Orange-Senqu River Basin Stewardship Learning Journey

Session 1 Mini-Report

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INTRODUCTION

This mini-report presents a description of the first of four sessions of the Orange-Senqu River Basin (OSB) Learning Journey, which was held online on 27 January 2021.

The OSB Learning Journey is a learning exchange that aims to bring key stakeholders from Lesotho and South Africa together to *identify shared risks around water security and joint solutions to protect the natural resources and economic and social benefits stemming from the Orange-Senqu Basin for Lesotho and South Africa.* The OSB Learning Journey is convened by GIZ NatuReS and GIZ Lesotho, and hosted under the auspices of ORASECOM.

The OSB Learning Journey is constituted of the following four sessions:

Session 1: Understanding the Orange-Senqu Basin	Paint a clear understanding of the catchment from headwaters to users in Gauteng, including where it flows, how it is used and abused, how it is impacted on, including: ▪ Geo-physical/environmental profile – including risks, ecological infrastructure ▪ Different ecosystems along the catchment and their importance for water provision and mitigation for climate change as well as their close relationship with livelihood. ▪ Identification of interested parties. ▪ Socio-economic & macro-economic profile of the basin. ▪ Risks & Threats. Understanding water stewardship as a concept.
Session 2: The people of the OSB: users & custodians	The objectives of the second session are: ▪ To ensure stakeholders remain mindful of the threats & risks identified in joint session 1. ▪ To confirm the "layout" of the stakeholder landscape on the OSB and what the key interests of the major stakeholders are using a participatory matrix. ▪ To identify the interests and responsibilities of government, private sector, communities, and NGO/donors in respect of the main interests. ▪ Identify the benefits & challenges of trans-boundary &, multi-stakeholder cooperation.
Session 3: Catchment management lessons for learning.	Part 1: Framing the issues ▪ Understanding the value of water. Explore the risk & contribution dynamic - tied to shared benefit. ▪ What is stewardship? How does it translate to action across a catchment ▪ Who needs to be involved? ▪ Stewardship must be seen as making financial sense, and that stewardship in a cross-boundary basin must be co-created & collaborative Part 2: Catchment management lessons from a number of selected existing water stewardship pojects. Part 3: What are the lessons learned from others in all aspects – governance, trans-boundary, private sector involvement, etc Part 4: What is unique about the OSB in regards to stewardship? **What needs to be done to protect the OSB?**
Session 4: How to protect the OS basin?	Collaboratively develop a way forward to protect the OSB, drawing from all previous sessions. What is the most appropriate response? What form should it take? How do we need to structure ourselves to achieve a sustainable collective response?

SESSION 1: OVERVIEW OF THE OSB, INCLUDING THREATS & RISKS

The session was held online on 27 January 2021, and lasted three hours. Stakeholders from Lesotho and South Africa were invited. The focus of the session was fourfold: to introduce the Learning Journey to participants; to provide an overview of the OSB, with a particular focus on the Lesotho-Gauteng part of the basin; to identify main threats and risks; to introduce the definition of water stewardship.

Participants

Of the 44 people who participated in the first session[1] of the Learning Journey, 25 were from Lesotho (including four GIZ staff), and 19 were from South Africa, (including six GIZ staff). Lesotho participants included representatives of the Government of Lesotho, the Basotho private sector and NGO community, specifically:

- Ministry of Water (ICM & ICU)
- Ministry of Agriculture
- Lesotho Millennium Development Agency
- ORASECOM Lesotho
- Lesotho Highlands Water Authority
- Lesotho Highlands Development Authority
- Lesotho Highlands Development Authority: Hydropower
- Letseng Mines
- Mothai Diamond Mine
- MG Health
- GIZ
- Caritas
- Catholic Relief Services

The South African participants were also representative of key stakeholder groupings, and included representatives of the following organisations:

- Department of Water & Sanitation
- ORASECOM
- Eskom
- Sasol
- GIZ
- SWPN
- IFAD
- UNDP GEF
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Programme

