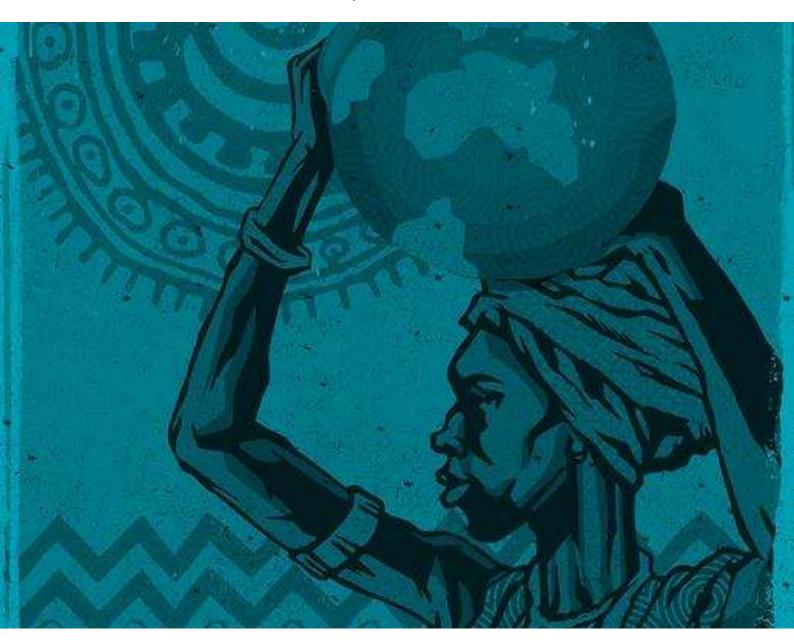


Progress Report Quarter 1 2018-2019 FY

Resilience in the Limpopo - Olifants

Association for Water and Rural Development





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Community participation in restoring hydrological flows to the mangroves in the Limpopo Estuary, Mozambique (Photo credit: CDS-ZC)

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Acronyms and Abbreviations

Agri-SI Agriculture Support Initiative

AWARD Association for Water and Rural Development

CC Climate Change

CCA Climate Change Adaptation
CPA Communal Property Association

CSO Civil Society Organisation

DAFF Department of Agriculture, Forestry and Fisheries

DEA Department of Environmental Affairs

DICLAD Dialogues for Climate Change Literacy and Adaptation

DWS Department of Water and Sanitation
GIS Geographical Information System

IAPs Invasive Alien Plants

IHL Institution of Higher Learning

InWaRDS Integrated Water Resources Decision Support IWRM Integrated Water Resources Management

K2C Kruger to Canyons KRA Key Result Area

LBCIN Limpopo Basin Curriculum Innovation Network

LEDET Limpopo Department of Economic Development, Environment and Tourism

LMC Legalameetse Management Committee

LNR Legalameetse Nature Reserve

MDF Mahlathini Development Foundation

MERL Monitoring, Evaluation, Reporting and Learning

MSI Municipal Support Initiative
MoU Memorandum of Understanding
NGOs Non-governmental Organisations
NRM Natural Resource Management

NRMP Natural Resource Management Program

SANParks South African National Parks
SDF Spatial Development Framework

USAID United States Agency for International Development

USG United States Government
WRP Water Resources Planning
WWTW Wastewater Treatment Works

Executive Summary

Overview of the Quarter

This report covers the period October 2018 to December 2018, the final quarter of the 2018 calendar year and first quarter of the USAID financial year. The Annual Report for the 2017/2018 financial year was submitted on 1st November. A major focus this quarter was reflection on the past year and strategic planning for the year ahead, within project teams and also at the level of the whole program during the annual Reference Group meeting in November. Since 2019 is the final year for project activities, with a much reduced budget, teams needed to prioritise activities that will maximise the impact and sustainability of their work whilst ensuring that all activities can be completed in time. A major focus has also been on numerous fund-raising activities through new proposals and concept notes.

Several important **network-building** events took place this quarter, some of these being a culmination of several years of work. The launch of the Lower Olifants River Health Forum (LORHeF) took place on 15th November, and plans are now underway for private nature reserves to include freshwater monitoring in their reserve management (a first) and to take over the management of the network.

A significant step forward was the first official meeting of the Lower Olifants River Network (LORiN) in Hoedspruit on 28th November which finally brought together government (national and provincial DWS) and water-users in the lower Olifants. This follows extensive preparatory meetings in 2018. The purpose was to address the critical water resources governance issues facing the lower Olifants and to gain clarity on roles and responsibilities. We are carefully monitoring actions from the meeting. Work towards building the new Middle Olifants River Network (MORiN) got fully underway this quarter, with several meetings with potential network members held in Pretoria, Polokwane, Hoedspruit and Groblersdal.

In terms of the Blyde, the Blyde Restoration team met with stakeholders from the Sabi-Sand Wildtuin to explore partnerships and opportunities for restoration in the upper Sand Catchment and also took part in a learning exchange in KwaZulu-Natal to learn about restoration efforts in other catchments. Turning to agriculture and climate-change adaptation, the second Agroecology Network meeting (supported also through DKA) was held at the University of Mpumalanga on 22nd November. Project staff also attended numerous other workshops and meetings with partners and stakeholders (in the fields of land-use planning, water reconciliation, climate change adaptation and agroecology) in order to build relationships, improve their understanding of context, provide input into processes and strengthen collaboration.

Two areas of work have focused on **governance** in the last quarter, namely IWRM and Co-management. A number of stakeholders worked together to ensure continued flows in the lower Olifants (which would have stopped flowing - see below) and to mediate issues between farmers and DWS. In the middle Olifants issues of governance were key themes for many stakeholders. Also, various meetings regarding co-management were held between AWARD, K2C and various LEDET Directorates towards improving the outcomes for co-management and to ensure the coordination of activities relating to co-management.

Several training and shared learning events were held. Under the Agriculture Support Initiative, a cross-learning visit allowed 15 farmers from the Lower Olifants to visit farmers in the Middle Olifants and share experiences and practices. Training was held for the farmers involved in the herb and organic mango production projects as well as training in poultry production. A Climate Change Dialogues Module 1 workshop was held for stakeholders under the Blyde Ecosystem Restoration project, to introduce them to the basics of climate change. This was done in conjunction with training sessions on field safety, ecoliteracy, mapping, GIS and species identification for the newly appointed teams under the Restoration Custodianship project. A shared learning event in Hoedspruit on land-use planning focused on raising awareness about the Critical Biodiversity Area (CBA) maps and land-use guidelines among various stakeholders involved in biodiversity-based activities, including estate agents, wildlife estate managers, private reserve managers and farmers. An Environmental Rights and Action workshop for Civil Society

Organisations from the upper and middle Olifants was held in November, together with the Legal Resources Centre.

