



PREPARING FUNDING PROPOSALS FOR GROUNDWATER-RELATED PROJECTS

TRAINING MANUAL



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TRAINING MANUAL

COMPILED AND PRODUCED BY

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MANAGEMENT INSTITUTE

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This Training Manual emanates from the project: Development of a Training Manual on the Preparation of Proposals to Access Funding for Groundwater-related Infrastructure, commissioned by the Southern African Development Community Groundwater Management Institute (SADC-GMI), and executed by OneWorld Sustainable Investments.

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SADC-GMI, 2019

Boxes, Tables, Figures, Maps, Photos and Illustrations as specified.

This training manual is accessible online through

SADC-GMI website: www.sadc-gmi.org





Citation: SADC-GMI, (2020). Training Manual on Preparing Funding Proposals for Groundwater-related Projects. SADC GMI: Bloemfontein, South Africa.

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GROUNDWATER MANAGEMENT INSTITUTE

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Abbreviations and acronyms

AF	Adaptation Futures
AfDB	African Development Bank
AgriBank	Agricultural Development Bank
AgriBusDev	Agricultural Business Development Agency
AMTA	Agro-Marketing and Trade Agency
AUDA-NEPAD	African Union Development Agency
AWF	African Water Facility
BGR	German Federal Institute for Geosciences and Natural Resources
CDSF	Clim-Dev Africa Special Fund
CIWA	Cooperation in International Waters in Africa
CRIDF	Climate Resilient Infrastructure Development Facility
CSO	Civil Society Organisation
CTCN	Climate Technology Centre and Network
DANIDA	Danish International Development Agency
DBSA	Development Bank of South Africa
DFI	Development Finance Institutions
DfID	Department for International Development
ESA	Environmental and Social Assessment
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Safeguards
FAO	Food and Agriculture Organisation
GCCA+	Global Climate Change Alliance Plus
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEF	Global Environmental Fund
GIZ	German Development Agency
GoM	Government of Malawi
GPG	Global Public Goods
ICP	International Cooperation Partner
IDRC	International Development Research Centre
IKI	The International Climate Initiative
IPCC	Intergovernmental Panel on Climate Change
IWRM	Integrated Water Resources Management
JICA	Japanese International Cooperation Agency
LCC	Lilongwe City Council
LogFrame	Logical Framework
LWB	Lilongwe Water Board
M&E	Monitoring and Evaluation
NBS	Nature-based Solutions
NGO	Non-governmental organisation
NORAD	Norwegian Development Cooperation
ODA	Overseas Direct Investment
OECD	Organisation for Economic Co-operation and Development
PEA	Political Economy Analysis
PPF	Project Preparation facility
PPP	Public-Private partnership

PPT	Microsoft PowerPoint
R&V	Risk and Vulnerability
RESILIM	Resilience in the Limpopo Basin Program
SADC	Southern African Development Community
SDC	Swiss Agency for Development Cooperation
SDG	Sustainable Development Goals
SESA	Strategic Environmental and Social Assessment
SIDA	Swedish International Development Cooperation Agency
SIWI	Stockholm International Water Institute
TOC	Theory of Change
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
USAID	United States Agency for International Development
WRC	Water Resource Centre

Components of the course

This course includes several components, as outlined in the table below. The main documents are this **Training Manual**, which is accompanied by a separate **Facilitators Manual**. These are supported by various additional resources, as outlined below.

Many of the documents and resources for this course can be found in the project's **online digital document library** (<https://sites.google.com/view/gwfundingcourselibrary>)

Component	Description and location
Training Manual	Includes all training material in the form of four content modules, and end of module quizzes for self-assessment Videos (available through the online digital repository)
Facilitators Manual	<ul style="list-style-type: none"> ■ Guidelines for developing training skills and capacity development; participatory analysis ■ Assessment for Modules 2, and 3 with rubrics for assessment ■ Final Exam, with answers
International Cooperation Partners (ICP) Handbook	Database of ICPs (donors and funders) for groundwater projects, relevant to the SADC region Location: Online digital repository
Digital Document Library	Online digital repository of relevant documents (e.g. additional readings), videos (expert videos produced specially for this course, as well as others of interest) URL: https://sites.google.com/view/gwfundingcourselibrary
Technical Background Document	This document comprises the complete underlying technical knowledge base on which this training manual is based. Online digital repository





Introduction

Welcome to the Training Manual on Preparing Funding Proposals for Groundwater-related Projects. The Training Manual is designed to increase your knowledge and build your capacity to prepare successful funding proposals for groundwater-related infrastructure, emphasising the importance of treating groundwater resources in a sustainable manner.

As you work through the Training Manual, you will learn how to develop successful project proposals, in a practical way, one step at a time. The Training Manual provides real-life context from a relevant case study in the SADC region to cement learning through practical examples.

Course Purpose and Objectives

The purpose of this is to address the key challenges faced in the SADC region to access finance for groundwater-related projects. Access to affordable long-term financing is a longstanding and ongoing challenge for large-scale water infrastructure investment in the region.

In addition, **International Cooperation Partners** (ICPs) (also known as funders or funding partners) are increasingly becoming aware of risks in infrastructure investments that are unlikely to be supported by sustainable ecosystem services, which makes accessing financing more difficult.

Key Information

The Training Manual has two main objectives:

- To strengthen participants' knowledge of sustainable groundwater development opportunities
- To strengthen capacity in the SADC region for developing successful proposals to better access finance for sustainable groundwater projects

The learning objectives outlined below will help you as a groundwater planner, decision-maker, or support-partner in SADC Member States to achieve the following objectives (see Figure 1):

Figure 1. Learning Objectives



Target audience

This Training Manual is targeted at people working in the SADC region on water resource development, and those wishing to strengthen their skills in developing successful funding proposals for groundwater development. This includes, for example, people from the following types of organisations:

- Government departments, such as groundwater, water and infrastructure development, climate change and environmental departments, and departments responsible for project funding
- Financial institutions that are mandated to

finance groundwater infrastructure and resource development

- NGOs, academia and the private sector that support water resource development.

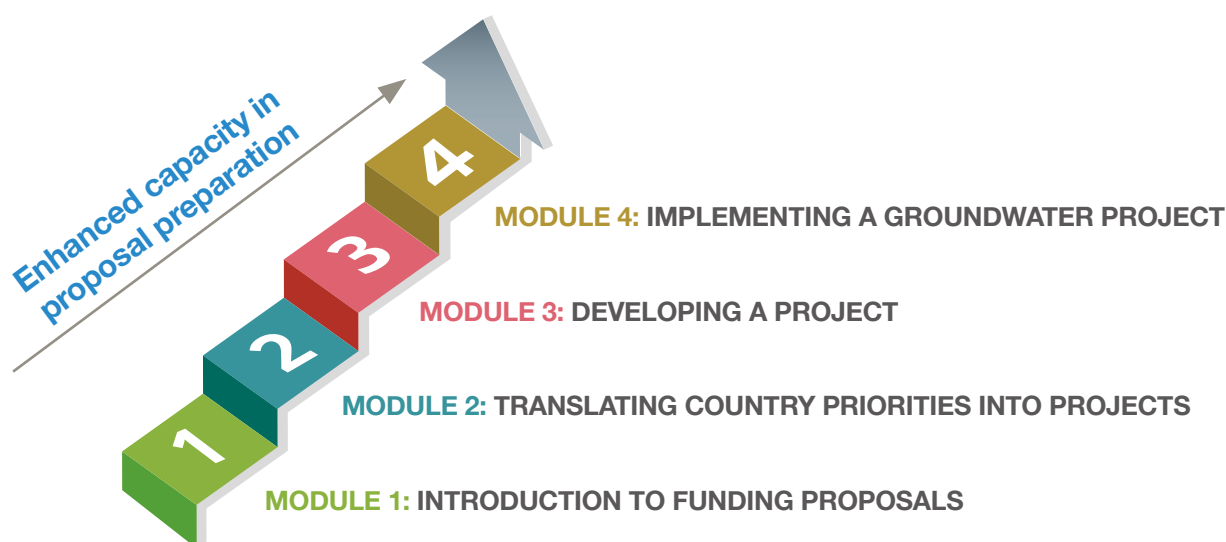
We anticipate that people using this manual will have some understanding of the role groundwater plays in water security in the region, with some background in groundwater, professionally or educationally. As such, this manual will be particularly useful for seasoned water resource management practitioners.

How the Training Manual works

The Training Manual is specifically designed to provide the skills and knowledge necessary to develop project proposals, one step at a time, emphasising the importance of sustainable groundwater resource development. Throughout this manual, real-life examples in the form of a case study help to ground the learning experience in practical examples, offering useful lessons for application in different contexts.

Each of the four Knowledge Modules is a step in the process of developing a successful groundwater project proposal. The objective is to enhance capacity in proposal preparation. Before joining the course, you probably identified a groundwater-related project idea that you would like to take forward during this course. With this in mind, the four modules of this course will help you develop your project idea further.

Figure 2. The training modules build towards developing capacity in proposal preparation



As you work through the manual and think about developing your own project, you will use and work with an **Indicative Proposal Framework** (see Appendix 1). This document includes the key aspects that most ICPs include in their templates for proposals/funding applications. So, this will help you to see what is needed in different parts of the funding proposal (or funding application). You can find the proposal framework template in Appendix 1.

When we refer to the proposal framework in the modules, you will see this icon, which will refer you to the correct section of the proposal template in Appendix 1:



**See: Indicative Proposal Framework
Section 2.2 Project Information**

The Training Manual is organised into four **Knowledge Modules**. Each Knowledge Module starts with an introductory page to detail the purpose, goal, and learning objectives of the module.

The content of each module varies, but will provide you with the necessary knowledge to do the ‘*Module quiz*’ at the end of each respective module.

Each module includes:

- Mandatory readings
- Additional support resources and readings
- Content summaries
- Pre-recorded presentations and videos
- A section in each module called ‘*Discussion Forum / Reflection*’ poses questions to consider or discuss (particularly if you are doing this work as part of a course).
- At the end of each module a ‘*Module quiz*’ allows you to assess your progress and knowledge of the module. There are ten questions in each quiz, and you should aim to get at least five answers correct. (If, however, you are working through this Manual as part of a Training of the Trainers course, you should aim to achieve 60% for each Module Quiz.) The answers to the module quizzes appear in Appendix 3.