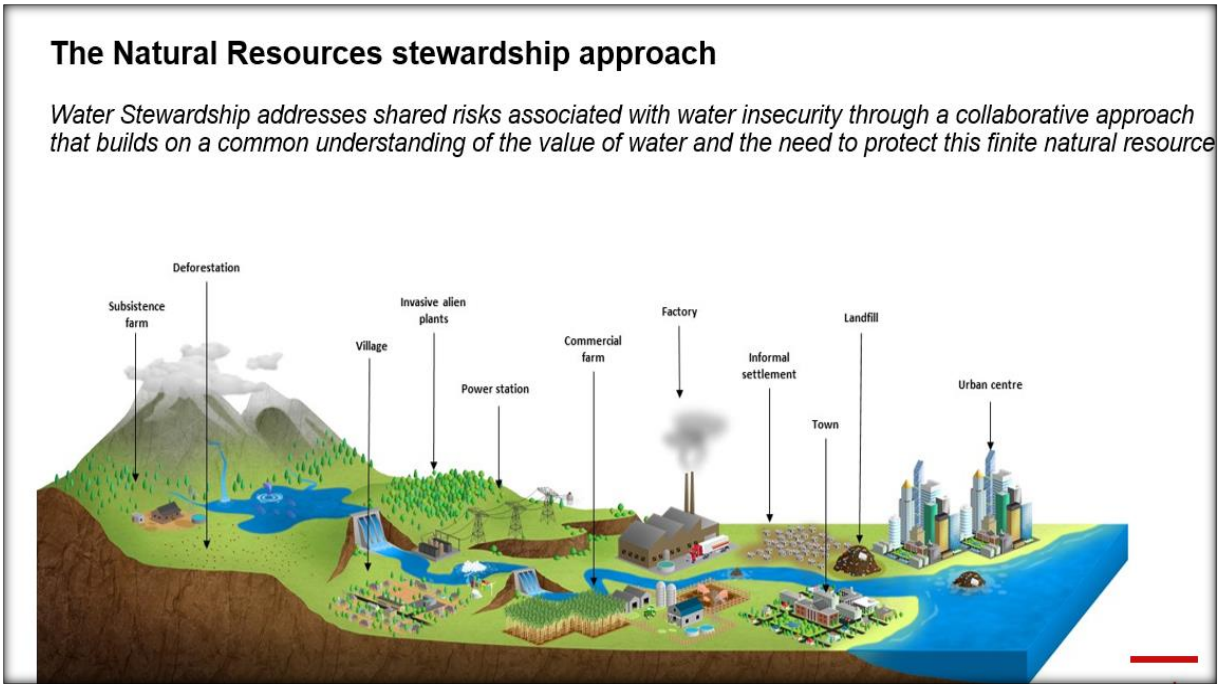
The programme followed in Session 1 was information-rich and included a number of presentations to provide the necessary backdrop to the Learning Journey[2], beginning with a welcome from Ntate

[1] An attendance register is attached as Appendix 1.
[2] The Agenda is attached as Appendix 2

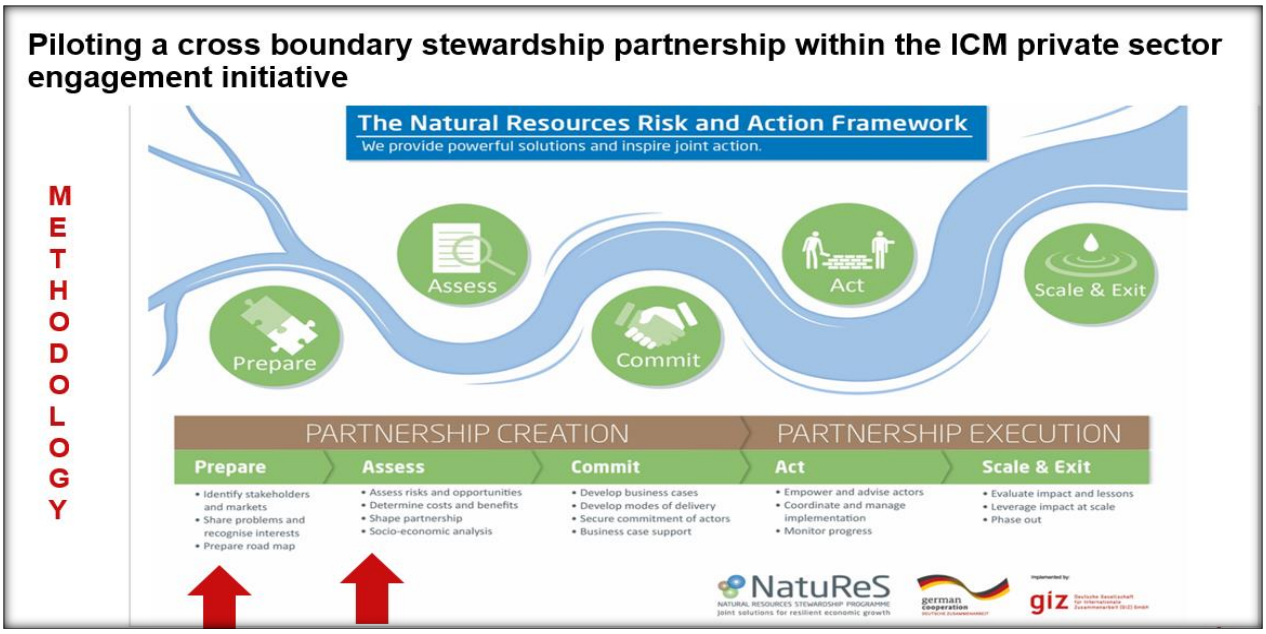
Fanana Makomoreng, National Coordinator of the ICM, of the Government of Lesotho. His colleague, 'M'e Mahlalele Sethlako, gave the background of the ReNoka branding within which the Integrated Catchment Management is conceptualised. ReNnoka, which is Sesotho for "We are a river", captures the importance of integrated and inclusive catchment management across geographical and administrative boundaries. The Learning Journey is part of this "water" movement.

