

SWIMWAY SOUTH AFRICA

Connecting Fish Rivers & People



Thabo the Tigerfish

6/30/2016

FISHWAY MONITORING WORKSHOP

This is a feedback brief for the workshop that was held after the SASAqS conference on 30 June 2016 in Skukuza, South Africa. During the workshop, an overview of the current situation on fishway monitoring and evaluation was given, along with presentations on fishway monitoring and telemetry. A background of the South African Swimway Programme was present, which was followed by discussions regarding where we need to focus our activities. A working strategy was decided upon, along with a way forward and the next steps that need to be taken for the Swimway Programme and the Sabie Swimway pilot project.

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South African
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Swimway South Africa

FISHWAY MONITORING WORKSHOP

1 | SOUTH AFRICAN SWIMWAY PROGRAMME

This workshop forms part of the South Africa Swimway Programme, which is being developed as a working programme dedicated to protecting and restoring migratory fish populations and river ecosystem connectivity.

Vision: Connect fish, rivers and people

Mission: Learn from international experiences, share knowledge, promote awareness, stimulate involvement and commitment from all stakeholders to use and manage river connectivity and fish migrations together.

This programme is currently being developed by a core team of international and local stakeholders. An initial workshop was hosted in November 2015 to identify the current status and need for such a programme. Following the extremely positive response from stakeholders in South Africa, it was evident that indeed further steps needed to be taken to develop such a programme. This was initiated with a preliminary plan, which included the development of a vision for the Sabie River (forming a pilot study for the programme) and follow-up meetings with stakeholders. During the South African Society of Aquatic Scientists (SASAqS) conference in Skukuza, South Africa, the various aspects of the programme and the possibilities were presented during various presentations in the fish migration session of the conference. During Herman Wanningen's key note presentation the vision for the Sabie River was also launched in the form of a poster, which will be distributed and shown to the public. This story will be published in the WRC Water Wheel publication. A follow up workshop took place after the SASAqS conference with interested stakeholders. This document details the outcomes of the workshop.

The aims of the fishway monitoring workshop were to:

- Share international and local experiences on fish migration, fishway monitoring and telemetry techniques
- Further develop the South African Swimway Programme and an activity plan for the next months. This included identifying the overall strategy of the programme and to compile a list of activities
- Initiate conversation with interested stakeholders
- Stimulate commitment and networking between stakeholders

2 | PARTICIPANTS

Currently, around 150 stakeholders have shown keen interest in the South African Swimway Programme. During the fishway monitoring workshop, the following Stakeholders were present:

Name	Proposed Role in Programme	Organisation	Email
Alan Whitfield		SAIAB	a.whitfield@saiab.ac.za
Andrew Deacon		Private consultant	andrewd@mpu.co.za
Anelile Gibixego		JG Afrika	givixegoan@jgafrika.com
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Celine Hanzen		UKZN	celine@riversoflife.co.za
Danny Govender		SanParks	danny.govender@sanparks.org
Francois Botha		Wireless Wildlife	francois@wireless-wildlife.co.za
Gordon O'Brien	Local coordinator & Advisor	UKZN	Obrieng@ukzn.ac.za
Hazel Govender		UKZN	indrign@dut.ac.za
Herman Wanningen	Partner & Advisor	WFMF	Herman@fishmigration.org
Kerry Brink	International Coordinator	WFMF	Kerry@fishmigration.org
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Mathew Burnett		Mjijane Game Reserve	mburnett@finelingthefeathered.co.za
Peter Paul Schollema	Partner & Advisor	Dutch Water Authority Hunze en Aa's	ppschollemahotmail.com
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Sean Marr / Olaf	Partner & Advisor	SAIAB	s.marr@saiab.ac.za
Skhumbuzo Kubheka		EKZNW	Skhumbuzo.kubheka@kznwildlife.com
Wesley Evans		UKZN	evans_wesley@yahoo.com

3 | EXPLORATIONS & REFLECTIONS

Herman Wanningen, director of the World Fish Migration Foundation, was the chair of the workshop. He gave introductions about the workshop and the presenters. Herman also gave a brief background about the sponsors and supporters of the workshop.