Expressions of **collective action and agency** included collective planning and alignment of their Annual Plans of Operation by the members of the Blyde Restoration Group, development of action plans for the proposed Community Day by the communities at Legalameetse Nature Reserve (LNR), and initiation of the declaration process for the Matseke Springs wetland adjacent to LNR by the Madutula CPA. Water committees established by smallholder farmers in the lower Olifants have made progress with organising neighbourhood groups of 10-15 families who work together to collect money for managing and accessing local water sources (springs or boreholes). Committees from different villages have actively sought each other out to learn from each other.

Technical tool development this quarter included development of a river biomonitoring database for use by members of the Lower Olifants River Health Forum. A GIS component was included into the InWaRDS dashboard. A mass balance model was developed to track water losses from all river reaches feeding into the Lower Olifants and so facilitate better management of declining river flows and dam operations. The gauge plate at Oxford weir was replaced. The De Hoop Release Model was run every Monday, Wednesday and Friday as requested by the DWS, to support the release of water from the De Hoop dam (the biggest release that has been done yet).

Work has started on the development of a mobile app for spatial land-use planning which was welcomed by participants at the shared learning event. The app supports users to determine categories of biodiversity that are present on a certain piece of land.

The Blyde Restoration team, together with SAEON, DAFF and the K2C Environmental Monitors (EMs), set up four permanent vegetation monitoring plots in the Lowveld Plantations, to monitor vegetation change as an indicator of restoration impact. The data will be collected by the EMs and the process overseen by SAEON. Ground-truthing and collection of data on wetland degradation and erosion for the IAP inventory map continued this quarter.

AWARD staff provided input into climate change **policy development** through presenting the DICLAD work at a FEDUSA (Federation of Unions of South Africa) inception workshop to develop a climate change policy, and through endorsing an open letter to the Presidency. This calls for an emergency sitting of Parliament to discuss the implications for South Africa of the IPCC climate change report with a focus on the socioeconomic impacts.

Another important area of policy addressed this quarter was the rights of smallholder farmers to save and distribute seed. Several workshops to raise awareness about the Seed Bill now before Parliament were held in the middle and lower Olifants and AWARD staff also attended a series of workshops organised by the African Centre for Biodiversity. Input into land-use planning policy continued through inputs to the Mopani Spatial Development Framework and the Greater Kruger Land Use Planning Workshop which aimed to better align Kruger's land use planning processes with municipal planning processes.

A communications highlight was AWARD's contribution to the 4th National Conference on Global Change held in Polokwane from 3rd- 6th December. The conference was aimed at showcasing research in the area of global change, specifically climate change, and AWARD contributed to three events on the programme. We facilitated a special session and participated in two others (facilitated by SANBI and the Institutions of Higher Learning sub-grant). AWARD's special session was entitled "The emergence of systemic adaptive governance practices for global change in a transboundary catchment in Southern Africa"; the SANBI session focused on collective action approaches for protecting and restoring ecological infrastructure to improve livelihoods and the IHL side event on developing a collaborative and adaptive curriculum to support transformative learning in an era of global change. AWARD made a considerable impression and was recognised in the keynote address by Prof. John Holberg (Chalmers University, Sweden) for our contribution to collaborative and transformative action-research processes. Other conferences this quarter included our presentations at the Conservation Symposium in KZN, in special sessions entitled "Bridging the research-

management gap in the NRM sector" and "Developing ecological management protocols to assess restoration".

Nine **sub-grants** were active this quarter within RESILIM-O and most of their progress has been captured above. However some key activities worth noting are as follows.

- Having successfully completed the granting process and signed the contract with CDS-ZC in September, work started on the Mangrove Restoration through Community Participation in Limpopo River Estuary, Mozambique project. The project was officially launched in November and by December, hydrological restoration of 15 ha of mangroves had been completed.
- The restoration team supported by the K2C Blyde Restoration Custodianship sub-grant got off to a flying start with the clearing of invasive alien trees in the Blyde catchment. The enthusiasm, dedication and effectiveness of this team of locally-based young people has been inspirational.
- Work with the smallholder farmers in the middle and lower Olifants (under the Ukuvuna and Mahlathini Development Foundation sub-grants) is really starting to bear fruit after two years of engagement. From the successful development of markets for their organic produce, to selforganisation around water and seed sharing, to increasing uptake and experimentation with innovative farming practices, these projects have stimulated peer learning, interest in farming, and increased the agency of farmers.
- The Media and Communications sub-grant completed AWARD's new-look website which is now accessible to the general public (see www.award.org.za) and produced three brochures.

Overview of the Quarter in Numbers

Targets for the 2018/2019 USAID financial year were calculated by combining the results from Q1 with the targets collaboratively set with staff during their 2019 work planning (covering Q2, Q3 and Q4 of the USAID year). Targets are generally similar to those for last year except for an increase in the targets for training.

Hectares under improved NRM, hectares under improved biophysical condition and all capacity development indicators will be reported annually, as agreed with USAID.

This quarter, 685 people were trained in climate change adaptation and 696 people were trained in sustainable NRM and/or biodiversity conservation. Overall 61% of the people trained were female (the higher proportion of women is due to the high proportion of women farmers trained through the Agri-SI projects).

Fifteen laws, policies or guidelines that address biodiversity conservation and/or other environmental themes were recorded this quarter. These were:

- Land Use Management Guidelines for two local municipalities (Ba-Phalaborwa and Maruleng) (both proposed)
- Spatial Development Framework (SDF) for Mopani District (proposed)
- Position Statement for CSOs in the Olifants Catchment (proposed, adopted)
- River Operating Rules for the whole catchment (proposed)
- Emergency Operating Rules for the Lower Olifants (proposed, adopted, implemented)
- Early Warning System (proposed, adopted, implemented)
- Lowveld Plantations Biomass Assessment (proposed, adopted)
- Community declaration letter for Madeira portion to be included into Legalameetse Nature Reserve (proposed)

Table 1: Targets and Q1 results for the 2018/19 financial year.

Indicator	2017/18 Target	2018/19 Target	2018/19 Q1 Results
EG.10.2-1 Hectares under improved biophysical condition	21,300	22,520	To be reported at end of year
EG.10.2-2 Hectares under improved natural resource management	506,310	542,925	To be reported at end of year
AWARD Institutions with improved capacity to address NRM and biodiversity conservation issues	156	133	To be reported at end of year
EG.10.2-4 Number of people trained in sustainable NRM and/or biodiversity conservation	1,522	2,500	696 (274 male, 422 female)
EG.10.2-5 Number of laws, policies, or regulations that address biodiversity conservation and/or other environmental themes officially proposed, adopted or implemented	47	58	15
AWARD Number of stakeholders (individuals) with increased capacity to adapt to the impacts of climate change	1,250	1,118	To be reported at end of year
EG.11-2 Number of institutions with improved capacity to assess or address climate change risks	213	167	To be reported at end of year
EG.11-3 Number of laws, policies, regulations, or standards addressing climate change adaptation formally proposed, adopted, or implemented as supported by USG assistance	39	42	12
EG.11-1 Number of people trained in climate change adaptation	2,110	2,463	685 (267 male,418 female)
AWARD Number of people reached by Our Olifants campaign including social media	1,006,251	2,000,000	6,356
STIR-12 Number of peer-reviewed scientific publications resulting from USG support to research and implementation programs	7	10	1

