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Independent Evaluation of the African Risk Capacity (ARC)

Annex C: Case Studies

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Oxford Policy Management

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Executive summary

The following provides a summary of findings from three country case studies (Mauritania, Kenya and Malawi) conducted between March and June 2017 to understand and learn from experiences of governments (as well as other humanitarian stakeholders) who have engaged with ARC Agency and taken out an insurance policy. The report, as well as the summary below, is structured according to key themes which are aligned with summary evaluation questions (in italics below).

ARC's products & country engagement

- *How and to what extent do ARC's products/services/activities support on-going engagement and an on-going learning cycle for ARC and Member States within and across countries?*

  - There appears to have been successful political engagement early in the process to convince each country to sign a policy, as well as subsequently when policy sign-off was needed, but appears to have dropped off during the technical ARV customization process. Ongoing political engagement appears to have remained high in Mauritania, but has been less effective in Kenya and Malawi given unmet expectations, staff turnover and election cycles.

  - ARC is perceived to have become more flexible and adaptive (noted in Kenya) in modifying policy parameters, and modifying policy options to meet local needs and context.

  - There do not appear to have been formalized efforts for cross-country learning, other than early regional technical trainings and for select key stakeholders during the annual Conference of Parties meeting. Some respondents requested more cross-country sharing.

  - The contingency planning process is seen to be useful in enhancing existing systems for planning (Mauritania & Kenya); This is less the case in Malawi – where the process was considered repetitive to existing systems (rather than complimentary).

- *How well do ARC's risk models function? Are they improving over time?*
  - There is a significant amount of scepticism and distrust in the ARV early warning system in Malawi and Kenya, and key stakeholders question whether it can be adapted accurately and extensively enough to unique country contexts.

  - There have been significant reliability issues with ARV modelling & customisation, seen to link to too short of a learning period of customisation before countries sign a policy – so that policies are taken out on a model that is not as well adapted as it could or should be. However, in all three country case studies, ARV customization has very much improved over the course of the 2 to 3 years during which it has been refined.

  - There are concerns with the validity of using the Water Requirement Satisfaction Index data and satellite data for making estimates of drought impact.

  - Such concerns then lead to issues of internal validity and trust, exacerbating negative perceptions that already exist about the value of insurance.

  - The ARV model is so complex that it is inaccessible to most people, and ARC technical ARV experts ultimately do much of the data manipulation and modelling behind the

scenes. The model's complexities are necessary for better reflecting the reality, but also lead to greater room for questions and scepticism.

Resourcing emergency response

- *Does the ARC model lead to enough disaster financing for different size slow and rapid onset disasters to make a crucial difference in the livelihoods of households?*
  - ARC appears to have made a crucial difference in the lives of highly vulnerable households in Mauritania.
  - ARC funding in Mauritania may have disincentivised efforts to secure additional emergency financing. In both Malawi and Kenya, the size of a potential payout (and the fact that it was late in Malawi) is marginal in comparison to the need, and does not seem to have reduced efforts to secure other forms of financing.
  - In all three countries, insurance financing for DRM (though not necessarily ARC) is seen to be a useful and necessary tool that complements other sources of response funds. However, in all three case study countries, there appears to be misunderstanding about the extent of the risk that ARC covers, leading to a perception that the payout (or potential payout) is inadequate to meet the level of need.
  - In Kenya, there are concerns that an ARC payout would not actually be received and funds mobilized quickly enough to provide "early response." Rapid drought response would likely be initially paid for through a contingency fund that would then be reimbursed with ARC funds.
  - In Mauritania, the response orchestrated with ARC payout funds was described as the quickest ever achieved – possibly because of circumventing bureaucratic processes by channelling funds directly to the National Drought Management Authority, which was then able to put them to immediate use.
  - However, in Kenya and Malawi the funds are/would be channelled through Treasury Departments, leading to lag time before they could be used. Thus, country-level bureaucracies are an important determinant in how rapidly ARC funds can be deployed.

- *Does ARC engagement within member states lead to tangible commitments from governments in terms of dedicated resources and time?*
  - All countries demonstrated active working groups, though with varying levels of commitment, so reciprocal time commitment is marginal.
  - National-level resource commitment is also marginal. Mauritania has continued paying annual premiums, and has integrated ARC into existing structures (Committee de Securité Alimentaire); Both Kenya and Malawi have stopped investing significant time and resources, given that they have not taken out a policy for the 2016/2017 season. However, there are remnants of engagement to pursue potential solutions going forward, and ARC continues to engage with key points of contact in each country.
  - The annual premium is considered too expensive compared to the potential size of payouts, making it appear more like a disaster fund (but from which a country is not guaranteed to be able to draw).

Coordinating disaster risk management & response

- *What network of stakeholders has ARC engaged in the country to support policy and practice change and is this the relevant network for changes to occur?*
  - ARC has engaged a limited network of stakeholders – there are reports of positive engagement amongst government agencies, though mainly among technical personnel and often lacking political buy-in; and very little of civil society or international agencies, many of whom reported exclusion from relief efforts (Mauritania). Civil society also reported being marginalised or excluded in Kenya & Malawi.

  - A lack of sustained political engagement appears to weaken a conducive policy environment relating to a countries' willingness to allocate resources to ARC.

Design of the disaster response

- *What indication is there that a payout to the government and the implementation of ARC Contingency Plan contributed to the protection of livelihoods and food security, and prevented asset loss?*
  - In Mauritania, indications are positive that the payout protected livelihoods, at least temporarily.

  - In Malawi, the response is less positive due to the late payout (though knowing the payout was coming, the government was able to access other funding to expand cash transfer programmes and still generate relief (yet to be substantiated in an evaluative study).

  - There is a generalized perception that one of the greatest benefits associated with ARC insurance, is the fact of a "guaranteed" and rapid payout for protecting livelihoods.

Sustainability of ARC's activities

- *Is there evidence of countries investing in DRM as a result of increased knowledge of DRM and quantified risk? If so, is there evidence that the change in investment is sustainable?*
  - Significant levels of sustainable investment in DRM cannot be attributed to ARC's capacity building around DRM and quantified risk in the case study countries. There is a possible exception in Mauritania, if continued payment of annual premiums is considered an indicator of sustained investment in DRM.

  - There does appear to be evidence of increased interest in alternative DRM financing options, though whether this interest has yet converted into investment is not yet clear.

  - Countries are making year-to-year decisions about the potential value of ARC, and in some cases based on climate predictions (i.e. El Nino or El Nina year), leading to major concerns about ARC's prospects for financial sustainability.

Future outlook

  - The biggest proponents of ARC's value are those most involved in DRM from a technical standpoint. However, inadequate communications and public relations, misaligned expectations, and perceptions challenges appear to undermine the perceived value, and pose the biggest threats to ARC's current model.

- ARC products are also considered to be expensive, with governments questioning the value of paying premiums, particularly if they don't receive a payout for several years in a row. This suggests a fundamental challenge with the current business model.

- The technical glitches and imperfect customizations that underlay the challenges experienced with ARV have significantly eroded the internal validity of the early warning mechanism and put into question ARC's model as an effective DRMF tool.

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List of abbreviations

ARC	African Risk Capacity
ARV	Africa Risk View
CEM	Country Engagement Manager
CSA	Commissariat à la Sécurité Alimentaire (Food Security Commission - Mauritania)
DoDMA	Department of Disaster Management Affairs (Malawi)
FIP	Final Implementation Plan
HSNP	Hunger Safety Nets Program (Kenya)
NDMA	National Drought Management Authority (Kenya)
OPM	Oxford Policy Management
TWG	ARC Technical Working Group (in-country)
WFP	World Food Programme
WRSI	Water Requirement Satisfaction Index

1 Introduction

The following report provides an analysis of findings from three country case studies of ARC member states conducted in 2017. As a fundamental source of data for the First Formative Evaluation of ARC, the case studies provide detailed information on the initial engagement and early evolution of ARC within different geographic, cultural, political and institutional environments among countries that have signed an ARC insurance policy. Through purposive sampling, case studies of ARC's engagement in Mauritania, Kenya and Malawi provide critical lessons learned about uptake of ARC insurance within unique country contexts and prospects for sustainability. The case studies also provide an initial check on the validity of the ARC Theory of Change and supporting assumptions, as integrated into the Contribution Story of the First Formative Report.

The structure of the report broadly follows the story of ARC's engagement in each country, while focusing on high-level themes at each stage. A brief timeline and history is presented for each country in Section 3. The themes derive from summary and detailed evaluation questions, which formed the basis for all research tools. Each section therefore provides a deeper dive analysis into critical areas for documenting early lessons learned, and to assess evidence supporting or challenging the pathways and assumptions underpinning ARC Agency's Theory of Change.

Across the three countries, **benefits** associated with ARC insurance included the following:

- The speed and certainty of funding when disaster is imminent (though this was also a source of disappointment, particularly in Kenya and Malawi).
- ARC is an innovative AU-driven financing solution to the growing frequency and severity of climate disasters, and an important step away from donor-dependency.
- Capacity building and contingency planning processes contribute to a country's capabilities in DRM, particularly at a technical level, and encourage cross-agency coordination.

Stakeholders cited the following **challenges** associated with their country's experience with ARC:

- There is persistent and widespread misunderstanding of how insurance policies, attachment points and payouts work. This has led to challenges in setting appropriate expectations, while managing to grow the risk pool.
- Pre-conceived notions of insurance as exploitative and ineffectual have made ARC's awareness-raising task more challenging.
- Country champions and decision-makers who see value in ARC policies face political challenges in justifying premiums when there have not been payouts.
- There is limited capacity for sensitisation: sustaining knowledge champions within a country to continue building understanding and buy-in has proven difficult given staff turn-over, and the resources and time needed for ARC to provide on-going capacity building.
- Communication challenges and limited stakeholder engagement have allowed for the spread of misinformation and distrust.
- There are multiple concerns with the ARV model, which failed to trigger a payout in Malawi, and which has been considered not customisable enough.
- ARC Agency is perceived to be pushing their own product – supply-side driven.
- Budgeting for premiums on a sustained basis and justifying the cost proves challenging.

These themes are discussed and analysed in further detail in the following pages, with specific examples of how benefits and challenges played out in each country, the early lessons and evolution in ARC's mode of engagement, and implications for the future of ARC.

2 Methods

Given the complexity of ARC and the multiple levels of analysis, a case study approach provides an efficient way to gather evidence and structure the analysis. By making use of a variety of data types and data sources, case studies enable evaluators to assess programmes in a way that a large quantitative survey cannot by allowing one to 'study intensely one set (or unit) of something – programmes, cities, countries, worksites – as a distinct whole' (Balbach, 1999: 3). For ARC, these case studies provide an opportunity to conduct in-depth interviews with a wide range of stakeholders about their specific experiences, and to develop a more comprehensive view the results of ARC's engagement.

The following findings emerge from analysis of documents reviewed and data collected via key informant interviews and focus group discussions conducted in Mauritania, Kenya and Malawi between March and June 2017. The case studies focused on stakeholders within ARC member countries to assess the activities, processes and views at a national level. In-country data collection lasted for two weeks, and interviewees included the ARC Country Engagement Manager, ARC Government Coordinator, ARC Supervisor, ARC Technical Working Group (TWG) members, representatives from key government agencies, and representatives from donors and humanitarian actors working in disaster risk management and response. A team of two international consultants and two national consultants worked together to collect and review relevant documentation, map key stakeholders, arrange and conduct interviews, debrief on the information collected and conduct a joint analysis of the findings. Table 1 (below) provides an overview of the number of stakeholders interviewed in each country.

Table 1: Stakeholders interviewed in Mauritania, Kenya and Malawi, March - July 2017

	ARC Agency Staff	Government representatives & technical staff	Other stakeholders (donors, civil society & NGOs)	Total
Mauritania	3	20	9	**32**
Kenya	2	15	7	**24**
Malawi	2	20	8	**30**

Case study sampling strategy

The evaluation team used purposeful sampling for selecting country case studies, with the goal of providing a representative sample of experiences during ARC's early years, and to cover a wide variety of scenarios and broad geographic scope (See OPM's Inception report for more detail on case study country sample selection). Guided by the evaluation questions, the selection of countries for the case studies was based on the following considerations:

- Geographical region
- Early adopters and recent signatories
- DRM institutional capacity
- Countries who continued ARC insurance coverage over multiple years and those who have dropped insurance coverage after one or more years of coverage
- Locations where pay outs have been made and where they have not yet been made

The objective of the formative evaluation is to identify lessons learned and make recommendations to improve the operational efficiency and effectiveness of the ARC suite of programmes, products

and services. The focus as related to Member States is therefore on early adopters' experiences in going through the ARC capacity-building programme and, where relevant, experiences in the receipt of a payout and subsequent implementation of ARC-funded interventions. The following table is the shortlist of countries from which the first three case studies were selected, and the reasoning behind the selection. Based on a collaborative discussion with DFID and ARC, Kenya, Malawi and Mauritania were ultimately selected for the first round of case studies.

Table 2: Shortlist of countries for First Formative Evaluation

Country	Criteria considered
Mauritania	– Example of a country that received an ARC payout where implementation of the CP was considered quite successful – DRM capacity low – West Africa
Niger or Senegal	– Example of a country that received an ARC payout where implementation of the CP was considered challenged – DRM capacity low – West Africa
Malawi	– Example of a country that took out an insurance premium, had expectations of a pay out that was not initially agreed, but following a review was agreed at $8.1m (for more see Joint ARC/GoM press release) – Long relationship with ARC but is not expected to take out insurance in the coming year – Southern /Eastern Africa
Kenya	– Example of a country that has been involved throughout, ARC's biggest client, although has recently withdrawn from the risk pool – DRM capacity high – East Africa
Mozambique	– Example of a country that completed the programme but did not take out insurance because of financial and possibly other constraints. ARC is currently re-engaging them so it is a good opportunity to observe this process. – High government buy-in to DRM – DRM capacity high – Southern / Eastern Africa – Slow and rapid onset disasters

Research focus

The full evaluation will include a total of 12 case studies, including countries who have recently joined the risk pool, been longstanding members, have experienced payouts, have left or never joined the risk pool. The exact content of each case study therefore varies, and the tools and approach must reflect the specific history and context of the country. For example, in Mauritania, research questions focused on implementation of the Operational Plan following the 2016 payout; but in Malawi the research questions instead focused on challenges with ARV's reliability. This level of focus allows the evaluation team to develop a much deeper understanding of key issues. It also means that the research team does not collect the same amount of detail on all evaluation questions within every case study country.