Figure 1: Herman Wanningen thanking the sponsors and supporters for their contributions

A | Current Status & Sharing experiences

Bonani Madikizela from the Water Research Commission (WRC) presented a review of the interest stakeholders in the region have in fishways and existing research in South Africa. He summarised that there are 57 fishways in South Africa and 42 of which have some form of functionality. Bonani went on to say that the true effectiveness of most of these fishways is unknown because of a lack of monitoring and evaluation in South Africa. In addition to the need for fishway monitoring there is also a need for more research on fishway design specific for African species. The WRC has already funded a series of projects for the planning, design and operation of fishways in South Africa. This includes guidelines from Anton Bok, Ralph Heath and associates in 2005-2007.

Robin Peterson from SANParks presented information more specific to the current status of the fishways on the Sabie River and which fishways needed monitoring/management priority. He also indicated that the Kruger National Park (KNP) will be removing 20-30 dams on non-perennial rivers in the KNP in the near future. This is in association with the South African National Defence Force. Robin also identified some key challenges and focus points for projects within the South African Swimway Programme.

KNP Focus Points:

- Restoring and maintaining Free flowing rivers
- Fishway monitoring and management plans
- Evaluate the benefit of removing 20-30 dams, already scheduled in Kruger National Park
- Understand what fish need to migrate, understanding migration cues and the need for river connectivity in the KNP
- Prioritization of spawning grounds
- Evaluation of eel populations
- Connectivity outside the park
- How can we mitigate the threats to migratory fishes in the KNP

Peter Paul Schollema from the Dutch Water Authority Hunze en Aa's, The Netherlands, presented international monitoring and evaluation techniques, which could be used within South Africa. He went into detail regarding the potential to use radio telemetry in a case study to monitor fishways in the Sabie River. For this 2 year study, a budget of R675,000 will be required.

Celine Hunzen is a PhD student from University of KZN who will be assessing the effect of barriers on eels in KwaZulu Natal. Celine gave a brief overview of her project, which will form one of the pilot studies in the programme.

Francois Botha from Wireless Wildlife demonstrated how wireless tags can be used for monitoring fish migrations. He detailed the efficiency of the telemetry devices and the pro's and con's of the additional features.

B | Initiating Swimway Programme

Gordon O'Brien from KZN University gave a summary and overview of the South African Swimway Programme. This was followed by discussions on what needs to be in the activity plan for the programme, how the programme needs to be managed and with whom we need to connect with.

1 | Management, Development & Coordination

Partners

The foreseen partners of the SA Swimway Programme will be limited to a small core group, which includes representatives from the following organisations who will drive the development of the programme:

- World Fish Migration Foundation;
- University of KZN;
- SANParks;
- Hunze & Aa's;

- Kingfisher;
- SAIAB;
- Possibility of WWF, The Nature Conservancy....

Coordination

The overall development and coordination of will be done by **World Fish Migration Foundation, University of KZN, SAIAB, South African National Parks and Water Authority Hunze & Aa's**. The proposed Coordination Team will include:

- Gordon O'Brien (Local Coordinator)
- Kerry Brink (International Coordinator)
- Robin Petersen (Local Coordinator)
- Sean Marr (Local Coordinator)
- Herman Wanningen (Advisor)
- Peter Paul Schollema (Advisor)

Network & Project Development

A network of stakeholders invested in the SA Swimway Programme will be developed. This includes people representing a range of sectors. Here are some of the key representatives who we want to connect with:

Fishway monitoring experts, representatives from Environmental affairs (National and Provincial), representatives from CMAs, Universities, Fishway Engineers, Consultants, NGO's, WRC, funding institutions, Icon to motivate people, local coordinator, SANParks, SANBI, EWT, WISA, Water Affairs and Sanitation etc.

It is intended that **workshops will be held every year** to develop projects within the SA Swimway programme and to obtain commitments. It was suggested that this coincides with the annual SASAqS conferences.