Additional Assessment options

If you are doing this work as part of a course:

If you are working through this training manual as part of a formal course, you may be required to write an examination (in the Facilitators’ Manual), to

test what you have learnt over the whole course. In addition, Modules 2 and 3 include assessment tasks, also provided in the Facilitators’ Manual.

Module Overview

Accessing financing for groundwater infrastructure is particularly difficult. The eight challenges below have been identified across the SADC region:

Challenges to accessing groundwater financing

Challenge 1. Under-capacitated public sector institutions: Many public sector institutions in the region have low capacity to deliver their core business, let alone develop time-consuming funding proposals. Preparing project proposals is also costly, thus institutions cannot always allocate sufficient resources to develop these sufficiently.

Challenge 2. Low levels of knowledge with regards to funding: The necessary knowledge of how to access funding and to see what funding is for, is low.

Challenge 3. Misalignment between objectives:

The objectives of funding applicants and those of ICPs are frequently misaligned.

Challenge 4. Budgetary and regulatory constraints:

Such constraints can restrict or prevent officials from adequately procuring for groundwater projects, or inhibit the establishment of public-private partnerships, which are often critical to the success of a project.



Challenge 5. Poor data interpretation and inadequate translation of science: This is a significant challenge for project bankability. Applicants often assume that the lack of data is inevitable, instead of focusing on interpreting what is available and translating this into a strong scientific base to underpin the proposal. Successful projects rely on a strong evidence base – which the funders need to see.

Challenge 6. Inadequately addressed political constraints: Political constraints mostly manifesting themselves through misaligned priorities at different governance levels, or across different sectors, or even between citizens and government. A local population may, understandably, see increased employment as a much higher priority than cooperative groundwater governance and thus may not endorse the project.

Challenge 7. Difficult-to-meet investment criteria: The criteria laid down by ICPs can be very prescriptive and narrow. A major barrier to accessing finance in Africa is the inability of applicants to meet ICP criteria. This is often because ICPs and applicants are driven by different agendas. Limiting the focus of projects (e.g. by prescribing that a project must focus on either grey or green groundwater infrastructure) can result in constraints that make it difficult for projects to combine interventions and benefits, thus reducing the synergies between different aspects of groundwater development.

Challenge 8. Low levels of stakeholder ownership: Stakeholders and project beneficiaries are often

under-engaged in the development of projects, with detrimental results. Stakeholders and beneficiaries need to be fully engaged from the beginning, with the project idea (the origination stage). If they don't share the enthusiasm of the developer and ICP for the project, they are more likely to be an obstacle than an asset. Beneficiaries are central to the long-term sustainability of the project beyond the funding or development lifecycle. So, if their full engagement is not planned for and acquired from the beginning, the project can easily fall apart.

Challenge 9. Inadequate consideration and mainstreaming of Environmental and Social Safeguards (ESS), Gender and Monitoring and Evaluation (M&E) issues in designing the project: Due consideration of cross-cutting issues such as ESS and Gender, or of how these can and should be mainstreamed in project design and implementation, can negatively impact on the success of an otherwise good proposal. Additionally, M&E is often not considered effectively in proposals, negatively affecting their success.

The Course is designed to improve your ability to provide solutions to these challenges in your development of project proposals. The principles of **sustainability** also underpin the Course – potential groundwater projects should always address aspects of climate change, along with environmental and social safeguards, gender, and the involvement of the community in the water value chain.

How the modules address the challenges in accessing finance

The four knowledge modules align closely with the nine challenges in accessing funding, detailed above. While the modules build on each other consecutively, you can also refer to specific modules depending on the challenge you face in developing your proposal.

- Most of the nine challenges are addressed in more than one module.
- **Challenge 1. Under-capacitated public sector institutions** is the issue that the whole course aims to address. This Training Manual is directly applicable to public servants' and professionals' core business and should increase efficiency in developing proposals. It should thus reduce the time spent on this and increase the success rate of

proposals developed by water practitioners from the SADC region.

- It is important to note that **Challenge 8: Low/no stakeholder ownership of the project** is applicable across every step of project and proposal development, from project inception stage all the way through to implementation and exit. If stakeholder ownership is not planned from the outset, the project is very likely to fail when funding comes to an end.

The following tables illustrate how and where the Modules address the various challenges.

Module 1: Introduction to Funding Proposals



Module content	Which challenges to accessing funding does this module address, and how?
<p>This module covers the key funding organisations, and their investment criteria.</p> <p>It unpacks what is meant by an investment-enabling environment for investing in groundwater infrastructure.</p> <p>By showing you how to apply a political economy lens during your project proposal preparation, you also learn why some countries are more successful at securing funding for groundwater projects than others.</p>	<p>Challenge 2: Low levels of knowledge with regard to funding. Module 1 covers the main ICPs active in the region, and their focus areas in funding groundwater projects. This will tell you which ICP is most likely to provide funding for your specific groundwater project.</p> <p>This is closely related to Challenge 3: Misalignment between objectives. Aligning objectives is difficult, and these first need to be clarified. Module 1 clearly spells out the objectives of the key ICPs for groundwater funding.</p> <p>Challenge 4. Budgetary and regulatory constraints. A key objective of the Course is to support your institution in navigating the policy framework in your country. The first step is to recognise and identify the relevant regulatory constraints, and then to look at them through the lens of a Political Economy Analysis.</p> <p>Challenge 6. Inadequately addressed political constraints -- Political constraints or problems generally arise for a project when there is no/not enough political, institutional or social support for the project. The first step in rectifying this is to identify these constraints or problems, recognising that they may not only be related to politics, but may have more to do with specific individuals, groups or institutions.</p> <p>Module 1 also explains how to conduct a Political Economy Analysis, which is a useful tool for mapping out the stakeholders and the groups of interest they form, as well as the social and institutional parameters that your project will have to deal with. Political constraints can also be a potential risk to your project. (The risk assessment tool and mitigation strategies in Module 4 will allow you to assess these risks and mitigate them to avoid issues later during implementation of your project).</p> <p>Challenge 7. Difficult-to-meet investment criteria -- This module lays out the investment criteria of the various ICPs, which you will need to meet if your proposal is to succeed.</p>





Module 2: Translating country priorities into projects

Module content	Which challenges to accessing funding does this module address, and how?
<p>A key question driving this module is: What makes a project viable and bankable? This module focuses on the objectives of your project idea, and will help you frame these and your Theory of Change, through a sustainable development lens.</p> <p>In this module, you will find out how to highlight country priorities in order to make your project proposal more successful.</p> <p>Module 2 also presents the structure and components of a project proposal and a concept note.</p> <p>After you have developed your Theory of Change and aligned your objectives with overarching sustainable development objectives, you will learn about Project Preparation Facilities, which are potential allies in the further development of your project proposal.</p>	<p>Challenge 3. Misalignment between objectives. Module 2 will guide you in developing a Theory of Change, which will help you to lay out clearly the objectives of your projects. With this information, you will be able to frame your project idea and proposal in a way that will match the ICP's objectives, which generally relate to sustainability, transformational change, social justice and gender equality.</p> <p>Challenge 5. Poor data interpretation and inadequate translation of science. Well translated science and well interpreted data are crucial to a winning proposal, and this whole course, and Module 2 in particular, will show you how to circumvent the issue of so-called 'unavailable data' in the region.</p> <p>The bankability of an infrastructure project is determined at the project development stage. With this in mind, Module 2 will take you through the steps to gather the evidence you need to justify the bankability of your project. For a project to be bankable, you need to consider the risks to the project, and these cannot outweigh the benefits.</p>



Module 3: Developing a Project

Module content	Which challenges to accessing funding does this module address, and how?
<p>In Module 3 you will learn about the basic phases of a groundwater project (the project lifecycle) and the performance management framework. Understanding the phases is the basis for the project economics and finances, for developing your project budget, and for establishing exit strategies.</p> <p>Stakeholder ownership is central, and the module will help you establish it throughout the project phases.</p> <p>You will use a widely-used planning tool: the logical framework (or LogFrame), to lay out the "storyline" of your project idea into a logical flow and detail each activity and component. This helps with budgeting, and paves the way for an efficient Monitoring and Evaluation (M&E) system.</p>	<p>Challenge 4. Budgetary and regulatory constraints. The module will help you to assess the policy enabling environment in your country and to address the associated challenges, opportunities and constraints. It also discusses a number of budgetary aspects, which are important for your proposal.</p> <p>Challenge 5. Poor data interpretation and inadequate translation of science Module 2 addresses this issue. However, what makes a project viable and how to adequately budget for groundwater project activities are highlighted in Module 3.</p> <p>Challenge 7. Difficult-to-meet investment criteria This module will teach you how to use a Logical Framework (a LogFrame) to ensure your project outcomes match the investment criteria of the various ICPs, which is vital for the success of your proposal.</p>