Research included the following range of activities:

- Stakeholder mapping analysis to identify key actors from whom to collect information. This included ARC representatives working with / in the country, government officials, civil society representatives, donor agencies & humanitarian actors;
- Creation of a timeline of ARC's activities and engagement with the country;
- Review of the contingency planning process, actual Operational Plans (historical and current) and their implementation, if relevant;
- Review of national development plans;

- Interviews with key stakeholders to gather views on the quality of ARC activities, barriers and drivers.

Interview Guide

The research team developed a master interview guide that draws directly from all summary and detailed evaluation questions. Given the unique thematic focus of each case study, this master guide was then adapted with specific attention on issues of interest. Key informants included in-country political actors, TWG members, and non-governmental actors (including NGO representatives and donors). Prior to each interview, the research team would prioritize areas of interest specific to the role and knowledge base of that respondent, and reflect or validate learning from prior interviews. Additionally, the questions posed to stakeholders were adapted over the course of the study, to deepen understanding of new information from key stakeholders, and to triangulate findings.

Sampling and selection of key informants

Qualitative research sampling is designed to build understanding of how or why something occurs, which requires collecting information from enough of the "right" informants to develop a comprehensive view of what needs to be understood. For the country case studies, this meant speaking with key informants in a wide range of relevant roles, who had at least a basic knowledge and understanding of ARC's engagement in the country to provide valid information and perspectives. The research team started by speaking with the ARC Country Engagement Manager, who then made a connection to the in-country Government Coordinator. As a key ARC representative, the Government Coordinator created a list of informants who had been closely involved with ARC (such as via membership in the Technical Working Group) and who could provide important perspectives on the topics of interest. DFID and OPM staff, as well the national consultants, provided additional connections to key informants via their own personal and professional networks. The research team then began by conducting key informant interviews using the semi-structured interview guide with the people identified via this initial mapping. Snowball sampling[1] was then used to identify additional informants over the course of the two weeks in-country. In every case, the research team attempted to speak with as many stakeholders as possible, given the allocated time and resources, who could provide an informed perspective on the country's experience with ARC.

In all cases, key informants were assured that their responses would remain anonymous, thereby allowing them to speak more openly about their experiences and opinions. For this reason, the findings and discussion presented here do not include the names and/or roles of respondents (or other potential identifying features) in order to protect their anonymity, and in the event that any negative repercussions could emerge from the information they provided.

This First Formative Evaluation did not include interviews of beneficiaries, given resource constraints and security considerations in Mauritania, the only country where it would have been relevant. However, future case studies will include data collection from beneficiaries as well.

Limitations

Due to the number and complexity of evaluation questions that the research team needed to cover over the course of the in-country field work, it was not possible to discuss every topic and question with every interviewee. This means that the team would determine prior to, and during the

[1] Snowballing is an approach where additional KIs are identified by asking existing KIs to suggest appropriate, additional people to interview. It can be a very effective way of identifying networks within a country, although care must be taken to ensure broad representation.

interviews, what topics were most pertinent to the Key Informant's expertise, and that still needed further validation or triangulation. This process, inherent to the nature of qualitative research, can also leave room for bias or information gaps. However, the team mitigated this limitation by discussing and agreeing on the most important topics to cover with each interviewee, and validating important findings across all stakeholders who would have been able to provide an informed perspective.

An additional limitation, given the time and resource constraints for the case studies, is that key informants in-country did not have an opportunity to review and comment on the draft report prior to submission to DFID. The team attempted in every case to triangulate findings among a wide range of stakeholders and interviewees, and when necessary to draw conclusions from apparent contradictions between responses. Given the complex and controversial nature of many of the findings included here, this additional step of validation, though difficult, could take place prior to publication of the final report.

3 Country summaries

The following section gives a brief synopsis of the events that have structured the experience with ARC for each of the three case study countries. This provides initial context for the analysis presented in the body of the report, with key issues covered in more detail herein.

Table 3: Summary of country experience with ARC

Country	Signed MoU	Capacity programme completed	Received Certificate of Good Standing	Risk Pool 1 2014-2015	Risk Pool 2 2015-2016	Risk Pool 3 2016-2017	Payout
Kenya	2012	2013	2014	√	√	Policy not taken up	N/A
Mauritania	2012	2013	2014	√	√	√	2015
Malawi	2012	2014	2015	Not eligible	√	Policy not taken up	2017

Mauritania: As one of the original countries to advocate for the launch of ARC, Mauritania has been involved since ARC's inception in 2012. ARC is housed within Mauritania's Food Security Commission (CSA), which is responsible for planning and managing the country's response to food insecurity crises, including due to drought, which impacts Mauritania on a frequent basis. Mauritania signed an MOU with ARC in 2012, and completed the capacity building programme and ARV customisation in January 2013. The country received the Certificate of Good Standing from ARC Agency Board in March 2014 and subsequently purchased an insurance policy from ARC Ltd for an estimated premium of $1,394,000 for a total cover of $9,000,000 for the agricultural season from July through November 2014. Having faced a very poor rainy season, Mauritania received a payout of approximately $6,326,000 in January 2015. Based on the country's Operational Plan, which had been approved in 2014 by ARC agency, the CSA developed a detailed Final Implementation Plan at the first indication that Mauritania would receive a payout. This was then implemented between February and July 2015, with 50 kilograms of rice and 4 litres of oil distributed to 50,000 households for 4 months (April – July). Mauritania has continued purchasing ARC drought insurance for Risk Pool II and III.

Kenya: Also among one of the first countries to join ARC, Kenya participated in the early design phase meetings and ultimately signed an MOU in 2012. Kenya chose to establish the technical working group within the Kenya Food Security Steering Group, and undertook ARV customisation and contingency planning work. Kenya became one of the first countries to join Risk Pool I in May 2014, and took out a policy for the short rains and long rains seasons with a premium of $9,000,000 and a total coverage of $30,000,000. That year, Kenya experienced localised droughts which ARV anticipated, but that were below the threshold to trigger a payout. The following year, the country refined ARV customisation, and joined Risk Pool II. The TWG and Kenya Food Security Steering Group chose to split the insurance coverage between two different regions, to better account for the potential impact of a localised drought. Kenya therefore had four policies, two for each rainy season, for both the arid and semi-arid regions of the country. The overall premium was again $9,000,000 for a total coverage of $30,000,000. The long rains during the 2015/2016 season were insufficient, with a resulting impact on vulnerable populations in the regions affected. ARV anticipated the effect of the insufficient rains, however, the impact remained below the attachment point that had been selected by the country and Kenya did not receive a

payout. Kenya chose not to take out a policy for the 2016/2017 season, given reduced political support for a tool that had not yet appeared beneficial, despite ARC's efforts to accommodate lower attachment points. Kenya faced a drought during the 2016/2017 season which, had the country had an ARC policy, would have triggered a payout.

Malawi: Similar to Kenya and Mauritania, Malawi was also one of the first countries to begin engaging with ARC, signed an MOU in 2012 and began all of the ARV customisation and contingency planning work. However, due to corruption scandals within the government and initial ambiguity about how payout funds would be used, Malawi did not receive a Certificate of Good Standing until 2015, at which time they became eligible to take out an insurance policy (thereby joining Risk Pool II). Malawi purchased a policy for the 2015/2016 agricultural season, which starts in October and ends in April, paying a premium of $4,700,000 for a maximum payout of $30,000,000. The 2015/2016 agricultural season was highly unusual, with intermittent periods of heavy rains, punctuated by long dry spells and warm temperatures. While the mid-season ARV report showed an estimated 2,000,000 vulnerable people impacted by the drought, the end of season report showed a dramatically reduced number, due to rains that had come again later in the season. The technical team in Malawi disputed this report in April 2016, and ARC sent a ground-truthing mission to determine what had been the cause of the discrepancy (more detail provided in Textbox 1). Following a country-wide representative study conducted by an independent consultant with the Centre for Agricultural Research and Development in August 2016, ARC determined that the model had not functioned as should have been anticipated. After consultation and deliberation, the ARC Agency Board chose to provide a payout of $8,100,000 reflecting a revised customisation of ARV that more accurately predicted the impact of the unusual rainy season. Malawi received the payout in January 2017, and developed a Final Implementation Plan for specifying how the funds would be used. Ultimately, $2,400,000 was proposed for use in expanding cash transfers, $2,600,000 for procuring pulses to complement an ongoing food distribution campaign, and the remaining funds (totalling $3,100,000) to be used to replenish the country's strategic grain reserves. Malawi chose not to sign a policy for the 2016/2017, largely due to the fallout resulting from the failure of ARV to trigger in the event of a drought disaster as would have been expected.

4 ARC's products & country engagement

4.1 Political engagement and buy-in

ARC's early political engagement in each country appears to have been effective at generating enough interest and will to launch the capacity building programme, and for each country to initially join the risk pool. Indeed, stakeholders within all three countries commended ARC Agency on having conducted a successful early country engagement process that drew the attention and interest of relevant decision-makers. This was facilitated by conditions that both created ownership and demonstrated ARC's potential value in all three cases. In Mauritania and Kenya, country representatives saw themselves as having been integral to the initial development of ARC, creating an early commitment to investing in and testing the idea. For example, Mauritania was one of the original countries to have advocated for the creation of ARC, and has been involved in its ongoing development since inception. Kenya has similarly been invested in ARC, both as a founding member and via involvement in the design phase meetings starting in 2012. ARC was seen to provide an innovative and relevant model designed by Africans for Africans that would reduce dependency on humanitarian actors, which was of interest to an incoming political regime open to new ideas. In the case of Malawi, a severe drought and food shortage in 2011 followed by flooding in 2012, coupled with prior sensitisation to insurance mechanisms via World Bank programs generated interest in the idea of sovereign parametric drought insurance. Equally, both Mauritania and Kenya have seen recurrent and more frequent droughts leading to major economic and human loss, and so were convinced of ARC's value.

Within this context, ARC arranged high-level meetings between the Director General and key political decision-makers in each country as part of the initial scoping missions (i.e. the Director General of Budget, Fiscal & Economic Affairs of the Treasury and the Treasury Cabinet Secretary in Kenya, the Ministers of Agriculture and Finance in Malawi, and senior political leadership in Mauritania). Beyond in-country visits to engage with political decision-makers, the Director General was noted for having welcomed and engaged with visiting diplomats in South Africa, and for engaging more informally during joint trips to Washington D.C. or during African Union meetings. Finally, ARC presented at relevant conferences and AU policy platforms, such as the African Disaster Risk Reduction Platform in Abuja in 2014. Key decision-makers within national drought management or disaster risk management platforms in each country believed in the idea of insurance as one of multiple necessary financing tools, and saw value in the technical instrument, Africa Risk View (ARV), underpinning the insurance mechanism. For example, in the case of Malawi, ARC demonstrated ARV performance in relation to historical events and showed that in past cases of rainfall shocks, a payout would have been triggered, which made a convincing case for its value to Malawi. Finally, the World Food Programme (WFP) was also instrumental in encouraging Mauritania, Kenya and Malawi to sign an MOU, engage in the ARC's capacity building program, and eventually to sign policies. In the case of Malawi, WFP leadership even advocated at the level of the Vice President to encourage take up of an insurance policy.

Once countries signed an MOU and during the technical ARV customization process, engagement with higher level decision-makers appears to have dropped off. This may be due to the appointment of an in-country Government Coordinator and ARC Supervisor, to whom the responsibility of engaging the relevant set of technical personnel and political decision-makers was expected to transition. This appears to have worked somewhat successfully in Mauritania for the first several years, where the first ARC Supervisor and former head of the Food Security Commission (CSA – Commissariat à la Sécurité Alimentaire) appears to have generated ongoing commitment to ARC, which was buffeted by a payout in the first year. Indeed, political buy-in and

engagement appears to remain relatively high in Mauritania, as a long-time ARC member. This has not been the case in Kenya and Malawi, where a lack of understanding about insurance coupled with early disappointments has led to generalized scepticism. Key stakeholders and political decision-makers who continue to believe in the value of ARC's insurance products appear to lack either the necessary technical knowledge, the political will, or the communications skills, to convincingly justify the need to critical decision-makers for an ARC policy during the 2016/2017 season. In these two countries ARC has been less successful in sustaining political engagement and sensitisation across a broader group of political decision-makers in the longer term.

Given a widespread lack of understanding of insurance concepts, criticisms of ARC's early political engagement include an inadequate sensitisation campaign at higher political levels. Additionally, in Kenya, stakeholders expressed concern that ARC engaged with senior decision-makers only when it was time to convince them to sign a policy and pay the premiums, but that ARC was not so responsive in addressing technical concerns early on. Finally, some respondents felt that the insurance terminology used by ARC alienated people and made it more difficult to overcome a generalized distrust of insurance. Thus, while ARC's early engagement appears to have been quite effective in generating interest and enthusiasm for a new and innovative disaster risk management financing tool, political engagement appears to have been less effective for ensuring ongoing political traction and trust.

4.2 Defining policy parameters

Following ARC's initial political engagement and scoping mission, an MOU is signed with the country which outlines the terms of the capacity building program. A Technical Working Group (TWG) is assembled of experts and representatives across relevant government agencies (and in some cases, humanitarian organizations) for carrying forward the work plan. The TWGs are structured slightly differently in each country, but encompass three primary components or sub-groups: ARV customization, contingency planning, and risk transfer.