Figure 2. Workshop discussions

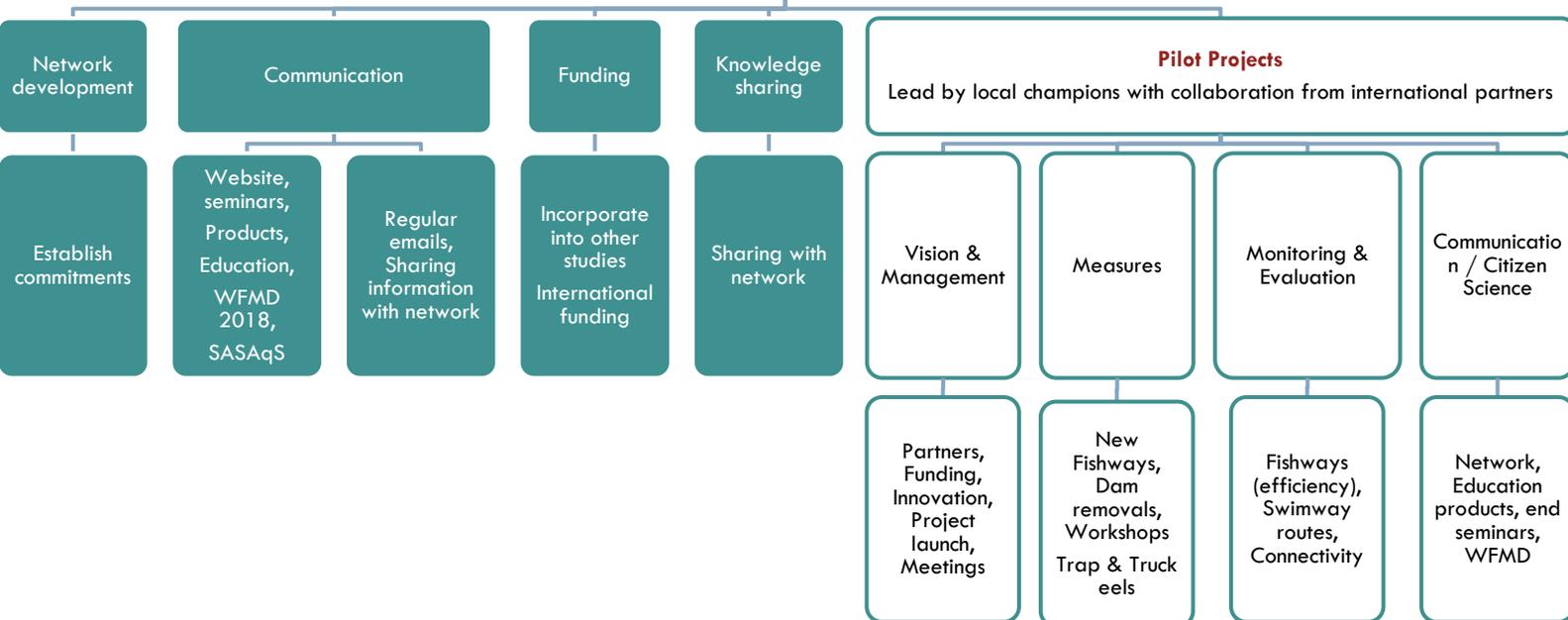
2 | Programme components

During the discussions it was also decided that collaborative projects with stakeholders form a key element within the programme. This means that projects can be independently created and initiated by others and easily integrated into the programme work packages using a “modular approach”. For the remaining components that need to be included in the programme, funding will be ascertained. This approach will allow the programme to grow and make use of already existing/proposed programmes, networks, projects and knowledge.

Below is a summary of key components that were identified during the workshop, which should be incorporated into the SA Swimway Programme. This will be considered and included in the preliminary proposal that will be ready by the end of August.

