



Annual Report 2015/2016 Financial Year

RESILIENCE IN THE LIMPOPO - OLIFANTS

11/30/2016





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Early start to the Olifants: stream in the upper catchment.

Front Cover: Rural settlements in Sekhukhuneland in the middle catchment affected by insufficient access to water during drought conditions. (Photo credits: Derick du Toit, AWARD).



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Aloes in Sekhukhuneland, a centre of endemism in the Olifants catchment.



Acronyms and Abbreviations

AgriSI	Agricultural Support Initiative
AWARD	Association for Water and Rural Development
CBO	Community Based Organisation
CHAT	Cultural-Historical Activity Theory
CMA	Catchment Management Agency
CMF	Catchment Management Forum
CMS	Catchment Management Strategy
coIRAP	Collaborative Resilience Assessment Process
CoDyM	Collaborative Dynamic Modelling
CPA	Communal Property Association
CSAG	Climate Systems Analysis Group
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organisation
DAFF	Department of Agriculture, Forestry and Fisheries
DEA	Department of Environmental Affairs
DMAF	Disaster Management Advisory Forum
DRDLR	Department of Rural Development and Land Reform
DWS	Department of Water and Sanitation
EMMP	Environmental Monitoring and Management Plan
IDP	Integrated Development Plan
INWaRDS	INtegrated Water Resources Decision Support
IUCMA	Inkomati-Usuthu Catchment Management Agency
IWRM	Integrated Water Resources Management
K2C BR	Kruger to Canyons Biosphere Reserve
KNP	Kruger National Park
KRA	Key Result Area
LEDET	Local Economic Development, Environment and Tourism (Limpopo Province)
LIMCOM	Limpopo basin Commission
LMC	Legalameetse Management Committee
LOCI	Lower Olifants Custodianship Initiative
LOROC	Lower Olifants River Operations Committee
MERL	Monitoring, Evaluation, Reporting and Learning
MSI	Municipal Support Initiative
MoU	Memorandum of Understanding
NGO	Non Governmental Organisation
NRM	Natural Resources Management
NRMPs	Natural Resource Management Programs
NWA	National Water Act
OCMA	Olifants Catchment Management Agency
OLLI	
PALSA	Priority Areas for Long-term Strategic Action
RESILIM-O	Resiliency of the Limpopo River Basin
SADC	South African Development Community



SANParks	South African National Parks
SARS	South African Revenue Services
SASS	South African Scoring System
SDM	System Dynamics Modelling
VSTEOP	Values, Social, Technical, Ecological, Economic and Political factors framework
WatRES	Water-related Ecosystem Services



Water shortages in the catchment (Photo credit: Fidelis Zvomuya, AWARD).



Director's Note/Executive Summary

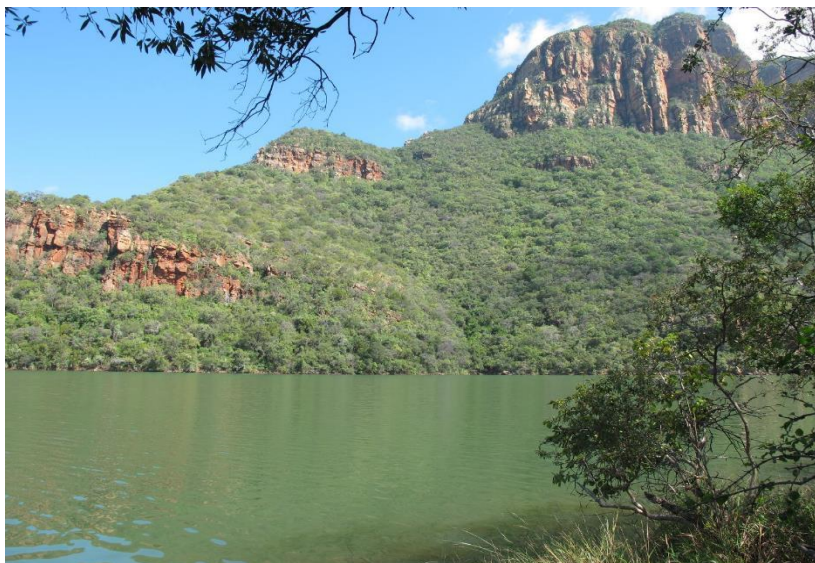


Figure 1: The Steelpoort River and surrounding escarpment, both critical areas for action.

Welcome to all readers! This annual report, from October 2015 to September 2016, marks the transition in our action-research to practice where, based on findings from Phase I, activities that focus on biodiversity and climate change adaptation in the Olifants Basin have started. Phase II is designed to take the outputs of Phase 1 into action through testing, reflexive learning and hence institutionalisation. It also broadens the focus to include the Mozambican portion of the catchment in a more substantive way. A theme that has emerged this year, and one we frequently discuss with incoming staff and stakeholders, is that of institutionalisation. Whilst tools and products can be very seductive, they can only be as effective as the governance and management systems in which they are embedded. In other words a tool for monitoring biodiversity or river flow for example, is of little value unless it is part of a wider, responsive governance system that can act to address and improve the situation. Importantly this governance system should include not only government but also civil society and sectoral participation. Part of our philosophy is that we need a systemic and social learning framing for governance to truly address the increasingly uncertain world that we all face, especially under climate change. In addition to confronting the multiple drivers of change such brought about by mining, agricultural transformation and discharges from waste-water treatment to name a few, our own resilience and that of residents and stakeholders has been put to the test during the worst drought on record in the Olifants Basin. This has amply demonstrated the kinds of challenges and future that we face in a climate changing world.



Figure 3: The Olifants River in the Kruger National Park during this year's drought.



Figure 2: The Limpopo River near Chokwe. Despite gathering clouds Mozambique remains in the grip of drought.

As we note, although the project cannot hope to reverse all of the processes that have been in place for a number of decades, it can make a considerable contribution to providing new ways of addressing management challenges, new strategic directions for responding to climate change and for seeking to support development options that are built on sustainable resource management options. RESILIM-O has deliberately adopted a strategic adaptive management approach in light of its suitability for institutionalisation and relevance to our appreciation of complex systems as the context within which to build resilience. However, fundamental to this is our commitment to capacity development which is not the same as training, for building resilience. Since the two are often conflated, this is an important distinction in our work which emphasises capacity development, rather than training alone, as a form of institutionalisation. In the context of USAID, this has been an issue for exploration especially in the selection of indicators for monitoring. Whilst training may constitute an important step it should not be regarded as synonymous with capacity development. For AWARD, and many others involved in developmental and educational processes, capacity development (personal or social) refers to a process of experiential learning in context- a concept that dovetails with institutionalisation in that it includes activities, knowledge, abilities, skills and practices of a particular 'activity system'. Phase II therefore focuses on capacity development, innovation, testing, embedding and institutionalising of resilience-based practices in various institutional arrangements.

This year's work has been characterised by a dynamic institutional context in both South Africa and Mozambique. South Africa in particular has faced a number of governance changes and challenges. In the first half of 2016 for example, we invested considerable effort in supporting two municipalities to take up biodiversity and climate change in their planning and actions. However, the local government elections in August saw new mayors and councils for both the municipalities with which we work and the program had to be re-introduced and approved by these new structures.



Equally, new institutional arrangements for both land and water management have offered exciting windows of opportunity for co-learning, collaboration and mentorship towards resilience building. In terms of water resources management, our partnership with the newly-established Olifants Catchment Management Agency (OCMA) got off to a slow start as they structured themselves for the tasks ahead, but we feel we now have a potentially solid basis for engagement into 2017. Initial meetings with the OCMA and Mozambique's Ara-Sul have suggested a role for AWARD in mentorship programs for water resources management and protection in each country, although ensuring collaboration between them would be our aim. A highlight has been preparations for a learning exchange between the existing Inkomati-Usuthu Catchment Management Agency (IUCMA) and the OCMA in preparation for the latter's first Catchment Management Strategy. Another major highlight has been the practical application of a suite of tools and protocols that have been developed in support of water governance, which have been used to mitigate the impacts of drought on riverine flow (see Box 1 in the main report). In collaboration with SANParks and DWS, and using the RESILIM-O tools, flows in the lower Olifants have increased during September with early results showing a significant improvement in riverine conditions over some 350 km of river length. This can only signify transboundary benefits for Mozambique.



Figure 5 Balule before and after flow releases in September 2016.



Figure 4: AWARD interacts with key water resources institutions (Ara-Sul and the OCMA) to discuss potential collaboration.



Turning to land management, institutional dynamism is again a feature of the landscape in which we have been working. This is significant for protected areas in that all provincial parks except one are under land claim in Mpumalanga and Limpopo. Without proper processes in place for good governance through co-management, we are at risk of losing the protection of prime biodiversity areas and the benefits that they can afford to claimants and the community. This is particularly true in the Legalameetse Nature Reserve situated in the Lowveld escarpment. In collaboration with the community, CPAs, LEDET, and more recently the LRC, we have focused efforts on processes such as trust-building and collaboration that will ensure a robust and tenable co-management agreement that may secure and improve this rich and diverse landscape (photo).



Figure 6: Doreen Robinson of USAID joins an early meeting with the Legalameetse land claimants.

Unsurprisingly there are many challenges that have rendered the 2007 co-management agreement untenable; most notably the recent discovery that four out of six CPAs still need to complete their CPA registration has meant that we first need to focus efforts on this key step, without which a co-management agreement is not possible.

The potential for further gains in areas under improved condition have been seen in our restoration work in the Blyde-Mariepskop area, also widely recognised for its biological wealth, endemism and as the source of the Blyde River - one of the few remaining intact river systems (photo). Nonetheless the area has seen a number of threats especially from invasive alien plants which compromise biodiversity and water resources. Despite nearly two decades of effort by government-led programs, little overall improvement is evident. During Phase I, all stakeholders pointed to the need for collaboration, co-ordination and joint planning between the various initiatives to reverse this picture. The use of CHAT and other processes has been key in highlighting different practices, roles and responsibilities. A key highlight for RESILIM-O has been the endorsement of AWARD's role as co-ordinator by the Deputy-Director General and Chief Director from the DEA Environmental Programs branch and other roleplayers and work has now started in earnest to ensure improved natural resources management in this area.

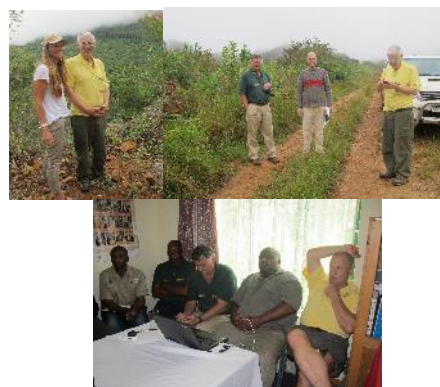


Figure 7: Stakeholders and AWARD engage with the DG and CD of DEA regarding Blyde restoration.

Work on support for climate change adaptation has continued in earnest this year with efforts focused on embedding climate change into all of our work. A major focus has been supporting the municipalities to embed climate change into both their disaster management plans and their IDPs. Despite some small successes and a real appreciation by individuals of our work, we are aware that underlying training and mentorship is needed for these overall processes before attention can be turned meaningfully to climate change adaptation at the local government level. We feel that rather than being seen as an “add-on” (as is the case in many of the outside trainings and toolkits), climate change needs to be embedded in various municipal responsibilities and actions such as water supply management, land-use planning and the like. This can be done through simply-designed conversational processes that do not intimidate staff with large amounts of technical information, and such an approach will form the basis of our work next year.



Additionally AWARD has piloted an innovative collaborative dynamic modelling approach (CoDyM) within the Selati River sub-catchment. With climate change as a focus, we are exploring the potential to use this approach to develop the capacity of key stakeholders in the Selati Catchment to think, plan and act systemically in the face of uncertainty.

Underscoring the South African constitution is the principle of stakeholder engagement within our governance system. AWARD has focused efforts on capacity development in almost all spheres of our work- from to engagements with civil society and the development of charters for Catchment Management Forums, to our biomonitoring custodianship initiative which aims to involve the protected areas (in the first phase) in the monitoring of river health. In this respect we have been delighted with the response with over 19 private reserves on board - far more than anticipated. A challenge however will be to embed this within a governance system that is responsive at both a national and regional level. In order to give meaning to our systemic, social learning approaches within capacity development, AWARD has designed a number of Resilience Support Initiatives (RSI's). The Municipal Support Initiative - already mentioned above - has been an important learning 'laboratory' for us as to the challenges that we, and the municipalities, might face- in institutionalisation. For example it is clear that whilst many technical staff understand the issues at hand, the political structures may hold different views. Again, the use of CHAT and other processes has been key in highlighting different practices, roles and responsibilities. The RSI's will be a key feature of our institutionalisation support to sub-grants in the next year especially within agriculture and for civil society.

This year AWARD started an exciting capacity development program for both interns and mentors, and in June welcomed nine new young professionals. This program aims to not only provide structured training for interns within AWARD, but also to establish a mentoring network between organisations to help equip mentors in the NRM sector with the relevant skills, processes and tools for effective mentoring of young professionals.

This year has seen the growth and continued implementation of our innovative and robust Monitoring, Evaluation, Reporting and Learning (MERL) approach that balances qualitative and quantitative processes. In our commitment to learning, we are in the process of conducting our second internal and formative evaluation into seven thematic areas. This will be supported by a systemic analysis by Ray Ison, Professor of Systems at Open University (a member of our reference group) in October this year. In terms of sharing, the Steering Committee meeting in September was attended by 61 people (including staff) and received good responses and interaction.