The ARC Country Engagement Managers (CEMs) and ARV Specialists worked closely and continuously with the ARC Supervisor, Government Coordinator, and TWG to build understanding of the parametric risk modelling, and how policy parameters are then defined based on ARV customization within each country. Respondents described a steep learning curve for developing the understanding needed for a country to adequately customize ARV and then make well-informed decisions about risk transfer and policy parameters. Through this process, members of the TWG who belong to national platforms are expected to disseminate their learning within a broader network. Additionally, the ARC Coordinator and ARC Supervisor are responsible for then communicating options for insurance parameters to a higher-level steering committee for discussion and decision-making.

In practice, the process of defining policy parameters played out somewhat differently in each context. In Mauritania, the CEM was commended for working intensively with the ARC Coordinator and ARC Supervisor each year to define policy options based on the country's budget, appetite for insurance premiums, and desired level of coverage. These would then be brought to the Steering Committee, and in more recent years, to a newly created inter-ministerial committee tasked with signing off on policy decisions.

In Kenya, ARC engaged primarily at the level of the TWG to define realistic insurance parameters. However, in the first two years the TWG did not have confidence in the ARV customization, and people within the National Drought Management Authority (NDMA) where ARC is housed, expressed concerns that it did not align with Kenya's other early warning systems. Additionally,

there appears to have been inadequate understanding of the policy details within the Treasury, and among politicians, leading to misaligned expectations about the attachment point and potential for a payout. Some interviewees from Kenya's TWG felt that ARC had undermined technical recommendations from the TWG and NDMA about whether (and on what basis) to take out a policy via backdoor communications convincing the Treasury to include ARC in the budget and sign a policy. Whether or not such allegations are true, the perception that the technical team was not adequately consulted or empowered to make recommendations before signing a policy ultimately undermined validity and trust in ARV and ARC.

In the case of Malawi, once the country received a Certificate of Good Standing in 2015 (following two years of capacity building and ARV customisation), ARC provided options for attachment points, disbursement limits and associated premium payments to the team working on risk transfer. Ultimately, the team chose a policy based on a one in five-year drought event, with a premium payment of 4.8 million USD, and a maximum payout of 30 million USD. This was then integrated into the national budget and proposed to Parliament by the Ministry of Finance. While the TWG risk transfer team presented the policy options to decision-makers in the National Disaster Risk Management Committee (NDRMC) and Cabinet, relevant Parliamentary Committees were not actively involved in decision making about the level of risk to transfer via an ARC policy. It should be noted that according to some members of the TWG involved in ARV customisation, the group were not yet comfortable with the level of correlation between the rainfall indicator used, and what had been recorded by weather observation stations. They would not at that stage have recommended using ARV, but did not have an opportunity to make a recommendation. They speculate that the decision was made without sufficient technical input, possibly due to ARC's and/or the AU's political influence. According to other stakeholders involved, however, the decision to buy a policy was made at a meeting of Principle Secretaries, chaired by the Cabinet Secretary in the presence of TWG members and following the TWG coming to a consensus on the customization. So, whether or not this claim is true, it demonstrates the challenge of progressing on policy options, while ensuring and inclusive and transparent process.

ARC asserts that there is a clear and established process by which the TWG makes a recommendation to political decision-makers about insurance policy parameters based on the ARV customisation. It is not possible for ARC to ensure that all TWG members are present at every meeting, or to delay decisions because not everyone's input has been given. Nonetheless, multiple ARC stakeholders in Malawi feel that an established and transparent decision-making process was not followed. Additionally, the timing for finalising the budget for the fiscal year (which starts in July) also means that the money had to be designated for ARC well before customisation for the year was completed. This finding would imply that a political decision was made to purchase ARC insurance in Malawi, independent of the validity of the ARV customisation. If true, this would mean that efforts to build political support for ARC insurance may undermine the ability of the technical teams to ensure that it fully serves Malawi's unique context and needs.

The experiences in Kenya and Malawi suggest that it has been challenging to adhere to a consistent and transparent process for selecting policy parameters closely informed by front-line technical staff and well-understood by a broad enough group of key government stakeholders. Additionally, there is a greater appetite for policies based on more frequent drought events (i.e. one in five, or one in three year events), leading some to describe the relationship between payment and payout as resembling a savings mechanism, and claiming that a country should at least get back out what has been put in. This may be due in part to a low-level of initial capacity around insurance concepts, communications and marketing challenges, as well as pressure to grow the risk pool as quickly as possible to demonstrate the model's short and long-term viability. However, it also presents a fundamental disconnect between how certain stakeholders view the product, and its functioning.

4.3 Ongoing engagement and learning cycles for ARC and Member States

There do not appear to have been formalized efforts for cross-country learning or broader sensitisation efforts, other than early regional technical workshops, and for select stakeholders during the annual Conference of Parties meeting. Respondents requested more cross-country sharing, and described the value of even informal communications and exchange between Government Coordinators, for example, to learn from each other's experiences.

In all three countries, respondents noted a lack of knowledge or understanding of ARC's insurance products among key ministries. For example, ARC's technical teams working in Mauritania were well spoken of, but multiple respondents described a need for greater engagement with political leadership to ensure understanding of ARC's mechanisms and tools. Similarly, key government officials in Kenya suggested that beyond direct engagement with ARC focal points (the Government Coordinator and ARC Supervisor) and those directly implicated in budgeting for disaster risk management (DRM), ARC has not engaged in effective sensitisation efforts among a broader group of political decision-makers and stakeholders. Major communications challenges were noted by both government officials and key partner organisations in Kenya, which limits an effective ongoing engagement and learning cycle, for either ARC or member states. For example, several interviewees who had been involved in the TWG in Kenya were unaware that the country had not joined the latest risk pool (2016/2017). Additionally, there appears to be limited capacity (in terms of dedicated human resources) within government agencies where ARC is embedded, such as Kenya's NDMA, to dedicate the needed time to support ongoing engagement and learning at higher political levels.

Despite challenges with facilitating learning cycles at higher political levels, there is evidence of on-going learning and engagement at the TWG level (concentrated among a few), and within ARC's technical and support teams. In Kenya, early modelling constraints were resolved through flexibility on ARC's part (including allowing Kenya to take out two separate policies for the arid and semi-arid regions) and debate and discussion among technical staff about which indicators were best to use for ARV customization. ARC is working to maintain support within Kenyan ministries through continued outreach to the Treasury and NDMA, and has proven to be adaptable in their approach to make policy parameters more appealing, such as lowering the attachment point to more frequent drought events.

In the case of Malawi, the experience of not initially receiving a payout during a serious drought event in 2015/2016 led to significant speculation about what had caused the situation. Following a ground-truthing mission and subsequent decision by the ARC Board to provide a payout, communication through the regular channels and the TWG did not resume. Some TWG members claimed that they never saw the report written by a consultant commissioned by ARC after the ground-truthing, and were not involved in subsequent adjustments to ARV reflecting what had been found. Ongoing learning cycles at the technical level therefore appear to have stalled, and were hampered by limited communication and cross-agency blame. However, ARC and Malawi have also discussed the situation in various forums, including the Conference of Parties in Abidjan in March 2017, to highlight the importance of using current and appropriate input data for ARV customization. As a result of this learning experience, ACR's ARV technical specialists are exploring how to include new parameters into the model, including temperature, that may have contributed to the model's failure to capture the full impact of the drought in Malawi.

Overall, case study findings point toward consistent in-country learning cycles during periods when a country has taken out a policy, and between the TWGs, Country representatives and ARC's front-line and technical staff. However, there appear to have been few formalized efforts to

promote cross-country learning and exchange, or to systematically gather, document and respond to feedback on products and services from country stakeholders. This may be changing more recently, though, as ARC held a regional 'lessons learned' workshop in the summer of 2017, and as part of the M&E plan, will collect annual country satisfaction data in the future.

4.4 Functioning of Africa Risk View

ARC's parametric insurance products rely on the proper functioning of ARV. The model must provide an accurate enough assessment of the actual impact of drought on food security to be trusted by countries interested in buying parametric weather insurance. This trust has been achieved in some cases, and among select stakeholders (often those most familiar with the model), but a significant amount of scepticism persists, particularly given the recent experience in Malawi.

Stakeholders in both Mauritania and Kenya consider the ARV model to have provided a useful decision-making tool for anticipating the scale of a drought's impact, and in determining what risk to transfer. In Mauritania, interviewees believe that ARV provides reliable risk estimates that have considerably improved over time with the inclusion of additional indicators, and following learning during the first years of customization. While not all respondents in Kenya find ARV to be an effective early warning tool, those who do claim that over time the TWG came to agreement on the best indicators to use for customisation, leading to a much more accurate early warning system. Even if it did not serve Kenya at first (due largely to an inadequate early customisation process), the TWG eventually improved its functioning to include input from technical experts from many sectors with different and complementary skills. Its legitimacy has therefore improved thanks to the refinement process, and TWG members most familiar with the latest iteration of its customisation are now convinced of its utility. However, those less familiar with recent updates remain sceptical.

Textbox 1: Malawi ARV failure

The lack of immediate payout in Malawi following the 2015/2016 rainy season created widespread controversy and negative publicity for ARC. On one hand, the incident has been used as evidence to demonstrate the inappropriateness of market-based insurance products as a response to climate-change related food insecurity. On the other, the response taken by ARC demonstrated considerable flexibility and a willingness to identify and address the cause of the problem. While these assessments represent the extreme ends of perspectives, the reality of what happened, and why, is much more difficult to tease out. The following provides a summary of findings from the Malawi case study conducted in June 2017 that suggests a more complex and nuanced story.

What happened
After Malawi's signing of a first policy for the 2015/2016 agricultural season, the TWG, Government Coordinator and ARC Supervisor in Malawi were closely following ARV bulletins. The rains had started late and multiple intense dry spells, coupled with higher than usual temperatures, were boding poorly for farmers, the vast majority of whom rely on rain-fed agriculture. During the early part of the season, which starts in November, ARV bulletins were showing increasing numbers of vulnerable people affected by the poor rains, and the mid-season report estimated an impact on 4 million people. However, following several weeks of heavy rains later in the season, the number dropped dramatically, to only 20,000 people. The ARC Government Coordinator and other TWG members refused to sign the end of season report in April, as it did not correspond with the crop devastation seen on the ground, and raised their concerns to ARC.

An initial ground-truthing exercise was undertaken in April/May 2016 by ARC, the Government Coordinator and select TWG members in three districts, which revealed discrepancies between ARV and realities on the ground. Within a week following this initial ground-truthing, ARC employed a consultant from the Centre for Agricultural Research and Development (CARD) to undertake an investigation into why the model had failed to predict the drought. The consultant first conducted an initial study in May 2016 in five districts where the discrepancy had been highly visible. This was followed by a country-wide quantitative survey conducted in

August and September 2016 to validate initial findings about which varieties had been planted, and which suffered most from the drought. According to the consultant's findings, the model used a maize variety with longer maturation period (120-140 days), than the average maturation period for the varieties actually planted by farmers (90-100 day) during the 2015/2016 season. However, the CARD report also states that both varieties of maize appear to have been equally impacted, and that higher than usual temperatures (not previously included in the ARV model parameters) had negatively impacted production in a way that the model did not account for. 53% of farmers claimed that high temperatures exacerbated the impact of the dry spells and 47% felt that it directly damaged their crops.

Why ARV failed to predict the impact of the drought on food security:

The findings of the CARD report were disseminated via a workshop for stakeholders in Malawi, but the study itself was not made public. ARC's primary argument about why the model failed to predict the impact of the drought is that the longer maturation period used in the model estimated a less severe impact of the dry spells. On the other hand, shorter maturing varieties increasingly planted by farmers were severely affected by a three-week dry spell that hit during flowering and that dramatically affected production (thus the failure of ARV to trigger a payout). This explanation appears to be only partly validated by findings presented in the CARD report. The report does in fact show that a greater percentage of farmers in the whole country have progressively used shorter term varieties over the last four growing seasons, regardless of the region, agro metric practices and ecological zones. However, findings outlined in the CARD report also claim that "low yields were widespread for both short and long term maturing varieties," thus putting into question whether this adequately explains the major discrepancy between the model's predictions and realities on the ground.

Opinions among stakeholders in Malawi about why the model failed to predict the actual impact of the drought in 2015/2016 vary widely, largely according to the Ministry and institution to which respondents belong. According to interviewees in multiple ministries, the TWG team responsible for customizing ARV made an inaccurate assumption about the crop used for calculating the Water Requirement Satisfaction Index – essentially the same primary cause put forward by ARC. Indeed, following the "non payout", the TWG faced intense scrutiny, criticism and pressure from the government. Government officials who posited the same argument as ARC had attended a meeting where ARC presented report findings to this effect. This argument is supported by the fact that the government was anticipating an El Niño year and so advised farmers to plant a short-maturing variety and provided free hybrid (short-maturing) seeds to about 1.8 million beneficiaries under the Farm Input Subsidy Programme.

Another possible explanation, though not the one put forward publicly by ARC, is the compounded impact of heat and evapotranspiration, as well as the temporal nature of dry spells (i.e. heavy rains for one/two weeks and then two/three weeks of dry spells during critical periods) which landed at a pivotal moment in the crop's maturation cycle. Such factors were not originally accounted for in the parameters of the model, suggesting that inaccurate assumptions/inputs were not the only cause of the problem. This may be substantiated by the fact that the ARC technical team in Johannesburg overseeing ARV customization subsequently decided that temperature should be accounted for within the model to generate more accurate estimates of the impact of drought, as well as the timing of dry spells during the growth-cycle.

Finally, another contributing factor for the discrepancy may be the compounding nature of droughts, floods, food prices and other factors that affect food security. Indeed, some stakeholders argued that Malawi had faced a major food security crisis in 2015/2016 due to a convergence of multiple factors, including from climate disasters from previous years, corruption, and poor policy decisions. Therefore, when the dry spells hit during the 2015/2016 season, they contributed to what was an already dire situation. This demonstrates the challenges of developing a model that isolates the effects of drought, while adequately accounting for related factors that negatively affect production and exacerbate food insecurity and famine.