Module 4: Implementing a groundwater project

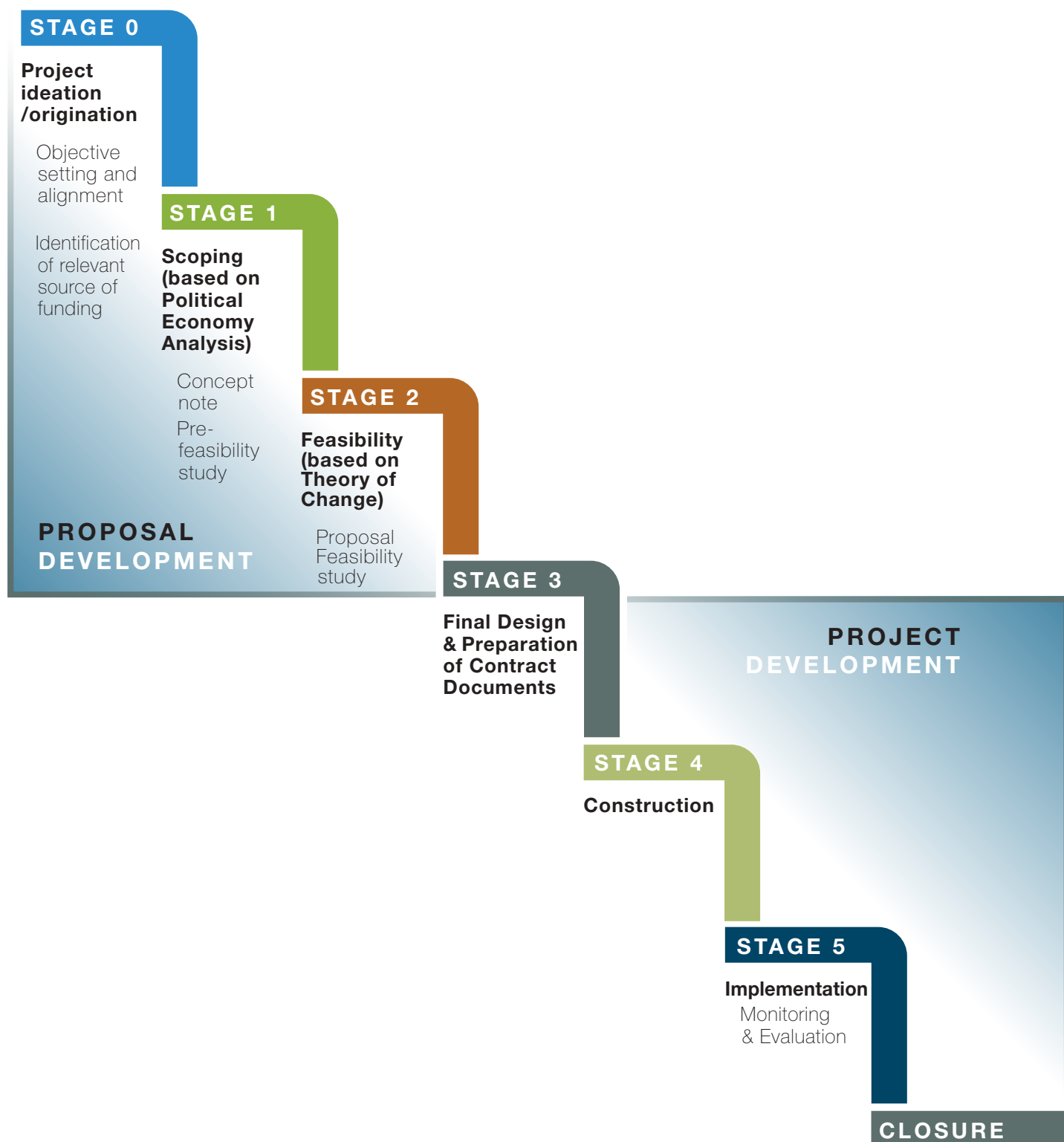
Module content	Which challenges to accessing funding does this module address, and how?
<p>This Module looks carefully at how to address the implementation phase of a project, focusing on implementing the cross-cutting aspects of a project, specifically:</p> <ul style="list-style-type: none">■ the potential project risks and how to assess them and plan for their mitigation■ the activities related to maintaining stakeholder project ownership■ the activities related to gender mainstreaming and to ensuring ESS are upheld through implementation activities related to M&E. <p>An important part of your planning relates to managing your project risks. A project may face a variety of risks and this module will show you how to identify and assess them.</p> <p>You will find out about Social and Environmental assessments and how to implement Environmental and Social Safeguards (ESS) and Gender plans, in groundwater projects.</p>	<p>Challenge 6. Inadequately addressed political constraints: As in Module 1, political constraints arise when a project lacks sufficient political, institutional or social support. Political constraints are a potential risk to your project. The risk assessment tool and mitigation strategies presented in Module 4 will allow you to assess the risks arising from political constraints and mitigate them to avoid issues arising later during your project implementation.</p> <p>Challenge 7. Difficult-to-meet investment criteria: In Module 4 you will cover aspects such as ESS and Gender plans, which are central to the investment criteria of most ICPs.</p> <p>Challenge 9: Inadequate mainstreaming and consideration of environmental and societal objectives: Module 4 highlights the importance of including ESS and Gender considerations in your proposal. These are crucial to the viability of your proposed project. Additionally, the module addresses Monitoring and Evaluation (M&E) activities, which can also play a key role in developing a successful proposal.</p>

Steps in developing a groundwater project and proposal

Figure 3 on the next page shows the various steps in implementing a groundwater project, from the original idea to project closure, including monitoring and evaluation. You will come across this figure, or aspects of it, as you go through the Training Manual.



Figure 3. Steps in implementing a groundwater project



How to use this manual

You should work through the manual from Module 1 to Module 4, consecutively.

You will come across these features in each module:

■ Introduction to Module

At the beginning of each module you will find out the purpose, goal and learning objectives of the module. In the module introduction you will also find a **Key term box**, as below, with definitions of key terms you will come across in the module. The first time you come across a key word in the text, it appears in **blue**.

■ Module learning information

This box gives you information on the module sub-sections, and learning objectives.

■ Mandatory readings and content

This is what you will learn in each module, and what will guide you in the development of your proposal. The content can be in written form, or a video. You will need to read and listen to all the material to be able to answer the quiz questions. You will also see boxes containing the content of a case study, which continues and is developed through the Training Manual. (This is explained in more detail below, with the first part of the Case study provided at the end of this introduction.)

■ Supplementary resources

These are additional resources such as videos and readings, that can help you in developing your proposal, but are not necessary to understand the content of the module.

■ Case Study

A case study (explained in the following pages) appears through the modules, using a real example to guide the activities and steps in proposal development.

■ Module quiz:

These are 10-question quizzes for self-assessment for each module.

■ Notes to Trainers

Throughout the course, key questions and pieces of information are detailed to provide specific training guidance for important subjects, or provoke thought around certain topics.

KEY TERMS

The key terminology for each module will appear in this box, at the start of each section.

MODULE LEARNING INFORMATION

Module parts (sub-sections)
Learning objectives

SUPPLEMENTARY RESOURCE

Useful additional information, often specifically related to project proposal development.

CASE STUDY

(See Case Study 0.1 below.)

Note to trainers

e.g. Hold a brief discussion on the key terms before beginning the section.



The Case Study

The Manual includes a Case Study, the “**Lilongwe Water and Sanitation Project**”, to illustrate and drill down into the key themes of each module. This provides a real-life, practical example of a water project which considers the conjunctive use of groundwater to increase water security for the city. This provides the backup for the city’s strategy for inter-seasonal storage investments. The Case Study explores many of the key issues and components of groundwater project proposals and is also a good example of the kind of information and the level of detail needed

to establish the ground-level evidence to support a project proposal.

The background context of the Case Study appears below (Case Study 0.1), and Modules 1 to 4 thereafter include relevant components of the project, to illustrate key aspects of each module. As you work through the Case Study, you will become familiar with the steps in developing a project proposal, as well as with the requirements and processes of one of the main ICPs, the World Bank, which is funding this project.

CASE STUDY 0.1

Lilongwe Water and Sanitation Project - Background Context

The Government of Malawi (GoM) requested support from the World Bank to enable priority investments in the water system, and improvements to sanitation. The objective of the project is to “increase access to improved water services and safely managed sanitation services in Lilongwe City”.

The information in Case Study 0.1 is a summary of the Strategic Context of the Project, contained in the Project Appraisal Document.

Malawi is a small, landlocked country, with a population of 17 million people, expected to grow to 23 million by 2025. The country is peaceful and politically stable, with a democratic government. Despite various economic reforms, the country is amongst the world's poorest nations, with over 50% of the population living in poverty. Malawi is extremely dependent on rain-fed agriculture, and is thus highly vulnerable to climate shocks, which impact negatively on economic growth and attempts to reduce poverty.

The country regularly experiences drought conditions, as well as floods (droughts and floods were both experienced in 2015, and a serious drought in 2016). Water availability and variation thus play a large part in Malawi’s economy and growth (World Bank, 2017). In addition, Malawi suffers from a lack of investment in water infrastructure, particularly storage, being one of the least capacitated countries in the region in terms of water storage infrastructure.

Private investment in Malawi is impeded by difficulty in doing business, given its poor infrastructure and the undersupply of services such as water, transport and electricity, according to the 2018 Doing Business Report. Poor sanitation and lack of access to safe drinking water are a problem in both urban and rural areas, and cited as a constraint to growth, amongst others.

Malawi is estimated to be in the early stages of urbanisation, with only 16% of the population living in urban

areas in 2010. The urbanisation rate was estimated at around 3.9 per cent in the period 1998-2008. This rate presents an opportunity; with the possibility of optimising planned urbanisation co-benefits. However, there is also the danger of poverty becoming urbanised, should planning and resources not be made available to address the related investment needs.

Lilongwe, the capital, is the site where most urban growth is taking place, along with a concurrent need for improved services. Lilongwe is Malawi’s biggest city by population size, and the country’s administrative centre. The population is estimated at 1.1 million (in 2017), projected to increase to 1.5 million by 2021. Informal settlements are increasing in response to this growth, with about 75% of the population living in informal settlements, according to a 2011 UN-HABITAT study (UN-HABITAT, 2011) in the project document. The city’s services are under pressure, including sanitation and water supply, limiting economic growth potential.



You can find more information about the project [here](#). Alternatively, you can search the World Bank’s website for the project: **Malawi Lilongwe Water and Sanitation Project**.

Introduction to funding proposals

“Through the eyes of the investment officer”



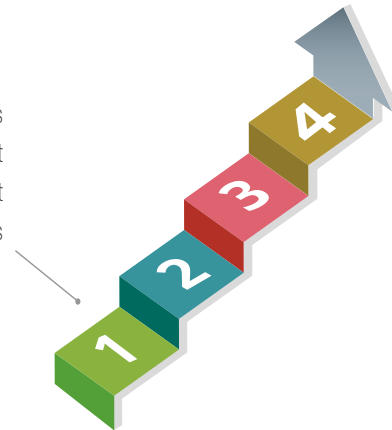
This module provides a simple overview of the various **International Cooperation Partners (ICPs)** – the funders and donors – who finance groundwater in the SADC region. You will learn about the result areas and investment criteria of potential funders, as well as the funding criteria applied to proposals related to groundwater investments.

The module also examines what is meant by an **‘enabling investment environment’**. In addition, this module will show you how to apply a **political economy lens** to unveil who enables and who (or what) blocks successful groundwater investments in your country or sub-region – and why.

MODULE OVERVIEW

This module has four parts:

- SECTION 1.1: Introduction to ICPs
- SECTION 1.2: Understanding the Investment enabling environment
- SECTION 1.3: The typology of groundwater investmentst
- SECTION 1.4: Applying a political economy lens



As you work through this module, look out for the Indicative Proposal Framework icon (shown below). This icon indicates that certain content aligns with the Indicative Proposal Framework. This document serves as a ‘generic proposal template’, as it includes the key aspects and types of information that most ICPs require in their proposal or funding application templates (see Appendix 1).