Turning to administrative issues, a major challenge for AWARD has been staffing and in particular, securing adequately experienced staff in relation to natural resources management and climate change. This has required innovative and adaptive governance on our part including the re-advertising of posts, and working with research associates, consultants and part-time staff. It is noteworthy that some skills are in very short supply in South Africa, constituting a critical skills need, with the result that we have had to try to fill the gap through foreign nationals. Despite the urgency, the process for securing accreditation and work permits from government has been enormously frustrating and confusing if not completely



Figure 8: AWARD trains landowners in river health monitoring.



undermining of a project such as this. With almost all the responsibility falling on the incoming incumbent, we are in danger of losing two key potential staff through delays to their applications. Solving this is beyond the management of AWARD. Staffing difficulties have extended into sub-grant management unit - again with various models being considered.

On a more positive note, there have been no unforeseen financial matters during the reporting period and we are happy to report that the management of funds attracted a clean external audit for the third year running in 2016. Further details are provided in the main report. Moreover, eleven sub-grants which significantly strengthen our capacity, have been identified and granting will be finalised in the coming months. This will include two sub-grants in Mozambique.

Finally, we close with a focus on our much-improved communications strategy aimed at strengthening and amplifying the resilience discourse. Finding key personnel has been critical and with a new manager and intern on board we have seen improved media coverage and penetration through radio, social media and TV coverage. We invite all readers to join us at <http://www.ourolifants.org/> !



Figure 9: The Limpopo River reaches the sea in Mozambique.



1. Overview

This annual report covers the period October 2015 to September 2016¹ and is the 4th report submitted to USAID. This period is significant in the 5-year program life of RESILIM-O in that it marks the transition from theory to practice where, based on findings from Phase I, implementing activities that focus on biodiversity and climate change adaptation in the Olifants Basin have started. It builds upon Phase I which focused largely on a systemic and collaborative enquiry into the resilience of the Olifants Basin as a Socio-Ecological System. The fourth and subsequent years are designed to take the outputs of Phase 1 into action through testing, reflexive learning and hence institutionalisation. It also broadens the focus to include the Mozambican portion of the catchment in a more substantive way.

The report provides an overview of the Catchment in terms of current conditions and threats and an overview of the RESILIM-O programme. It then reports progress for the year against indicators and then as a narrative against each Key Results Area. Section 3 provides a financial report whilst Section 4 concludes with a description of key projects and sub-grants.

1.1 Introduction

The RESILIM-Olifants program focuses specifically on the transboundary Olifants River Catchment which forms part of the even-wider Limpopo River Basin. The Olifants River Catchment, or ORC, is of particular concern because of the wide-scale threats to biodiversity and the ecosystem services that support peoples' livelihoods. Much of our work in Phase I focused on a basin-wide assessment which is summarized below as background to the project-specific work detailed in Section 2.

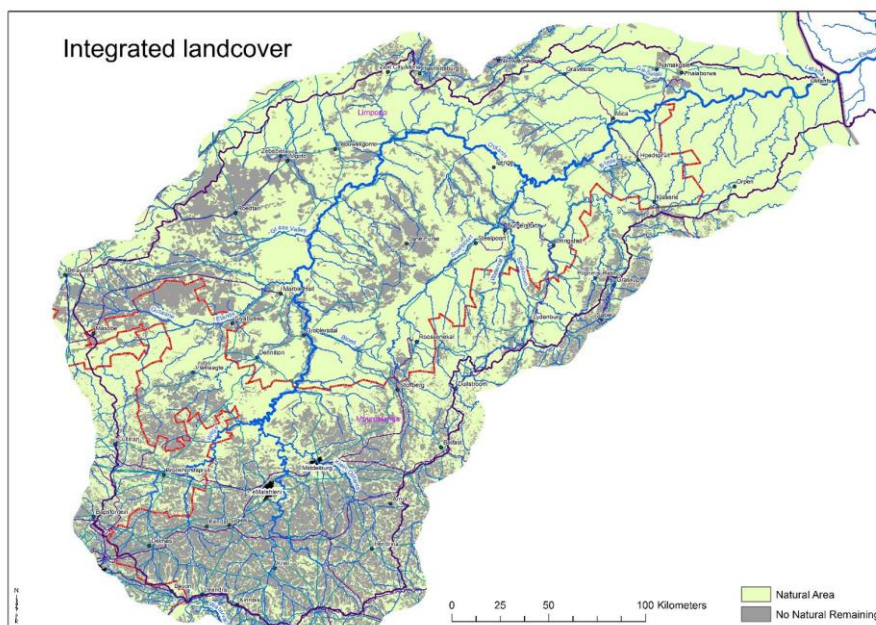


Figure 10: Map of the South African portion of the ORC indicating land transformation and areas with little to no natural cover remaining (source: AWARD).

¹ Please note that the AWARD work plan runs from January 2016 to December 2016 while the USAID period is from October 2015 to September 2016.



From both an aquatic and terrestrial perspective the Olifants River Catchment is a rich and diverse landscape. It is home to areas of endemism and high biodiversity, particularly along the Drakensberg Escarpment which includes the Blyde and Legalameetse Nature Reserves and some tributaries of the Olifants. The Olifants River flows into the Limpopo River and the Maputoland-Tongoland Ecoregion, an area of rich biodiversity and endemism which includes the Limpopo River estuary. Currently, the Olifants River is the only tributary that sustains flows of the Limpopo River in the dry season. Through RESILIM-O, AWARD has identified a wide range of habitat types in the grassland and savanna biomes, although climate change is likely to see a major transformation of the already threatened grasslands to savannas. There are substantial areas of natural landcover especially in the Lowveld, along the escarpment and Blyde River Catchments. Nonetheless many of these are threatened by a range of drivers including mining, urbanization, afforestation and invasive alien plants. Declining water quality and decreased flows threaten aquatic systems along the entire Olifants River within South Africa and to the Xai Xai estuary in Mozambique.

Large areas of the Catchment have been substantially modified and the upper catchment is almost totally transformed through agriculture and mining with the latter increasing significantly in the last decade even across former agricultural areas (Figure 10). A number of ecosystems are considered either critically endangered or endangered and many more are vulnerable. In Mozambique, the estuarine area is classified as a *National Maritime Ecosystem Priority* area. Equally, the mainstem of the Olifants River is regarded as critically endangered from its source to the protected areas in the Lowveld (Figure 11). Likewise almost all westerly-flowing rivers in the high and middle-veld are critically endangered. Intact river systems are limited to the Blyde and some tributaries of the Steelpoort and the lower Olifants. With over 600 former or existing mines (coal and platinum in particular), impacts are felt in both the terrestrial and aquatic systems and on human livelihoods. The discharge effluent from many of the 100 plus waste-water treatment works (public and private), many of which are struggling to meet national standards, impacts on the aquatic systems downstream and again on peoples' livelihoods. Indeed AWARD's work suggests that the most vulnerable livelihoods in terms of the direct dependencies on ecosystem services are in the former homelands which cover about half of the ORC.

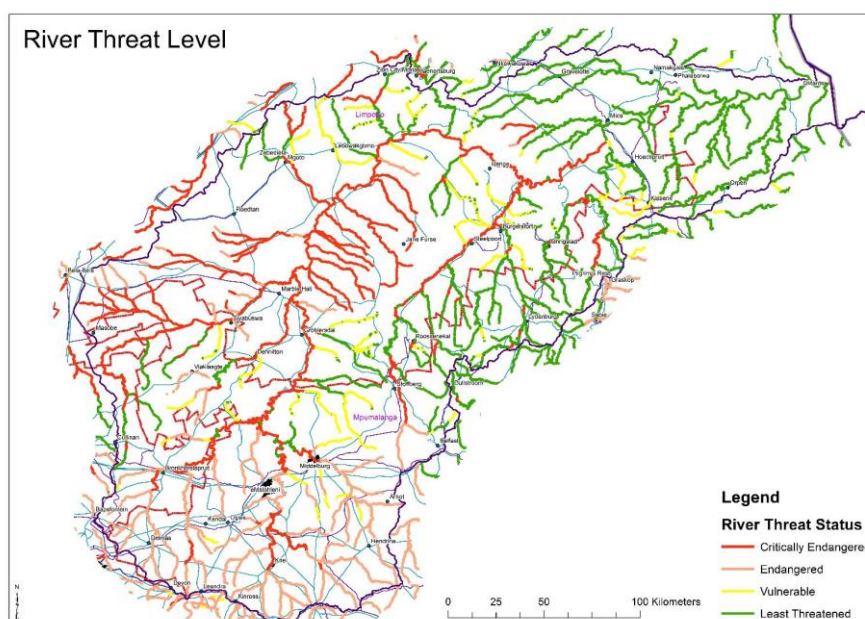


Figure 11 Map of the threat level to rivers of the ORC within South Africa.



AWARD has identified a number of integrated biodiversity areas which track the mainstem Olifants River (after Loskop Dam) and include the Steelpoort and Blyde Catchment and the swathe of land across the escarpment into the Lowveld (Figure 12). Key elements contributing to the selection of these areas include exceptionally high values of diversity at multiple levels of biodiversity, high levels of endemism, the presence of threatened ecosystems, larger contiguous areas of intact habitats, and under-protected habitat types.

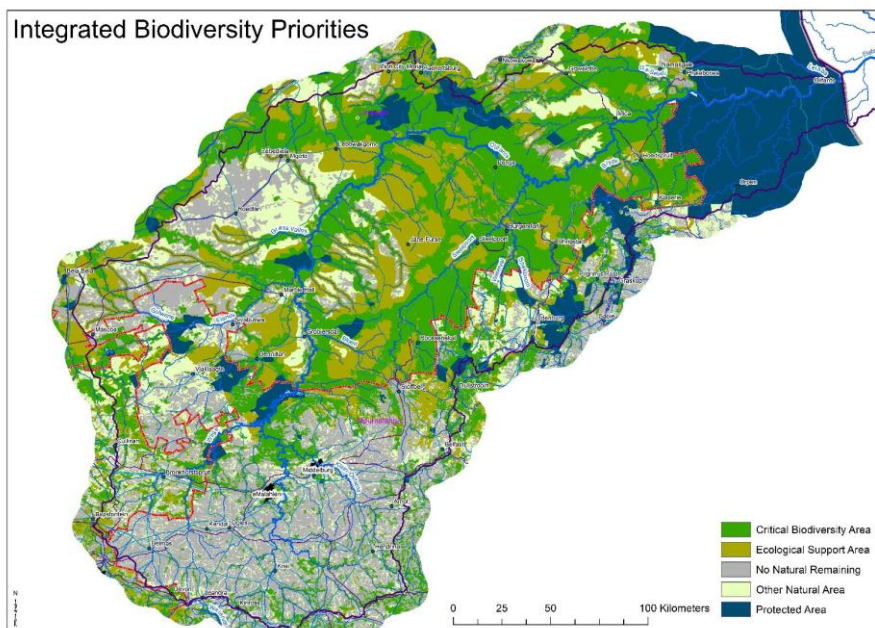


Figure 12 Map of the Integrated Biodiversity Priorities (source: AWARD).

Within the domain of water resources, the Olifants River ceased flowing for a number of days in 2005, prompting widespread concern and calls for an integrated focus on all of the easterly-flowing rivers of the Lowveld of South Africa. As noted, the Olifants Catchment is a particular concern given that it is the largest contributor of flows to the transboundary Limpopo River. Despite the enabling legislative framework for water reform in South Africa introduced in 1998, most rivers in this catchment continue to degrade in both quality and quantity. Given that these rivers form part of international systems, the implications are of wider significance than for South Africa alone. Indeed flows into Mozambique support the livelihoods of between 6000 and 10 000 small-scale farmers and the critical mangroves of the conservation priority mangroves. All of these are vulnerable to changes in flow and water quality (Figure 13), highlighting the importance of the systemic approach adopted by AWARD (see Figure 15).

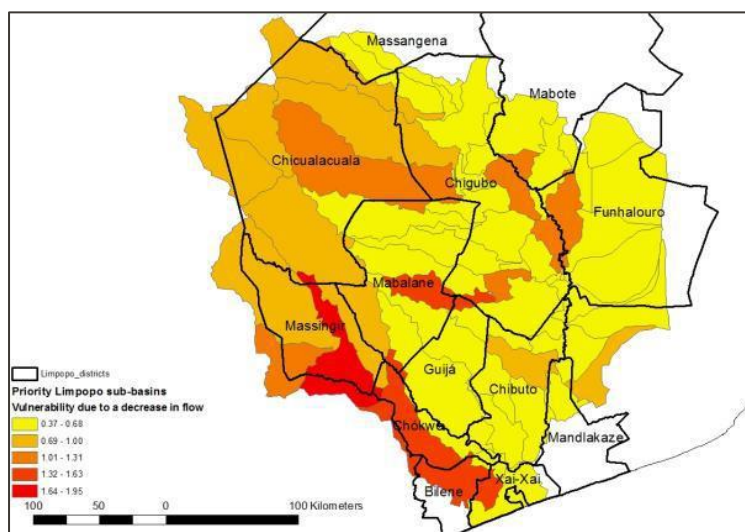


Figure 13: Map illustrating areas with the highest social vulnerability to reductions in flow in the lower reaches of the Limpopo Basin (Source: Verde-Azul).

1.2 The RESILIM-O Program

The RESILIM-Olifants or RESILIM-O program, funded through USAID, focuses on the Olifants River Basin, the health of its ecosystems and the dependence of residents on these, and how people may adapt to climate change and other change factors through increased resilience.