Conclusions drawn:

Based on an assessment of the contradictory claims and potential motivations among various interviewees to assign or deflect blame for the malfunctioning of the customized model, the case study team drew some key conclusions. There is a need for shared responsibility of model failure between ARC and the government, and the ARV customisation should include a more formalised validation process. Given that the model used a composite crop cycle that represented an average maturation period for 3 commonly used varieties (local, composite and hybrid maize), the differences in the crop used for the WRSI and the realities of what farmers planted during the 2015/2016 season appear unlikely to fully account for the difference between the ARV projections and what was perceived to have been the full impact of the drought on vulnerable populations. However, according to ARC staff interviewed, multiple factors (economic, past

climate disasters – including floods, and previous droughts during years when the country did not have coverage) converged during the 2015/2016 season to create a dramatically bad year in terms of food insecurity.

Ultimately, the team was unable to validate the conclusion that an inaccurate assumption about maize variety fully explains the model's failure, however there is a convincing argument for it being a significant contributing factor. The customization process does seem to have neglected adequate input from agronomists, agro-meteorologists and other critical expert stakeholders, and appears to have been too removed from the "ground." No single other explanation provides a fully satisfactory answer to why ARV did not predict the impact of the drought, either. Multiple people spoke to the highly strange and unpredictable nature of the 2015/2016 season, with short periods of heavy rains following by dry spells, raising questions about the overall reliability of ARV in such cases. Additionally, ARV technical experts recognised a need to factor temperature and other parameters (such as the specific time-period when a crop is most vulnerable to dry spells) into the model.

This convergence of factors demonstrates the complexity and challenge of a) ensuring that the correct indicators and data are selected for ARV customisation, b) minimising basis risk inherent in any parametric insurance and developing strategies for managing a situation where downside basis risk *does* occur, and c) isolating the factors that are in fact tied to how drought is defined and accurately reflecting this in the ARV model.

Unfortunately, Malawi's experience has significantly eroded such trust, with TWG working group members and other stakeholders describing mixed opinions about the effectiveness of ARV, and ARC's approach in using it to help Malawi determine what risks to transfer. Most interviewees pointed to the failure of the model to provide an accurate assessment of the widespread crop failure during the 2015/2016 season, undermining its value as a tool for making risk transfer decisions. However, one member of the TWG still considered ARV effective. He resisted the idea that anything had been forced on Malawi, and saw the TWG as ultimately responsible for all decisions about which indicators to use in customising ARV. The model is only as good as the input data used. This was corroborated by other interviewees involved in customisation who noted that assumptions and input data ultimately caused the problems.

Nonetheless, many TWG members and political-decision makers in both Malawi and Kenya continue to question whether ARV can be adapted accurately and extensively enough to their unique country contexts. Specific concerns include the accuracy and resolution of satellite rainfall data, use of the Water Satisfaction Requirement Index (WRSI), accuracy in predicting vulnerability, lack of regional sensitivity to show localized droughts, inability to capture dry spells that occur during critical times within the growing season, and inability to capture evapotranspiration, water-logging or vegetation cover.

Additionally, there are lingering concerns about whether the model is too difficult to master, making TWGs reliant on ARC to complete the final manipulations before proposing a limited set of policy options. Interviews also revealed some lack of understanding of the relationship between ARV and the insurance product, with multiple people citing concerns that the model focuses entirely on drought while missing other vulnerability factors. Finally, a handful of stakeholders in Kenya claimed that the model would not be able to provide for rapid response, as a payout would only be triggered once the country had already reached a full-blown drought.

In many cases, the reliability and trust issues with ARV modelling & customisation may be associated with too short of a learning and refinement period before countries sign a policy. This means that policies are taken out on a model that is not as well adapted as it could or should be, in which TWG members are not yet confident, and that is not yet well enough understood by key technical and political decision-makers. For example, a key stakeholder familiar with ARV's evolution since Kenya first joined ARC claims that ARV's weaknesses during the first two years

have now led to a loss of confidence in it, which is difficult to repair. As previously mentioned, the technical team working on the WRSI in Malawi claim that they were not yet comfortable with the level of correlation between the satellite rainfall data being used, and weather station observations, noting that they were only finding 60% correlation. As such, would they have had the opportunity, they would have made a recommendation to not yet sign a policy (for the 2015/2016 season) before testing the customised model again. However, others claim that these same members of the TWG, who have been widely blamed for the model's failure, are avoiding responsibility for what had happened.

In all three countries, there is widespread consensus among TWG members that ARV customization has improved over time. This signals that reliability and trust in the model through inclusion of new indicators and use of improved data sets is likely to happen concurrently with increasing knowledge and understanding among both technical and political stakeholders. For example, Kenya's NDMA is now satisfied that the data they are using for the vulnerability indicator is sufficiently up to date. While it will always be a work in progress, they recognise that the data they are working with is relatively good. Additionally, ARC has gradually been adding new indicators for inclusion in ARV, which has also improved its performance. For example, Mauritania has now included multiple sorghum varieties (short and long cycle) and indicators to account for the water requirements of pastoralists, into the model's parameters. Additionally, TWG members in Mauritania claim that the process has led to a greater level of data sharing across relevant government agencies.

In both Kenya and Malawi, limited trust in ARV has been exacerbated by unmet expectations. While this may be due to a lack of understanding about the technical mechanisms behind the model, it appears to have dampened interest in ARC's products. Many government officials in Kenya expressed frustration at having spent money on premiums for a policy that did not appear to have served the country during a time of drought (during the 2014/2015 season). However, those involved in ARV customisation and with the TWG were not surprised, as they had participated in developing the parameters, and were able to explain the signed policy to political decision-makers. However, the misaligned expectations led to a loss of confidence in the model, which appears to have affected the willingness of key decision-makers within the Ministry of Finance to advocate for its inclusion in the 2016/2017 budget. Similarly, following the experience with the 2015/2016 season, many stakeholders in Malawi do not have confidence in ARV going forward, even after the revised customisation of ARV and subsequent payout.

Finally, there is general agreement that the model is so complex that it is inaccessible to most people. This may be necessary to better reflect the reality of drought impacts on vulnerable populations. However, it also means that for now ARC's technical ARV experts ultimately do much of the data manipulation and modelling behind the scenes, leading to more room for questions and scepticism. In Mauritania and Malawi, there are also concerns about local capacity to update ARV customisation on an ongoing basis, without ARC's support. In Mauritania, the ARC Coordinator and TWG members do not yet feel that they have a strong enough technical understanding to explain the model and answer questions from the inter-ministerial committee, though there is a desire to now manage ARV customisation and selection of policy parameters more independently from ARC. Thus, limited local capacity to fully understand and explain ARV's functioning also presents a potential liability in terms of the validity with which it is viewed in each country.

4.5 Contingency planning

Following signing of the MOU and capacity building work plan, the TWG engages in a contingency planning process that results in the development of an Operational Plan that would be followed in

the event of a payout. This plan is intended to build on existing systems and capacities within the country, and to provide a rapid and targeted response at different scales, depending on the size of the disaster and the corresponding ARC payout. The Operational Plan is then reviewed and signed off by an external board, prior to a country signing a policy. The Operational Plans differ from country to country, reflecting the existence of prior disaster response infrastructure, or social safety net programs that can be scaled up (as would be the case with the Hunger Safety Nets Program in Kenya). In Mauritania, the Operational Plan calls for food distribution as the primary response mechanism, with the possibility of employing cash transfers in the future once the infrastructure is in place. ARC is housed within Mauritania's Food Security Commission (or CSA), which developed a contingency plan designed to leverage CSA's experience with food distribution and internal infrastructure. Malawi's Operational Plan calls for a combination of food distribution and unconditional cash transfers.

The process for developing the Operational Plans also differs in each country. For example, in Mauritania a relatively narrow group of people were involved in the initial contingency planning process, with multiple interviewees expressing a desire to have been more closely involved. In the case of Kenya, all TWG members were included in developing the Operational Plan, with key experts from Kenya's Food Security Steering Group also providing input, along with the Government Coordinator and ARC Supervisor. The contingency planning process in Malawi appears to have been equally inclusive, with a variety of people from different government agencies and external stakeholders contributing. Officials from the Department of Disaster Management Affairs (DoDMA) led the contingency planning process. In partnership with the Ministry of Agriculture, they identified and engaged experts from various organisations that they already work closely with under the Humanitarian Response Committee (HRC) to be involved, such as WFP. Once this core team developed the Operational Plan, they shared it with HRC which is responsible for recommending a drawdown of Malawi's Strategic Grain Reserve to respond to emergency and non-emergency food insecurity.

The contingency planning process is intended to build from existing activities and response mechanisms within a country to achieve more rapid and effective delivery. It has been considered useful for enhancing existing planning processes in both Mauritania and Kenya. For example, the concept of contingency planning is already well accepted in Kenya, and resources are set aside every year to support counties to undertake their own contingency planning process. According to those involved in the contingency planning process with ARC, it nonetheless helped to build better principles and scenarios for organising interventions, and required them to develop a national-level contingency plan specific to drought disasters. Additionally, according to an interviewee within Treasury, the process is useful because it provides stipulations for how funds can be used, and keeps the disbursement transparent.

This is less the case in Malawi, where the process was considered repetitive to existing systems, rather than complimentary. The responsible TWG subgroup found ARC's support during the process useful. However, Malawi has been developing contingency plans since 2008, so it was not a new activity for DoDMA. A National Food Insecurity Response Plan already provides response plans based on scenarios of numbers of food-insecure people. The primary task in developing the ARC Operational Plan was therefore to determine how eventual payout funds would be used to best complement the national response plan. Apart from the ARC template which simplified the process, the team did not see any value-add from the contingency planning process. However, DoDMA indicated that the Operational Plan developed for ARC provided valuable input to the preparation of the 2016/17 Food Insecurity Response Plan.

Stakeholders in all three countries agreed that the process was flexible in allowing for a range of preferred activities, and in allowing for changes within the Final Implementation Plan (FIP), which

serves to define actual activities, timing and targeting following a payout. However, some interviewees within the Ministry of Finance in Kenya and Malawi said questions had arisen about why use of the funds was restricted to certain activities, and that this caused frustration. In the case of Malawi, it is unclear whether this is because they were unaware of the country-driven process for developing the Operations Plan or because they received the payout after other resources had already been allocated to the response, and thus wanted to have greater flexibility in using the funds.

It is not clear that the contingency planning process, though generally deemed useful, has led to a strategic vision of broader planning, partnership and dialogue to support DRM. In general, there appears to have been little (if any) consultation between ARC and other related initiatives, such as Capacity Development for Disaster Reduction Initiative (CADRI), or other major international players, such as the World Bank.

5 Resourcing Disaster Risk Management

5.1 ARC relationship to national DRM strategy

None of the three case study countries has a comprehensive national DRM strategy in place, though recent initiatives signal progress in that direction. For example, a new comprehensive national disaster risk management plan is being promoted in Mauritania by UNDP through CADRI.[2] However, at the time of the study there had been no cross-coordination between ARC and the Ministry of Environment and Sustainable Development, responsible for developing the national Disaster Risk Reduction Plan. The CSA's ongoing efforts to address food insecurity are primarily financed via donor funded programmes. So, while ARC's philosophy and approach is generally coherent with national policy in terms of food security, resilience, agriculture, and growth, ARC has not been involved in any formal initiative, dialogue and other coordination around a comprehensive DRM strategy.

In Kenya, the Ending Drought Emergencies Framework has recently been developed to guide DRM strategy specific to drought, and a new National Contingency Fund provides thresholds to trigger different types of responses depending on the scale of the emergency (i.e. at the county level, at the national level, and at the point of declaring a national emergency).[3] However, the instruments remain poorly coordinated. A National Disaster Risk Financing Policy is also in development, and is a requirement for accessing other forms of financing through the World Bank (such as Catastrophe Draw Down Option), but has not yet been passed.

According to internal and external stakeholders, Malawi doesn't currently have a national DRM strategy, though a National Disaster Risk Management Policy was published in 2015 by the Department of Disaster Management Affairs.[4] This document lays the groundwork for developing a comprehensive strategy, with Policy Priority Areas that include "Establishment of a comprehensive system for disaster risk identification, assessment and monitory" and "Development and strengthening of a people-centred early warning system." Additionally, according to the Ministry of Finance, the government is trying to build fiscal space to designate funds to use during times of disaster, but the country remains almost entirely dependent on emergency donor funds. The national government allocates approximately 7 million USD per year to restock the National Grain Reserves, which are then drawn down based on the recommendation of the Humanitarian Response Committee, in the event of a crisis.

Nonetheless, in-country ARC representatives, as a well as ARC staff clearly describe disaster insurance as one of multiple tools that must be layered and integrated into a comprehensive DRM strategy. In practice, though, it is not clear to what extent there has been deliberate coordination around how ARC products fit within a broader strategy. It may also be too soon to tell, given that such processes take considerable time to institutionalise.

[2] Islamic Republic of Mauritania. (2015) *Analyse de la Situation du Pays – Mauritanie,* Réduction des Risque de Catastrophe dans la planification nationale (in the context of UNDP Capacity for Disaster Risk Reduction Initiative).
[3] Ministry of Devolution and Planning. (2015) *Ending Drought Emergencies: Common Programme Framework,* Republic of Kenya: Kenya Vision 2030.
[4] Ministry of Economic Planning and Development. (2015) *National Disaster Risk Management Policy.* Government of Malawi.

5.2 Budgeting for ARC premiums

Government officials in all three countries clearly articulated the value of sovereign insurance, and ARC's product offering. Government officials and representatives of multilateral institutions in both Mauritania and Kenya described reduced access to donor funding for disaster response due to donor fatigue, given the large number of competing global emergencies. This has made a "guaranteed" and rapid source of funds in the event of a national disaster highly appealing, particularly in countries like Mauritania and Malawi with small national budgets.