Twelve laws, policies, regulations or standards addressing climate change adaptation were recorded this quarter:

- Land Use Management Guidelines for two local municipalities (Ba-Phalaborwa and Maruleng) (both proposed)
- Spatial Development Framework (SDF) for Mopani District (proposed)
- Position Statement for CSOs in the Olifants Catchment (proposed, adopted)
- River Operating Rules for the whole catchment (proposed)
- Emergency Operating Rules for the Lower Olifants (proposed, adopted, implemented)
- Early Warning System (proposed, adopted, implemented)

The number of people reached through the Our Olifants media campaign was calculated from social media reach statistics as well as readership, listenership or viewership figures published by the various print

media, radio and television stations which have featured stories on RESILIM-O. The target for media exposure this year was set at around 2 million people. This quarter we managed to reach 6,356 people.

One peer-reviewed paper was published during this reporting period:

• Burt, James & Price (Dec 2018). A peaceful revenge: achieving structural and agential transformation in a South African context. *Journal of Critical Realism* 17(5):1-22.

The following paper was submitted to the Journal of Simulation in November 2018:

• Carnohan, S.A., Clifford-Holmes, J.K., McKnight, U.S. and Pollard, S. *Climate change adaptation in rural South Africa: Using stakeholder narratives to build SD models in data-scarce environments.*

Conference presentations:

- Several presentations, a special session and a side event at the Global Change Conference.
- Itumeleng Selebalo presented her MSc work at the 6th Annual System Dynamics Conference in Johannesburg
- The Blyde Restoration team presented work on the Blyde and Co-management projects at the Conservation Symposium in KZN, in special sessions entitled "Bridging the research-management gap in the NRM sector" and "Developing ecological management protocols to assess restoration"
- The MDF team presented a talk on community-based climate-smart agriculture at the Extended National Committee on Climate Change meeting in November.



Farmers visiting cluster leader Anna Molala's seed bank at her homestead in Makweng in the middle Olifants.

1 Background

The RESILIM-Olifants or RESILIM-O program focuses on the Olifants River Basin (Figure 1), 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. 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". For further detail on the background and rationale for this work, readers are referred to the 2018 Annual Report and the 2019 Workplan.

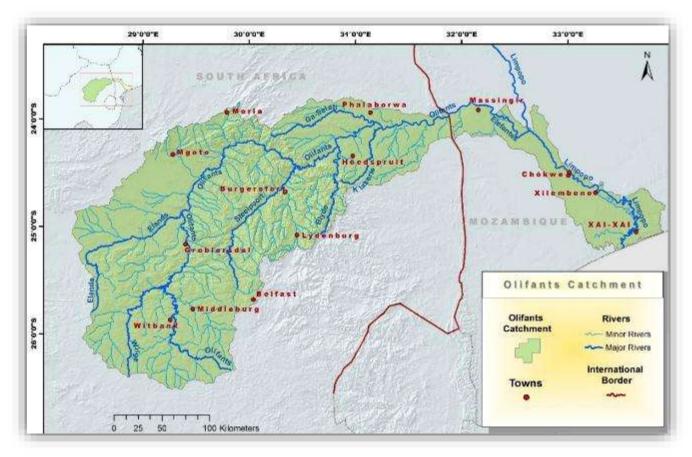


Figure 1: Map of the Olifants River Basin.

2 Progress in Key Result Areas

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.

2.1.1 Municipal Support Initiative: Capacity Building to Support Catchment Resilience in Municipalities

The Municipal Support Initiative (MSI) focuses on improving preparedness and responsivity of local government (as institution) to deal with natural resource degradation and climate change vulnerability. It supports practitioners in a professional learning process through workplace support, tool development and application.

Land Use Planning

The Land Use Planning shared learning event in October helped to increase the reach of the land use planning tools and guidelines developed under RESILIM-O to a new set of stakeholders besides the municipal spatial planners, namely estate agents, farmers and managers of wildlife estates and private game reserves. Participants were shown how biodiversity considerations should be integrated into land use schemes, zoning, subdivisions, EIAs, water use applications and agricultural applications. The idea of a spatial planning mobile app was enthusiastically supported by



Figure 2: Land Use Planning shared learning event in Hoedspruit, October 2018

participants. This tool could be used by municipal planners as well as all land owners and users, to show CBA categories and land use guidelines for farm portions. It could also flag areas that require assessments (either EIAs or biodiversity assessments). A CBA User Guide - a less technical summary of the Biodiversity Handbook - is under development.

The team continued to support and make inputs into the Mopani Spatial Development Framework (SDF), an important mechanism for adoption of the CBA map at district level (i.e. beyond Ba-Phalaborwa and Maruleng local municipalities). They contributed to the Greater Kruger Land Use Planning workshop held by SANParks and K2C, aimed at better aligning Kruger's land use planning processes with municipal processes. In November they met with LEDET staff from the Biodiversity and EIA units to explore the challenges around the integration of the CBA map into spatial planning practice. Two main constraints were highlighted: a capacity issue within the Environmental Empowerment Services (EES) Unit which is responsible for facilitating the uptake of

biodiversity and conservation work by the political structures within local municipalities; and the fact that the Biodiversity Unit and the EES are working in silos. Communication between local government and the competent authority (LEDET) has therefore been unsatisfactory. The team negotiated some areas of collaboration to support the integration of biodiversity into spatial planning instruments.

Water projects

AWARD continued to use available opportunities to support the uptake and implementation of the work done last year under the two MSI sub-grants on Water Conservation and Demand Management and Wastewater Treatment Works (WWTW). Options for sustaining the WWTW turnaround process were presented internally to AWARD's Management Committee. The MSI team entered into a MoU with GWFA focusing on wastewater management in Ba-Phalaborwa LM, aiming to consolidate a partnership between the WWTW process controllers and the GWFA laboratory located within the SAEON facility in order to improve the regularity of water testing. The MSI team also presented the WWTW findings and decision support tools developed under RESILIM-O at an Integrated Water Governance System (IWaGSS) project meeting in Phalaborwa in October.

2.1.2 Civil Society Organisation Support Initiative (CSO-SI)

With the completion of the Changing Practice course last year, support to Civil Society Organisations will continue through facilitating their involvement in water governance networks in the middle and lower Olifants, and through shorter engagements to follow up on work in previous years and to build in sustainability plans.

A Legal Action Competence workshop for Civil Society Organisations from the upper and middle Olifants was held this quarter, together with the Legal Resources Centre (LRC). This shared learning event focused on developing action plans to address environmental violations identified by the CSOs.



Figure 3: Derick du Toit addressing participants at the CSO shared learning event in November.