See: Indicative Proposal Framework (Appendix 1)
Section 2.2 Project Information

MODULE GOAL

This module will provide insight into the reasons why some proposals are more successful than others at attracting finance for groundwater infrastructure projects. Knowledge of the various ICPs, and of the investment-enabling environment for groundwater development is critical. Applying a political, social and economic lens to your specific proposal idea will help you understand how to optimise the enablers and mitigate against the blockages within your governance and investment context.

Learning Objectives: At the end of this module you should be able to:

- ✓ **Understand** why some proposals are more successful at attracting finance for groundwater infrastructure projects than others.

Continued »

- ✓ **Utilise** basic knowledge about the various funding agencies and 'investment-enabling environment' for groundwater infrastructure development, to develop successful proposals.
- ✓ **Understand** which funds are available/accessible and understand what funding criteria various funders apply to proposals related to groundwater investments
- ✓ **Apply** the Political Economy Analysis lens for greater understanding of groundwater investments in your country and/or sub-region.
- ✓ **Utilise** a political and socioeconomic lens in your own proposals, to examine who and what can influence your project both positively and negatively.

MANDATORY READINGS

There are two mandatory readings for this module, which are core knowledge to support this module. These can be found in the online Document Library, or you can access them using the links below:

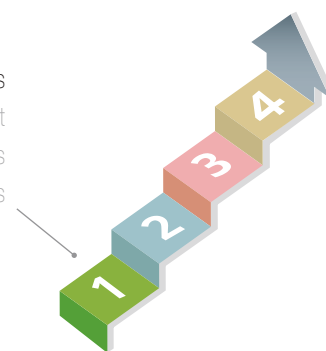
- The Climate Resilient Infrastructure Development Facility (CRIDF) Funding Eligibility Report
- The Stockholm International Water Institute (SIWI) Framework for Political Economy Analysis of Transboundary Basins in Africa, 2015

ADDITIONAL RESOURCES

Some additional useful resources may be found in the online Document Library. These include:

- The International Cooperation Partner Handbook. This provides a summary of the International Cooperation Partners relevant for groundwater in the SADC region. Please feel free to download this resource for your own use, and refer to it as you need.
- The Indicative Proposal Framework. As mentioned above, this is a blank template, indicating the key sections you need to complete for any proposal, provided for your use and reference. This is based on a number of ICPs' proposal templates. Please note that it has been tailored to be broad. For any specific ICP there may be other aspects that you need to consider.
- Excerpts from OneWorld's documentary film: "Too Many Degrees" (26 minutes)





SECTION 1.1

Introduction to ICPs

This section introduces the ICPs that you are most likely to encounter when you consider submitting a proposal. There are a few key terms that you must know before we proceed.

KEY TERMS

International Cooperation Partners (ICPs)

The international funders of groundwater projects fall into two main categories: private investors and public investors. Broadly, public investors can be further categorised into: Multilateral Development Banks (examples – African Development Bank (AfDB), World Bank, European Investment Bank, etc.), agencies and funds; and bilateral funders, who focus on country-to-country funding. In this Training Manual, we will collectively refer to these as International Cooperation Partners (ICPs).

Development finance

Development finance is a general term that refers to financial flows aimed at serving communities by providing the resources for building public sector infrastructure. In the public sector sphere, these finance mechanisms are not geared toward making profits. In this way, credit is transformed from one of making profit to one of increasing human well-being and environmental protection. Overseas Development Assistance (ODA) continues to be the largest single source of external development finance at country level, and its flows are increasing.

Climate finance

Climate finance refers to a small but important component of development finance, that seeks specifically to reduce carbon emissions, to enhance carbon sinks, and to reduce vulnerability, by maintaining and increasing the resilience of human and ecological systems to negative climate change

impacts (UNFCCC, 2014). Climate finance can be drawn from public, private and alternate sources of funding.

An enabling investment environment

The policy, legal and political context, which together, create an environment in which ICPs are comfortable to invest resources. An effective enabling environment for groundwater investments encompasses the laws, regulations and government organisations that reduce investment risks.

Key result areas

ICPs work toward achieving key results, or progress toward specific results (such as increasing inclusive and sustainable growth for Africa), across the different sectors/ geographies/ issues that they fund. These key result areas differ between the institutions. Your project needs to meet ICPs specific result areas to be considered for financing, and your proposal must highlight this. Highlighting this is key, as you can see in the Indicative Proposal Framework in Annex 1, and in the Digital Library (downloadable).



See: Indicative Proposal Framework
Section 2.2 Project Information

Continued »

KEY TERMS

Climate change mitigation

Refers to efforts to reduce or prevent emissions of greenhouse gases using new technologies, renewable energy, as well as rehabilitating ecosystems, improving energy efficiency of old technology, and changing consumer and societal behaviour and practices (IPCC, 2018).

Climate change adaptation

A response to climate change that seeks to reduce the vulnerability of social and biological systems to climate change shocks and stressors, while transforming socio-economic development approaches to align with a new normal, or a different climate and development future (IPCC, 2018).

Climate Resilience

The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity of self-organisation, and the capacity to adapt to stress and change (IPCC, 2018). Strengthening a system's climate resilience is a key aspect of climate change adaptation.



SUPPLEMENTARY RESOURCE: VIDEO

Why are many funding applications not successful? 'Through the eyes of the investment officer'

With the Key Terms in mind, watch the following interview with Mr. Olympus Manthata – Head of Climate Finance at the Development Bank of Southern Africa (DBSA), on the problems faced by investment officers when engaging with funding proposals.



1.1.1. Groundwater Project Funders: International Cooperation Partners

The international funders of groundwater projects fall into two main categories: private investors and public investors.

Broadly, public investors can be further categorised into:

- Multilateral agencies and funds, notably the development banks, which include the African Development Bank (AfDB), the World Bank, the International Monetary Fund (IMF), the International Finance Corporation (IFC), the European Investment Bank (EIB), etc.
- Bilateral funders, which focus on country-to-country funding.

In this Training Manual, we refer collectively to these institutions as International Cooperation Partners (ICPs).

An important Note: While private investors make a significant contribution to groundwater development in the region, their particular investment strategies and criteria vary widely, and are often not publicly advertised. For this reason, this Course focuses on public financing. ICPs such as those listed above are the predominant source of financing for groundwater infrastructure projects.

1.1.2. ICPs relevant to groundwater in the SADC region

Groundwater investments from ICPs in the region are mainly channelled through the following Multilateral Development Banks, bilateral ICPs and regional ICPs. Table 3 in section 1.3.2 provides additional

information on which aspects of groundwater projects different ICPs target.

Table 1: Groundwater relevant ICPs

ICP TYPE	RELEVANT TO GROUNDWATER IN SADC REGION
GLOBAL	<p>The Adaptation Fund</p> <p>The Cooperation in International Waters in Africa (CIWA)</p> <p>The Green Climate Fund (GCF)</p> <p>The Global Environment Facility (GEF)</p> <p>The United Nations Development Programme (UNDP)</p> <p>The United Nations Environment Programme (UNEP)</p> <p>The World Bank</p>
BILATERAL	<p>Germany's Federal Institute for Geosciences and Natural Resources (BGR)</p> <p>Danish International Development Agency (DANIDA)</p> <p>Department for International Development (DfID)</p> <p>Deutsche Gesellschaft für Internationale Zusammenarbeit (the German Development Agency) (GIZ)</p> <p>Japan International Cooperation Agency (JICA)</p> <p>Swedish International Development Cooperation Agency (SIDA)</p> <p>Swiss Agency for Development Cooperation (SDC)</p>
REGIONAL	<p>The African Development Bank (AfDB)</p> <p>The African Union Development Agency (AUDA-NEPAD)</p> <p>The African Water Facility (AWF)</p> <p>Clim-Dev Africa Special Fund (CDSF)</p> <p>The Development Bank of Southern Africa (DBSA)</p>

Of all the groundwater investors, the GCF and the GEF have the most specific funding criteria, while the DFIs and ICPs, such as the AfDB, the World Bank and the JICA, tend to issue funding based on whether proposed projects align with their broader programmatic areas for the region.

Tip: An important supplementary resource for this course is **The International Cooperating Partners Handbook**, compiled for this manual (see Appendix 2). This Excel workbook provides a summary of the major financiers of groundwater in the region. It details each ICP's key result areas, investment criteria and typical projects they fund and provides useful instructions on which funder to target, based on your project specifications.

1.1.3 ICPs' Key Result Areas and Investment Criteria

ICPs key result areas vary across a wide range, as outlined below.

International agencies/ funds:

- These international funders tend to have key result areas that are aligned with the United Nations Sustainable Development Goals (SDGs), which ensure that the local projects contribute to international priorities. These key result areas often promote key ideologies such as empowering women, building resilience to climate change and boosting human capital.

Regional agencies/ funds:

- Regional ICPs focus more on promoting specific development goals on the African continent, such as promoting inclusive and sustainable growth in Africa.



**See: Indicative Proposal Framework
Section 2.2 Project Information**

Each ICP has its own unique investment criteria, which any potential project has to meet in order to be considered for financing. For instance, all ICPs

ICPs' conditions and financial mechanisms for groundwater investments

Public sector investments in groundwater in the SADC region are primarily made through grants. A typical structure is the combination of direct grants from international public investors and national governmental grants that complement the international grant – in other words through a co-financing arrangement.

Some investments do not take the form of a direct financial contribution to a groundwater infrastructure-related project. In these cases, public investors often use the model of providing expertise through technical experts, in support of groundwater infrastructure development.

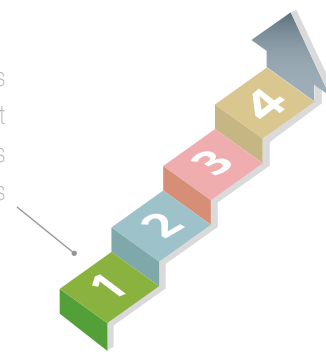
require projects to contribute to gender equality and social inclusion. They also require that projects must have environment and social safeguards (ESS) in place to protect people and the environment from any potential adverse impacts the project may have.