Most stakeholders to whom the question was posed in Malawi, see potential value in sovereign risk insurance for extreme weather. While trust in ARV has weakened, many described an openness to considering future policies if ARV customization can be better adapted to the country context, and if ARC develops new products. Given the government's responsibility for ensuring food security, many see an important role for national level insurance, which provides coverage in cases where the government would not otherwise have sufficient resources. Additionally, stakeholders saw value in ARC providing an early source of response funds, during which time the government could mobilize other resources.

The value in a country the size of Kenya is less clear, particularly when compared to other types of DRM financing (including investing in resilience and mitigation). Multiple interviewees from both inside and outside the government claim that the maximum payout is relatively small compared to Kenya's national budget, and its overall disaster response financing needs in the event of a serious drought. However, leadership within the key partner agency, the National Drought Management Authority, also described seeing value-for-money in ARC's products given a focus on high-impact events, and thanks to the fact that funds are restricted for pre-defined response activities. These same officials argued that, while relatively small, payout funds would go a long way toward supporting critical drought response for the most vulnerable.

Despite stakeholders expressing the value of ARC insurance, it is unclear to what extent this translates into a willingness to budget for and pay the premiums. In Mauritania, the ARC premium payment is not embedded in the national budget, but has been provisioned through the Ministry of Finance. The government is regularly paying ARC premiums, however with a delay. Interviewees cited differing reasons for the delay, including that it was simply a matter of taking time to come up with the necessary funds. Most argued that it was not a sign of weakening interest in ARC. However, one respondent in a well-informed position stated that the reason for the delay was internal political debate about the value of paying the premium during the 2016/2017 season, particularly once it was clear that Mauritania would be highly unlikely to receive a payout.

In Kenya, ARC premiums have been budgeted for as a line item within the national Civil Contingency Fund. This means that it is technically part of the national budget, but ultimately up to one or two people (including the Treasury Cabinet Secretary) to decide whether it will be included or not. In theory, the decision is made based on a technical recommendation from the Steering Committee. However, ultimately the fact that it is a budget item within a line ministry means that it can be very difficult to defend. At the time of the case study, some TWG members were surprised and dismayed to learn that the premium had not been paid and that Kenya had not taken out a policy. Many speculated that one or two officials within the Ministry of Finance had felt unable to justify keeping it in the budget, when Kenya had not seen any benefit during the prior two years. Textbox 2 provides more detail on the reasons given for Kenya withdrawing from the risk pool.

Textbox 2: Reasons for Kenya withdrawing from Risk Pool III

When asked why Kenya chose not to purchase a policy for the 2016/2017 season, interviewees cited wide ranging reasons, including a loss of trust in the model, expensive premiums, unmet expectations, internal coordination challenges, and political sensitivity due to the election season.

Loss of trust: Multiple TWG members claim that ARV customisation had been flawed in the first two years and, according to some, did not accurately predict the impact of drought. Because of this, many stakeholders (including politicians) thought the model should have triggered. They were frustrated by the lack of payout and felt that their case was not properly looked at. Additionally, some important external actors (including the EU and the World Bank) expressed scepticism about the model and began questioning ARC's value for money.

Limited understanding and unmet expectations: Others primarily blamed a lack of understanding on the part of key political decision-makers who do not see insurance as a long-term proposition. Interviewees claimed that many people do not understand that ARC is designed to provide a response of last resort only in cases of severe drought, and expect it to function more like a savings mechanism. These misunderstandings led to unmet expectations, as Kenya did experience drought during the two first years they had purchased a policy. However, the number of people estimated to have been impacted did not reach the necessary threshold to trigger a payout. While there were localised droughts in relatively large areas, the model functions based on aggregated numbers at the national level. Officials who participated in selecting policy parameters for Kenya understood that based on the agreed upon attachment point, ARV had not triggered and were able to explain this to decision-makers, but it nonetheless resulted in reduced buy-in.

Expensive premiums: According to many stakeholders, ARC is too expensive compared to the potential payout. Treasury is facing competing budgetary priorities, and there is a high opportunity cost associated with the sum that Kenya pays in premiums (including using them for immediate response or mitigation). Kenya paid a total of $18mill USD to-date, but currently has not received any payouts. NDMA, which had continued advocating for joining Risk Pool III, were asking Treasury to budget for ARC premiums at the same time as asking for funds to respond to the previous years' drought.

Political sensitivity: Additionally, the 2016/2017 season was a politically sensitive time, prior to national elections. Drought management and response are particularly sensitive politically, so allocating funds to a mechanism considered ineffective was difficult to justify to parliamentarians. This was compounded by observations that other large Southern African countries (such as South Africa) were not buying policies led to a belief that Kenya was paying more than it should, and that other countries were not doing their fair share.

Internal coordination: Finally, there appears to have been a lack of internal coordination at the technical level, and inadequate upward communication to key decision-makers. For example, the TWG teams and informed officials from other key ministries did not know that the Cabinet Secretary for the Ministry of Finance was not planning to include ARC premiums in the budget, and so never had an opportunity to advocate for its inclusion.

Stakeholders in Malawi also expressed concerns that ARC insurance products are expensive from a cost-effectiveness perspective. For instance, the amount paid for the premium could go a long way if used directly for disaster response, and when compared to a similar figure for restocking the Strategic Grain Reserve. During the first year when Malawi wanted to take out a policy, for the 2014/2015 season, they went to the WB and other donors to ask for support in financing the premium. However, the World Bank declined to do so due to concerns that the country was not yet at the level of capacity and understanding to make well-informed risk transfer decisions based on the customised ARV model. Additionally, the request was last minute, and donors were not convinced that the government was taking ownership of the process or willing to invest their own resources in building the necessary capacity.

Malawi self-financed the 2015/2016 premium entirely from the national budget. Given that the fiscal year starts in July and ends in June, the Ministry of Finance budgeted for the premiums more than

six months in advance (in May), signed the policy in September 2016 and made the premium payment in December 2016. However, following the controversy over not receiving a payout following that season, Malawi has not again budgeted for and purchased a policy. Textbox 3 provides greater detail on the reasons provided by interviewees.

Multiple stakeholders expressed the view that if Malawi received a maximum payout, then the premium would be worth it. For example, a premium of 4.8 USD million compares favourably with a maximum payout of 30 USD million, which is equivalent to total budget for maize purchases in 2016/17. However, it would be very hard to justify paying the premium if they are not anticipating a bad rainy season, when they would have a higher likelihood of getting a payout.

Textbox 3: Reasons for Malawi withdrawing from Risk Pool III

Frustration among stakeholders and champions of ARC following the delayed payout to Malawi for the 2015/2016 season is the primary reason for not purchasing a policy in 2016/2017. Decision makers within key ministries were frustrated with the experience. At the time of allocating resources for the 2016/2017 budget, Malawi had not yet heard whether they would receive a payout, which would have made it very difficult to justifying another premium payment. According to one interviewee, if ARC's response had been rapid and favourable (i.e. confirming that Malawi would receive a payout before May 2016), then they would have likely budgeted for a premium for the following year.

As it happened, the political fallout was significant, leading to a context far from conducive to signing another policy. Awareness of ARC's products and services among key groups, such as parliamentarians and CSOs, was much higher than when the 2015/2016 policy was signed, and largely focused on negative coverage of what had gone wrong. This meant that the visibility was also higher, and few officials were ready to defend inclusion of another premium in the budget.

Additionally, as noted by several interviewees, based on climate forecasts Malawi anticipated a good year in terms of rainfall (thanks to El Niña), providing little reasons for joining the pool. However, with the next season projected to be poor, some stakeholders claimed that Malawi may see value in it again.

5.3 Relationship between ARC and other climate adaptation and DRM financing

As stated above, insurance financing for DRM (though not necessarily ARC) is considered within the three countries to be a useful and necessary tool that complements other sources of response funds. However, in all three cases there are concerns about value-for-money, and a perception that a payout (or potential payout) is inadequate to meet the level of need.

Nonetheless, the ARC payout received in Mauritania appears to have been large enough to disincentivise efforts to secure additional disaster response funds. There is no evidence of further mobilization efforts for resources from other partners or donors, as a result of the ARC payout. Previously a state of emergency would be declared, which would be used to seek contributions from donors or partners. There may be a strategic risk that a government does not call a state of emergency and draw on other funding. However, this is also partly the problem ARC aims to solve, because the ARV model serves that purpose, by signalling a catastrophe and then mobilising rapid resources to address it. Additionally, evidence from interviews suggests that the independence afforded by ARC insurance may lead to a risk of reduced coordination with and support from other global organisations.

However, in both Malawi and Kenya, the size of a potential payout (and the fact that it was late in Malawi) is marginal in comparison to the need, and does not seem to have reduced efforts to

secure other forms of financing. With donor funding ever harder to secure, the NDMA in Kenya claims that ARC would help cover a big gap in their budget in being able to respond to more households with greater levels of relief. Similarly, officials with the Treasury assert that there are insufficient funding sources for DRM and disaster response in general, and that ARC may still be an important source of financing. However, others claim that it would be better to use the cost of the premium on resilience programming, or to fund early response for different scales of emergency, rather than waiting for a full emergency to see the value of paying the premium.

Malawi, largely dependent on humanitarian aid for disaster response, attracted significant donor funds following the poor 2015/2016 season. Following a declaration of a state of emergency by the President, Malawi received both in-kind and cash donations from local and foreign partners through the National Disaster Appeal Fund (NDAF). A majority of humanitarian financing is then channelled through WFP which implements the humanitarian response programme on behalf of the government. Since the ARC payout did not disperse as expected, it is impossible to determine what potential influence ARC insurance had, if any, on the level of donor funds made available. However, there is no sign that a timely payout would have reduced the need for or availability of other funding sources, given the scale of the disaster. The total cost of the response following the 2015/2016 season was 380 million USD. Even if Malawi had received a full payout, it would not have covered even 10% of total the funding need.

Another consideration in terms of the relationship between ARC funds and other forms of DRM financing is timing. One of the strongest arguments for the value of ARC products is the relative speed with which a country would receive payout funds compared to other sources. However, as previously mentioned, in Kenya, there are concerns that an ARC payout would not be received and funds mobilized quickly enough to provide “early response” because by the time the threshold is reached for triggering a payout, the situation will already be very serious for large numbers of people. Therefore, rapid drought response would likely be initially paid through a contingency fund that would then be reimbursed with ARC funds. Other interviewees contended that funds would in fact be dispersed more quickly than when appealing for donor funds. However, this point of disagreement has implications for whether Kenya would in fact see value in including ARC insurance among other financing mechanisms that may provide equally rapid funds. This is particularly the case because, as a larger country, Kenya has a greater range of financing options to choose from.

In Mauritania, the response orchestrated with ARC payout funds was in fact described as the quickest ever achieved – possibly because they were able to circumvent bureaucratic processes by channelling funds directly to the National Drought Management Authority, which was then able to put them to immediate use. In Kenya and Malawi the funds are/would be channelled through Treasury Departments, leading to lag time before they could be used. Thus, country-level bureaucracies are an important determinant in how rapidly ARC funds can be deployed, and provide an early complement to other funds that would take longer to access.

The experience in Malawi in 2015/2016 may demonstrate how access to “enough” donor resources to respond to the crisis dis-incentivises purchasing insurance, particularly as the ARC payout did not arrive in a timely manner. In terms of whether DRM financing has been made available to complement ARC, humanitarian and multi-lateral actors were initially interested in co-financing Malawi’s premiums, but ultimately backed out due to concerns with national financial management systems and the validity of ARV. Beyond humanitarian response and public funds, there is no evidence of other sources of DRMF made available to complement ARC. According to one interviewee, however, receiving early ARC funds could shift the negotiating terms with donors, as Malawi would not need to attract additional response funds as urgently.

There does not currently appear to be much relationship or coordination in any of the three countries between disaster risk financing and climate adaptation financing. Kenya is the most advanced in this regard, with significant programmes underway to improve climate adaptation and risk mitigation. In Malawi, there appear to be relatively few efforts relating to disaster risk reduction and prevention – rather, the focus is overwhelmingly on building resilience more generally, or response. This limits opportunity for overlap between the climate adaptation and DR agendas. However, according to two stakeholders external to the government, there is currently greater interest among donors and within the government in how to build agricultural diversification, risk mitigation and climate change adaptation.

6 Coordinating disaster risk management & response

6.1 Stakeholder and network engagement

The network of stakeholders that ARC engaged in each country appears to have been generally limited to select politicians and high level decision-makers, as well as technical personnel engaged in the TWGs. Interviewees spoke positively about this engagement, and commended ARC's proactive early engagement and responsiveness when technical questions or issues arose. However, it appears that this mode of engagement failed to generate broader political buy-in. Additionally, interview findings suggest that ARC has not engaged very proactively with civil society or international agencies beyond a narrow set of key partners, such as WFP.

In general, the NGOs/INGOs in Mauritania appear to align with ARC's approach on how to mitigate the impact of climate disasters, and agree for the need to have more reliable financing mechanisms to fund a timely response. However, interviewees from such organisations also expressed the importance of having coordinated strategies and communication platforms for a more effective response, which they have thus far felt largely excluded from. From the perspective of ARC staff, however, the NGO/INGO sector in Mauritania is itself not very well coordinated, with scattered efforts that make it difficult to partner efficiently. Similarly, representatives of civil society and humanitarian organisations reported a sense of exclusion in Kenya, where even WFP spoke to a lack of transparency and communication in decision making processes around ARC. Several government officials in Kenya asserted that ARC's political engagement would have been more effective if it would have included a broader range of stakeholders from the beginning, both within key government agencies, as well as among other humanitarian actors. However, the perception of ARC Agency having a strong agenda to "sell" ARC insurance limits the potential for them to engage as a more neutral humanitarian actor. In Malawi, many civil society and humanitarian organisations only learned about ARC following the negative media and controversy, and expressed concern about a lack of transparency and broader stakeholder consultation. While some reactions have been highly critical, this new awareness has also created avenues for potential support, with some more positive assessments of the value of disaster insurance in the country and more broadly being published.