IMPLEMENTATION

SA Swimway Programme
Partnership: WFMF, University of KZN, Hunze & Aa's, Kingfisher, SAIAB, SANPARKS



3 | Pilot Projects

During the workshop a number of pilot projects were identified. The idea is that these projects can highlight ongoing activities, their results and celebrate successes within the SA Swimway Programme. Here are some of the projects identified:

- Sabie Swimway Project: implement a management plan – Champion: SANParks
- Swimway Network – Champion: WFMF
- Fishway Evaluation – Champion: Potchefstroom University
- Effects of barriers on eels by Celine Hanzen – Champion: University of KZN
- Pongola River: Fish behavioural study – Champion: University of KZN
- Knowledge sharing – Champion: SASAqS
- Review fish migration – Champion: FFSG-IUCN
- Other projects include focusing on: Build fishway monitoring part of RDM, Dam removals (before & after), Research in the Umzimvubu, New dam constructions (connectivity before & after), Describing decision process in the Wilger, citizen science projects

The SA Swimway programme will develop & initiate the Sabie Swimway Pilot project. Other pilot projects will be included as modules within the Programme.

C | Next steps

For the coming months we will be planning the SA Swimway Programme development as well as the Sabie Pilot project. Below are the next step:

- 10 page proposal for SA Swimway Programme project plan – August 2016
- Stakeholder meeting to develop a coalition of partners for the SA Swimway project - September 2016
- Launching programme with pilot during the Kingfisher project meeting - November 2016
- Start Sabie Swimway project – February 2017
- Obtain funding for programme and Sabie Swimway project – August to February 2017
- Align the programme to existing fish conservation and river management activities: Freshwater Ecosystem Network, Yellowfish Working Group.
- Establish programme stakeholder database and initiate communication/discussions re programme.
- Host a SA Swimway Programme WRC dialogue with national stakeholders in 2016 or early 2017.
- Develop other pilot projects that can be integrated into the SA Swimway Programme.

An overview of the tasks ahead are in the table below.

Roadmap with activities

Activity	August 2016	September 2016	October 2016	November 2016	February 2017	June 2017	July 2017 -June 2020	June 2020-
SA SWIMWAY PROGRAMME PROJECT PLAN	10 page proposal for SA Swimway programme and Sabie Pilot project	Setting up a project group & getting commitment (UKZN)		Present proposal during Kingfisher Project Meeting (Partners)	Start 3 year Sabie pilot project		Complete pilot project	
SA SWIMWAY NETWORK	Develop stakeholder database: contact relevant representatives Monthly emails			Workshop with Stakeholders Monthly emails		SASAqS Workshop		
FUNDING for programme & for Pilot projects	Contact national & international funding organisations; Submit proposals; Align with relevant projects			Host a SA Swimway programme WRC dialogue with national stakeholders in 2016 or early 2017.				
SA SWIMWAY PROGRAMME DEVELOPMENT	Align the programme to existing fish conservation and river management activities. Including Freshwater Ecosystem Network, Yellowfish Working Group.			Develop programme (2016-2018) 1. Situation analysis & overviews: dams, fishways, rivers, free-flowing rivers, iconic species, biodiversity hotspots!, dam removals, stakeholder analysis, relevant networks, policies, research projects, databases. And setting a first set of priorities (key rivers for migratory fish) 2. Develop & Initiate pilot projects: Showcase best practices and examples, Sabie River actions and others river systems 3. Monitoring & Measures 4. Communication & education: including Seminars (once a year during SASAqS) & establishing a South African fish passage network! 5. Development Long term plan: ambition, goals, needs and priorities, workshops with stakeholders, setting long-term activities, fishway and dam removal program, research agenda/strategy, communication, costs and financing				
LAUNCH PROGRAM ON WFMD 2020							Launch program, signed by all stakeholders in June 2020	
IMPLEMENT 'SWIMWAY SOUTH AFRICA' PROGRAM								Executing the plan together with responsible stakeholders! Evaluating the program annually

JOINTLY ORGANIZED BY

World Fish Migration Foundation (WFMF), The Netherlands
University of KwaZulu Natal, Aquatic Ecosystem Research, South Africa
Regional Water Authority Hunze en Aa's, The Netherlands

KEY WORKSHOP ORGANISERS

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