2.1.3 Institutions of Higher Learning Capacity Building Project (Sub-grant)

This project, implemented by Rhodes University, aims to support institutions of higher learning in the Olifants basin to review, design and develop contextually relevant teaching and learning programs that reflect systemic and social learning approaches to climate change vulnerability reduction.

Activities this quarter included the start of re-design of learning programmes identified for innovation by the five participating institutions. The project team ran a side event at the Global Change Conference in Polokwane in December, focused on exploring the use of "challenge laboratory" methodology in developing a collaborative and adaptive curriculum to support transformative learning in an era of global change. A joint paper based on the learning programme review process, findings and reflections was presented.

2.1.4 Mangrove Restoration through Community Participation in the Limpopo River Estuary, Mozambique (sub-grant)

This project, implemented by CDS-ZC aims to contribute to increased resilience of the mangrove-livelihoods 'socioecological system' in the Limpopo estuary (Mahielene and Zongoene Sede communities) through restoring and maintaining biodiversity and hydrological processes so as to provide natural resources and ecosystem services that sustain local people and mangrove ecosystems.

This quarter the hydrological restoration process was completed, through opening up of hydrological channels silted up during the floods of 2000 to restore appropriate water flows within the mangroves. This was achieved through



Figure 4: Topographical survey.

fieldwork conducted from 1st November to 4th December involving local community members and community leaders. A topographical survey covering 15.5 ha was first conducted by a local consultant, to determine the depth of excavation needed for the channels in each location, and to guide the positioning of the channels as they move away from the main river. This survey created the basis for re-creation the correct tidal elevations according to the Watson (1938) zoning scheme for mangroves, based on the degree and frequency of tidal flooding.

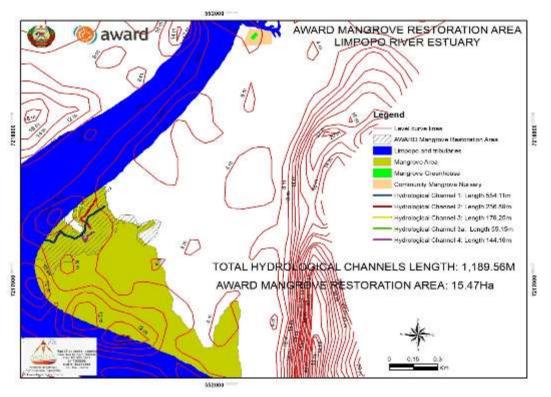


Figure 5: Results of topographical survey showing mangrove restoration area, with hydrological restoration channels and level curve lines.

Channel excavation was done by 264 local community members who received agreed-upon financial incentives. More than 50% of these people were women. Channels were opened from the mouth upwards, and control frames ensured the correct channel dimensions (Figure 6). Four channels were excavated, with a total length of 1,190 m and 3,570 m 3 of sediment was removed.



Figure 6: Community participation in channel excavation to restore water flow to the mangroves.

2.2 KRA 2: Enhanced Long-term Water Security and Water Resources Protection under Climate Change

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 sustainable plans and actions for water resources protection within Integrated Water Resource Management (IWRM). This is being done through:

- 1. Governance support to various institutions
- 2. Mobilising custodianship of water resources through the development of networks with greater capacity for monitoring and action in:
 - a. the lower Olifants (LORIN or Lower Olifants River Network)
 - b. the middle Olifants (MORIN through a grant)
 - c. Protected Areas in the Lower Olifants through a network known as the Lower Olifants River Health Forum (LORHeF)
- 3. Development of tools and protocols in support of a decision-support system for IWRM and training in the use of these tools.

2.2.1 Support for Systemic, Accountable Water Governance

The low rainfall and low flows in the Olifants River reported in September (see 2017/18 Annual Report) continued into October and November and the situation in the lower Olifants started to reach crisis point. Multiple warnings were sent out by AWARD through the Early Warning System. On Sunday the 18th of November, Lepelle Northern Water closed the Phalaborwa Barrage outflow due to insufficient inflow. Blyde dam had been drawn down to 48% over a short space of time. On the 19th of November SANParks requested that AWARD run the release model again to provide recommendations to DWS. While a release was approved by DWS, the situation once again demonstrated the need to go beyond using releases from De Hoop dam as a "band-aid" solution and to address the governance and management issues that have contributed to the crisis situation. It is for this purpose that the informal governance network that has operated in the Lower Olifants over the past few years is being expanded and formalised into the Lower Olifants River Network.

AWARD staff held several meetings with stakeholders in preparation for the LORiN meeting in November. One of the farmers from the Lower Olifants came to AWARD's offices in October seeking help - reflecting a level of desperation, and also trust in AWARD. The KRA 2 team reflected the farmer's concerns to Mr Guma from the DWS Regional Office in Nelspruit, and he undertook to contact the correct DDGs to secure high-level support for addressing the problems (including the WARMS database, unlawful use and lack of DWS action to curtail it, and poor communication with stakeholders about Validation & Verification). The team also met with with key stakeholders from the DWS Regional Office in November about the situation in the Lower Olifants and the importance of the LORiN network meeting.

2.2.2 Networks for Collective Action

An important part of the work on water governance is participation in and contribution to water networks in the region. In most cases these networks were non-existent and, in a world of weakening governance and increasing complexity, they are regarded as key for long-term sustainability. They address a constitutional principle underpinning our democracy where people have a right to know and participate in governance. We have been supporting networks for water resources monitoring and management both in the middle and lower Olifants.

A highlight for the Water Governance team was the first official meeting of the **Lower Olifants River Network (LORIN)**, held in Hoedspruit on 28th November. This network was established to deal with ongoing issues impacting water quality and quantity in the lower Olifants river catchment. These impacts result from several different drivers (not only unlawful water use), thus the stakeholder network is rather diverse ranging from DWS national to local estate managers in Hoedspruit.

The workshop provided an opportunity for stakeholders to learn more about the drivers of the current state of affairs in the Lower Olifants and to express their concerns to the regulators/managers of the water resources (DWS). The KRA 2 team compiled several useful pieces of data/evidence including a timeline of events and a mass balance model to track water losses from all river reaches feeding into the Lower Olifants. The meeting was very fruitful, with participants identifying both immediate and long-term actions needed to address the issues under three themes, namely resource-directed measures, source-directed measures, and planning and operations.



Figure 7: LORiN network meeting participants (L) and some of the maps used during the workshop (R).

Several meetings were held this quarter with potential members of the Middle Olifants River Network (MORiN), in Pretoria, Groblersdal, Polokwane and Hoedspruit. These meetings also served to build the team's understanding of the problem dynamics hampering collective action around WRM in the region. Initial causal loop diagrams were drawn up. The team noted the potential for conflict and tension due to the existence of many different initiatives, many of which are unaware of each other and some of which are working at cross purposes.



Figure 8: Meeting with the CEO of the Lebalelo Water User Association in Pretoria.