Generally, while ARC appears to have engaged the relevant networks to generate early-stage buy-in for ARC products and services and to launch capacity building programs, it has likely been too narrow of a network for ensuring the transparency, quality-assurance, and multi-stakeholder support necessary for sustaining policy and practice change within member countries. However, it is somewhat unclear who should be ultimately responsible for such action. Some interviewees, including ARC Country Engagement Managers, contend that it should be the country's responsibility. Others claimed that ARC needs to more proactively support broader communications and engagement campaigns.

6.2 Internal coordination and ARC Technical Working Groups

ARC technical activities in country are managed by an appointed Government Coordinator who oversees the functioning of the TWGs responsible for ARV customisation, contingency planning and risk transfer decisions. The Government Coordinator, whose salary is subsidised by ARC for an agreed upon duration within the MOU, is the primary liaison between the country and ARC, along with an appointed ARC Supervisor. The Supervisor's role is to raise awareness within higher political levels and convene a steering committee which signs off on the Operational Plan and risk

transfer parameters and premium amounts. In each case, ARC is embedded within the national agency most directly responsible for disaster management and/or food security response, with technical experts then recruited from other relevant agencies (such as meteorological departments and the ministry of agriculture) to contribute to the work. In practice, the TWGs function somewhat differently in each country, depending on when ARC's capacity building program started and the level of autonomy around undertaking annual updating activities.

At the time of the case study, the TWG in Mauritania convenes as needed around key tasks (such as at the time of refining and validating the parameters of the ARV model each year), and as defined within the agreed upon work plan. This is driven largely by the Government Coordinator and ARC Country Engagement Team. The role of the technical working groups is most clear in terms of establishing the early warning system, with specialists from multiple ministries providing data and input for improving the accuracy of modelling. The Operational Plan does not appear to undergo much updating year to year. Similarly, the TWG in Kenya met most frequently when customising ARV, however this was not done in a highly planned and structured way. There were more structured meetings twice a year to discuss the model and risk transfer options prior to signing a policy, at which time the TWG received technical advice from across relevant ministries. After liaising and consulting with ARC, the TWG would then make recommendations of which policy parameters to include in the technical report that would go to Treasury.

In Malawi, select individuals from the Ministry of Agriculture, Ministry of Finance and Economic Development, DoDMA and the Department for Climate Change and Meteorology formed ARC's core in-country TWG team with sub groups focused on finance/risk transfer, contingency planning and ARV customisation. Apart from government institutions, TWG membership also involved development partners such as WFP, the Donor Committee for Agriculture and Food Security and FAO. During the customisation process the team focused on ARV customisation would meet 2 to 3 times per month. Once they were satisfied as technicians they presented the model with recommendations to the National Disaster Risk Management Technical Committee of Directors chaired by DoDMA and the National Disaster Risk Management Committee of Principle Secretaries chaired by the Chief Secretary to the Office of the President and Cabinet. The final approval was done at cabinet level through the Minister of Finance. However, as in Kenya, several interviewees within the TWG suspected that a decision had been made within the Treasury about whether or not to sign a policy prior to receiving technical recommendations from the TWG. While this was not corroborated by all interviewees, and disputed by ARC, the fact that such questions arise demonstrates the challenge of consistently ensuring that policy decisions are informed by a strong technical understanding, rather than political influence.

Women are represented in the TWGs in Kenya and Malawi, though not in Mauritania. However, gender is not perceived as a significant concern for representation in Mauritania and there are no current efforts to address this gap. Encouragingly, several interviewees claimed that there is growing respect and awareness about women's professional roles within key positions in the government, and this is seen within positions relevant to ARC. For example, the head of the CSA is a woman, as well as the current ARC Supervisor. Multiple interviewees involved in implementing the payout spoke to efforts to ensure that it was conducted in a gender-sensitive manner. Further detail is provided on this in Section 7. In Kenya, interviewees had mixed views on equal gender representation. Some claimed low representation, and gave the opinion that women had self-selected out of the TWG due to a lack of interest or technical expertise. However, others claim balanced representation of women in both the TWGs (though this was not reflected in the numbers) and the Kenya Food Security Steering Group. Women were perhaps the best represented in Malawi, where there is a ratio of 1 to 6 on the TWG team focused on ARV customisation, and where women outnumbered men on the risk transfer team. Equal gender

representation on the TWGs and in ARC decision-making has not been a specific area of focus, however this preliminary assessment may be useful in bringing greater sensitisation.

ARC's engagement with the TWGs was generally well-regarded, although with recommendations for improvement. The Country Engagement Manager and ARV Technical Specialists in Mauritania were commended for providing significant ongoing technical input for establishing ARV parameters, given there are still capacity gaps in the degree to which ARV is mastered locally. In Kenya, the National Drought Management Authority chose to coordinate the ARC TWG via the Kenya Food Security Steering Group. ARC's engagement was considered effective in working with the TWG on the contingency planning process. However, early engagement with the TWG on DRM financing appears to have worked less well. Multiple interviewees expressed concerns that ARC was pushing for higher premiums, and that staff were more responsive to higher-level decision-makers (i.e. within the Treasury) when it came time to support decision-making about risk transfer (i.e. sign a policy). Additionally, the three risk transfer options proposed by ARC during the first two years were not seen as very flexible and appeared limited to higher risk transfer levels.

ARC's engagement with the TWG on ARV modelling in Kenya also led to some early frustrations, due to the limits of customisation and flexibility. Additionally, the ARC team worked on customisation remotely, which did not lend itself to the type of hands-on support and knowledge transfer necessary for quality ARV customisation. However, this working dynamic appears to have improved significantly over time, with ARC providing more in-country support when technical issues are raised. More recently, ARC has been responsive to the TWG's concerns and justified its choice of ARV modelling features, leading to a consensus that ARC has become stronger at responding at the technical level. The current partnership is working well and there is sufficient engagement and support from ARC to the TWG in terms of how the model functions.

In Malawi, ARC's engagement with the TWG and during the ARV customization process appears to have advanced smoothly, until the realisation that ARV failed to capture the extent of the impact of the 2015/2016 dry spells. The engagement began with the ARC regional team briefing TWG members and working with staff from the meteorological department (MET) to select the optimal satellite data sets by correlating them with weather observations. The MET team also determined rainfall parameters, including the start and end of season conditions, rainfall thresholds and length of season. ARC provided technical guidance in working with the agriculture team to determine and choose an average crop cycle from 3 varieties (local, composite and hybrid maize) to then compute the Water Requirement Satisfaction Index (WRSI). This then fed into the team working on the vulnerability indicators, and finally those working on risk transfer and contingency planning. TWG members felt they had brought together the best minds across key agencies to work on the customisation and contingency planning. However, some also claimed there was not enough engagement with agricultural field staff in different districts across Malawi to get the necessary current information about crop varieties being planted, and that it would have been important to have more involvement within the Ministry of Agriculture.

Despite the reliability issues with ARV that arose in Malawi, members of the TWGs were generally quite positive about ARC's engagement. ARC was seen to be helpful and available to support with the customisation process and capacity building. The ARC team assisted whenever the TWG faced challenges with customization, and ARC's ARV technicians were very conversant in the software. According to a TWG member focused on vulnerability, the ARV Technical Specialists were also flexible to incorporate changes based on suggestions from the team. However, there were complaints that the process was not inclusive enough. From the perspective of stakeholders outside government, the TWGs were too restricted to a small number of technicians. There was no room for greater awareness building and input, leading to flawed modelling, and ultimately a serious lack of buy-in.

Since the controversial payout in Malawi, there has been very little engagement or communication within the TWG, which has not (yet) reconvened to work on updating the customisation. There have, however, been ongoing meetings and a recent stakeholder sensitization workshop hosted by ARC (June 2017).

Among the case studies, there appears to have been a shift in coordination among relevant stakeholders in Mauritania and Malawi. In Mauritania, multiple interviewees claimed that the experience with ARC strengthened inter-agency coordination and data sharing across government institutions. Additionally, the CSA appears to have recognised duplication with other humanitarian efforts while implementing the ARC payout, and said that they plan to engage more proactively to coordinate activities in the future. This is likely an unintended result of the payout experience, and not yet evidenced, but may demonstrate that ARC products could indirectly lead to greater coordination and layering of humanitarian response efforts. Interviewees across multiple ministries in Malawi also pointed to increased coordination between relevant ministries and institutions as one of the key positive outcomes of ARC's engagement and capacity building program. Government respondents in Malawi claim that there has not been a shift, however, in how Malawi coordinates with other humanitarian actors. Moreover, an interviewee from the non-state sector who commended relevant government agencies for generally being open in coordinating relief activities in previous years, claimed that they did not experience such openness in regards to ARC. Given that Kenya has not received an ARC payout, there is not yet evidence of any shift in coordination of relief activities.

7 Design and implementation of the disaster response

7.1 Type of response and appropriateness

The contingency planning process serves to establish an agreed upon "menu" of activities within the approved Operational Plan from which a country can then choose in the event of a disaster. Once a payout has been triggered, a country will develop a Final Implementation Plan (FIP) that documents how the funds will be used, depending on the scale and reach of the disaster, the size of the payout, and other context specific factors (such as the functioning of local markets and available procurement of staple foods). The following section describes the activities originally included in the Operational Plans for Mauritania, Kenya and Malawi, as well as the process for developing and implementing the FIP plans used for the 2014/2015 payout in Mauritania, and the 2015/2016 payout in Malawi.[5]

Mauritania's Operational Plan calls for cash transfers and food distribution, however only food distribution was implemented (rice and oil), for the first payout. This was because the infrastructure was not yet ready for implementing cash transfers, and the CSA already had extensive infrastructure and expertise for handling a rapid food distribution response. However, key stakeholders to the government, as well as some local mayors described a desire for cash transfers or other forms of subsidised access to food that would better support local economies.

Malawi's Operational Plan calls for food distribution (including through a draw-down of the Strategic Grain Reserve, thanks to guaranteed replenishment) and cash transfers. A primary reason for selecting these activities included DoDMA's experience implementing them in the past, ensuring the speed with which they would be able to respond in the event of a disaster. Additionally, using funds to replenish the Strategic Grain Reserve allows for an immediate drawdown as mandated by the draw-down guidelines, and reduces the time that would otherwise be needed for procurement. Ultimately, the decision to distribute food or cash was expected to be contingent on functioning markets that allow people to purchase staple foods at the time of the disaster. Malawi also considered including the scale-up of an ongoing cash for work program, but decided against it. The team ultimately concluded that it could cause controversy as the payments would be quite low compared to the unconditional cash transfers. Additionally, the amount was deemed to be too small to significantly benefit households faced with humanitarian crisis.

In Kenya's case, both cash transfers and food distribution were chosen due to ease of accountability, traceability, ability to quantify aid provided, and availability of existing infrastructure. The targeting and distribution mechanism for cash transfers is a planned scale up of the national Hunger Safety Nets Program (HSNP). This scale up has not yet been tested since Kenya did not receive a payout during the two years when they joined the pool.

7.2 Development of the Final Implementation Plan

In both Mauritania and Malawi, the process for developing the Final Implementation Plan (FIP) was considered flexible enough to respond to the unique timing and realities on the ground, while still selecting from activities that had originally been agreed upon within the approved Operational Plan. The process for developing the FIP appears to have been a joint effort in both cases. In Mauritania,

[5] For the sake of brevity, a high-level summary of activities included in the Operational Plans is provided here, however, the full document for each country is available for download on the ARC website at http://www.africanriskcapacity.org/2016/10/31/risk-pool-ii-20152016/.

it was drafted by the TWG and signed off on by the CSA and ARC Steering Committee. In Malawi, due to the late arrival of the payout decision, all actors involved in the humanitarian response were convened to identify existing gaps, and to determine how ARC payout funds could address these deficits. According to a representative from one of the humanitarian response NGOs, this inclusive process for developing the FIP was incredibly useful, thanks to broad based consultation on how the funds could best be used in alignment with the Operational Plan.

However, findings suggest that the process for developing (and even revising) the FIP may not have been rigorous enough to avoid the influence of political factors in how funds were used. In Mauritania, which received a payout of USD 6.3 million in January 2015, a last-minute decision to distribute rice rather than wheat as the staple food resulted in 12,000 fewer households receiving food aid, given the more expensive procurement. Reasons given included the following: rice is locally produced and supports Mauritanian farmers, thus aligning with government policies to promote local food production; rice is locally preferred as the staple food, rice was available immediately and did not require international procurement and importation, rice can be more efficiently used for consumption (wheat takes longer to process and consume). While the logic is understandable, the decision-making process resulting in this change is not entirely transparent. Trade-offs may be necessary between the speed associated with distributing a given staple food, and the numbers reached, but the resulting number of households impacted in this case appears difficult to justify. Additionally, ARC's role in providing due-diligence in confirming the decision is not entirely clear, as it appears to only have been informally communicated to ARC via telephone ahead of implementation. As such, a shift in government priorities to promote local production of staple crops (such as rice), likely had an impact on decisions made within the FIP, to the detriment of households who would have otherwise received food assistance.

Given the late arrival of the payout in Malawi, there was initial debate about how the USD 8.1 million would be used. The Treasury was resistant to the idea of cash transfers and wanted to use all the funds to replenish the grain reserves. However, this did not fit within the original Operational Plan. DoDMA explained the restrictions around use of the funds (according to the Operational Plan) and then took a collaborative approach with other humanitarian actors to identify and fill key gaps within the ongoing humanitarian response. Ultimately, the group chose to purchase pulses to complement ongoing food distribution efforts, agreed to reimburse WFP for expanded cash transfers (WFP took out a loan to implement cash transfers with the guarantee that they would be paid back by ARC funds), and (as confirmed by the FIP Amendment Application Form from DoDMA dated 6th March 2017) agreed to purchase maize with the remaining funds in September to replenish the Strategic Grain Reserve. According to a representative of a humanitarian NGO closely involved in developing the FIP, ARC was very flexible in reviewing and approving the activities that DoDMA wanted to undertake based on realities on the ground.