Although RESILIM-O focuses on the Olifants Catchment it is located within the broader context of the Limpopo Basin. Here another RESILIM program addresses similar issues at the scale of the four SADC member states that share the Limpopo Basin (South Africa, Botswana, Zimbabwe and Mozambique). It is worth noting here that the Olifants River contributes nearly 40% of the water that flows in the Limpopo River making it an important catchment in the system as a whole.

The overarching goal of RESILIM-O remains as outlined in the original project documentation: “To reduce vulnerability to climate change through building improved transboundary water and biodiversity governance and management of the Olifants Basin through the adoption of science-based strategies that enhance the resilience of its people and ecosystems through systemic and social learning approaches”.

As the program moved into Phase II at the beginning of the current reporting period, the strategic objectives from Phase I were refined to reflect a more action-oriented approach. Phase II is about the implementation of resilience-building endeavours in response to Phase I including capacity development and institutionalisation as well as finalising some studies and assessments and supporting Phase I within the Mozambican part of the Olifants Catchment. Seven Key Result Areas (KRAs) and their higher-order strategic objectives were adopted (Figure 15, Figure 16). These KRAs address the key strategic areas for action (KRA 1-5) as well as internal governance, Monitoring, Reporting and Learning (KRA 6 and 7). While some of the activities have been clustered according to specific objectives, some are cross cutting and co-dependent so that all contribute in varying degrees to the objectives and to the RESILIM-O goal.

The catchment is viewed as a complex coupled social-ecological system. In such systems, social learning is not just a pre-cursor to action; learning needs to be ongoing. Thus a re-formulation of issues and solutions can also take place to facilitate more strategic action. The relevant issues relate to climate change, biodiversity and water (natural resources), and relevant actions would be those that make the people of



the catchment and the ecosystems more resilient to climate change. Systemic social learning enables stakeholders in government and civil society to plan collaboratively for action, to take action, and to learn from reflection on their actions (reflective learning and strategic adaptive management). RESILIM-O has continued to embrace the systemic, social learning approach into Phase II. Based on Phase I experiences, we have developed an innovative and responsive approach to collaborative planning for action that effectively combines evidence-based information with issues identified by stakeholders.

RESILIM-O has deliberately adopted a strategic adaptive management approach in light of its suitability to ongoing social learning and the program's appreciation of complex systems as the context within which to build resilience. However, fundamental to building resilience is the development of regional capacity within the region and its institutions to carry the process of adaptive management and social learning forward. Phase II therefore focuses on capacity development, innovation, testing, embedding and institutionalizing of resilience-based practices in various institutions. Although the project cannot hope to reverse all of the processes that have been in place for a number of decades, it can make a considerable contribution to providing new ways of addressing management challenges, new strategic direction of responding to climate change challenges and for seeking to support development options that are built on sustainable resource management options.

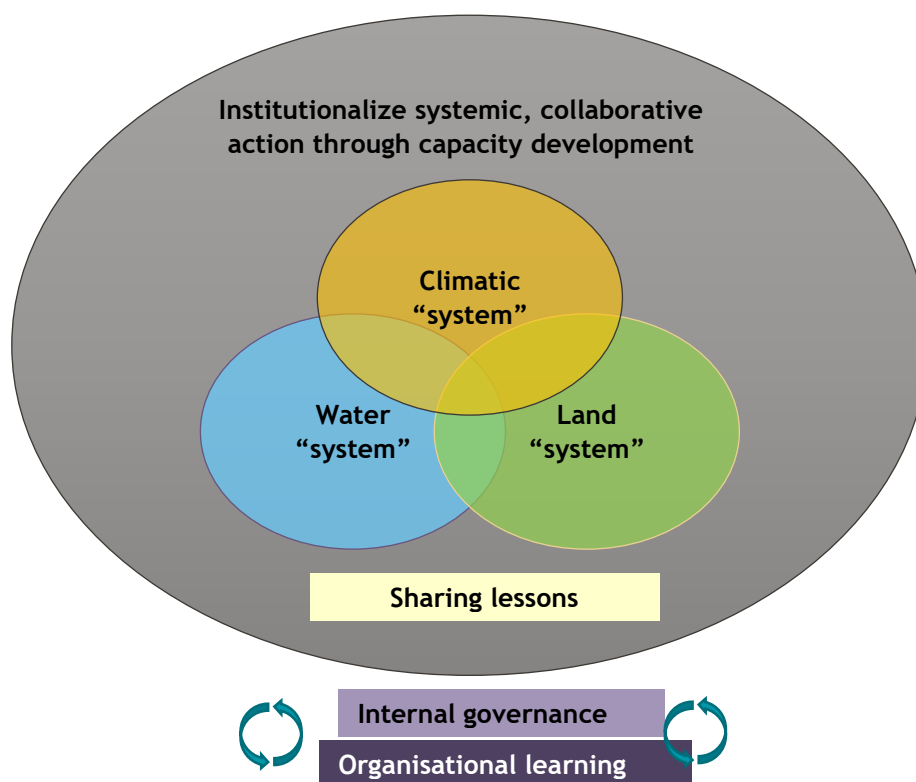


Figure 14: Figure 15: Schematic of RESILIM-O framework guiding activities in Phase II.

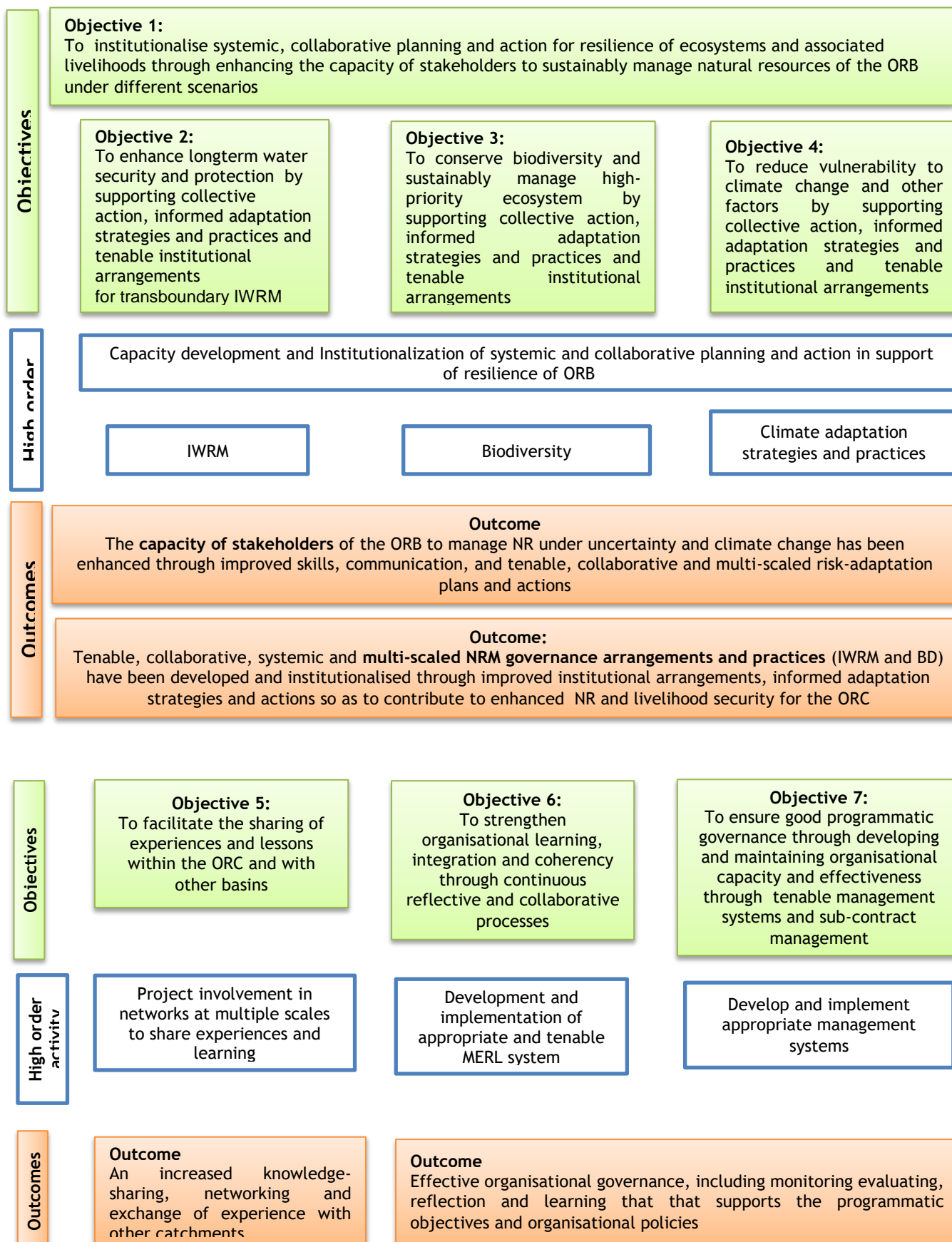


Figure 16: Schematic of RESILIM-O Phase II objectives, higher order activities and related outcomes. ORC = Olifants River Catchment, IWRM = Integrated Water Resources Management, BD = biodiversity, MERL = Monitoring, Evaluation, Reporting and Learning.



1.3 Results in Numbers

The Monitoring, Evaluation, Reporting and Learning (MERL) component of RESILIM-O aims to promote learning and accountability using a hybrid framework that includes monitoring and evaluation against intended outputs and outcomes (as quantitative indicators), but which also leaves space for more qualitative monitoring and evaluation through process documentation, case studies and qualitative indicators. This hybrid approach recognises that development work takes place in complex, open social-ecological systems, where inherent uncertainties make it difficult to track progress simply according to predetermined targets. Progress in RESILIM-O is therefore assessed through both the quantitative data presented in this section and the narrative descriptions in Section 2.

Progress against high-level programmatic indicators is shown in Table 1 and Table 2. Table 1 shows the annual progress against the targets from the 2016 work plan. Targets for the two “hectares” indicators reflect the modified targets (as modified during Q3). These targets reflect the final impacts for the program, as currently envisaged, in terms of “Number of hectares in areas of biological significance and/or natural resource showing improved biophysical conditions as a result of USG assistance” and “Number of hectares of biological significance and/or natural resources under improved natural resource management as a result of USG assistance”. Since changes in natural resource management and biophysical condition take time to manifest, it is currently difficult to report on these two indicators. Table 2 therefore provides a qualitative description of progress against these, together with an indication of the relative contribution of different project area to the overall targets. The target of 628,364 ha shown in Table 1 is the sum of the hectares targets in Table 2.

Program Area: Climate Change

A total of 461 people received training in climate change mitigation or adaptation, 50% of whom were men and 50% women. Quarters 3 and 4 saw an increase in numbers due to several contextual scoping workshops in Mozambique as well as the engagement of Civil Society Organisations and emerging farmers in the South African part of the catchment (see KRA 1). While a large numbers of “new” institutions (i.e. those with whom AWARD has not previously worked) were engaged through these processes (59 in Mozambique, 38 in South Africa), these were initial engagements, often with only one or two representatives of each organisation, and work on climate change adaptation per se (which is regarded as a process) has not yet started in earnest. These institutions were therefore not counted as having improved capacity to address climate change issues (at an institutional level) as yet. However, work with existing institutional partners, such as the municipalities, conservation agencies and waste water treatment plant operators continued throughout the year, as reported in the following section of this report.

Program Area: NRM and Biodiversity

The number of people receiving training in natural resources management and/or biodiversity conservation slightly exceeded the target of 700 (gender disaggregation 55% males, 45% females). The number of institutions with increased capacity also exceeded the target. This was partly due to the unexpectedly large response to the biomonitoring project, with a total of 19 private game reserves becoming involved during Q2 and Q3. As for climate change (above), initial engagements with communities in Mozambique and CSOs in South Africa were not counted. These “new” institutions will be included next year as work with them is deepened. Twenty new institutions were also engaged during Q3 and Q4 through the co-management project (see KRA 3), as AWARD’s engagement deepened to include individual Communal Property Associations (CPAs), development committees as well as the provincial Land Claims Commission. However, most of the work done so far has involved strengthening and supporting



these institutions in matters of general governance and to resolve legal challenges; work focusing on co-management of natural resources and biodiversity has yet to begin. Work with existing partners continued to deepen through the year, as reported in the following section.

AWARD is proud to report on the first contribution towards the “hectares” targets. With equipment procured through RESILIM-O, together with the Flow Tracker app and related tools (see KRA 2), we determined that the Environmental Reserve was not being met in the Lower Olifants and requested changes to water resources management including releases from the new De Hoop Dam (see Box 1) which was granted in September. Monitoring of physico-chemical characteristics and stream biota before and after the De Hoop Dam release showed significant improvement to the condition of the river (AWARD, in prep.).

Cross-cutting Indicators

Relevant achievements for the “Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, or adopted as a result of USG assistance” this year were the beginning of implementation of the Charter and Guidelines for Catchment Management Forums (accepted and publicly endorsed by DWS), the official proposal and implementation of the flow model and Decision Support System for releases of water from the De Hoop Dam in Q4 (counted once as proposed and once as implemented) and draft guidelines for co-management.

Although not counted as officially proposed laws, policies, strategies, plans or regulations (as per the indicator reference sheet), Memoranda of Understanding (MoU’s) or letters of endorsement are an important indication of the commitment of partners to work with AWARD over a period of time, and are therefore considered important enablers for further work. Signed MoU’s currently exist between AWARD and the Maruleng Local Municipality, the Ba-Phalaborwa Local Municipality, the Department of Water and Sanitation, the Peace Parks Foundation and the Legalameetse Communal Property Association, with several others in the pipeline.