**See: Indicative Proposal Framework
Section 2.2 and 3.3 Implementation plan**

Often investment criteria will rely on the country having a specific country credit rating, being considered a post-conflict country, or being regionally or geographically located (this is especially true for regional ICPs, who have specific focus areas). Many ICPs also require the potential project to be pro-poor or contribute to specific development goals (such as building climate resilience, promoting transboundary impacts, etc.).

The specific key result areas and their subsequent investment criteria for relevant groundwater ICPs can be found in *The International Cooperating Partners Handbook*, an additional resource for this module.



SECTION 1.2

Understanding the investment-enabling environment

In this section you will explore the investment-enabling environment for groundwater investments. A key challenge of accessing financing for groundwater infrastructure are the gaps between the requirements of the ICPs and the respective water policies of the SADC Member State in question. (While it is outside of the scope of the Training Manual to provide solutions to these high-level policy enablers and constraints, it is useful to know what can constrain or aid your potential project.)

It is important to note that investors take the policy, legal and political environment of a country into consideration. These factors may combine to either create an environment in which funders are

comfortable to invest resources, or one in which they are hesitant to invest. An effective enabling environment for groundwater investments thus encompasses the laws, regulations, and government organisations that de-risk, or reduce the risks, to an investment. It is important that this legal and financial environment of the SADC Member States enables investments. All SADC Member States are eligible to receive technical assistance from bilateral and global ICPs. While an investment-enabling environment will not always necessarily lead to investment, it is however an important precursor for investment.

1.2.1 Achieving an enabling environment for investment

There are four critical conditions for success in establishing an enabling environment for investment

1 *A progressive, cohesive policy environment*

Countries that have broader, cross-cutting and integrated water policy objectives (such as those based on the principles of Integrated Water Resource Management, and conjunctive water use) are generally more aligned with ICPs' result areas.

A cohesive policy framework that is mainstreamed with national development priorities is an important foundation for attracting financing. Very few ICPs fund projects and programmes in the absence of this coherent framework. Cohesive frameworks assist in prioritising actions and enable the monitoring of long-term progress. Countries with updated, mainstreamed and cohesive frameworks are generally able to more easily a match their national priorities with the key result areas of ICPs. Some SADC countries' policy frameworks do not integrate the

role of their groundwater resources (its importance, its value, its vulnerability to climate change, etc.). These countries struggle to establish clear guidelines for further development and management of their groundwater resources.

2 *Political and economic stability*

The stability of a country's political and economic climate contributes greatly to the willingness of ICPs to fund any particular project within that country. **ICPs are more likely to invest in projects and programmes where the underlying political environment is predictable, and where there is diminished risk of conflict** which could lead to project interruption or incompleteness.

3 *Strong institutions*

SADC Member States with strong institutions are more likely to provide an enabling environment for investment. Strong institutions are seen to reduce political risk and help provide an environment that facilitates the setting up of funding partnerships.

The following factors contribute to the provision of such an environment:

- a) Public-Private Partnership (PPP) laws and policies, that are updated and clearly articulate the requirements of all partners to an investment, as well as
- b) Public Procurement Law that reduces corruption while still being accessible to a range of small and large recipients, and
- c) Updated Public Finance Management Law, a key factor in ensuring that private sector entities

are incentivised by the knowledge that their investments are legally protected.

4 **An active and supportive civil society**

An active and supportive civil society sector is also crucial to establishing an investment-enabling environment. The ideal situation is to have in place water policies that require stakeholder participation and are specific about the requirements to achieve this. It is very important to define the responsibilities of different stakeholders, while further articulating how development in the water sector aligns with the SDGs.

1.2.2 The barriers which impede investment

Unfortunately, in some cases the policy, legal and financial environments of SADC Member States can block investments and impose barriers that disincentivise ICPs from investing in projects. These investment-impeding barriers include:

- **Overlapping mandates and coordination issues:** These are most often a result of unclear policies and inadequate PPP and procurement laws. Furthermore, the region has been slow to effectively decentralise water resources development and service provision, despite policies that decree otherwise. This is particularly an issue for groundwater development, which is most often needed at the local level.
- **Complex, hard-to-navigate bureaucratic procedures:** Bureaucracy often complicates rather

than enables investment processes, adding to the investment-impeding in the region.

- **Weak links between national policies and objectives, and ICP result areas:** Proposals submitted for groundwater funding in countries with inadequate policy frameworks have often been unable to establish strong links between national policies and objectives, and the ICP result areas and investment criteria, with the result that groundwater investment proposals were not geared towards ICP expectations. For a proposal to be successful, the sustainability and broad impacts of a groundwater project need to be clearly articulated in terms of the *relevant* ICP result areas.



**See: Indicative Proposal Framework
Section 2.2 Project Information**

CASE STUDY 1.1

The Enabling Environment for the Lilongwe Water and Sanitation Project

The Lilongwe Water and Sanitation Project received Investment Project Financing (IPF) from the International Development Agency (IDA), a World Bank organisation which specialises in lending to low-income countries. The World Bank is a specialised organisation focused on international development – with the specific purpose of reducing poverty by lending money to poorer governments around the world, to improve

the standard of living of their people. The World Bank consists of the following organisations:

- International Bank for Reconstruction and Development (IBRD), which lends to low- and middle-income countries;
- International Development Association (IDA), which lends to low-income countries;

Continued »



CASE STUDY 1.1

- International Finance Corporation (IFC), which lends to the private sector;
- Multilateral Investment Guarantee Agency (MIGA), which encourages private companies to invest in foreign countries; and
- International Centre for Settlement of Investment Disputes (ICSID), which helps private investors and foreign countries work out differences when they don't agree.

The World Bank's core goals are:

1. To end extreme poverty: reduce the percentage of people living on less than \$1.25 a day to 3 % by 2030.
2. To promote shared prosperity: foster income growth for the bottom 40% of the population in every developing country.

The Bank aims to achieve these goals through a number of different sectors, including the water, sanitation and waste sector. Ensuring the supply of safe drinking water, focusing on inclusive, sustainable development, building capacity, mobilising finance and 'crowding in' the private sector are all key aims.

The Lilongwe Water and Sanitation Project thus dovetails with the key World Bank result area of supplying safe drinking water. There are a number of other themes, per sector, which the World Bank strives to achieve. The Lilongwe Project meets the following World Bank themes:

- Human Development and Gender (based on the extensive gender element in the project)
- Urban and Rural Development (specifically urban water and sanitation, urban infrastructure and service delivery, and disaster risk management)
- Environment and Natural Resource Management (specifically climate change adaptation, and water resource management)

Therefore, the Lilongwe Project both sectorally and thematically meets a number of the World Bank's key result areas. This was a key step in the project being accepted for financing from the World Bank.

Malawi's Policy Environment:

Additionally, certain aspects of Malawi's policy

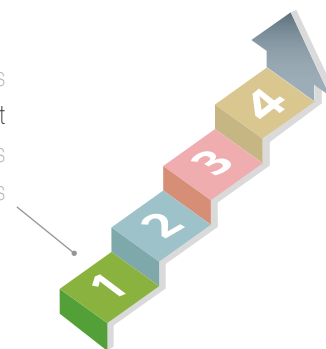
environment were favourable to the requirements of the World Bank, which enabled the investment from the IDA. Specifically:

- Malawi's Public-Private Partnership (PPP) laws help enable investment, based on their Public-Private Partnership Act of 2011. The Act outlines that the general principles for PPPs should include:
 - improving the delivery of public infrastructure and services in Malawi;
 - assisting in achieving better value for public expenditure by the government; and
 - promoting private sector investment in infrastructure and services, amongst a range of considerations.

The World Bank has thus engaged the IFC to act as a transaction advisor for PPP for water production expansion investments.

The project was deliberately designed to crowd in private sector financing by focusing on the distribution network infrastructure and allowing space for the private sector to finance water production infrastructure based on the strength of Lilongwe Water Board's (LWB's) cash flow.

- Malawi has also undergone extensive public finance reform through programmes facilitated by the European Union, the World Bank and other ICPs, which has helped strengthen its policy environment.
- Malawi also requires an extensive and complex procurement process to secure public funds for the procurement of groundwater infrastructure or projects. According to Article 30 of the Public Procurement Act of 2012, there must be proof that the procurement proceedings were conducted in a transparent, accountable, non-discriminatory, fair, anonymous, efficient way, with open competition. This helps mitigate the risk of fraud, corruption and financial irregularities.
- Malawi is also a stable democratic country, which enables investment. So, despite a recent difficult economic period, the economic and political reforms the government has initiated have provided a progressive environment for financing and investment.



SECTION 1.3

The typology of groundwater investments

In this section you will explore the typologies of groundwater investments and learn to match potential groundwater projects with the most relevant ICPs.

KEY TERMS

Adaptive capacity

The combination of strengths, attributes, and resources available to an individual, community, society, or organisation, that can be used to prepare for and undertake actions to reduce adverse impacts, to lessen harm, or to make the most of beneficial opportunities (IPCC, 2018).

Climate resilience

The ability of a system and its components to anticipate, absorb, accommodate or recover from the effects of a hazardous event in a timely and efficient manner. This includes ensuring the preservation, restoration or improvement of the system's essential basic structures and functions (IPCC, 2018).

Integrated Water Resource Management (IWRM)

The Global Water Partnership defines IWRM as "a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems". Recommended in the 1992 Dublin Principles, IWRM relies on balancing between the three principles of social equity, ecological sustainability and economic efficiency.

This central approach toward sustained water security, where no one is left behind, can only be achieved through ensuring that all water investments

(including groundwater investments), are made through balancing hard infrastructure investments with green, or ecosystem-based investments, and nature-based solutions. Put simply, the ecosystem services must be strengthened to ensure that the hard, or grey groundwater infrastructure can continue to yield water resources for its beneficiaries sustainably into the future.

For example, groundwater recharge zones exist to control both the quantity and quality of water reaching aquifers. As such, they are central to preventing pollution and maintaining supply for both drinking water and ecosystems. Protection schemes such as these, currently mainly used in areas supplying drinking water, could be expanded to critical groundwater recharge areas in ecosystems to improve ecosystems resilience and secure the ecosystem services.

Grey (hard) infrastructure

Grey infrastructure refers to human-engineered, or hard infrastructure solutions. Examples include boreholes, wellfields, pipelines, storage tanks, electricity supply systems, and roads.