The Lower Olifants River Health Forum (LORHeF) was launched on 15th November. The first meeting aimed to operationalize the network by catalysing existing interest (cultivated through RESILIM-O over the past few years) to form a self-driven river biomonitoring network. There was opportunity to share and learn from the experience of other biomonitoring networks such as Kruger National Park's biomonitoring programme and the Estuaries Network. In preparation for this event, AWARD developed a biomonitoring database and included a GIS component into the InWaRDS dashboard. The meeting achieved its purpose and dates were set for site selection and the first round of monitoring.



Figure 9: Group photo of LORHeF participants, 28th November 2018.

2.2.3 Developing an Integrated Water Resources Management Decision Support System (InWaRDSS)

As described above, the Decision Support System and Early Warning System, supported by the near real-time flow and water quality monitoring system, is integral to all the work with stakeholders around water governance. The team ran the De Hoop Release Model regularly this quarter to support decisions around dam operations. Our three flow loggers and one water quality probe have continued to provide important redundancy for the aging DWS monitoring network, as acknowledged once again by DWS at a flood preparedness meeting at Roodeplaat on 20 - 23rd October. A new gauge plate was installed by Thabo Mohlala at Oxford Weir this quarter as the old one had reached the end of its lifespan. This was necessary to allow us calibrate the Oxford flow gauge.

The team has engaged with an Associate Professor from the University of Windsor, Dr Tirupati Bolisetti, who is currently building a hydrological and water quality model for the Olifants Catchment. AWARD agreed to provide meteorological data that he currently lacks. In exchange, we will have access to the model and its results, including the downscaled climate change simulated hydrology, which we currently do not have at the catchment scale. Furthermore, we will be able to expand the model to form the basis of all the release models we currently utilise and integrate the interface into InWaRDSS.



gauge plate at Oxford weir.

2.3 KRA 3: Enhanced Natural Resource Figure 10: Replacing the Management for Securing Biodiversity and Associated Livelihoods under Climate Change in High Priority Areas

Key Area 3 objective: To conserve biodiversity and sustainably manage high-priority ecosystems by supporting collective action, informed adaptation strategies and practices and tenable institutional arrangements.

2.3.1 Blyde Catchment Restoration for Enhanced Biodiversity and Ecosystem Services



Figure 11: Blyde Restoration Custodianship training for the IAP clearing team in the Lowveld Plantations on 23rd - 24th October on eco-literacy, mapping and GIS.

The Blyde sub-catchment constitutes a high-priority biodiversity and water source area in the Olifants Catchment. However, its functioning is being threatened through invasion by multiple alien plant species, particularly those associated with timber plantations.

A highlight this quarter was training the newly appointed invasive alien plant clearing team under the Restoration Custodianship sub-grant project (23 - 24th October). The group was very enthusiatic, knowledgeable and willing to learn. The training included field visits and covered field safety and awareness, eco-literacy, mapping, GIS and species identification.

The Blyde Restoration Group held a collaborative planning workshop again this year to align their annual operational plans (APOs) for alien plant clearing, indicating that the collective action started through this project is still ongoing. The Invasive Alien Plant Inventory Map developed by the group was used to inform the APOs, indicating institutionalisation of this collaboratively developed tool. AWARD

provided feedback on the new Management Unit Clearing Plan (MUCP) developed by DEA National to support planning at regional and local scales and promote collaboration between agencies. The group agreed to explore and test the MUCP functionality, although noting that it was not developed collaboratively and there has been little communication about it.

A constructive meeting with stakeholders from the Sabi-Sand Wildtuin (SSW) on 19th October explored opportunities for restoration and development in the upper Sand catchment. SSW is interested in conservation of water and biodiversity in this area over the long term and is willing to fund restoration initiatives to achieve this goal.

The team continued with ground truthing for the Invasive Alien Plant (IAP) Inventory Map, capturing data on wetland degradation, erosion and recent fires. They also sampled additional transects for the biomass resource assessment and extrapolated the data to compartments of similar species, density and tree structure. The low value of timber above the Watt Road, the poorly functioning road network and the high levels of illegal harvesting will make these areas difficult to manage in future.

As part of sharing our experiences and learnings, the Blyde Restoration team visited partners in the uMngeni and Cathedral Peak catchments in KZN (31st Oct to 2nd Nov). This followed an earlier learning exchange in which we invited partners from the uMngeni (KZN) and Tsitsa (Eastern Cape) to the Blyde Restoration Group's technical workshop for the development of the Lowveld Restoration Plan. The focus of the exchange was on learning more about different restoration techniques used in other catchments and how they can be applied in the Blyde landscape. We explored wetland mapping and delineation processes, buffering in forest management, and monitoring of vegetation and hydrological processes. From the 5th- 9th November we



Figure 12: Umngeni field visit with Dr. Lechmere-Oertel, to see restoration research sites in Ferncliffe nature reserve

attended the Conservation Symposium, formerly known as the Symposium for Contemporary Conservation Practice and presented the work under the Blyde Restoration and Co-management projects.



Figure 13: KZN Learning exchange: Cathedral Peak

On the 13th November, a group of partners including AWARD, SAEON, DAFF and K2C Environmental Monitors set up four vegetation monitoring plots in the Lowveld Plantations. These plots will be used to monitor vegetation change as one of the indicators of restoration impact in the Blyde landscape. SAEON, as the official custodian of long-term environmental data, will oversee the monitoring process and the K2C Environmental Monitors (EMs) will collect the data. The knowledge and field skills displayed by the EMs was impressive and encouraging for the future monitoring process.

2.3.2 Blyde Restoration Custodianship (Sub-grant)

This project aims to support and enhance current efforts on invasive alien plant (IAP) control and ecosystem restoration in the larger Blyde area (including the Blyde River Canyon Nature Reserve and the sections of the Lowveld Plantations which are to be incorporated into this), as well as the beneficiation and capacity development of local landowners and community members.

The newly appointed clearing team started with restoration activities in November on Mariepskop and in the Upper Klaserie catchment. The team is highly motivated and has done a remarkable job so far in the number of polygons cleared and in their adherence to the required standards and procedures. K2C has considerable expertise in managing restoration teams and in the technical reporting requirements for DEA NRM projects. Pre- and post-clearing site inspections are conducted on foot for each clearing block, together with the team leader, during which coordinates are marked and photos taken.

A CPA Liaison officer was appointed on the 3rd of December 2018 and has had the chance to meet the team and the other stakeholders including DAFF, the four Blyde CPAs, AWARD and the K2C staff. CPA members were included as part of the interview panel. There were some delays in appointing the Liaison Officer due to lack of communication between the four CPAs and their community members in terms of receiving CVs from individuals who met the job requirements.

On 6th December, CPA members attended a field trip to the Watt Road to discuss the broader project, the boundaries of the reserve, the biomass assessment and timber harvesting options.



Figure 14: Nick and Frans of K2C applauding the team's good work.

An article about this project featured in the K2C newsletter in December - see https://k2cbiosphere.blogspot.com/2018/12/custodianship.html

2.3.3 Support for Evolving Co-Management Arrangements for the High Priority Legalameetse Nature Reserve

Legalameetse Nature Reserve (LNR) 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 subcatchment, and also has the potential to meaningfully contribute to the livelihoods of local communities with land claims on the reserve.