A total of 38 publications and presentations was produced during the year, made up of 3 peer-reviewed scientific publications, 3 technical reports, 7 conference presentations (including one special session with a number of break-out groups at the Program for Ecosystem Change and Society in November 2015), and 25 formal presentations at meetings or workshops. Unfortunately the target set for this indicator in the work plan considered only peer-reviewed publications, hence the low target.

The number of people reached through the Our Olifants media campaign was calculated from social media reach statistics as well as readership/listenership/viewership figures published by the various print media and radio and television stations which have featured stories on RESILIM-O. While the number of people who actually read, watch or listen to a particular story is almost certainly lower than the overall distribution figures, and not all of these people will reside in the catchment, it is not possible to calculate the actual number of people reached at this stage. On the other hand, the uptake of press releases issued is probably under-reported because AWARD has not yet acquired media monitoring software.

The target for media exposure was set conservatively at the beginning of 2016, since Media and Communications staff had not yet been appointed and it was unsure whether the recruitment process would be successful. However, a Media and Communications Manager and intern were appointed during Q3, after which media exposure grew significantly, and then exponentially in Q4 with the development of stories for print, radio and television. While most of the media exposure was through South African media channels, the Our Olifants Facebook page has developed a notable following in Mozambique (60% of 1310 followers at end September 2016).



Table 1: Progress against indicators for the 2015/2016 Reporting period.

PROGRAM AREA	INDICATOR	2015/16FY PROGRESS										
		Q1 Oct-Dec 2015		Q2 Jan-Mar 2016		Q3 Apr-Jun 2016		Q4 Jul-Sep 2016		Total Q1 to Q4		2016 Annual target from workplan
Climate Change	Number of stakeholders (individuals) with increased capacity to adapt to the impacts of climate change as a result of USG assistance	M 76	128	M 51	84	M 106	200	M 65	27 (See Note 1)	M 220	439	700
		F 52		F 33		F 94		F 116		F 219		
	Number of people receiving training in global climate change as a result of USG assistance	M 76	128	M 51	84	M 106	200	M 65	181	M 220	439	700
F 52		F 33		F 94		F 116		F 219				
	Number of institutions with improved capacity to address climate change issues as a result of USG assistance	13		16		0 (see Note 2)		0 (See Note 2)		29		25
NRM & Biodiversity	Number of hectares in areas of biological significance and/or natural resource showing improved biophysical conditions as a result of USG assistance	0 (See Table 2)		0 (See Table 2)		0 (See Table 2)		6,806 ha		6,806 ha		628,364 ha (final target)
	Number of hectares of biological significance and/or natural resources under improved natural resource management as a result of USG assistance	0 (See Table 2)		0 (See Table 2)		0 (See Table 2)		6,806 ha		6,806 ha		628,364 ha (final target)
	Number of people receiving USG supported training in natural resources management and/or biodiversity conservation	M 34	66	M 49	86	M 155	264	M 182	347	M 420	763	700
		F 32		F 37		F 109		F 165		F 343		
	Number of institutions with improved capacity to address NRM and biodiversity conservation issues as a result of USG assistance	9		19		17		1		46		25



PROGRAM AREA	INDICATOR	2015/16FY PROGRESS					
		Q1 Oct-Dec 2015	Q2 Jan-Mar 2016	Q3 Apr-Jun 2016	Q4 Jul-Sep 2016	Total Q1 to Q4	2016 Annual target from workplan
Cross-cutting	Number of laws, policies, strategies, plans, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, or adopted as a result of USG assistance	1	0	0	2	3	-
	Number of scientific studies published or conference presentations given as a result of USG assistance for research programs	9	5	5	19	38	4
	Number of people reached by Our Olifants campaign including social media	5,413	2,856	10,614	7,238,556	7,249,170	20,000
<p>Note 1: Not all training carried out this quarter can be considered as capacity development because several engagements were initial engagements with new stakeholders which did not specifically address climate change adaptation (see also comments in the Note from the Director)</p> <p>Note 2: Work in Q3 and Q4 involved deepening our work with existing institutional partners. While large numbers of “new” institutions (i.e. those with whom AWARD has not previously worked) were engaged through these processes (59 in Mozambique, 38 in South Africa), these were initial engagements, often with only one or two representatives of each organisation, and work on climate change adaptation has not yet started in earnest.</p>							



Table 2: Progress towards biodiversity “hectares” indicators during 2016.

Program Activity	# Ha under improved NRM - Overall Target	# Ha under Better NRM- Achieved	# Ha with Improved Biophysical Conditions - Overall Target	# Ha with Improved Biophysical Conditions - Achieved
1. Clearing and restoration - Upper Blyde and adjacent Upper Klaserie	110,000 hectares	Not yet established - see Note 1	110,000 hectares	Not yet established - see Note 1
<p>Note 1: The areas of highest biodiversity value were identified and sites have been selected, in this case the Upper Blyde and Upper Klaserie catchments. Invasive vegetation reducing biodiversity and water has been identified as the major risk to existing high biodiversity areas. Roleplayers have been identified, trust gained with many of the relevant roleplayers, working relationships established, a common understanding of the problems established, and a way forward agreed. A forum has been established for this work and capacity building sessions held. The extent to which this has already led to better NRM among the roleplayers has not yet been established, but a baseline has been established, and a case study completed to evaluate progress.</p>				
2. Co-Management: Legalameetse Protected Area	18,000 hectares	0 - see Note 2	18,000 hectares	0 - see Note 2
<p>Note 2: This nature reserve is an area of high biodiversity and community/ social value. An increasing number of relevant roleplayers has been identified and trust established, along with growing working relationships, and a platform from which to proceed. The mechanism for achieving better biodiversity management in the reserve is through supporting local stakeholders to come to a co-management agreement and to develop a conservation plan. Progress has been made with capacity building of committee members, women and youth, to enable their active and informed participation in the process. The land reform affecting the reserve is slow and intricate and hence we have not yet been able to start working on the management of the reserve itself. Progress was also hampered by staffing needs but a new AWARD facilitator arrived in this quarter, and an intern was appointed to assist with translations. A case study has been completed to track progress against the 2015 baseline.</p>				
3. MSI Land Use Planning: Maruleng	325,875 ha	0 - see Note 3	325,875 ha	0 - see Note 3
<p>Note 3: In our work with local government (Maruleng), landuse planning by local government was confirmed as a tenable mechanism for improving natural resource management (NRM) on private and communal land and as a longer term result, the condition of biodiversity on this land, where it is under threat. The chosen mechanism is to identify key motivated individuals (such as planners; done) who are motivated and to assist them to develop an environmental management (EM) plan (currently absent) and to motivate for the appointment of an environmental management officer (also absent) to implement the EM plan (a broad function including biodiversity conservation). We also aim to collaboratively produce sector-based land use zoning guidelines that interpret the Biodiversity Sector Plans at a local scale. Our progress comprises a signed Memorandum of Agreement (in June 2016) and the production of new planning tools. There is no improved management to report as the MoU took considerable time and the plan and necessary staff are not yet in place. However, we are optimistic given the MoU being signed and the evident commitment of the planner at Maruleng. We will also initiate the land use planning process with one traditional authority within the Municipal boundary of Maruleng</p>				
4. MSI Land Use Planning: Ba-Palaborwa	301,799	0 - see Note 4	301,799	0 - see Note 4
<p>Note 4: The MoU with this local government is still pending (note that this has been signed October 2016). We have been running a similar process to that above with land-use planning within the Spatial Planning and Economic Development Directorate. It has become apparent that given the complex institutional arrangements and many governance challenges, more than technical support is needed and it was decided to explore the involvement of the District Municipality (Mopane) and Traditional Authorities in the MSI as well. An MoU with the Makhushane Traditional authority will be signed and a case study is being collaboratively developed.</p>				



Program Activity	# Ha under improved NRM - Overall Target	# Ha under Better NRM-Achieved	# Ha with Improved Biophysical Conditions - Overall Target	# Ha with Improved Biophysical Conditions - Achieved
5. Biomonitoring: Lower Selati River & Protected Areas	126 km of river = 250 hectares		126 km of river = 250 hectares	Baselines established
<p>Note 5: The Olifants River and its tributaries are of great significance for biodiversity in SA (along its length and into the Kruger National Park and the Transfrontier Conservation Area) and Mozambique. This program activity seeks to improve NRM by encouraging land owners to monitor river health and report findings to a central forum where high-level management decisions need to be taken, as well as to develop conservation plans that are informed by a consideration of aquatic ecosystem (not currently the case). We have not yet started measuring improved management but we have put the following prerequisites in place: Identified motivated landowners; motivated more landowners; established trust and a common approach to the problems; identified relevant government roleplayers and established working relationships; appointed more internal staff for the project; trained monitors in using the mini-SASS ; and identified a potential sub-grantee to expand the activity on communal land and plan to expand to the Legalameetse Nature Reserve. We have also established a baseline.</p>				
6. Improved governance for the EWR and flow tracking along the Lower Olifants	<ol style="list-style-type: none"> 1. Not anticipated (see Note 6) 2. 110 km of river = 440 hectares 	<ol style="list-style-type: none"> 1. 347 km of river 2. 440 ha 	<ol style="list-style-type: none"> 1. Not anticipated (see Note 6) 2. 440 ha 	<ol style="list-style-type: none"> 1. 6806 ha 2. 0 (see note 6)
<p>Note 6: This activity seeks to improve NRM by putting in place decision support systems and tools (currently absent flow-measuring equipment in the streambed, tracking flows, disseminating information and requesting flow adjustments/releases when the Environmental Reserve (essential for maintaining biodiversity) is not upheld). This year we</p> <ol style="list-style-type: none"> 1. Procured (a) the equipment to monitor some 110km of river. This still must lead to better flows, water quality and hence improved condition through the actions of DWS and the OCMA and (b) the Flow Tracker app and related tools to monitor the entire length (to be completed ebd of 2016). 2. Determined that the Environmental Reserve was not being met in the Lower Olifants and requested a release from the new De Hoop Dam which (see Box 1) which showed significant improvement to the condition of the river (AWARD biomonitoring report) over 347km. This was an unanticipated benefit 				



1.4 Summary of RESILIM-O Projects

A snapshot of the projects that comprise Phase II of RESILIM-O is given in Table 2.

Table 3. An overview of RESILIM-O projects in 2017. Projects in blue refer to sub-grants that have been scoped and/or initiated in this reporting period. See Section XX for further details on sub-grants.

KRA 1: SYSTEMS APPROACHES AND CAPACITY DEVELOPMENT	
1.1 COLLABORATIVE RISK ASSESSMENT MOZAMBIQUE	Nearly complete. Planning for implementation has started.
<u>SYSTEMIC FRAMING OF THE OLIFANTS SOCIAL-ECOLOGICAL SYSTEM</u>	Nearly complete. Multi-stakeholder workshop on 3 rd Nov 2016 Draft overview nearly complete.
1.2 COLLABORATIVE DYNAMIC MODELING OF THE SELATI (CODYM: LINKS TO CC AND WATER)	
1.3 UNDERSTANDING THE LINKS BETWEEN ECOSYSTEM SERVICES AND HUMAN WELL-BEING	
<u>CAPACITY DEVELOPMENT RESILIENCE SUPPORT INITIATIVES (RSI)</u>	All underway and continuing into 2017.
1.4 MUNICIPAL SUPPORT INITIATIVE (MSI: LANDUSE PLANNING)	
1.5 CIVIL SOCIETY INDABAS	
1.6 AGRICULTURAL SUPPORT INITIATIVE	
1.7 SKILLS AND TRAINING AT INSTITUTES FOR HIGHER LEARNING	
1.8 INTERNS AND MENTORS (CAPDIM)	Successfully launched in June 2016. Well underway.
<u>CROSS-CUTTER</u> CHAT (AN EXPANSIVE LEARNING PROCESS)	Extensively used in four projects.
1.9 INTEGRATOR- ECOPARK (RENAMED LOEP- LOWER OLIFANTS CUSTODIAN INITIATIVE)	Feasibility study complete- will be taken forward as a key focus area.
KRA 2: IWRM	
2.1 GOVERNANCE (SYSTEMS, AND BILATERAL)	Work with OCMA and Ara-Sul started.
2.2 TOOLS AND PROTOCOLS (DSS)	Well underway.
2.3 CUSTODIANSHIP- BIO-MONITORING IN PROTECTED AREAS (PRIVATE)	Well underway.
2.4 BIO-MONITORING IN COMMUNAL AREAS	Scoping started in Sep 2016.
KRA 3: TERRESTRIAL NRM	
3.1 BLYDE NRMP RESTORATION PROJECT	Now well underway
3.2 LEGALAMEETSE CO-MANAGEMENT	Slow start due to staffing recruitment constraints. Now well underway.
3.3 AGRICULTURAL SCOPING (CONTRACT)	Started.
3.4 COMPLIANCE MONITORING & ENFORCEMENT SCOPING (CME)	Started.
KRA 4: CLIMATE CHANGE ADAPTATION	
4.1 UPDATE INFORMATION FOR ORC	Underway but delays due to super-model challenges.



<u>SUPPORT FOR RESILIM PROJECTS:</u>	
4.2 CC AND DRR (MSI)	Well underway. AWARD will tail off support in 2017.
4.2 CC INTO IDP (MSI)	
4.3 OTHER RESILIM PROJECTS (LANDUSE, AGRICULTURE, NRMP)	Underway.
KRA 5: LEARNING EXCHANGES	
5.1 LEARNING EXCHANGE BETWEEN THE IUCMA AND OCMA	Exchange planned for Oct 2017.
KRA 6 MERL, MEDIA AND COMMUNICATIONS	
6.1 MERL	Well underway. Restructuring due to staff constraints.
6.2 MEDIA AND COMMUNICATION	Slow start due to recruitment constraints. Now underway.