Introduction to the approach and objectives of the Learning Journey

Lea Derr, from NatuReS, provided the rationale and an overview of the Learning Journey, explaining to participants the importance of trans-boundary collaborative water stewardship. Using a basin wide, integrated approach, Lea shared an image that illustrates the notion clearly:



Lea then outlined the stewardship methodology underpinning the development of collaborative water stewardship platforms. The two red arrows below show the two main phases which will be covered during the 4 sessions of the learning journey.



Background and overview of the OSB and ORASECOM

Lenka Thamae, Executive Secretary of the Orange Senqu River Commission (ORASECOM), provided a detailed description of the OSB[3], explaining the extent, the geophysical features, the rainfall patterns, the threats and risks faced by the OSB. Ntate Thamae explained how climate change was impacting the basin as a whole. He described the water use profile including the water reservoir and water transfer systems, especially describing what he called "The Journey of Water – LHWP and the Vaal", including information about the two phases of the Lesotho Highlands Water Project and the Vaal River System. He then went on to explain the importance of ORASECOM as a collaborative institution and the imperatives of the trans-boundary cooperation in the Orange-Senqu River Basin. Ntate Thamae ended his presentation with some important lessons to share:

- The options for increased resource yield are diminishing.
- Land degradation coupled with climate impacts pose significant (current and future) risk to water management in the basin.
- Water conservation and demand management may hold opportunity for extending available limited resource.
- Need to continue strengthening and nurturing skills for effective institutions for water resources management.
- Partnerships among various stakeholders are critical to addressing the various challenges of water management in the Orange-Senqu River Basin.

Socio-economic value analysis of OSB for Lesotho and South Africa

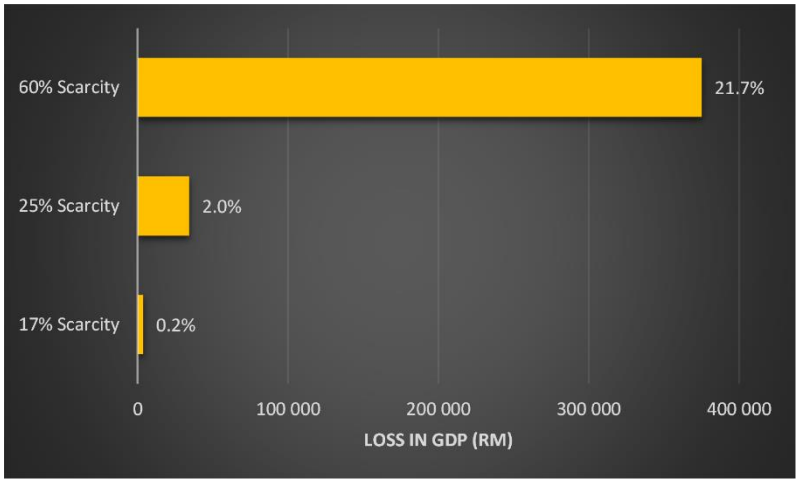
Following the overview of the OSB, the participants then listened to information on the socio-economic value of water for Lesotho and South Africa, presented by Vasileios Markantonis, economist working for NatuReS GIZ[4]. The presentation was based on preliminary research carried out by

[3] The slides used by Ntate Thamae are in the full process presentation attached as Appendix 3.
[4] The slides used by Vaseleios Markantonis are in the full process presentation attached as Appendix 3.