The Co-management team together with partner organisations EMROSS and K2C met with some of the key LEDET directorates and departments whose activities relate to co-management on 17th October. AWARD has been trying to bring these directorates together for some time, to start working on improving the coordination of activities that affect co-management. Participants included the Chief Directorate for Biodiversity and Natural Resources, the LEDET Mopani Region Cluster Manager, the Director for Natural Resources Management and Agriculture from Limpopo Department of Agriculture, the Chief Director Limpopo Wildlife, State Owned Nature Reserves (LNR Reserve manager), the Protected Areas Directorate and the Tourism and Development Directorate (LTA). Several issues were raised by LEDET regarding the chain of communication and the delays in signing the co-management agreement (which some felt AWARD had exacerbated). LEDET also highlighted that the LMC should have attended the meeting. AWARD provided feedback to the LMC, and a document describing the objectives and outcomes of the co-management support project was drawn up and signed, for submission to LEDET.





Figure 15: (L) Co-management awareness-raising with the Madeira community; (R) Matseke wetland site visit.

In November the Co-management visited the Matseke Springs wetland adjacent to Legalameetse Nature Reserve (LNR). The Madutula CPA has requested to declare this site as part of LNR in order to protect it from fires and harvesting of trees. The declaration process is being led by K2C and supported by AWARD.

Two meetings were held this quarter to raise awareness about co-management among the Cyprus, Balloon and Madeira communities. In the case of Madeira, it was clear that the committee is well organised and meets regularly with the beneficiaries. In the case of Cyprus and Balloon, however, communication between the community representatives and the broader community needs to improve urgently. Lack of information regarding registration, beneficiation, lease fees and the roles of the LMC and individual CPA committees affect communities' understanding of co-management and the processes required. This impacts information flow, transparency, benefit distribution and overall inclusion in the co-management process.

The registration of the four unregistered CPAs has still not been resolved. The chairperson of Madeira (elected as coordinator for this process) met with Makhutšwe CPA on the 25th of October; however, only one committee member came to the meeting. The CPAs have now started contacting Mr Maluleka (DRDLR) regarding the matter. They want Mr Maluleka to come and hear their resolutions with regards to falling under the Makhutšwe CPA and also to address the issues within the CPA.

The two registered CPAs are still willing to delay signing the co-management agreement as long as their request for active participation in decision making (procurement and adjudication of tenders) is not taken into consideration. They plan to take the matter to the MEC (Member of the Executive Council), followed by the Premier of Limpopo, the Public Protector then the Constitutional Court. LEDET has stated that government policy does not accommodate the CPAs' wishes, and there is therefore currently a stalemate.

2.4 KRA 4: Reduced Vulnerability to Climate Change through Collective Action, Informed Adaptation Strategies and Practices and Tenable Institutional Arrangements

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 Key Result Area contributes to the overarching RESILIM-O goal of building climate resilience in the Olifants Catchment. Due to the cross-cutting nature of climate change (CC), the majority of project activities in KRA4 are about embedding climate change thinking in other RESILIM-O projects. All of these activities are supported by continual updating and collation of climate information relevant to the Olifants catchment.

2.4.1 Dialogues for Climate Change Literacy and Adaptation (DICLAD)

A highlight this quarter was presenting the DICLAD work to the Federation of Unions of South Africa (FEDUSA), at an inception meeting held in collaboration with Friedrich Ebert Stiftung (FES) Trade Union Competence Centre. The purpose was to initiate the development of a policy to guide FEDUSA and its affiliates in their response to climate change. Our presentation was positively received and ignited much discussion on social learning processes, how to communicate on climate change, and how to build networks. Several attendees approached us with proposals for collaboration and invitations for engagements in 2019 related to climate justice and climate change policy development. This included representatives from the National Planning Commission and some of the trade unions.

The DICLAD team also reviewed the IPCC Special Report on Global Warming of 1.5°C, released in October. AWARD, together with several other organisations, endorsed an open letter to The Presidency (drawn up by the Cooperative and Policy Alternative Centre or COPAC) calling for an emergency sitting of Parliament to deliberate the implications of the report for South Africa. The team also monitored events and developments at the UNFCCC COP24 meeting (3rd - 14th December).

We participated in several other key climate change meetings, including the Extended National Committee on Climate Change meeting (6th November) focused on socio-economic impact assessment of the National Climate Change Response Policy, and the Mpumalanga Climate Change Forum meeting in Secunda (7th - 8th November) which provided an opportunity to learn about the Gauteng City-Region's Climate Change Strategic Action Plan and to share experiences of developing CC strategies for local and provincial government. In general, staff noted that there is some evidence of "talking and planning fatigue" among stakeholders when it comes to CC. A greater focus on action and implementation is needed.

On 25th October, the DICLAD team facilitated a Module 1 workshop for the Environmental Monitors (EMs, who monitor and advocate environmental issues and concerns in their communities) and Restoration Champions (who work as invasive alien clearing teams) from K2C, as part of the training described under KRA 3. The purpose of this workshop was to build climate change literacy and a systemic understanding of climate projections and impacts related to natural resource management (NRM).

The final DICLAD analysis report, analysing climate change dialogues held in 2017, was submitted by the consultant this month.

2.4.2 Support to Small-Scale Farmers for Climate Change Adaptation through Agro-Ecology (Agriculture Support Initiative or Agri-SI)

The AgriSI team facilitated a cross-learning event from 1st - 3rd October which allowed 15 farmers from the Lower Olifants (Mametja) to visit and interact with 10 farmers from the Middle Olifants (Motetema). Farmers expressed their gratitude for the opportunity to share experiences and practices, learn from their peers and strengthen their networks. They returned from the visit encouraged and inspired to try some of the propagation techniques, pest control remedies, different crops and livelihood diversification activities demonstrated by the Middle Olifants farmers. They were also interested to note the participation of youth in farming in the Middle Olifants.



Figure 16: Learning exchange between lower and middle Olifants farmers.

Two two-day education and awareness workshops were held with farmers from the Middle and Lower Olifants in October and November, together with the Legal Resources Centre (LRC) and Ukuvuna. These workshops were aimed at developing farmers' capacity to advocate for their rights, especially around access to seeds and the right to save and share seeds with others. They helped smallholder farmers to understand how the new Seed Bills (Plant Improvement Act & Plant Breeder's Rights Act) will affect practices such as seed saving, exchange and sale. Farmers thanked AWARD and LRC for bringing them such useful information. The Agri-SI team also attended a series of workshops in Johannesburg (22 - 25th October) run by the African Centre for Biodiversity to discuss the Seed Bill and Seed Treaties.



Figure 17: Seed Bill workshop in the Middle Olifants, 4-5 Octpber 2018.