2 Results per Key Result Area

2.1 KRA 1: Enhancing resilience through systems approaches and capacity development

Key Area 1 objective: To institutionalise systemic, collaborative planning and action for resilience of ecosystems and associated livelihoods through enhancing the capacity of stakeholders to sustainably manage natural resources of the Olifants River Basin under different scenarios.

AWARD has developed and tested the **Collaborative Resilience Assessment Process (ColRAP)** as an alternative to conventional approaches to vulnerability and risk assessment. Conceptually and methodologically, ColRAP is an innovation of the RESILIM-O program, and a report is currently being prepared to document the learning involved. The programmatic design focused on a collective systemic understanding of context in order to develop meaningful, responsive and tenable resilience plans for action (the “action” component of implementation, designed as Phase II). As part of a social learning process we were deeply committed to:

- developing a *collective* understanding of context and vulnerability at the start rather than the more conventional approaches which start with “expert-knowledge systems”;
- a process that not only acknowledged the broader “system” but that opened up the possibility of facilitating more systemic thinking with stakeholders from the start; and
- *learning and adaptation*. In keeping with a key feature of complex systems, this approach is dynamic where ideas and methods are modified with learning and reflection. This highlights *emergence* as a central theme, where the emergence of approaches and methodologies from a bundle of theoretical, conceptual and praxis frameworks is characteristic.

With the completion of most of the collaborative scoping of context in the South African part of the catchment during Phase I, this year resources were invested in the Mozambican portion of the catchment. The ColRAP process was completed in Mozambique through collaboration with Verde-Azul, our strategic



partner in Mozambique. Workshops were held in the Chokwe and Massingir districts to collaboratively scope the context (VSTEED)² and develop an understanding of the importance of water to communities (WatRES)³. These workshops are designed to encourage participants to talk about various aspects of their lives, thus developing a local picture of the context and the risks people face, and starting the process of social learning.

AWARD was impressed by the participants' level of engagement during the workshops where they expressed concern over declining water quantity and the impacts of this on crop production and health. Flooding is a periodic problem that affects water quality and damages infrastructure. However, many seemed to hold the view that South Africa is the sole contributor to most of the water and environmental challenges that affect the rivers. Understanding of the catchment and water-related risks was generally low. There is thus an opportunity for RESILIM-O to support these communities to participate more meaningfully in trans-boundary water resources management.

As part of the ColRAP process within South Africa, AWARD has piloted a **collaborative dynamic modelling approach** (CoDyM) within the Selati River sub-catchment. With climate change as a focus, we are exploring the potential to use this approach to develop the capacity of key stakeholders in the Selati Catchment to think, plan and act systemically in the face of uncertainty. The focus is on a stakeholder engagement *process* which is undertaken concurrently with the development of an underpinning, integrative System Dynamics Model (SDM) used for scenario and policy analysis (adapting to climate change).

Between November 2015 and September 2016, 11 workshops and 6 smaller working sessions were held with a broad spectrum of stakeholders including conservation agencies, wastewater treatment works operators, municipal managers, mining companies and commercial and emerging farmers (Figure 17). The first round of CoDyM workshops is now complete. These workshops functioned very much like other methodologies used by AWARD to understand context together with stakeholders, such as VSTEED, WatRES or CHAT workshops. However, the key here is to understand the constraints for individual and collective action, for each sector to confront the impacts and consequences of their own practices, and to identify points in the system where potential for change exists (opportunities). The next round of workshops will be held during October and November 2016. The CoDyM team is working with the climate change team to assess different ways in which climate change can be embedded within the process.

² Values, Social, Technology, Environment, Economics and Politics (VSTEED) workshop which is one of the first steps in the Resilience Assessment Process (colRAP).

³ Water-Related Ecosystem Services.



Learning during this pilot process is being carefully tracked and will allow decisions to be made about where and how this approach could be used elsewhere in the catchment next year. Two conference presentations and three scientific publications have been produced to showcase what AWARD believes is a novel approach.



Figure 17: AWARD staff with emerging farmers at the CoDyM workshop in the Upper Selati.

A challenge identified in Phase I was the scarcity of skilled professionals in the climate change, water and biodiversity sectors, a situation which characterises South Africa as a whole. Thus attention this year has been focused on **capacity development initiatives**. These range from a program for interns and mentors within and outside of AWARD, to support for municipalities, agricultural projects and Civil Society Organisations (CSO's) - all designed to strengthen resilience, natural resource management and adaptation to climate change.

Internationally, internships are seen as an important way to build graduates' experience so that they become more employable, and AWARD provides an important workplace-based learning space to build the capacity of young professionals who can contribute to the catchment's resilience by working in natural resource management positions in future. Many organisations in the NRM sector struggle to offer coherent, well-structured learning internship programs, due to common factors such as a lack of experienced mentors or being understaffed in general. After a successful internship program last year, two of the five interns were retained within the organisation, while the remaining three found permanent positions elsewhere.

This year, AWARD initiated a **capacity development program for both interns and mentors** and in June 2016 welcomed nine new young professionals. This program aims to not only provide structured training for interns within AWARD, but also to establish a mentoring network between organisations to equip mentors with the orientation, processes and tools for mentoring interns and other staff. As part of the new capacity development program two week-long contact sessions were held for the young professionals (in June and September), the second of which included ten interns from partner organisations including K2C Biosphere Reserve, LEDET, and the South African Wildlife College. Also in June we facilitated the first mentor's workshop which was attended by 26 participants from seven organisations, who agreed to establish a mentor's learning network. The second mentors' workshop was held in August in Hoedspruit.

Four months into this project AWARD is proud to reflect on some of the successes. The young professionals have been working with their mentors and all have reported steady progress in their learning, grasp of conceptual frameworks used and are starting to comprehend the bigger picture of the program. Reflecting



on their involvement in VSTEOP stakeholder workshops in September, young professionals reported that hearing first-hand the challenges communities are facing with deteriorating river water quality and drought made an impression on them. The skills obtained during the Young Professionals' week proved valuable:

'The presentations from the mentors during the intern's week played a huge role in the work we carried out with the communities, I understood the context of the catchment and was able to facilitate the map exercise and translated and interpreted from English to Sepedi'.

There is also evidence that some of the young professionals are starting to develop a professional identity and to think about their future career development:

"Although I have been to Legalameetse before, it was my first time meeting all the six CPAs in Legalameetse. It was a real eye opener, the meetings just made me realise that Co management in South Africa is something that still needs to grow, and that there are not a lot of experts in the field [I might just consider pursuing a career in co management], currently I am developing more interest towards co-management".

The approach taken in the program is to use challenges as learning opportunities. The AWARD facilitator encourages the young professionals to find ways of dealing with problems themselves. Mentors in partner organisations have cherished this platform to share experiences and support each other.

When searching for **Civil Society Organisations** (CSOs) to partner with in Phase II, AWARD found that there was a need for communication and collaboration between CSO's especially regarding preparedness for uncertainty. Since many of the effects of climate change and natural resource depletion are experienced directly by civil society, the CSO Support Initiative in RESILIM-O aims to support the sector by mobilising civil society, supporting diversity and providing opportunities for exploring self-organisation and collective action. This is being done through "indabas"⁴ with CSOs, which serve the dual purpose of building an understanding of the contextual challenges facing CSOs, and providing a platform for networking and communication. Three indabas were held, in the upper, middle and lower reaches of the Olifants with a good turnout of a broad spectrum of organisations, and robust participation (Figure 18).

⁴ An indaba is an important conference held by the izinDuna (principal men) of the Zulu or Xhosa peoples of South Africa. The term comes from a Zulu word meaning "business" or "matter".



Figure 18: Civil Society Organisations meet to discuss civil society activities focused on the middle Olifants catchment and the environment.

The **Municipal Support Initiative (MSI)** focuses on improving preparedness and responsiveness of two local governments (Maruleng and Ba-Phalaborwa) to deal with natural resource degradation and climate change vulnerability. As a professional learning process it supports practitioners through workplace support, tool development and application. A major focus has been on securing agreements to collaborate. The main areas of support this year were the integration of climate change into disaster risk reduction and the municipal Integrated Development Plans (IDPs) (reported under KRA 4); and preparations for support to land-use planning (and inclusion of biodiversity and climate change) and improved waste-water discharges (which affect aquatic health and biodiversity).

The signing of a Memorandum of Understanding (MoU) with the Maruleng Local Municipality in June was a highlight following months of engagement during which AWARD noted increasing levels of commitment and ownership of the MSI by municipal staff. The Senior Spatial Planner has engaged with senior management around the appointment of a dedicated Environmental Officer to focus solely on land-use planning and other environmental issues.



Much is being learnt through the work with Maruleng and Ba-Phalaborwa local municipalities. Firstly, it has become clear that the two municipalities face different challenges, so it has been necessary to tailor the MSI activities accordingly. The scope of the MSI has grown as we have gained a better understanding of the social-ecological systems involved. For example, the land-use aspect of the MSI originally intended to focus on providing technical inputs to the municipalities alone (environmental and spatial planning; Figure 19), but this has now broadened to include other government departments, especially the Mopani District Municipality (essential for effective remediation of challenges around wastewater treatment) and the Traditional Authorities (who are involved in allocation of land for development which often conflicts with municipal land-use planning activities). Despite numerous challenges, the Makhushane Chief committed the Makhushane Traditional Authority to work with AWARD in developing the land-use planning case study and is committed to signing an MoU.



Figure 19: The MSI team works with the Spatial Planning and Economic Development directorate within the Maruleng Municipality to address incorporation of biodiversity issues into land use planning.

Aside from delays in securing signed MOU⁵s, a major setback this year was the changes associated with the local government elections in August, making it necessary to start again with the process of introducing the RESILIM-O program and the MSI project - in particular to the Mayor, the mayoral committee and council.

As with the municipalities, AWARD will also offer support to various agricultural projects (known as the **Agri Support Initiative**) designed to strengthen resilience and adaptation through improved soil and water conservation techniques, climate change adaptation as well as associated diversification in livelihood activities. AWARD has designed a draft support process, met with various specialists and called for sub-grants (see KRA 7). Contextual profiling (using VSTEPP) of various individuals and villages was started in September 2016. A further development was the arrival of Richard Hatfield, who joined AWARD at the

⁵ The MOU with Ba-Phalaborwa was signed in October 2016



beginning of June, and who will lead the initiative in collaboration with partners. Two sub-grants have been finalised for implementation of the small-scale farmers' component of the Agriculture Support Initiative, Mahlathini incorporating Seeds of Light, and Ukuvuna, with both scheduled to start work in October. Three VSTEOP assessments to set the context for the soil and water conservation work, and also for the anticipated Olifants River biomonitoring initiative were carried out in September in preparation for the commencement of the Mahlathini-led work.

In 2015 AWARD started developing ideas around a **flagship initiative** known as the Lower Olifants Custodianship Initiative (LOCI, formerly the "Ecopark" idea) through which the key objectives of biodiversity protection, water security enhancement and climate change adaptation could be integrated. This initiative could facilitate the development of a more effective and tenable stewardship program for the whole province, through piloting this work and utilizing complementary opportunities staff through the Global Environment Facility Protected Areas program. In other words, this has implications beyond RESILIM-O. To this end we completed a feasibility study in support of this in mid-2016 which was discussed with stakeholders⁶ in the area as part of an adaptive planning process with . The key strategic outcome was to support a LOCI-type of initiative as an **emergent process** (rather than top-down), where, through various projects in the area, stakeholders would be encouraged to work together and for a collective identity which could be later institutionalised as a flagship.

Currently the projects which will serve as the basis for LOCI include the AgriSI work, water resources management (see KRA 2), the Maruleng MSI and potentially, biomonitoring. Potential new projects would focus on supporting livelihood diversification of local community members - as a climate change adaptation strategy - through conservation entrepreneurship or green economy enterprises. Discussions around this project were initiated with the Institute of Natural Resources in June as a potential sub-grantee.

2.2 KRA 2: Water Security and water Resources Protection for improved IWRM

Key Area 2 objective: To enhance long-term water security and protection by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements for transboundary IWRM.

This component of the program focuses on supporting the emerging governance of the Olifants Basin so as to secure a sustainable plans and actions for water resources protection within Integrated Water Resource Management (IWRM). This is being done through support to the Catchment Management Agencies or equivalents in South Africa and Mozambique, the development of tools and protocols in support of a decision-support system for IWRM, training in the use of these, and mobilising custodianship of residents over water resources through monitoring. A cross-cutting theme involves understanding the potential impacts of climate change through the incorporation of predictions for both flow and water quality. In addition, we are seeking ways to support stakeholders to confront and consider the multiple impacts of climate change through piloting a collaborative 'modeling' approach (see CoDyM process under KRA 1).

⁶ local, provincial and national government departments, commercial farmers and other landowners within the Lower Olifants area, traditional authorities, Communal Property Associations, and other groups such as the Kruger to Canyons Biosphere Initiative



In terms of **water governance**, engagement with the Olifants Catchment Management Agency (OCMA) is considered important for the long-term institutionalisation of improved water management practices in the Olifants Catchment. There is also an important opportunity for AWARD, through RESILIM-O, to support the institutionalisation of systemic, resilience-building practices and to facilitate learning exchanges with the Inkomati-Usuthu Catchment Management Agency (IUCMA). However, this has been challenging so far because of a very difficult and uncertain political and institutional context. Evolution of the OCMA (and CMA's in general) has been hampered by delays, changes to major national legislation and conflicting messages at various levels of government. This context has affected AWARD's work with the OCMA in that it has been difficult to schedule meetings, identify staff for training and secure a MoU. More recently however, engagement has strengthened as the proto-CMA has started to consider its responsibilities, particularly that of developing a Catchment Management Strategy for the ORC. In this regard a series of learning exchanges have been scheduled between the IUCMA and OCMA from October onwards. Discussions have also started to collaboratively design a training and mentorship program for uptake of the IWRM decision-support system (see below). Looking beyond South Africa, we have initiated discussions with Ara-Sul and LIMCOM for a similar mentorship program and for the potential for a bilateral flow agreement. Our persistence has paid off in some respects in that DWS regional staff trust AWARD and constantly rely on their assistance and guidance. Certain DWS national staff also have a high regard for AWARD's research in the water sector, and AWARD is often invited to be part of important decision-making processes or policy reviews (link to Governance evaluation report). Strengthening these and developing a shared vision of water governance is worth continuing and pursuing despite delays and the slow pace of progress.