Green infrastructure

Green infrastructure, or soft infrastructure, is a strategically planned network of natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services in both rural and urban settings.

Continued »



KEY TERMS

Wetlands are an example of green infrastructure, as well as strips of conserved vegetation in riparian zones, options to conserve soil integrity, areas or zones maintained for preferential groundwater recharge.

Nature-based Solutions (NbS)

A nature-based solution is a way of tackling a socio-economic problem (such as water or food security) by using a sustainable, nature-based option, such as preserving land cover to increase filtration.

Definition and components of Nature-based Solution (NbS)

The IUCN defines Nature-based Solutions as “actions to protect, sustainably manage, and restore natural or modified ecosystems, that address societal challenges effectively and adaptively, simultaneously providing human well-being and biodiversity benefits”.

The core principles of NbS (from IUCN) are:

1. Embrace nature conservation norms (and principles);
2. Implemented alone or along with other solutions to societal challenges (e.g. technological and engineering solutions);
3. Determined by site-specific natural and cultural contexts, including traditional, local and scientific knowledge;
4. Produce societal benefits in a fair and equitable way, promoting transparency and broad participation;
5. Maintain biological and cultural diversity and the ability of ecosystems to evolve;
6. Applied at a landscape scale;
7. Recognise and address the trade-offs between the production of a few immediate economic benefits for development, and future options for the production of the full range of ecosystems services; and
8. That the solution is an integral part of the overall design of policies, measures or actions addressing specific challenges.

For further information see [here](#).

1.3.1. A typology of groundwater investments

We will explore the sustainability of groundwater investments in more depth in Module 2, but it is useful for you to know that your potential project must lead to sustainable outcomes to receive financing. More importantly, it is useful for you to know which funders require a specific focus on aspects such as climate resilience.

There are four generic types of groundwater investments that could contribute, directly or indirectly, to sustainable outcomes for your project:

- Governance investments
- Economic investments
- Infrastructure (green and grey) investments
- Behavioural investments

In order to promote groundwater investments, it is important to adopt an inclusive and long-term approach to resource management. To be sustainable, these investments need to promote climate change adaptation and inclusive growth.

Table 2 gives a description and examples of the different types of groundwater investments.



**See: Indicative Proposal Framework
Section 2.2 Project information
(type of project)**

Table 2: Typology of groundwater investments

TYPE OF INVESTMENT	DESCRIPTION AND EXAMPLE
GOVERNANCE & PLANNING	<p>These include investments in groundwater for:</p> <ul style="list-style-type: none"> ■ adaptation of leadership, policy, regulations, laws and strategies ■ institutional arrangements to transform or alter pertinent governance aspects of groundwater management for enhanced climate action and optimal disaster risk reduction ■ transformational climate-adaptive and disaster risk-reducing planning that is jointly conducted and integrated across relevant sectors.
ECONOMIC	<p>These include:</p> <ul style="list-style-type: none"> ■ investments in groundwater that increase per capita income while reducing inequalities ■ green economy investments where enterprises promote climate change adaptation, while also creating alternate revenue streams.
INFRASTRUCTURE	<p>These include investments in groundwater infrastructure development that consider:</p> <ul style="list-style-type: none"> ■ how green infrastructure investments can enhance or balance grey infrastructure development, for example to avoid stranded economic assets through enhanced nature-based solutions ■ how to reduce or eradicate the impact of extreme climatic events and climate change.
BEHAVIOURAL	<p>These include investments in changing behaviour for climate-adaptive, capital decision-making, planning and management of groundwater by stakeholders (i.e. government, labour, industry and civil society).</p>

An overarching plan

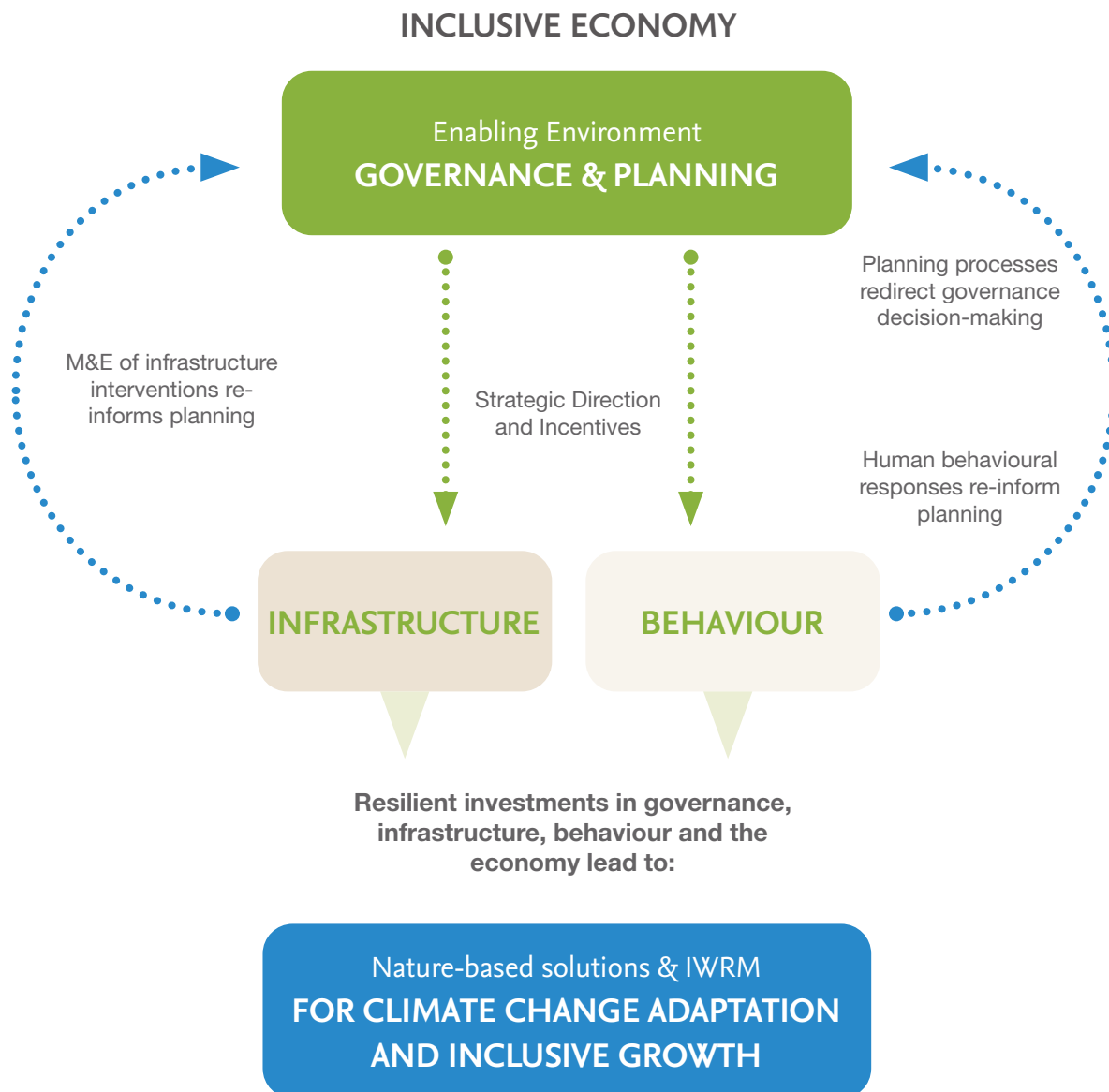
A successful funding proposal is underpinned by an overarching plan – such as an investment plan or a sector or national development plan. Such plans should show how these types of investments relate to, support and maintain each other, and how they contribute to the objectives of the overarching plan. The overarching plan thus gives context to the project idea.

This conceptual framework can assist in further defining your project idea or concept. It can help you to think through how you should present the investment opportunity in order to demonstrate its alignment with ICP result areas and investment criteria.



Figure 4 shows how the different types of groundwater investments shown in Table 2 above, work together to achieve sustainability.

Figure 4. Groundwater investments: A conceptual framework for sustainability



CASE STUDY 1.2

The Interventions of the Lilongwe Water and Sanitation project

The Lilongwe Water and Sanitation project (LWSP) (a five-year project running from March 2018 to June 2023), aims to increase access to improved water services and safely managed sanitation services in Lilongwe City, Malawi. Chiefly, the project looks to address crucial infrastructure shortages for the water network and sanitation system of the city to directly benefit roughly 500,000 residents in the city. This project makes use of all four interventions mentioned previously (i.e., governance, economic, infrastructure and behavioural) to ensure that its outcomes are long-lasting and sustainable.

Tip: These examples demonstrate important considerations for Stage 1 (Scoping) of your proposal development. These considerations will help you identify how feasible your project is likely to be. They will also assist you in writing a Concept Note, and must inform the project rationale, which is the foundation of any successful project proposal.

Governance: By strengthening the technical capacities of the Lilongwe Water Board (LWB) and the institutional capacity of the Lilongwe City Council (LCC), the project seeks to provide long-term capacities within Lilongwe to address water security needs for many years to come. Once these capacities have been strengthened, the LWB and LCC will be able to make more informed decisions for the City's water. Also, creating the partnership between the LWB and LCC will ensure that water and sanitation are planned for together, which is vital to long-term sustainability of water security in the city.

Infrastructure: The project will rehabilitate and construct significant water and sanitation infrastructure in the city. Significant investments will be made into the water and sanitation network of the city, including expanding the water supply network to areas of the city with poor access to water, and the rehabilitation of the existing water treatment plant. Monitoring and evaluation of the rehabilitated and newly constructed

water infrastructure can then re-inform the LWB's plans. If the expansion of the water service network proves to be useful and beneficial, it could be extended to other parts of the city.

Economic: Rehabilitating the water network will result in reductions in non-revenue water from leakages, thus increasing the overall revenue for the LWB. This will have economic windfalls for the LWB, which can then use the increased revenue for other projects, to lead to further economic gains in the future. This helps to promote the sustainability of the project beyond the funding schedule.

Behaviour: The project will attempt to change Lilongwe residents' perceptions and understanding of sanitation through a number of sanitation marketing campaigns. This dual approach to sanitation will lead to increased public health. This can then help inform further governance aspects, as the LCC can look to implement additional sanitation plans with people more receptive to sanitation schemes.