The Agri-SI team facilitated the second Agroecology Network meeting on 22nd November in Nelspruit, attended by representatives of 18 different organisations working in the areas of climate-smart agriculture, agro-ecology, livelihood diversification and food security. Keynote addresses by ACBio and the LRC focused on the Seed Bills and Seed Treaties.

In the Lower Olifants the AgriSI team, working in collaboration with MDF and Hoedspruit Hub, continued to support livelihood diversification opportunities. The herb growing and marketing project continued to flourish with more farmers joining and other stakeholders coming on board to support the initiative.

Lower Olifants (Mahlathini Development Foundation sub-grant)

Farmers in the Lower Olifants continued to get support from Mahlathini Development Foundation (MDF) and Hoedspruit Hub to diversify their livelihoods. The Herb Production and Market Linkages Initiative continued to flourish, with a number of new participants being brought on board. An introduction to herb production for new farmers wishing to join this project was held on 23rd October. A number of different marketing options have now been tried, including setting up of a Facebook page for Hoedspruit Hub to do weekly order of organic boxes, supply to various shops and also farmer's markets. This project will now be expanded to 5 of the 6 villages in which the Agri-SI project operates, with each group taking



Figure 18: Herb grower Lina Malepe, preparing coriander and flat leaf parsley for delivery to Hoedspruit Hub.

responsibility for setting up their own internal process for managing production, orders and deliveries.

Smallholder farmers from Lepelle and Sedawa participated in training on Organic Mango Production and Value Addition. Jeffrey Tshishonga, Estate Manager at Bavaria Estates, conducted household visits to provide advice and troubleshooting for the smallholder farmer participants. A three-day training workshop was held at the Hoedspruit Hub, followed by a visit to Bavaria Estates.



Figure 19: Visit by Jeffrey Tshishonga to smallholder mango farmers (L); farmers visiting the Bavaria Estates mango nursery (R).

Other trainining workshops this quarter included a cluster review workshop (4th October) to review agroecological practices and two poultry production training workshops for 86 farmers (20th - 21st November). MDF continued with regular garden monitoring and farmer support during December as this is a busy time for the farmers and good rains in some of the villages stimulated farmers to work hard in their gardens and fields.

Water committees established by smallholder farmers in different villages have organised neighbourhood groups of 10-15 families who work together to collect money to manage one water source (spring or borehole) and do the reticulation for themselves. Committees from different villages have actively sought to learn from each other. Members from these groups have also entered into discussions with their local authorities to ensure that their initiatives are supported, and negotiated with more powerful individuals in their villages who presently hold 'power' over certain water sources and attempted to draw them into the broader process of sharing and managing water resources in their village.

Farmers have demonstrated many adaptations and innovations in their practices. One obvious example is that participants have seen the value of micro-climate management (shade netting) in vegetable production under increasingly dry and hot conditions. A number of participants have extended their gardening areas under shade netting and a few have purchased additional tunnel kits. As this particular innovation is now directly linked to the participants' ability to make a small income from selling organic produce, it is being implemented to various degrees by around 30-40% of the participants. Another adaptive innovation is the building up of trench beds, where digging is difficult due to shallow and rocky soils. Participants have grasped the importance of deep beds with lots of organic matter and have adapted that principle.

Middle Olifants (Ukuvuna sub-grant)

This project supports farmers in the Capricorn and Sekhukhune districts in the Middle Olifants, covering two local municipalities, 5 wards and 16 different villages. The number of farmers involved grew this quarter from 223 to 239. Around 73% of these are women (at least 54% of whom are over the age of 55). Although currently only 12% of farmers are under the age of 30, the project is working to increase youth participation. Two young women qualified as trainers this quarter.

Activities included training for cluster leaders and an internal exchanges between cluster leaders and members from Monsterlus, Tafelkop and Motetema to share skills and knowledge about garden monitoring, plant identification and propagation, and facilitation (19th - 22nd November). The Ukuvuna team additionally held community dialogues intended to enhance the ability of farmers in the Middle Olifants to self-organise, plan and work together. The dialogues focused on seed saving and seed sharing and included opportunities to share 19 different seed varieties and traditional seeds (26th - 30th November). The approach to training is

participatory, using participants' home languages, hands-on and with frequent revision and opportunity for peer learning.

Garden assesments were carried out by the 16 cluster leaders this quarter for all 58 gardens in Sekhukhune and all 181 gardens in Capricorn. The number of "green" gardens decreased in this assessment to 58% (from 75%) while the number of "orange" and "red" gardens increased to 27% (from 17%) and 15% (from 8%) respectively. This partly reflects the inclusion of several new gardens but also the fact that many farmers were preparing the land for the summer cropping season.



Figure 20: Seed saving, sharing and exchange: farmers buying seeds from cluster leaders in Makhushwaneng (L); seeds stored in Anna Molala's "seed bank" (R).

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

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

2.5.1 Monitoring, Evaluation, Reporting and Learning (MERL)

Given that the program is moving into the final year of implementation, the evaluation component of MERL in 2019 will move away from formative evaluation activities and focus on supporting and complementing the USAID evaluation (due in April 2019), the final program report and program-level communications outputs.

The MERL team spent much of October filing, collating and analysing the quantitative and qualitative data for the year, sharing the results with staff and producing the 2017/18 Annual Report. All TraiNet data were submitted to USAID before the 31st October deadline and the Annual Report was submitted timeously on 1st November. The reporting process went quite smoothly this year, due to the growing familiarity of the MERL team with the process, timeous submission of data by staff, identification of highlights for the year by project teams in their September monthly reports, and identification of project innovations at the October RESILIM-O day. The regular reviews of quantitative results carried out each quarter were useful, because they helped staff to see how they were doing and identify any gaps or missing data along the way. Coordination between the MERL and Grants units has been necessary to help ensure that data from the subgrants reaches the MERL team in time for the various reporting tasks. The Annual Report was accepted by USAID on 6th November with no changes. The public version of the report was distributed to staff and subgrantees and also posted on the AWARD website.

The MERL Manager spent time with all AWARD project teams between 10th and 12th December collaboratively setting targets for 2019.

A MERL paper entitled "Complexity-sensitive monitoring and evaluation in a coupled social-ecological system in Southern Africa: A hybrid methodology developed in AWARD's RESILIM-O Program" was submitted to the journal Sustainability Science. This paper explores the ways in which the MERL system has enabled learning within RESILIM-O. It describes the formative phase of the MERL system, its features, implementation process, and outcomes related to learning. It analyses how the MERL system responds to complexity and shares praxis-based insights useful for development programs in other complex social-ecological contexts. The results suggest that in addition to a responsive design, a successful MERL system requires a responsive disposition from implementers, funders and MERL team alike.

The focus of the NRMP case study (the MERL Officer's Masters in Education study) was shifted this month, from being on Government NRMPs only to being a comparison of how reporting supports learning in three different organisations in the NRM sector with different reporting requirements. The new case studies are: AWARD (donor-funded NGO), K2C (government-funded NGO) and Working for Water (Mpumalanga) which is a government-funded state program.