In terms of the inclusion of civil society in IWRM as required by the NWA of 1998, a number of partnerships and projects are noteworthy. This includes AWARD's long-term partnerships with SANParks and various academic institutions which have strengthened the monitoring and implementation (see Box 1).

Based on preliminary results (AWARD in prep), this action has resulted in a significant improvement of the condition of the Steelpoort and Olifants Rivers, from the de Hoop Dam to the Mozambique border constituting some 346 km (Figure 20), since September 2016. As noted, this improvement is a direct result of our collaborative actions with SanParks and DWS, to ensure that continued flows throughout the drought (Box 1). Results from our biomonitoring work from two sites along the lower Olifants¹, taken before and after the de Hoop releases, indicate a significant improvement in river health from critically modified to good over the 346 km downstream of de Hoop.

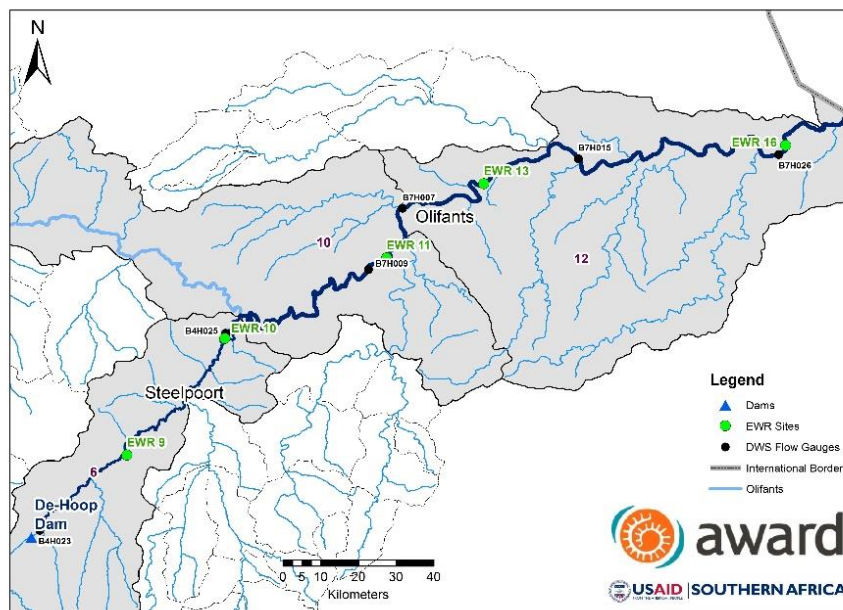


Figure 20: Map of the length of the Steelpoort and Olifants Rivers that show improved condition from the releases of flows from de Hoop Dam as of late September 2016. These flows resulted from a collaboration between AWARD, SanParks and DWS (see Box 1)

Box 1: An example of co-operative governance: securing environmental flows in the lower Olifants

In response to the crippling drought and non-compliance with environmental water requirements in the lower Olifants, and in support of good, adaptive governance we started work on securing a shift of water use from the Blyde to the De Hoop Dam (currently at 42%¹ capacity) to augment flows in the lower Olifants. If the dam drops below 25% water cannot be abstracted for irrigation, placing 10 000 permanent and seasonal jobs at risk. In response to requests by DWS, and a letter from the Acting Managing Executive of the Kruger National Park and recommending the use of the RESILIM-O model to achieve this, DWS agreed.

A major success for RESILIM-O has been the acceptance of these recommendations and the release of water from the De Hoop Dam on the 23rd of September 2016. AWARD has been given the responsibility of monitoring the flows and running the RESILIM-O De Hoop release model when necessary to recommend further releases until we are out of the emergency state. The dam releases resulted in the Environmental Water Requirement (EWR) being met at Kruger National Park's Environmental Water Requirements site, Mamba Weir - a major success in a time of drought! In order to help institutionalise the above tools and protocols, a model/tools training session was held in Nelspruit in September.



Furthermore, Catchment Management Forums (CMFs) are an important mechanism for stakeholder participation in IWRM. However a lack of capacity and support for stakeholder participation has meant poor attendance and familiarity with IWRM processes. Thus, AWARD has continued to play a central role in supporting the institutional development of CMFs (development of a CMF charter and guidelines on institutional form and function). Although this work was constrained earlier this year due to staffing constraints, there have been some encouraging signs in the last quarter, including a request for assistance in from DWS to support this process.

Further work in 2017 will focus on capacity development for IWRM for civil society through the Water and Climate Change clinic which is in the planning phase.

In support of good governance and the protection of freshwater resources, AWARD has made notable progress in the development of tools and protocols as part of a decision-support system known as INWaRDS (Integrated Water Resources Management Decision Support System). These include tools to facilitate monitoring compliance with standards set by government and stakeholders

As part of this and to address a major constraint for water resource managers and practitioners in terms of real-time monitoring of both flow and water quality, has developed the building blocks, conceptual frameworks and software (mobile apps and desktop) for an integrated approach. To our knowledge, this is a first for the region and the country. The INWaRDS suite of tools consists of:

- An all-inclusive desktop application, the INWaRDS dashboard, which provides access to information on flow, water quality, rainfall, dam levels and climate information.
- A web-based App which has similar functionality to the desktop dashboard but will work on any web-browser without having to install the Windows-based desktop application.
- A mobile “Flow Tracker” App for Android phones which allows monitoring of flow (Figure 21). Warning triggers have been programmed into the code which push a warning notification on users’ cell phones for **early flood detection as well EWR compliance**.

The near real-time models and tools were accepted by Dr Beason Mwaka (Director: Water Resource Planning Systems) and Celiwe Ntuli (Directorate: Water Resource Planning Systems, Deputy Chief: Systems Operation).

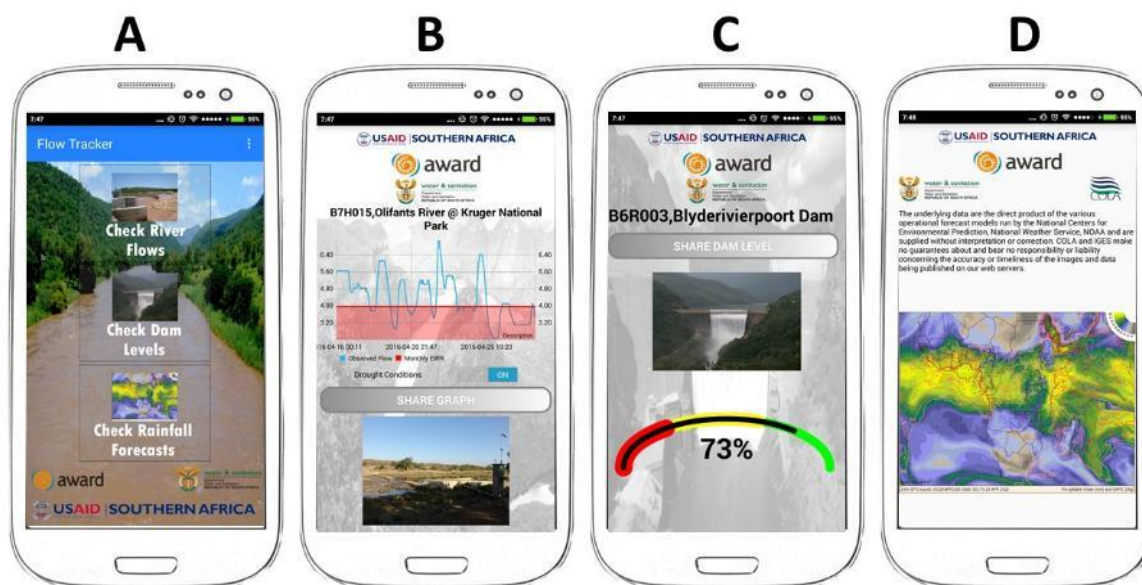


Figure 21: A) Mobile Flow Tracker App; features include: B) Near-real time compliance monitoring and flood alerts, C) Current Dam Level Status, D) Precipitation Forecasts.

The Olifants Catchment Management Agency (OCMA) will need to prioritise key areas of vulnerability and importance (including biodiversity and climate-change proofing) in the Olifants Catchment. Given this, AWARD is supporting strategic decision-making through the identification of priority areas. The PALSA project (Priority Areas for Long-term Strategic Action) will be one of the focal points for training and information-sharing between the CMA and AWARD.

An important component of setting priority areas is the development of an integrated water quantity and quality model for the entire Olifants and, since such a system was not available in South Africa, it has been a major focus for KRA2. The Ga-Selati sub-catchment was selected as a start-up site for the modelling effort. This has been supported by the installation of data loggers for flow and water quality at key sites in the Selati⁷ and an MoU between AWARD and DWS specifies the hand-over plan of the data loggers at program closure. The probe at Mamba weir has logged data successfully since the 24th of August. As of September, the integrated model has been set up and calibrated for the Ga-Selati and details are provided in the monthly reports and the AWARD website.

Moreover, the hydrological modelling for three selected *climate change scenarios*⁸ has been completed and these indicate a decrease in flows for the lower Ga-Selati, especially after 2030 (Figure 22). We now have a working model and the first climate change outputs - the first ever daily water quantity and quality model simulating climate change scenarios in the Olifants River Catchment.

⁷ In August, the first near real-time flow probe and data logger was installed at Mamba weir in Kruger National Park. This is a significant site within the catchment as it gauges the flows entering Kruger National Park and essentially what Mozambique would receive after losses between Mamba weir and Baluleweir.

⁸ MPI-ESM-LR-rcp85, MIROC-ESM-rcp85 and CanESM2-rcp85

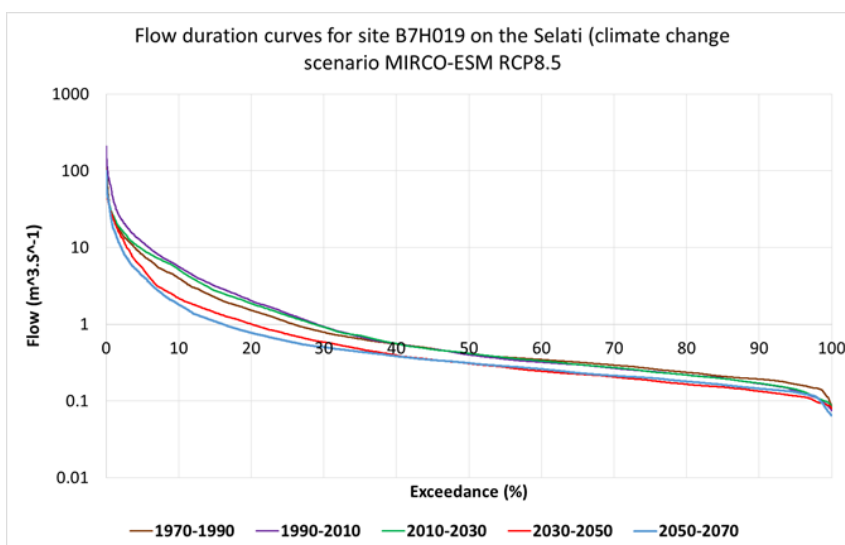


Figure 22 : Climate change impacts on water: Flow duration curves for different time periods at gauge B7H019 at the outlet of the Ga-Selati catchment. The duration curves indicate a decrease in flows post 2030 (red and blue lines).

In terms of outreach and stakeholder engagement, the following are noteworthy:

- Given the extensive water quality issues in the Olifants River and the potential impacts on human health, AWARD produced a guideline document entitled “Mitigation for Drinking Water Quality” which is now available to the public to support access to safe drinking water.
- AWARD continued to support and participate in a number of multi-stakeholder and managerial forums. Importantly, through the OLLI and LOROC meetings, we have used the tools developed through RESILIM-O (see above) to demonstrate to DWS and stakeholders the continued and worsening areas of non-compliance with benchmarks for river health (see also Box 1).

This year, progress has also been made with **mobilising custodianship for water resources**⁹ by landowners through biomonitoring. Despite the deterioration in flow and water quality in the Olifants catchment, most landowners of private game reserves only monitor terrestrial ecosystems and not the health of their water resources. After our launch in late 2015, the RESILIM-O biomonitoring project has been enthusiastically accepted, with 19 private nature reserves already on board. Two rounds of accredited practical training in biomonitoring using SASS 5¹⁰ have been provided to river monitors from the reserves (Figure 23). A similar project is currently being planned for communal areas (potentially as a sub-grant) and an orientation and field trip for the sub-grantee was concluded as well as initial contextual scoping of potential villages to be included.

⁹ The National Water Act (1998) devolves responsibilities for water resource management and invites stakeholders to be involved with protecting their water resources, under the premise that compliance is more likely if citizens act as stewards or custodians of their water resources.

¹⁰ The South African Scoring System (SASS) version 5, is a biomonitoring approach based on the occurrence of macroinvertebrate taxa with different habitat preferences and levels of tolerance to pollution.