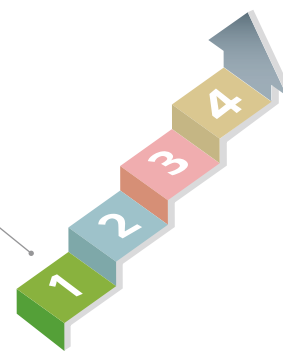
1.3.2. Matching groundwater investments and ICPs

Following this typology, we have matched and grouped the ICPs investing in groundwater according to their type of investment.

Table 3. Type of investment related to specific investors

Type of groundwater infrastructure	Donor/Investor
Governance, framework	GEF: Global Framework for Country Action for groundwater governance (through the FAO). GEF/ WB: Sustainable groundwater Management in SADC Member States project - SADC-GM AfDB JICA BGR CIWA SIDA SDC DANIDA
Grey infrastructure: boreholes and wells, and pumps	Private investments: groundwater irrigation schemes for commercial farms JICA GEF and GCF - not as sole focus of investments BGR: exploration and study CIWA
Green infrastructure: nbs, wetland rehabilitation	GCF: through community-based adaptation initiatives such as integrated water management, or sustainable farming practices (which allow for groundwater aquifer recharge). AfDB: when groundwater infrastructure-related investments are engaged, the activities related to groundwater infrastructure development are a component or a co-benefit of the main project
Combined green and grey groundwater infrastructure	GEF/WB: Sustainable groundwater Management in SADC Member States project - SADC-GMI GCF with UNDP / UNEP





SECTION 1.4

Applying a political economy lens

This section explains the importance of applying a critical, political economy lens to your project development. You will find out how to do this, by

carrying out a Political Economy Analysis (PEA). Before beginning, review the key terms used in this section.

KEY TERMS

Political Economy Analysis

A political economy analysis (PEA) examines the power relationships that exist in a specific investment environment. This means studying the vested interests, incentives, relationships, distribution and contestation of power between different groups and individuals. Using a PEA lens will provide insight into the political and economic pressures that may affect the success of your project.

Political Flux Analysis

A political flux analysis is a study of the factors that may affect the current political situation and the balance of power, for example an election, or a flood, might change the way that political actors view a particular proposal or project.



SUPPLEMENTARY RESOURCE: VIDEO

1. Professor Mike Morris (from the University of Cape Town, South Africa) briefly explains what is meant by a Political Economy Analysis, and why it is fundamentally useful for project proposal development.



2. Please refer to the Mandatory Reading: SIWI, 2015: Framework for Political Economy Analysis of Transboundary Basins in Africa: for further information regarding how to conduct a political economy analysis.

1.4.1 Why should you do a Political Economy Analysis?

For development initiatives to succeed they must be economically, technically, socially, environmentally AND politically viable. Developing groundwater infrastructure often requires political support or will. The PEA tool will give you a good understanding of the key political and economic factors that can determine the success or failure of your groundwater project.

This information will greatly assist in explaining the risks, and feasible ways of mitigating or managing them, in implementing your project.

This will also give your investor comfort that you:

- a) understand the risks associated with your project;
- b) can navigate the political and economic environment, limiting or eradicating the risk impacts.



**See: Indicative Proposal Framework
Section 3.4 Project Risks, Monitoring
and Evaluation**

1.4.2 Carrying out a PEA

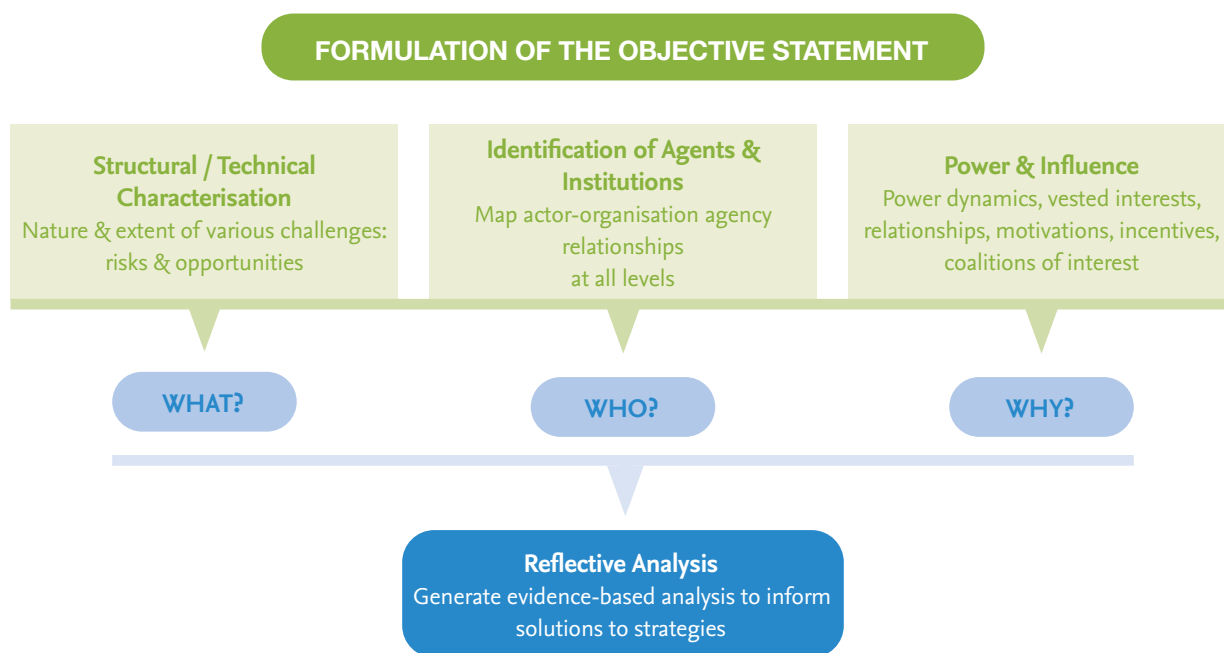
A PEA is a problem-focused tool, with three stages:

- 1) Define the boundaries of your analysis, included in an 'Objective Statement'
- 2) Engage with three key questions:
 - **What** are the factors and vested interests involved?
 - **Who** are the players influencing the issues and holding power?
 - **Why** are the actors with power acting in certain ways? (e.g. to secure their vested interests and influence the process)

- 3) Analyse your evidence, to support strategic decision-making (Reflective Analysis).

The PEA Framework is illustrated in Figure 5 below.

Figure 5: The PEA Framework stages (adapted from SIWI, 2015)



Tasks in carrying out a PEA

Task 1) *Determine the Objective Statement*

The Objective Statement defines the boundaries of the PEA, and outlines the evidence base you will need to understand and resolve the problems at hand. Your Objective Statement should clarify the purpose, context and scope of your analysis, and summarise your initial assumptions.

Possible questions:

- What is the situation to be analysed?
- What is the information needed for?
- Why is this analysis being carried out?

Task 2) *Establish the “What” - Structural and technical considerations*

- Describe the country and the overall context to be examined, focusing on the regional political and economic realities.
- Identify the various factors and vested interests likely to influence your project.
- Provide a summarised overview of the structural and technical ‘landscape’ related to your project. This should include the history of interaction; previous projects and activities; and the key economic, political, hydrogeological, geographical, engineering, social and environmental issues.
- How many/which countries affect the issue your project seeks to address?
- What is the overarching political context?
- What vested interests are there to be taken into account?
- How does the overall state of the national economies of the countries involved affect your project?
- What is the technical and physical context?
- Are there historical development experiences, negative or positive, which may have an impact?

Possible questions:

- If your project concerns transboundary aquifers, how many riparian countries does your project affect?



See: Indicative Proposal Framework
Section 3.1 Project Summary

Task 3) *Identifying the “Who” - Institutions and agents*

- Map out all the players, constituencies and stakeholders at all levels that may impact on or influence the issues you have identified.
 - If applicable, map institutional legacy factors relating to transboundary projects at each national level. Such factors may include language, legal systems, governance models, etc.
 - Include input from any existing governance and institutional studies and analyses. In a transboundary project, this may include a very large array of regional persons, organisations and institutions.
 - Determine the roles and relationships at all levels which impact on the project.
- #### Possible questions:
- Who are the players or organisations that may have an influence on the project?
 - Who will or may be impacted by the project?
 - Who are the key constituencies who occupy influential positions?
 - Which parties are responsible, formally or informally, for which functions related to the issues identified in the Objective Statement, in each of the identified constituencies?
 - What are the relationships between the key players?
 - Who makes up the constellations of actors involved?
 - What are the coalitions of interest between players?



Task 4) Establishing the “Why” - Power and influence

This task is the powerhouse of the PEA and what makes it a unique and useful tool. However, you need to tread carefully:

- You need to very carefully evaluate and verify the information you obtain.
- You need to understand the power dynamics that are likely to slow, stop or accelerate your project.
- You need to identify the key parties who wield the major power or influence, including their sources of power, linkages and relationships at all levels, including international influences.
- Once you have identified the interests and incentives at all levels, and the nodes of influence and power, you need to determine their position on the issues set out in your Objective Statement. This will allow you to build your evidence base, so as to provide a more accurate indicator of current positions around an issue than political promises might suggest.

Possible questions:

- Is the information from a reliable source, can it be corroborated, and does it make sense?
- Which of the parties hold power and influence

(formally or informally)?

- Who are the three or four key persons of power/influence who will determine the outcome?
- What is the hierarchy of power, both in terms of legal systems, and actual hierarchies?
- Who are the more powerful or influential government ministries or ministers or local councillors?
- Are there overriding political issues at the local, national, regional or international level which eclipse the issues being analysed, possibly with nothing to do with water?
- What is the past record of statements, positions, voting, and other responses made by key persons related to the issue under analysis?
- Are there prescriptions from higher political levels in existence?
- Are unrecognised, pre-determined mental models in operation which are influencing perceptions, positions and decisions?
- Are bidding and tendering systems adequate or vulnerable?
- Are there opportunities for manipulation and opaque transactions, interactions and relationships?

Task 5) Reflective Analysis

After gathering the information to underpin your PEA (Tasks 1 to 4 above), you can begin your reflective analysis. Reviewing the initial assumptions that you made, compared to the eventual outcomes, will bring the whole picture into focus.

Start off by doing two things:

- a) Reflectively verify your findings – creating perspective:
Possible questions: Does the assessment make sense, given all the information gathered? Is it tenable and believable? Does anything seem contradictory? Are any positions irrational?
- b) Analyse the strategic implications:
 - Political space - areas of contestation and compromise: What would need to change to make progress possible? What are possible pathways to solutions and compromise?