However, there are open questions as to the timing of the maize purchase, and the reasons for waiting so long to replenish. According to multiple stakeholders from various ministries, the government should purchase maize in June, July or August, immediately following harvest when prices are lower, and as outlined within the recently revised Strategic Grain Reserve Guidelines. Interviews with stakeholders closely involved in decisions about how to use the funds have not provided a convincing reason for waiting until September to purchase, and on balance, the evaluation team does not feel that they received satisfactory justification. The maize situation in Malawi is complex, with a history of corrupt practices and recent scandals, thereby complicating market entry decisions and casting doubt that replenishment would occur within the optimal timeframe for making most efficient use of the funds.

There also appear to have been misperceptions within the government about Malawi's independence in choosing the activities for which the funds could be used once a payout was

approved. This was confirmed by the Ministry of Agriculture and the Ministry of Finance, who had the perception that the AU was dictating how Malawi could/could not use ARC funds. This again reflects misaligned expectations among less-informed officials about flexibility in use of the funds. For example, some government officials wanted to use the payout to finance premiums for the next two years. However, DoDMA (primarily responsible for the contingency planning and implementation process) was grateful to have predetermined activities for which the funds could be used, thus assuring that ARC funds would directly support humanitarian response to the drought.

7.3 Targeting, timing and accuracy

In Kenya, the targeting of response activities would occur through existing HSNP mechanisms within the four counties where the program currently functions, and where the largest numbers of vulnerable households are located. However, due to the need for demonstrating benefits to other counties within Kenya there have been discussions of extending the reach of an eventual ARC payout within the Operational Plan to include other counties. This may generate broader political buy-in from Parliamentarians, but also raises questions about how to provide for equitable distribution across the country, without compromising the accuracy of targeting the most vulnerable households, largely concentrated in the arid lands currently served by HSNP. In terms of timing for implementing expected payout activities in Kenya, according to the Operational Plan, HSNP would scale up to reach additional households within 120 days of receiving an ARC payout, and the entire activity would be completed within 12 months. The plans include the following phases:

- Rapid assessment phase from Day 0-15
- Targeting phase from Day 16-25
- HSNP scale-up from Day 26-111

While this is a rapid response relative to when the payout is received, multiple stakeholders are concerned that by the time the end of season ARV report would trigger a payout, given the parameters of risk transfer agreed in the policy terms, there would be thousands of households already in a desperate condition. For this reason, an ARC payout to Kenya would likely be used to reimburse the National Drought Contingency Fund for resources spent to provide an even earlier response via pre-approved activities.

In the case of Mauritania, the rapid timing of the payout combined with the planned targeting approach was deemed to be highly effective by government officials familiar with the process. The CSA found value in having an early indication that they were likely to receive a payout, as this then allowed additional time to draft the FIP. All interviewees generally had very positive perceptions about targeting accuracy and the transparency of the process. It was designed to be very consultative at local levels and to include strong coordination with local officials. The process for identifying vulnerable households was also quite decentralised, and deliberately addressed gender as a component of vulnerability by prioritising women-headed households.

According to Malawi's Operational Plan, either cash or food transfers are designed to begin reaching households two months following receipt of the payout. As the ARC payout arrived in January 2016, much later than would have been expected if ARV had triggered, it did not ultimately function as an early source of response funds. Additionally, even once the funds had been received within the Treasury, they were transferred to an operational account in March 2017. This means that the funds had still not been used almost a full year after the government declared a state of emergency in April 2015.

Targeting for use of the current payout, which provides a complementary source of funds to emergency response activities already underway, has followed the Malawi Vulnerability Assessment Committee's standard approach, which indicates those districts and villages most affected using the Joint Emergency Food Assistance (JEFA) criteria. DoDMA and the WFP's local implementing partners engage Civil Protection Committees (CPCs) to then identify actual households at the village level most in need of emergency assistance. The existing targeting mechanism under MVAC is likely to facilitate response delivery to vulnerable populations. However, some respondents recommended a review of this targeting mechanism to ensure that ARC funds would in fact reach those who had lost crops due to the disaster. No documentation is currently available on the actual use of ARC funds, making it too early to assess the accuracy of targeting methods.

7.4 Contribution to protecting livelihoods and reducing asset loss

Kenya has not received a payout and the use of ARC funds in Malawi had not yet been documented at the time of the study, making Mauritania the only case study country where it is possible to assess indications of whether a payout contributed to protecting livelihoods and preventing asset loss. However, the current study did not include beneficiary surveys or interviews, which will be conducted during the impact evaluation phase. The assessment therefore relies on perspectives from stakeholders within the Mauritanian government, other humanitarian actors, and on secondary data from a process audit completed by Kimetrica in November 2015 following use of ARC funds.

Indications generally show that the payout had a positive impact on protecting livelihoods. According the process audit, almost half of the households receiving food were prevented from the distress sale of livestock during that time.[6] The duration of aid – 4 months – was also seen to be highly valuable at reducing vulnerability, and this was the first time the CSA was able to provide such a duration of support. Interviewees also perceived the timeliness of the payout to have been very positive in helping reduce the number of households reaching crisis. ARC funds were received in January 2015 and vulnerable households received the first monthly food distribution in April 2015, well before the typical start of the lean season in June. However, the amount of the payout was still considered to be insufficient – barely addressing the basic needs of Mauritania's most vulnerable households, such that as soon as aid stops vulnerability returns. More detail is provided in Textbox 4.

Textbox 4: Results of the Mauritania payout

The successes associated with the payout in Mauritania provide a strong example of how ARC funds can contribute to a more rapid and effective response to disaster than has previously been possible across most of the continent. The combination of early warning, contingency planning, and risk transfer allowed the country to orchestrate a more timely and comprehensive response than ever before. According to the process audit, the targeting process, geographic coverage and nature of the intervention were largely consistent with the Final Implementation Plan (FIP), though changes were made to the type of food distributed, the number of target beneficiaries and the budget. Overall, however, the Mauritanian Food Security Commission was found to have achieved a cost-effective and efficient response delivery, with achievement of the first two objectives outlined in the FIP, and anticipated achievement of the third (at the time of the process audit). These objectives are the following:

1. Quicker provision of help to households
2. Rapid implementation of initiatives put in place within the ARC framework
3. Distribution of food in sufficient quantity and quality to target households within the prescribed time-

[6] African Risk Capacity: Process Audit Report: Mauritania. Submitted by Kimetrica to ARC Secretariat, November 2015.

period.

Early statistical findings on the results of payout implementation should be treated with caution given the small sample size of the spot checks, which included 47 households sampled from the target population in Gorgol and Brakna regions. Additionally, the process audit authors note that a CSA representative was present during the interviews, potentially creating bias. Nonetheless, the results provide some early indication of positive outcomes for beneficiaries. First, distribution appears to have been consistent with plans in the FIP, as 100% of households interviewed said they received 50kgs of rice and four litres of oil per month for a four-month period (though 96% of households interviewed found this quantity to be insufficient), with 100% satisfaction in terms of food quality. 40% said that the food distribution had prevented migration, and 100% said that the number of meals consumed per day had increased over the past four months. Finally, 46% said that the food distribution had prevented the distress sale of livestock over the four months when they had received it.

As discussed in more detail in Section 7.5, these successes are attributed to early communication from ARC that Mauritania was likely to receive a payout, efficient bureaucratic processes resulting from ARC's willingness to deposit the funds directly into CSA's operating account, CSA's existing expertise and infrastructure, and strong coordination between national, regional and departmental institutions.

The number of households covered by the payout was also considered to be insufficient. Some interviewees suggested that this insufficiency resulted from the customised ARV model not including the impact of the drought on livestock and only one variety of sorghum. If included, respondents believed this may have increased the payout amount from ARC to better match the scale of the disaster. Additionally, given that Mauritania has experienced multiple severe droughts in rapid succession, the country may not have fully recovered from the previous drought. To the degree that people had already sold off assets, the ARC payout met only their most basic needs, contributing more to basic survival than sustained resilience. This assessment highlights the importance of tying the use of insurance-based disaster response financing to a broader food security and development strategy, so that there are fewer unmet expectations related to the scale and purpose of the payout, and the amount of coverage based on decisions about the level of risk transfer and associated premiums.

In Malawi, perceptions of the payout were much less positive due to its late arrival. Nonetheless, once DoDMA was alerted to the fact that they would receive a payout, they were able to access other funding via WFP (stipulated on future reimbursement from ARC funds) to expand cash transfer programmes and still generate needed relief. The impact of these funds has not yet been substantiated in an evaluative study, and it is premature to assess the contribution of an ARC payout to the protection of livelihoods and food security, particularly given the anomalous nature of Malawi's experience. However, due to the late receipt of ARC funds, it would be difficult to argue that ARC contributed to the protection of livelihoods and the prevention of asset loss through early response. Stakeholders also raised concerns about the relatively small amount ultimately received, as compared to the scale of the disaster, expressing scepticism that it was enough to serve ARC's stated purpose. Additionally, since the payout was integrated into a broader humanitarian response, its impact is not currently clear. This said, it is worth again noting the positive reaction of humanitarian actors to the consultative process by which Malawi chose to allocate ARC funds to bridge gaps that had been noted within the humanitarian response landscape.

7.5 Implementation monitoring and process learning

As the results of ARC funds used in Malawi are too soon to assess, it is only possible at this time to draw clear lessons from the payout implementation and monitoring in Mauritania, which, as

noted above was generally perceived as having been very successful. Factors contributing to this success include the following:

- ARC funds were deposited directly into the CSA account, leading to a rapid response time.
- CSA's previous experience with delivering food aid and its administration structure allowed rapid mobilization of needed resources (human and otherwise) for implementation.
- CSA has the existing infrastructure (food trucks, decentralized 'shops', local personnel, etc.) in place for rapid delivery, leading to very cost efficient delivery (i.e. low cost of aid delivery per household per month).
- Strong coordination between regional and departmental institutions, and with the ministry of the interior allowed for an efficient response.
- Flexibility associated with the development of the Final Implementation Plan allowed the CSA to choose rice instead of wheat (though this may have come at questionable cost).

However, CSA officials responsible for overseeing implementation also cited the following challenges:

- The amount of aid delivered at the household level was insufficient and thus rationing was frequently practiced / needed.
- Duplication occurred among the CSA and other humanitarian actors due to poor coordination and communication.
- Inclusion of more response activities in the Operational Plan would allow the CSA to be more responsive to the unique contexts and needs among the vulnerable populations targeted. For example, the staple food item should be varied by need, geography, etc.
- Government representatives and other humanitarian actors argued for developing the competencies and infrastructure to implement cash transfers, particularly in more urban areas where functioning markets exist.

In terms of implementation monitoring, there was a perception that ARC requirements were not entirely explicit up front, and that the reporting tools could have been clearer. Nonetheless, the process was well-documented through three monthly reports and a final report, as well as via the process audit conducted shortly after.

Several important lessons emerge from the payout experience in Mauritania. First, there is a need for greater communication and coordination with other humanitarian actors to avoid duplication and make the most efficient use of resources. Additionally, the lack of coordination and communication may be interpreted as a lack of transparency in how targeting is conducted or how funds are spent, and can be detrimental to broader efforts to demonstrate ARC's value. Second, last minute procurement decisions that dramatically impact the numbers of households receiving food assistance should be made more transparently, ideally with the use of an established decision-making framework. While ARC may not realistically be able to determine in a short amount of time the validity of justifications for making last minute procurement changes, it would seem critical to employ a more structured process for evaluating and discussing them. If Mauritania does indeed move toward cash transfers as their primary intervention, this point may become less relevant. However, this still appears to be several years away. Finally, an area of learning related to implementation of the CP is the potential value of having a greater diversity of responses which can then be selected and implemented in tandem based on the level of vulnerability of different beneficiaries, the availability of different forms of assistance at the time of a payout, and the characteristics of the region.

8 Sustainability of ARC's activities

8.1 Effectiveness of capacity building

Technical training and capacity building are central to the service that ARC Agency provides, particularly in the establishment of early warning systems and contingency planning, as these are fundamental to achieving ARC's ultimate stated impacts. The capacity building and assistance provided is based on an initial evaluation of needs and knowledge gaps within the country. A negotiation/dialogue process is then put in place between ARC and the national counterparts which results in the signing of an MOU and work plan that outlines the roles of each for the capacity building program.

As a result, ARC has provided technical assistance in the following areas for each country: customising and validating the ARV model, contingency planning, concepts around risk transfer and insurance, and, in the case of Mauritania and Malawi, developing a final implementation plan. Additionally, ARC offers (as detailed within the Country Work Plans) to provide assistance at the request of the government around developing a holistic national strategy for disaster risk management and ultimately signing an insurance policy with ARC Ltd. ARC would facilitate dialogue and agreement among key government stakeholders, support decision making around the extent of coverage and associated premium payments following the country's needs and budget, and advocate for political support and buy-in to the idea of disaster risk insurance. Interview findings would suggest that the national disaster/drought management agencies in each country were not inclined to ask ARC for support in developing a more holistic disaster risk management strategy. Several reasons emerge to explain this. Responses suggest that ARC is not perceived as offering neutral advising around DRM strategy, given the agency's focus on promoting the uptake of ARC insurance products. Additionally, the case study countries each have ongoing initiatives with other partners to support improved DRM strategy and planning, making it unclear how exactly ARC's services for developing a more holistic DRM strategy (including insurance financing options) could complement ongoing efforts. In some cases, in-country stakeholders do not necessarily make the link between engagement with ARC and other ongoing initiatives. Nonetheless, all countries worked closely with ARC in customising ARV and validating it with other early warning systems, developing contingency plans aligned with existing response strategies, elaborating insurance parameters and signing a policy with ARC Ltd (at least for one season).