Figure 23: Young professionals using SASS 5 for biomonitoring of river health during a field trip.

Two learning exchanges were planned this year to support the new Olifants CMA staff in the development of their catchment management strategy through learning and engagement with the Inkomati-Usuthu CMA (see KRA 5). These will take place in October 2016.

2.3 KRA 3: Natural resources management of high-priority areas

Key Area III objective: To conserve biodiversity and sustainably manage high-priority ecosystems by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements.

Work in this KRA has two main areas of focus: supporting ecosystem restoration through the removal of alien plants and good natural resources management in the Blyde River sub-catchment, and supporting the establishment of a sustainable and tenable system of co-management for the Legalameetse Nature Reserve between the provincial conservation agency and the communities who have successful land claims on the protected area. Both of these areas are priorities for RESILIM-O given that they are high biodiversity areas and strategic water source areas (AWARD, internal report). The Blyde area has been the focus of numerous initiatives and considerable investment to clear alien vegetation and improve water flows but nonetheless by 2015 there are few signs of overall improvements. It is being threatened by invasive alien plant species and soil erosion, particularly associated with timber plantations. Legalameetse on the other hand, has been afforded protection as a provincial reserve but institutional arrangements are in a state of flux. Indeed, this project is the first of its kind in the Limpopo Province and a priority for the MEC.

Given this, the **Blyde Ecosystem Restoration and NRMP Support project** aims to support the development of coordinated and integrated planning and implementation of invasive alien plant control efforts for



ecosystem restoration in the upper Blyde sub-catchment. After endorsement this year from the Deputy-Director General and Chief Director from the DEA Environmental Programs branch and from the multiple roleplayers¹¹, as coordinator for the different NRMPs, AWARD and partners are working on the collaborative development and implementation of a joint restoration and management plan. AWARD is using social learning and systems approaches within the management and governance processes of the organisations involved and aims also to support the development of tenable and appropriate institutional arrangements to ensure long-term sustainability of these restoration efforts.

The project has made good progress this year with several concrete steps being taken collectively by the group towards achievement of the overall goal. AWARD's role as a mediating organisation has been critical in helping to overcome some of the barriers to collective action noted in 2015. In a recent formative evaluation, all stakeholders were highly complementary and appreciative of the role AWARD has played so far and it could be argued that the group has become more confident in recognising and navigating complexity.

Major gains have included:

- The field visit and meeting with the DDG and CD of DEA and their endorsement.
- Approval of AWARD as the co-ordinator.
- AWARD together with the project partners, is developing an invasive alien plant inventory map or resource assessment to determine the extent of the problem in the catchment, and hence to inform planning (Figure 24).
- This year the project also significantly deepened its engagement with the forestry sector, particularly the state forestry sector under the Department of Agriculture, Forestry and Fisheries (DAFF¹²). In August the Acting Regional Director for Limpopo and Mpumalanga indicated his support for the project and committed to further communication with the DDG and CDs at national level to introduce the project in more detail and secure a meeting (scheduled for October). The other project partners see AWARD's successful engagement of the forestry sector as a major success of the project so far.

Drawing in future land owners who have land claims in the area (CPAs and communities) remains challenging¹³ but essential in order to develop local custodianship and ensure sustainability of the initiative. This will be taken forward in the next work plan.

Some exciting opportunities emerged for upscaling the impact of this project and institutionalising it beyond the RESILIM-O program. AWARD was invited to the DEA Management Research and Planning workshop focused on Social-Ecological Systems, Strategic Adaptive Management and complexity thinking approaches. RESILIM-O and the Blyde Restoration project was one of four used to consider integrated approaches within the work of the DEA NRMPs and there was strong interest in AWARD's approach.

¹¹ Several government-initiated Natural Resource Management Programs (NRMPs) are active within the sub-catchment. The fall under the Department of Environmental Affairs (DEA) and form part of the Expanded Public Works Program, a nationwide government program aimed at creating labour-intensive employment and skills development for previously disadvantaged people, thereby contributing to poverty alleviation and economic empowerment.

¹² This was important for the success of the project as DAFF is currently a large landowner in the catchment, and together with land claimant communities, a key agent for the development of future institutional arrangements for restoration work.

¹³ A challenge arose during Q3 relating to the establishment of an Eco-furniture project in the Mariepskop area by SANParks and the Kruger-to-Canyons Biosphere Reserve (K2C) in collaboration with DAFF Forestry. Serious contestation around employment and recruitment processes resulted in suspension of the project, and its future remains uncertain. These developments highlight the importance of having a well-considered, unified and carefully designed approach for engaging with communities and landowners



In support of this project, a sub-grant proposal is under development by the Institute for Natural Resources for a further project to support capacity development for compliance, monitoring and enforcement in relation to the forestry industry.



Figure 24: Photo showing dying pine trees (brown trees) that had recently been treated by the High Altitude Teams working in Mariepskop State Forest. Captured during IAP mapping survey.

As background to our second focus in this KRA, we note that all provincial parks except one are under land claim in Mpumalanga and Limpopo. Without proper processes in place for good governance through co-management, we are at risk of losing the protection of prime biodiversity areas and the benefits that they can afford to claimants and the wider community. However such support is almost non-existent and skills for facilitation for such processes equally dire. Given this, Legalameetse Nature Reserve in the upper Selati sub-catchment was selected as a pilot project for supporting **co-management of protected areas** which have been claimed by local communities under South Africa's land restitution process. Legalameetse is a major biodiversity hotspot and important water source area for the Selati sub-catchment, and also has the potential to meaningfully contribute to the livelihoods of local communities with land claims on the Reserve.

A co-management agreement was signed in 2007 between land claimants and LEDET, but this has not been successfully implemented, leading to various conflicts. Thus the RESILIM-O efforts aim to support the development of a functional, tenable and appropriate co-management agreement, as well as subsequent implementation of co-management that takes into account both sustainable biodiversity and NRM and sustainable and equitable beneficiation for community members. In March, a Memorandum of Understanding was signed between the Legalameetse Management Committee (LMC) and AWARD outlining the roles and responsibilities of both parties. A formal agreement was also signed with the Legal Resources Centre for help with legal issues for up to 3 days per month (August 2016).



With the arrival of the new co-management coordinator Lilian Goredema in May 2016, work at Legalameetse deepened. We were able to engage with the six different communities involved (previous interaction had only been with the LMC, made up of two representatives from each community; see Figure 25). This revealed that many people had little knowledge of the co-management agreement or process, which together with findings about mistrust, guided our project activities in the latter part of the year. Furthermore, with our support, the LMC made a decision that to ensure inclusion of young people four youths should be selected to join each CPA committee. AWARD has also emphasised the importance of the inclusion of women.

An important challenge identified during Q3 was the discovery that four of the CPAs (Paris, Cyprus, Madeira and Balloon) still need to finalise their land claims and complete their CPA registration. This means that a co-management agreement is not yet possible and AWARD will now move forward to address this issue in partnership with the Legal Resources Centre.

AWARD is also drawing up a guideline document for CPA governance, outlining the criteria for a CPA to be considered a properly functioning institution. This is based on the legal requirements for CPA registration but includes additional criteria such as whether an Annual General Meeting (AGM) is held and whether fair and democratic processes are in place for appointing committee members.



Figure 25: Meeting of the Development Committees from Balloon with AWARD facilitators, at the Induna's homestead. 1 August 2016.

Important lessons are emerging from the project particularly with respect to the degree of cooperation needed for co-management to work; the need to tailor support for different groups of stakeholders and that the Limpopo Land Claims Commission must be included in the project as an important partner.



2.4 KRA 4: Support for climate change adaptation strategies and practices

Key Area 4 objective: To reduce vulnerability to climate change and other factors by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements.

This KRA contributes to the overarching goal of RESILIM-O of building climate resilience in the Olifants Catchment. Work on support for climate change adaptation has continued in earnest in Phase II. Due to the cross-cutting nature of climate change, the majority of project activities in KRA4 focus on embedding climate change in other RESILIM-O projects.

All of these activities are supported by continual **updating and collation of climate information** relevant to the Olifants Catchment. AWARD has considered two main data sources for locally-scaled climate projections for use in the Olifants, namely that of the Climate System Analysis Group (CSAG) and the Council for Scientific and Industrial Research (CSIR)¹⁴. RESILIM-O was granted permission by the lead CSIR climatologist, Dr. Francois Engelbrecht, to use their climate projections for the AWARD IWRM Dashboard (see KRA 2).

In July, AWARD conducted an analysis of historical and projected climate information based on data and graphs downloaded from the Climate Information Platform¹⁵ for the Ba-Phalaborwa station, which is the only station located in the Catchment. The results were shared with champions in Maruleng and Ba-Phalaborwa Local Municipalities.

During Q2, the climate change team completed the first draft of a review on climate change adaptation options, policies and projects. The purpose was to provide a basis for understanding the international, national and provincial discourse and development on South Africa's climate change adaptation, and how this context can inform our work. This report revealed significant institutional barriers for implementing adaptation as well as opportunities for collaboration with other adaptation projects in the Olifants catchment.

Much of our work is focused on integrating climate change into municipal plans and actions because South Africa has pledged that municipalities to consider the impacts of climate change on basic services (via the Durban Charter). Thus, RESILIM-O is currently supporting the Maruleng Disaster Management Centre with a review of their Disaster Management Plan, specifically with the integration of **climate change into the disaster risk assessment and management planning**. During May, AWARD staff assisted the Disaster Manager at the Maruleng Local Municipality with planning for the relaunch of the Maruleng Disaster Management Advisory Forum (DMAF; Figure 26). This forum held two further meetings between May and September.

In our work with the municipalities, there have been some further small successes:

- Following the inception meeting with the potential climate change teams in Maruleng and Ba-Phalaborwa Local Municipalities, there is now an established group of stakeholders (including senior managers from the Maruleng and Ba-Phalaborwa) with expressed interest in addressing the challenge of integrating climate change adaptation into their planning processes.

¹⁴ In the case of CSAG, data are statistically downscaled from the General Circulation Models (GCMs) whilst in the case of the CSIR, data are dynamically downscaled based on Regional Circulation Models (RCMs).

¹⁵ CIP is maintained by CSAG.



- In Q3, RESILIM-O finally obtained verbal approval to work with Mopani District Municipality officials to explore ways of integrating climate change into their management planning and to set up a climate change task team with their Disaster Manager and Environmental Officer. This was a highlight because of the confusion over who in the municipality is responsible for coordinating climate change related effort.

Despite the above successes, tangible benefits emerging from this intense support for implementing climate change adaptation at the local government level are few. As part of strategic adaptive management and planning for next year, it is likely that we will modify our project activities under KRA 4.



Figure 26: Maruleng Disaster Management Advisory Forum (DMAF) re-launch, May 2016.

Forums on climate change are emerging both at the local and provincial level (e.g. Limpopo Climate Change Working Group and Mpumalanga Provincial Climate Change Forum), but there is still not enough clarity on how these forums will benefit local government, beyond creating a platform to voice grievances and challenges. This is also related to the question of whether the forums' recommendations will carry any authority in the greater institutional context.

A key climate change adaptation strategy that is being initiated through sub-grants is to support both small-scale and commercial farmers to prepare for food production and livelihood diversification in a climate changing world (Figure 27: Dr. Sharon Pollard, Richard Hatfield & Bigboy Mkhabela in Botshabelo with a Homestead Farmer on a briefing session visit. Figure 27; see Section 3.3). It is striking that not only are the impacts of current practices deeply problematic under current conditions with respect to soil and water conservation, but this will be severely exacerbated under climate change scenarios. In the case of small-scale farming, agro-ecological approaches are widely considered to support farmers to be responsive to and adapt to change. These approaches not only focus on the technical aspects of soil and water conservation but also on social processes of learning and collective action.



Figure 27: Dr. Sharon Pollard, Richard Hatfield & Bigboy Mkhabela in Botshabelo with a Homestead Farmer on a briefing session visit.

2.5 KRA 5: Sharing of experiences and lessons within the ORB and other basins

Unfortunately due to the delays in respect of the delegation of responsibilities to the OCMA and other factors (as reported under KRA 2), progress in this regard has been slow. Nonetheless plans are now being made for a number of learning exchanges as reported under KRA 2.

2.6 KRA 6: Monitoring, Evaluation, Reporting & Learning and Media and Communications

Key Area 6 objective: Strengthen organisational learning, integration and coherency through continuous reflective and collaborative processes.

This year has seen a strengthening of the **Monitoring, Evaluation, Reporting and Learning (MERL)** team and increasing establishment of a MERL “culture” within the organisation, with support from senior staff. It has become increasingly clear through discussions with other MERL practitioners in the region that the hybrid MERL framework used in RESILIM-O is in many respects pioneering, and that AWARD is quite far advanced in putting the theory of complexity-aware MERL into practice. The team has received several



requests from other organisations for advice in this area and is planning to develop written materials in the coming year.

The focus of the year has been to find easy and clear ways of communicating our approach to further embed MERL into the culture of AWARD, to better support staff and to introduce the MERL framework to sub-grantees. This included developing a new ‘Theory of Change’ diagram that reflects the relationships between the program outcomes and indicators. This is a simple version that easily communicates with newcomers or outsiders, but also adequately reflects for staff the high level trajectory of the program.

Monthly reports were this year successfully integrated into staff’s monthly activities. A system whereby team leaders compile monthly reports on designated ‘home days’ was introduced and strongly supported by senior management. Besides serving as a record of activity, the monthly reporting process provides staff with an opportunity to reflect on the highlights, challenges and learning experienced during the month. These reflections then feed into the quarterly and annual reporting processes.