StratEcon. In the presentation, the main economic findings for the Orange-Senqu River as well as the socio economics implication of a decrease in water level were presented. The LHWP Water Revenues and Electricity Sales were described between 2012 (600Mm) and 2019 (850Mm), this represented 3.7% of the national GDP in Lesotho for 2019 and accounts for 16 058 direct and indirect jobs. Water is not only vital to Lesotho for and its GDP but also to many businesses across the Vaal and in Gauteng. The total value of the economy of the Vaal River water system was evaluated in the region of R1.7bn in 2018. The largest sector was financial services (21%), followed by general government services (18%) and trade (12%). The presentation further outlined the very low water levels of key dams in Lesotho and possible causes of these reduced levels:

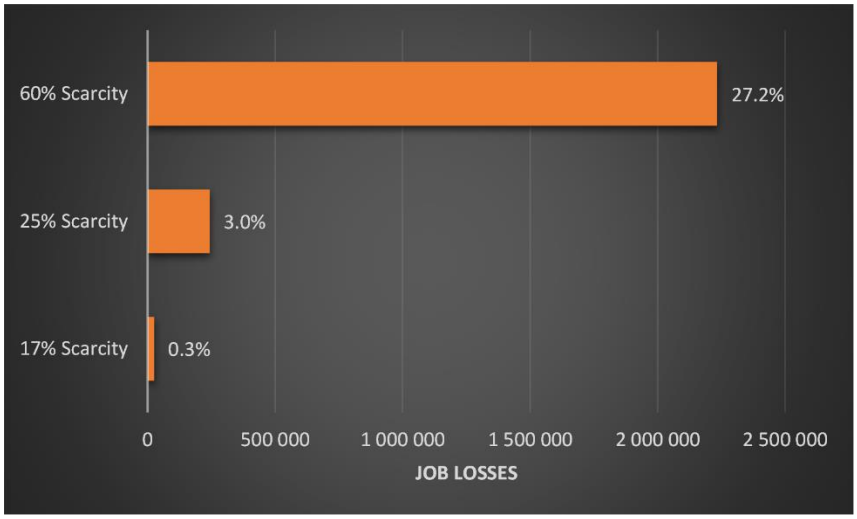
- Dam integrity
- Evaporation
- Ecosystem damage
- Catchment specific rainfall / Climate change

The study further outlined three water reduction scenarios and their potential negative impacts.



Vaal River System – GDP Loss

Vaal River System – Jobs Loss



The study also provided a snapshot of the value of the wetland ecosystem on which the health of the Senqu River and OSB catchment is predicated. It was noted that of over 96 000ha of wetland the ecosystem services could be valued at M33 000 million. The presentation closed by emphasising the financial sense and urgency of ensuring the health of the basin for both Lesotho and South Africa. Vaseleios reminded the participants that the study was a preliminary baseline exercise that required further and highly warranted investigation into a number of additional aspects such as into dams (integrity and silting implications), water input verification and projections in relation to evaporation and rainfall patterns, and climate change impacts, and further analysis of ecosystems, including ecosystem damage.

Q & A session

A number of important questions and comments[5] made up the discussion session after the above two presentations, including the following selection:

- There is a need to consider how to address poor land management practices, specifically range land use by livestock owners to assess their impact on water resources.
- Do projections developed for macro- & micro-economic scenarios take into consideration activities that are not yet implemented (e.g. National Irrigation Master Plan for Lesotho & proposed Lesotho-Botswana water transfer project)? The answer was given that they were not included for this initial baseline, but will be included going forward to generate more accurate projections.
- Does rainfall data consider winter snowfalls [given that] Lesotho had little or no snowfalls over the past two years? The answer was given that precipitation and snow were both included in calculations, but that these needed verification which will be done.
- Due to land erosion and farming practices, siltation of the Matsuko Weir and Muela Dam has negative impacts on hydro power and water security and transfers and should be a focus area for integrated catchment management. De-silting is an expensive exercise for LHDA (prevention is better than cure).
- Has long term climate change projections for the LHWP catchments been developed and risk to yield assessed? The answer was given that LDHA is in the process of engaging a consultant to undertake a climate change vulnerability assessment including the development of an adaptation and mitigation strategy for the LHWP.