During the first years of ARC's capacity building program, ARC hosted regional workshops attended by representatives and technical staff from multiple countries. However, ARC found that the people attending the trainings were not necessarily those engaging in the technical work back home, and that the wide range of skill-levels and capacities present made it difficult to teach at the right level for everyone. This was the found to be the case in Kenya, where the person ultimately tasked with doing the technical work to customise the model for the 2014/2015 season had never attended an ARC workshop. In the case of Malawi, a select handful of TWG members would attend and then be responsible for transferring information to the rest of the group, though the knowledge was not always shared. The capacity building workshops therefore changed to in-country training sessions where all key technical staff, as well as a broader range of local stakeholders would be able to attend. This improved the situation in Kenya, where the relevant technical people from ministries and NGOs attended the technical workshops in 2016/2017. However, according to some TWG members, it is still challenging to get enough of the "right" stakeholders in the room, due to competing priorities on people's time. Beyond the formally organised trainings and workshops, a significant amount of capacity building appears to occur

through informal and ongoing consultation between the ARC Country Engagement Manager, the Government Coordinator and the ARC Supervisor.

In all three countries, TWG members spoke highly of the trainings provided by ARC. In Mauritania, interviewees expressed a very positive view of the ARC team that has supported at the country level, including their dynamism and responsiveness. Stakeholders in Kenya who had attended regional and local ARC workshops spoke to their value in gaining technical capacity related to ARV customization and associated policy parameters. This was also the case in Malawi, where TWG members said that ARC was effective in teaching about ARV. Following the capacity building program, the technical team in Malawi can now explain it to decision-makers and answer questions as needed. Additionally, TWG members working on ARV understand how satellite rainfall data can be linked to production and vulnerability data to predict disasters using a more holistic model. They have learned how to work with a cross-sector team on customisation, and see the value of their data for other aspects of the government's early warning and disaster response systems (though it is unclear whether this learning has translated to other early warning systems).

In the case of Kenya, ARC's technical support appears to have helped build capacity in early warning and contingency planning, though less in building generalised capacity in DRM (given that Kenya already has relatively high capacity). However, people within key Kenyan agencies are now sensitised to the option of using sovereign insurance as one of many financing tools for DRM. Additionally, as the TWG's expertise and experience with ARC has grown, the technical team responsible for ARV is now able to explain and justify customization and risk transfer decisions to higher-level decision-makers independently of ARC.

Despite these positive views on the technical training and assistance, there are mixed views on the adequacy and effectiveness of overall capacity building efforts. The capacity building in Mauritania and Malawi is widely considered to have been insufficient. For example, multiple stakeholders within the CSA expressed a need for Mauritanian government staff to have a higher level of technical capacity to take fuller ownership of the ARV model for its effective ongoing use, and to have greater trust in its functioning. While capacity has improved, recent turnover in technical areas has unfortunately made it necessary for ARC to repeat trainings on the basics of ARV to bring new technical staff up to speed. This is also a serious concern in Malawi, where a system of common service rotates civil servants between different ministries. This makes it particularly difficult to sustain internal capacity and knowledge champions within key ministries over time. There is also a need for the TWG's skills to be developed in greater depth, so that knowledge can eventually be transferred internally. Some government representatives in Mauritania suggested that ARC's initial engagement in the country was motivated by proving the viability of the model and encouraging the quick signing of a policy, at the expense of ensuring greater local capacity, ownership, relevance and accuracy.

A similar sentiment was expressed by TWG working group members and other stakeholders in Malawi who claim that those involved in developing the WRSI "graduated too early," as demonstrated by the problems with ARV customisation in 2015/2016. According to the team responsible for developing the Operational Plan and Final Implementation Plan, the contingency planning trainings provided little value, other than training the team to fill in the new template that ARC had provided. The government had already been engaging in contingency planning for a long time. Nonetheless, there is agreement across government agencies and among external actors that a lot remains to be done in terms of building capacity for broader understanding of insurance and risk transfer concepts.

TWG members participating in ARV customisation claim that configurations have been completed by ARC, but with ongoing consultations around premium costs and associated coverage based on the outputs of the model. In Kenya, Mauritania and Malawi, there is consensus on the need for

ongoing ARC Agency support each year. These findings suggest a need to restructure and/or possibly expand the capacity building program to promote inclusion of a broader set of stakeholders, as well as to deepen the level of knowledge and skill in each country. Additionally, it is important to have a formal monitoring system to review and report on the effectiveness of various capacity building activities, both for country awareness as to the areas where the most support is needed, and to focus investment on those capacity building activities found to be most effective.

8.2 Existence of in-country champions for ARC

Given the approach of embedding ARC representatives within government agencies to promote country ownership, effective in-country champions who continue to advocate for the value of sovereign disaster insurance (and ARC's products more specifically), are critical to the model's success. Some such champions were identified in Mauritania, particularly in the early stages of ARC's engagement. Indeed, several strong proponents led Mauritania's initial engagement vis-à-vis ARC, including leadership within the WFP, the former Food Security Commissioner, and the former ARC Supervisor. However, there has more recently been significant turnover within these key roles, leading to questions about whether those newly assigned to them will sustain the advocacy efforts necessary to continue Mauritania's commitment to paying premiums and investing staff time/capacity.

In Kenya, strong and effective knowledge champions are present at the technical level and within NDMA, which is spear-heading on the technical side. However, the upward communication to politicians and decision-makers necessary to maintain the political will for ARC products does not seem to be sufficiently impactful. Similarly, the Kenya Food Security Steering Group and TWG have strong knowledge and understanding, but this does not seem to effectively translate to greater understanding and buy-in among political decision-makers.

In the case of Malawi, the original Government Coordinator, who was an Economist within the Ministry of Agriculture, had been instrumental in bringing people together and moving forward the ARC agenda. However, he has now been promoted and transferred to another ministry, which makes it harder to be fully involved. Due to the serious fallout after the initial "non-payout" in 2016, there appear to be very few technical or higher-level political champions remaining. When asked about champions, several interviewees mentioned the Vice President as someone who understands the value of insurance and the need for DRM. Others included the Minister of Finance and Minister of Foreign Affairs, neither of whom the research team managed to secure interviews with. Interestingly, despite the negative publicity that ARC has received in Malawi, several people also pointed to civil society actors as potential new champions. For example, CARE recently initiated at least one stakeholder discussion that included key government ministries and NGOs to discuss the potential way forward in looking at climate insurance to complement other DRM financing approaches.

These findings again point toward a need for broader awareness and sensitisation campaigns, although in some cases the dearth of existing champions (such as in Kenya and Malawi) may result from a determination among government officials that ARC's drought insurance product does not provide the necessary value for money to move forward.

8.3 Government commitments of resources and time

All case study countries demonstrated an initial commitment of resources (premium payments) and time (participation of agency technical staff and representatives in the TWG and Steering Committees). This appears to be continuing in Mauritania, particularly with the recent creation of an inter-ministerial committee to oversee and approve Mauritania's risk transfer decisions. This may be a sign of government buy-in and commitment. However, one respondent claimed that it rather signalled a perceived need for greater oversight. In any case, reciprocal time commitment appears marginal, as the TWG sub-groups typically only meet once or twice per year, and with members often absent. National-level resource commitment is also marginal. Mauritania has continued paying annual premiums, and has integrated ARC into existing structures, such as the CSA. However, both Kenya and Malawi have stopped investing resources, given that neither has taken out a policy for the 2016/2017 season. Following Malawi's experience in 2016 and despite claims that stakeholders still see value in the product, there is reticence to commit any additional resources among a majority of government interviewees. Among a select group of stakeholders, however, there is ongoing engagement with ARC to pursue potential solutions going forward.

8.4 Investment in and institutionalisation of DRM

Significant levels of sustainable investment in DRM cannot be attributed to ARC's capacity building around DRM and quantified risk, though this may be too early to judge, given the time necessary for institutionalisation. There is a possible exception in Mauritania, if continued payment of annual premiums can be considered an indicator of sustained investment. Additionally, the creation of the inter-ministerial committee to oversee and steer ARC's thematic areas may signal a new institutional mechanism to continue driving forward the initiative. It is expected to provide higher level of political leadership and decision-making authority to ARC's governance structure in Mauritania.

In the case of both Malawi and Kenya, awareness has been built among select officials within key government agencies around the importance of investing in DRM, and using different tools (including insurance) for transferring risk. Additionally, there appears to be increased interest in alternative DRM financing options. However, this is not entirely new either. Kenya has already been investing in DRM and looking at quantified risk for some time. For example, the country is in the process of developing the National Contingency Fund and the soon to be formalised National Drought Emergency Fund. This is also true for Malawi, which had previous experience with parametric insurance through the World Bank. It would appear that this change in awareness of alternative DRM financing options is sustainable (and increasing over time), but not attributable to ARC.

There is therefore no current evidence of greater investment in DRM resulting from increased knowledge due to the experience with ARC. Additionally, there does not yet appear to be enough staff expertise, or investment in the knowledge transfer systems in place, to provide a reference point for new staff. In both Kenya and Malawi, the work of the TWGs appears to have stalled following the 2015/2016 season. There is also not any evidence that ARC contributed to an improved legal or regulatory framework relating to DRM in any of the three countries, though this may be too early to judge.

9 Conclusion and outlook

The technical glitches and imperfect customisations that underpin the challenges experienced with ARV have significantly eroded the internal validity of the early warning mechanism and put into question ARC's model as an effective DRM finance tool. The conceptual challenges of demonstrating the long-term value for money of disaster insurance in the context of short term political decision-making is equally problematic. However, increasing the time that ARC invests in each country for ARV customisation and to build broader based understanding and capacity would result in the risk pools growing at a slower rate, also threating ARC's financial viability.

Nonetheless, there remain proponents of ARC products in each country, most of whom are intimately involved in DRM from a technical standpoint. There also appears to be a generally high level of buy-in to the idea of the product as an important new source of funding, in the face of mounting challenges in accessing donor funding, given shifting and competing priorities. However, respondents consider the product not generally affordable, particularly in comparison to donor funds. Additionally, even in Mauritania, after not receiving a payout during the 2015/2016 season, many respondents expressed doubt about the value of continuing to pay the premium. There is widespread difficulty accepting the idea of financial risk associated with paying insurance premiums (for example, if a country would never receive a payout), though this is inherent to any insurance product. This implies that ARC's outlook depends on crises and associated payouts happening relatively frequently. For countries using one in five-year attachment points, if in three/four years there haven't been any significant natural disasters triggering a payout, interest/demand for ARC would likely dramatically wane (as has been the case in Kenya after only two years). However, lowering the attachment point requires increasing the premiums, which are already considered too expensive. Additionally, if only countries with a high risk of drought in a single region join the pool, then there is not a regionally viable model. Additionally, there are problems around countries deciding not to buy into the pool late in a year when the model already has made it clear that a payout would be highly unlikely. Countries are making year-to-year decisions about the potential value of ARC, sometimes based on climate predictions (i.e. El Niño or El Niña year), leading to major concerns about ARC's prospects for financial sustainability.

On a case by case basis, interviewees in each country had conflicting views on whether there is a future for ARC. In Kenya, a majority said yes, but with significant caveats. Some of these caveats, listed below, demonstrate a fundamental misunderstanding of insurance, and suggest why ARC's sustainability based on the current business model appears elusive. Respondents claimed that they could imagine taking out another policy, contingent on the following:

- ARC pays out something (even a symbolic gesture) to show the value of past policies;
- There is a guarantee of some payout when signing up for future policies;
- The premium is lowered;
- The model is more sensitive to regional complexity;
- The thresholds to trigger a payout are lowered;
- ARC offers insurance for rapid onset perils, as drought is a human development failure that should be addressed through preparedness.

A handful of people were more confident that Kenya would again use ARC insurance products, citing the following reasons:

- Kenya is far from having adequate financial instruments to respond flexibly to disasters;
- ARC provides a flexible and quick financing option;
- All resources are currently focused on elections, so Kenya just needs to wait a year or two;

- The new government in Kenya will be looking to the future and will be interested in knowing more about ARC and its potential value;
- The Kenyan government now realises that if they would have paid for the 2016/2017 seasons they would have received a large payout.

However, a handful of people were clear that Kenya would not take out another policy, for the following reasons:

- Two rainy seasons of not signing a policy indicates decreasing interest in ARC;
- Alternative financing options are becoming available that offer larger sums, guaranteed access to funds, and greater flexibility;
- Kenya was offered matching funds for doubled coverage through Replica, but they still chose not to sign a policy, signalling very weak interest;
- Key decision-makers could not be convinced to sign a policy, even when the technical team knew there was a high likelihood of receiving a payout during the 2016/2017 season.

Stakeholders in Malawi have equally mixed opinions about whether the country will (or should) consider taking out future insurance policies with ARC. Those with greater understanding of the insurance product generally see its value in Malawi, and the importance of it being among the range of mechanisms used by the government to access funds for disaster response. However, there is also widespread distrust in the model, and in ARC's claims about the reasons for its failure. Some argue that they would not want to go forward with a model that has not worked in the past – and political officials are wary given the fallout and negative publicity. Others are open to interpreting the experience as one of learning - and acknowledge that 'teething problems' are part of the process for any new and innovative initiative. Indeed, multiple interviewees described it as an important learning experience, both for Malawi and ARC, with many willing to continue exploring what they see as a potentially valuable tool as climate-related disasters become more frequent and serious. Generally, government stakeholders within multiple ministries expressed an openness to considering ARC products and purchasing future policies, as long as key issues within the model were resolved.

There is also support among external humanitarian actors for Malawi to consider the value of purchasing sovereign insurance again, but with the condition that the government would engage in a more transparent and inclusive decision-making process, involving a broader range of civil society and humanitarian actors. Several multilateral and humanitarian actors feel that Malawi needs to demonstrate that they've achieved a certain level of capacity around the early warning system and risk transfer before taking out sovereign insurance again.

The outlook is clearly more positive in Mauritania, which has experienced first-hand the value of ARC insurance in allowing the country to respond quickly and effectively to a mitigate a food security crisis resulting from drought. The country has purchased a policy for three years in a row, and in-country stakeholders have been vocal about the benefits they see. However, the comparative analysis of findings from the three country case studies suggests that short term value-for-money considerations associated with the cost of the premium, communications and public relations hurdles, coupled with persistently misaligned expectations and scepticism of ARV's reliability, all appear to pose existential threats to ARC's current business model.

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