One important mechanism for internal communication and co-learning is that of the monthly RESILIM-O day. These days offer a platform for sharing on conceptual, methodological and implementation topics relevant to the program (non-administrative). Three RESILIM-O days specifically focused on MERL, in April, August and September. Such activities encourage staff to see MERL as something central to the program and to their work.

Another highlight of the year was the successful completion of eight evaluation case studies to complement the ongoing monitoring against indicators. Three of these were interim reports and will be finalised next year once key project activities have been completed (Collaborative Dynamic Modelling, Capacity Development for Interns and Mentors, and Support for Water Governance). The remaining case studies focused on Civil Society Organisation Support, Support for Water Governance, the Municipal Support Initiative, the Blyde Ecosystem Restoration and NRMP Support, and Support for Co-management at Legalametse. These reports provide a wealth of qualitative data and synthesis to support the quantitative aspects of MERL, and also to inform strategic planning for 2017. Using these case studies and other available data, Professor Ray Ison will present a “systems overview” formative evaluation during the Reference Group meeting in October.

The MERL team also developed a number of tools and processes for data collection and management. Queries about data entry into USAID’s TraiNet system were clarified and data entry is now up-to-date. A toolkit was developed for MERL orientation to staff and sub-grantees, consisting of slide presentations outlining our hybrid MERL framework, theory of change, data sources, reporting process, and the various reporting templates. Five potential sub-grantees as well as the new interns were oriented to the MERL framework and processes.

Version 2 of the Stakeholder Database is almost complete. It took longer than expected because of the attempt to integrate a database on water use, which led to many technical challenges. Next year the MERL team, AWARD staff and sub-grantees will be able to use the Stakeholder Database to track capacity-building activities in the AWARD network across the catchment.

Challenges this year have included finding the right mix of skills and program knowledge within the MERL team and finding ways to work with each other as a geographically dispersed team. The team found that “traditional” Monitoring and Evaluation skills did not always fit comfortably within the hybrid RESILIM-O approach and that a background in social science research or trans-disciplinary research may be more fitting.



In terms of **Media and Communications**, the appointment of a full-time Media & Communications Manager and a Communications intern in Q2 this year had a large impact in terms of improving media coverage and penetration. The amount of coverage, message penetration and sharing of messages on social media grew significantly. A new Twitter account was created for AWARD, and in September a Facebook account for Civil Society Organisations was also added. The Media and Communications Unit also started updating both the Our Olifants and AWARD websites with fresh content, both generated and sourced.

Other major outputs include:

- A video which gives an overview of the ways in which RESILIM-O is working to reduce vulnerability in the Olifants River Catchment and to enhance the resilience of its people and ecosystems (Figure 28).



Figure 28: Videographer Lauren Clifford-Holmes interviews Legalametse Management Committee Chairperson, Mr Aaron Mangena for the RESILIM-O overview video.

- Flow Communications, a service provider consultancy for Media and Communication was commissioned to coordinate the publication of at least one article per week. Meetings have been held with the *Mail and Guardian* who suggested a possible strategic partnership with AWARD for their water series beginning August 2016. This will see AWARD being invited to be part of the *Mail and Guardian* “Greening The Future Awards” panel of judges in 2017.
- Regarding television coverage, AWARD managed to negotiate some deals with (a) No-Line Communication, producers of SABC 2’s *Living Land* Program and (b) *People’s Weather*, (to include Mozambique). August saw the biggest achievement being the DSTV investigative journalism program *Carte Blanche* filming and broadcasting a story on the Olifants (Figure 29) and the response from the *Carte Blanche* program was overwhelming. with Facebook posts related to this show having a record number of hits (2803).
- Radio stations: AWARD had radio interviews with four different radio stations (Greater Tzaneen FM, Radio Alpha, *Ligwalagwala* FM, and Talk Radio 702).



Some of the outcomes that may possibly be linked to the Carte Blanche broadcast include the Phalaborwa municipality finally agreeing to meet with Kruger National Park stakeholders to address their challenges, and concern and a request to work together by Ara-Sul, KNP and AWARD at the LOROC meeting in Mozambique. AWARD received calls from several organisations, including the Department of Water and Sanitation inquiring about Peter Mashile, the man whose nappy-washing initiative was featured in the program. AWARD was also invited by the DWS to attend a community meeting in Burgersfort, where they revealed that they were willing to assist the communities in their quest to make sure that their environment and water sources are protected from pollution.

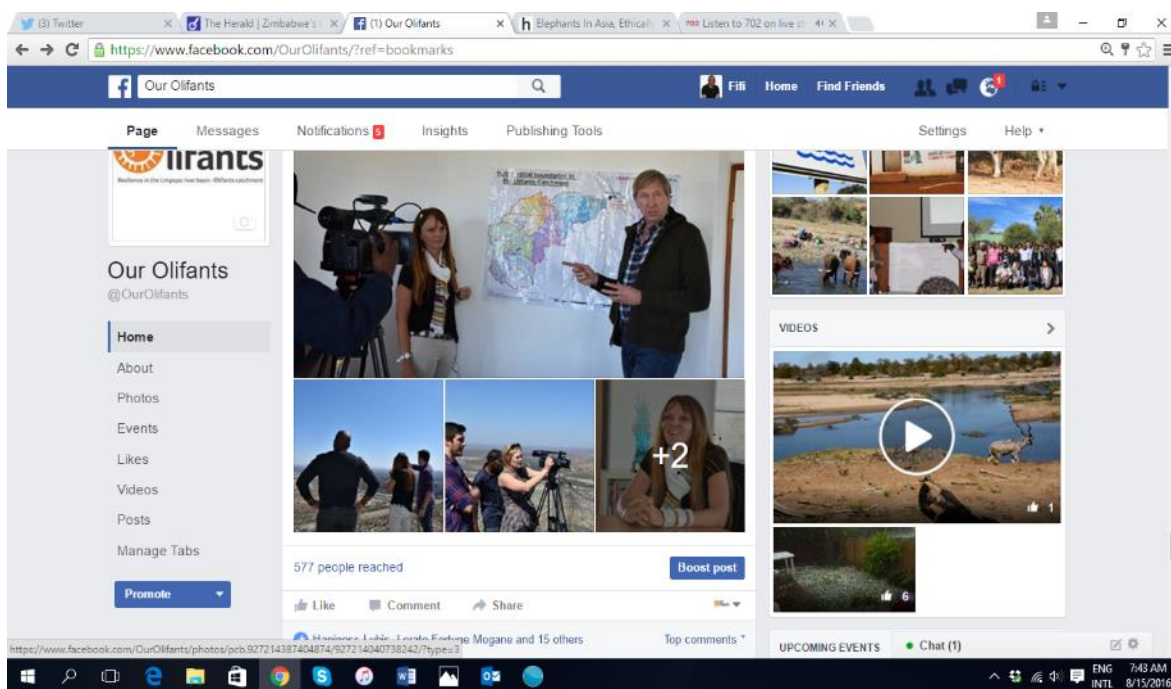


Figure 29: Facebook screenshot featuring filming of the Carte Blanche documentary.

2.7 KRA 7: Internal governance

Key Area 7 objective: To ensure good programmatic governance through developing and maintaining organisational capacity and effectiveness through tenable management systems and sub-contract management.

Staffing and offices

AWARD currently has a staff complement of 34 people (including 11 interns) plus 5 research associates. There have been several changes, with departures and arrival of new staff. A major challenge has been to fill vacancies, especially technical posts and senior administrative posts. In particular, technical support to the directors has been identified as a major gap since 2015. A huge amount of time has been given to interviewing and finally trying to secure work permits for foreigners. We are still in an uncertain and potentially vulnerable position with respect to two key positions after nearly a year. At the same time, AWARD has been trying to grow young professionals into the sector through the employment of junior staff and the internship program.

As part of the staff development program several employees took part in short-term training. This includes training on USAID Financial Policies and Procedures, TraiNet and J-Visa Compliance and USAID's



AidTracker system. Nineteen staff members were trained through an in-house two-day Intermediate or Advanced MS Excel training course.

With expanding numbers, AWARD moved into offices which accommodate all project teams in one building. This has significantly improved operational efficiency.

Sub-grant management

Phase 2 of the RESILIM-O project has the added facility to issue Fixed Amount Awards as sub-grants. In March this year AWARD invited locally-based South African organisations (especially CSOs, CBOs & NGOs) with an interest and capacity in collaborative implementation associated with the program areas listed below to identify themselves through the submission of an expression of interest. Of the 18 submissions received, only 3 were deemed appropriate to the bid. A cycle of solicited calls was launched with a further 7 submissions being submitted.

Considerable time was spent in developing, managing and tracking the selected potential sub-grantees. Both the technical and administrative teams provided grants application support and technical assistance on proposed program areas. Seven potential grantees participated in a series of briefing sessions which took the form of capacity-building and collaborative planning in grant proposal development. This was in keeping with one of RESILIM-O's fundamentals, namely systemic collaborative planning and social learning. From positive feedback we believe that our approach is relevant and functional even if somewhat time consuming.

As with other KRAs, staffing for a Grants Management Unit has been a challenge¹⁶. AWARD interviewed several potential candidates over a number of rounds, testing the potential to outsource a service provider, but by September it was decided to retain the Grants Management Unit within AWARD. The setting up of procedures and processes for managing grants has taken considerable effort. Amongst these tasks has been the drafting of the Grants Manual and a suite of management templates to guide the recipients in the development of proposals and budgets as well as a system for tracking sub-grant milestones.

Work on the Mozambican portion of the Olifants/Limpopo basin continues to find expression through our strategic partner Verde-Azul, whose contractual agreement moved during this year from a short-term consultancy to a long-term contractual relationship. We have therefore begun the paperwork for a Fixed Award Amount (FAA) to run from June 2016 to December 2017. Along with site visits and technical assistance, AWARD and Verde Azul began jointly developing a transboundary communications strategy for the Olifants. AWARD has successfully procured the services of Portuguese to English translators in an effort to reduce the administrative burden on both AWARD and Verde-Azul.

Partners and Steering Committee meetings

AWARD has held two events this year aimed at inviting critical comment and sharing of experiences with informed partners and experts in the region. These were a partners' meeting in October 2015 in Nelspruit and a Steering Committee meeting in September 2016 in Pretoria. AWARD received positive feedback and interest at both events, particularly at the latter where many participants commented on the pioneering nature of AWARD's use of social learning approaches in the development and transformation of practices.

¹⁶ Due to problems with capacity, salary demands and appropriate skills



At the same time these events stimulated constructive debates around some of key issues experienced in the program.

Reference Group meeting

As part of our commitment to keep up-to-date with global thinking and developments we continued with the annual Reference Group meeting in October, where we hosted Prof. Ray Ison along with Dr. Biggs and Dr. Rosenberg. These engagements provide important formative sessions for building systemic approaches into our resilience-building endeavours. Prof. Ison also spent time with the AWARD staff and interns.

Knowledge management

Given the successes of RESILIM-O Phase I, AWARD has generated a large amount of cutting edge knowledge and documentation about the Olifants River Basin, and receives numerous requests for this information. We are equally aware of the need to share our work with USAID as a donor through platforms such as the Development Experience Clearinghouse. Knowledge management has been an ongoing difficulty due to the complexity and range of both material and partners. We have, as a response, initiated the process of developing an Information and Knowledge Management Framework for AWARD including RESILIM-O.

Contractual requirements

The contractual requirements governing our Cooperative Agreement with regard to the EMMP, as submitted with our 2016 Work Plan, continue to be upheld and monitored across all program activities. All consultancies and sub-contracts have equally been informed of this requirement. We have plans to ensure that our sub-grantees develop their own EMMPs, which we will monitor during the course of program implementation.

3 Reflections and Looking Forward

3.1 Design Considerations

AWARD does not anticipate major changes to the programmatic design for the next financial year such that the workplan will comprise the same KRAs (known as activities by USAID). A major change will be the inclusion of sub-grants as outlined below.



3.2 Sub-grants

So far 12 projects in 8 key areas are identified as potentials for sub-granting. Whether all will be funded during 2017 remains to be decided (please see Section 2.7 for further details). The projects are currently:

Table 4: A summary of sub-grants under consideration

PROJECT DESCRIPTION	
1	<p>Projects focusing on capacity development for food production under climate change scenarios:</p> <ul style="list-style-type: none"> • Support for small scale, climate smart agriculture (mainly in the central and lower Olifants) • Support for small scale commercial climate smart agriculture • Support for commercial climate smart agriculture
2	The introduction of resilience-based curricula into four Institutions of Higher Learning.
3	<p>Projects that focus on supporting two municipalities with improving capacity as a way of adapting to water management challenges under climate change:</p> <ul style="list-style-type: none"> • Improving waste water treatment so as to reduce the impacts of effluent discharges into rivers • Water conservation & demand management to reduce the loss of water due to leakages from the reticulation systems, effectively making more water available for human consumption.
4	The implementation of at least 3 priority projects in Mozambique (still under negotiation).
5	Development of conservation entrepreneurs in the lower Olifants with a focus of integrating biodiversity, climate change and livelihoods security into local economic development programs.
6	Capacity development for government agencies involved in compliance, monitoring and enforcement of agricultural and forestry activities and land-use practices impacting on biodiversity in priority biodiversity areas.
7	Building custodianship through bio-monitoring programs.
8	Training for civil society organisations through the Catchment Ambassadors program so as to improve accountability and transparency in the management of the Olifants catchment and its resources.

Two projects have received final approval and will be issued with Fixed Amount Awards. They are the small scale agriculture projects and the support for curriculum revitalisation in the institutions of higher learning.