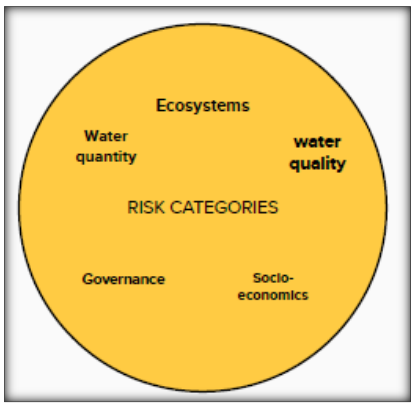
Threats & Risks

Having a basic understanding of the OSB, the issue of risks and threats was discussed by the participants, building on some inputs from earlier presentations. The discussion showed how different sectors were affected differently. The following shows some of the allocation of risks per sector that were tabled by the participants.

[5] All comments and questions can be seen in the Muralboard record attached as Appendix 4.

The key threats and risks that were identified were those related to:

- The fact that there are less resources available for increased abstraction demands.
- Climate change impacts, including temperature changes over time; precipitation changes; unpredictability of weather patterns; downstream & upstream impacts, affecting supply & demand conditions.
- Increased demand from expanding industrial, urbanisation & residential use along the basin.
- Sedimentation & siltation of dams resulting from eco-system degradation, including wetlands.
- Large-scale industrial pollution from industries and mines.
- Toxic runoff from large-scale agri-business.
- Soil erosion from agriculture (large- and small-scale), as well as urban development.
- River bank degradation from large and small-scale agriculture.
- Disruption of flow and silting affecting estuary ecology.
- Political and governance issues.



The discussion also briefly drew attention to the categories of risks and threats.

Water Stewardship as a concept

Lea Derr from GIZ NatuReS brought the discussion back to the notion of water stewardship, reminding the participant group exactly what this means, in relation to the OSB. She used the definition put out by the Alliance for Water Stewardship as a starting point, and added a further refinement of defining corporate water stewardship as a critical value-add:

Water stewardship	*Corporate Water stewardship*
"The use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions."	*CWS is an approach whereby companies identify and manage water-related business risks, understand and mitigate their adverse impacts on ecosystems and communities, and contribute to and help enable more sustainable management of shared freshwater resources.*

In presenting this concept, Lea provided a useful framework that itemises the kinds of key activities related to water stewardship, organised according to key factors, namely:

- Long-term improved engagement and collaboration between all stakeholders/actors.
- The establishment of city and basin level multi-stakeholder partnerships.
- Improved corporate water stewardship through building international partnerships.

Finally, Lea pointed out the key benefits of private sector (small and medium enterprises to large businesses) involvement in water stewardship, including noting that the private sector is uniquely placed to offer:

- Unique perspectives on water resources by businesses who are committed to sustainable growth and employment in the catchment.
- An important collective voice in support of better water governance.
- Innovative water technologies and processes, as well as associated supply chain developments.

- Connections and influence with upstream suppliers and downstream customers, who can also engage on multi-stakeholder platforms.
- Potential, additional sources of investment, especially relating to emerging mechanisms such as blended finance as well as patient capital, and insurance/reinsurance.

Closing comments

The session was information-rich, and all agreed that participants needed to digest the information and consider the implications. A number of useful "think-points" were tabled by participants in closing:

- We need to have a *systems approach* to water resource management. We need to understand water stewardship in the OSB as a system e.g. linking what happens in different areas to what is happening in the other areas, upstream and downstream.
- We need to work out now how we understand the way t*he system will be managed and used into the future*.
- There is a need for implementation of *operating rules* along the whole catchment.
- *Climate change adaptation* is key to understanding cost and supply of water
- We need to think in terms of *asset management* for long term sustainability.
- No doubt that LDHA needs to be subject to ongoing *maintenance* for long term water security.

A theme to carry forward into further discussions on collaborative water stewardship was put forward as:

In closing Session 1 of the Learning Journey, Ntate Lenka Thamae urged participants to appreciate the gravity of protecting the resource for all concerned, reminding us that there are no alternatives available for the inevitable increase in abstraction demand going into the future, and that catchment protection must be accompanied by a strong water conservation message.