2.5.2 Media and Communications

The major achievement this quarter was the completion of AWARD's new-look website which went live at the end of November and is now accessible to the general public (see www.award.org.za).

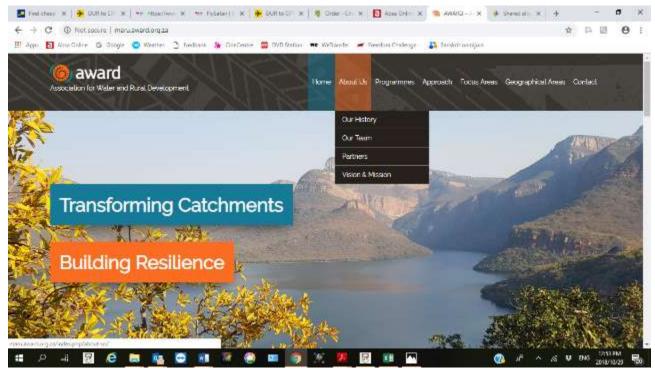
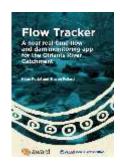


Figure 21: AWARD's new-look website.

The following communications materials were finalised this quarter:

1) A flyer on Flow Tracker, a mobile app which tracks river flow and dam levels in real time and gives rainfall forecasts.



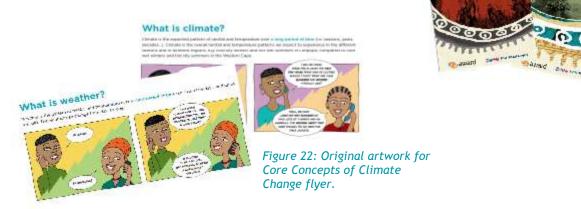
2) A climate change core concept flyer: A simple "layman's" version intended for use during workshops, which may be translated into other languages (Sepedi). This resource required some relatively time-consuming original artwork which has greatly enhanced the final product and could also be used in workshop situations.

Climate

change

3) A climate change scenarios technical flyer: This includes technical information about more complex concepts of climate change.

These resources are all available on the website for print-on-demand purposes (as lower resolution pdf's). Higher resolution versions are also available for printing professional hard copies.



Regarding social media statistics, the quarter closed with 378 Twitter followers on the AWARD feed and 584 followers on the AWARD Facebook page. The post reach and tweet impressions both increased substantially this quarter, to an average of 2,465 (from 40 last quarter) and 1,945 (from 634 last quarter) respectively. The Our Olifants feed ended the quarter with 237 Twitter followers and 1,366 followers on the Facebook page.

2.6 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.

2.6.1 Work Plan 2019

Much of November and December was spent in work planning. The Director worked with each team to prepare a detailed work plan for each project. The Finance Manager assisted with budgeting and the MERL Manager with target-setting. The work plan will be submitted in January 2019 as per the agreement with USAID. We now have 9 internal projects and 9 grants.

2.6.2 Reference Group

The Reference Group meeting in November provided an opportunity for reflection on the highlights and innovations of RESILIM-O, potentially interesting or useful ideas from elsewhere, and what would constitute effective "handover" in nine months' time under each of the different program areas. There was broad agreement that the group has been an interesting and worthwhile governance innovation, evolving according to the needs of RESILIM-O in its different phases. Members characterised the functioning of the group as wholesome, contributing to their own learning and careers and promoting a solidarity that comes from like-minded persons sharing experiences in the tough yet exciting sector in which we work. The small size and mostly high level of trust (and ethic of considered criticism, balanced with encouragement) in the

group helped enormously in keeping functions and modalities meaningful and the ambience constructive. There was general appreciation of the strongly-felt authenticity of our interactions.



Figure 23: Reference Group meeting, November 2018. L-R: Jan Graf, Ray Ison, Eureta Rosenberg, Sharon Pollard, Derick du Toit and Harry Biggs. Charles Chikunda joined the group via Skype for certain portions.

2.6.3 Human Resources and Office Management

Charles Chikunda moved over to a part-time contract with AWARD.

The Office Management team carried out the usual essential tasks including management of leave, timesheets, overtime and medical aid, fleet management, supervision of the IT infrastructure, procurement of goods and services, preparation of service-level agreements with suppliers and logistical support for meetings.

2.6.4 Knowledge Management

The Knowledge Management System (KMS) underwent several revisions and improvements this quarter in response to feedback from staff. October acted as a trial period for the submission of MERL data using the KMS. This went reasonably smoothly except for a few challenges that were reported to the database management team. Project teams have therefore started using the KMS for submitting their MERL data. They have also made various levels of progress with uploading historical documents and photographs.

All templates for sub-grants have been uploaded to the Knowledge Management System and milestone data are now also being uploaded.

2.6.5 Grants and Contracts Management

Nine sub-grants are currently active (Table 2). The close-out of the EMG sub-grant was completed this quarter.

With the holiday season approaching there was a rush to review and pay some of the sub-grant milestones. The planned submission dates for milestones prior to the festive break resulted in unrealistic review turnaround times. The delayed submission by the CDS-ZC Mangrove Restoration Project of milestone 2 and overdue milestone 3 will most likely require a modification of the timeline and payment schedule.

Table 2: Summary of RESILIM-O sub-grants as at end December 2018.

Sub-grantee	Sub-grant Title	Follow- on	New	Period of Performance	Comment
Mahlatini Development Foundation	Support for Small-Scale Climate Smart Agriculture (Lower Olifants)	Х		Feb'18 -Oct'19	Milestones 4 of 7 complete
Ukuvuna Harvests	Support for Small-Scale Climate Smart Agriculture (Sekhukhune Middle Olifants)	X		Feb'18 -Jun'19	Milestones 4 of 6 complete
Rhodes University	Capacity Development through Institutions of Higher Learning	Х		Mar'18 - Apr'19	Milestones 3 of 5 complete
Rhodes University	Networks for collaborative, systemic action in the Middle Olifants River Catchment		х	Jun'18 – Apr'19	Milestone 4 of 6 complete
CSV	Media and Communications		X	Aug'18 – Jul'19	Website & communications materials in progress
K2C	Blyde Restoration Custodianship project		Х	Aug'18 – Jul'19	Milestone 3 of 5 complete
CDS-ZC Mozambique	Mangroves rehabilitation in the Limpopo river estuary		X	Sep'18 – Sep'19	Milestone 2 of 7 complete
EMROSS	Support for Strategic NRM & Environmental Regulation in Priority Areas of the ORC		X	Sep'18 – Sep'19	Four months complete (cost reimbursable)
Aves Africa	Support for shared learning for collective action	า	Х	Apr'18 – Mar'19	11 of 17 events complete

2.6.6 Environmental Monitoring and Mitigation Plan

The contractual requirements governing our Cooperative Agreement with regard to the EMMP as submitted with our 2017 Work Plan continue to be upheld and monitored across all program activities. All consultancies and sub-contracts have equally been informed of this requirement.