Once you have established a degree of perspective and thought about issues of political contestation and compromise, you will be in a position to undertake the following activities:

Identify possible congruence of mutual self-interest:

- What are the main areas of self-interest, perceived and real, individual or collective?
- Are the areas of self-interest able to be legitimately satisfied by the project or are they in conflict with the policies of ICPs?
- Are there areas of *mutual* self-interest? How could these be optimised?

Reflective Analysis

Generate evidence-based analysis to inform solutions to strategies

Reassess your Objective Statement:

- Would it be possible to alter the proposal to enhance mutual satisfaction, to reduce risks and increase rewards?

Conduct a Political Flux Analysis – predictions of political change:

- Are there elections or other political events in the near future which may change the players?
- Is public opinion changing, which may alter the perspectives and motivations of decision-makers?
- Would a flood or drought, or another uncontrollable event create new opportunities to promote cooperation to address mutual problems?

Conduct a confidence assessment and identify key risks

The purpose of undertaking a PEA is to provide information, intelligence and understanding to decision-makers so that strategic decisions can be made on how best to spend scarce resources. However, it is important *to place a degree of confidence on the findings and recommendations of the findings – as you will need to highlight such areas of uncertainty, risk and potential change.*

In this final step, you must assess:

- How confident are you about your findings?
- Have you identified all the key risks?



DISCUSSION FORUM / REFLECTION

After reviewing this module's content as well as the supplementary readings, reflect on the following questions. (If you are doing this work as part of a course, share your thoughts with your fellow participants.)

- Do you believe that your country's policy environment enables investments in groundwater? How does it do this – or not do this?
- What is your current understanding of the political economy issues that drive the project outlined in this module's case study?
- Have you had any particular successes in working with ICPs that you can share with your peers? Alternatively, do you have any lessons or questions to share with your peers on this course with regards to accessing financing?



MODULE QUIZ

Instructions

The module quiz below will test the knowledge you have gained over the course of this module. Use this to assess how well you have understood the material, and to see whether you should go back and re-read some sections.

- Please read each question carefully, and then read the answer option(s).
 - Be aware that some questions may have more than one correct answer. Mark all the correct answers.
 - When you have a clear idea of the question, select the correct answer(s) from the list.
 - ✓ Single choice: Only one option is correct (including the option "all are correct")
 - ✓ Multiple choice: Two or more options may be correct responses.
 - ✓ True / False
1. When trying to secure financing for a project, which of the following will encourage investment?
 - a. High levels of corruption
 - b. A water policy environment which is based on the principles of Integrated Water Resource Management
 - c. Water policy and laws which do not consider the needs of stakeholders
 - d. Economic recession
 2. Choose the correct definition of the term 'an enabling environment' as it applies to funding groundwater projects.
 - a. Financial flows targeted towards serving people and communities through finance mechanisms that are not geared toward making profits.
 - b. The policy, legal and political environment (context), which together, create an environment in which funders are comfortable to invest resources.
 - c. Elements that work toward achieving key results, or progress toward these, across the different sector/geography/issues of their funding.
 - d. A policy, social, institutional and/or environmental outcome that provides an opportunity to implement a desired intervention.
 3. Which factor or factors from those listed below establish the enabling environment behind the case study example in this Module?
 - a. Effective Public-Private Partnership laws
 - b. Explicit establishment of groundwater as a central enabler of water security
 - c. Strong institutions, such as an effective water ministry, a local or regional DFI and /or supportive NGOs and academic environment
 - d. Clearly articulated links between climate change response strategies, the SDGs and the national water policy framework
 4. What is the most important success factor of your Political Economy Analysis (PEA)? (choose one):
 - a. A clearly articulated Objective Statement
 - b. Accurate and verifiable information
 - c. Credible sources of information
 - d. Demonstrating integrity and confidentiality in accessing information from informants

5. Which funding agency or agencies would you go to for accessing finance for groundwater resource development planning?
 - a. The World Bank, Japan International Cooperation Agency (JICA), The German Federal Institute for Geosciences and Natural Resources (BGR)
 - b. The Global Environment Facility (GEF) and the Green Climate Fund (GCF)
 - c. The German Development Agency (GIZ), the Department for International Development (DfID)
 - d. The Development Bank of Southern Africa (DBSA) and the African Development Bank (AfDB), the African Water Facility (AWF)

6. Which funding agencies would you go to for accessing finance for developing groundwater resources for climate change adaptation?
 - a. The Global Environment Facility (GEF), the Green Climate Fund (GCF)
 - b. The African Development Bank (AfDB), the African Water Facility (AWF)
 - c. The Development Bank of Southern Africa (DBSA), the African Union Development Agency (AUDA-NEPAD), The German Federal Institute for Geosciences and Natural Resources (BGR)
 - d. The German Development Agency (GIZ), the Department for International Development (DfID)

7. True or False? Nature-based Solutions are integral to ensuring that Integrated Water Resource Management takes place.
 - a. True
 - b. False

8. True or False? Developing groundwater resources is central to ensuring water security nationally or regionally.
 - a. True
 - b. False

9. Which type of investments correspond to a groundwater project taking an Integrated Water Resource Management (IWRM) approach?
 - a. Governance & Planning and Infrastructure investment
 - b. Governance & Planning, Infrastructure, Economic and Behavioural investments
 - c. Governance & Planning and Economic investments
 - d. Economic and Behavioural investments

10. What are the four critical conditions for success in establishing an enabling environment for investment?
 - a. A cohesive policy framework; political and economic stability; strong institutions; and an active and supportive civil society
 - b. Political and economic stability; an active and supportive civil society; political will; and strong institutions
 - c. A cohesive policy framework; updated policies, strong institutions; and international institutions support
 - d. Political and economic stability; a strong financial system; an active and supportive civil society; and the support of international institutions



MODULE 2

Translating country priorities into projects



The key question driving this module is: What makes a project viable and bankable?

This module focuses on the **objectives** of your project idea. It will help you frame your **objectives**, and your **Theory of Change**, within a **sustainable development lens**. You will find out how to highlight country priorities within a project proposal, in order to make it more successful. The module also provides

the structure and components of a **concept note** and **project proposal**. After you have developed your Theory of Change and aligned your objectives with the overarching sustainable development objectives, you will learn about **Project Preparation Facilities (PPFs)**, which are potential allies in the further development of your project proposal.

MODULE OVERVIEW

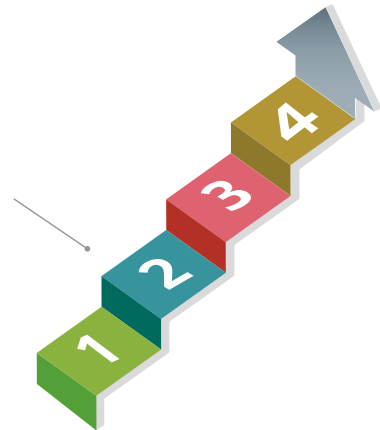
This module has four parts:

SECTION 2.1: Groundwater and sustainable development planning.

SECTION 2.2: Theories of change to increase groundwater resilience

SECTION 2.3: Developing a concept note and understanding the full proposal template

SECTION 2.4: Accessing Project Preparation Facilities (PPFs)



Learning Objectives: At the end of this module you should be able to:

- ✓ **Understand** and work with the components of a concept note and a proposal template
- ✓ **Understand** what project preparation facilities (PPFs) are available and how to access them
- ✓ **Understand** the links between groundwater and sustainable development, and the impacts of climate change on groundwater
- ✓ **Develop** a Theory of Change for your project.

MANDATORY READINGS

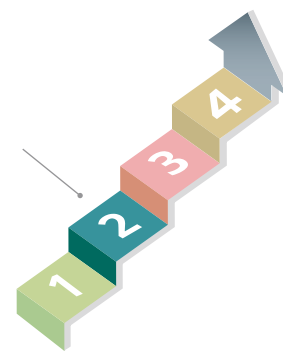
Please read this document while you are working through this module:

- SADC-GMI Guidance Document: Building Groundwater Resilience.

ADDITIONAL RESOURCES

- We have compiled a document which illustrates how to mainstream climate change in your project, which can be accessed in the Document Library.
- We have developed a work pack with several of the key groundwater ICPs' proposal templates in the Digital Library.
- You can find out more about the United Nations' Sustainable Development Goals (SDGs) here: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>





SECTION 2.1

Groundwater and sustainable development planning

In this section you will explore how best to align groundwater with sustainable development objectives. However, there are a few key terms that you need to be familiar with before you proceed.

With these key terms in mind, let's focus on linkages between groundwater, sustainable development and climate change.

KEY TERMS

Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), climate change refers to a change in the state of the climate that can be statistically identified by changes in the variability of its properties, and persists for decades, or longer. It may be due to natural internal processes, modulations of the solar cycles or volcanic eruptions, as well as persistent **anthropogenic** changes (caused by human impact) in the composition of the **atmosphere** or in **land use** (IPCC, 2012: 557). Note that the **Framework Convention on Climate Change (UNFCCC)** has a different definition, defining climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' The UNFCCC thus makes a distinction between **climate change** attributable to human activities, and **climate variability** attributable to natural causes.

Policy

A policy is an official document that sets out the goals and activities planned by government at the national, provincial or municipal levels. Policy, in general, is what the government hopes to achieve, and what it does to achieve such objectives. Policies generally require new legislation to bring them into force.

Climate Mainstreaming

Climate mainstreaming is an iterative process whereby climate resilience (*Tip: Refer back to your glossary from Module 1 to recap on climate resilience*) is integrated from the outset and in a meaningful way into development planning and policymaking. In this way, planning for climate change is shifted from a reactive, incremental mode, into a forward-thinking mode led by planners.

The Water-Energy-Food Nexus

The water, energy and food nexus refers to the set of connections that link water security, energy security and food security to one another. Study of the nexus reveals that action in any one particular area will be likely to have an effect on the other areas. This has significant implications for human development in that food security depends on poverty reduction and sustainable development.

Adaptive Capacity

The adaptive capacity of a system, whether it be an individual, community or society, is its ability, based on a combination of available strengths, attributes, and resources, to adapt in order to reduce potential harm, to prepare for adverse impacts, or to exploit potential opportunities.

2.1.1 Highlighting the importance of groundwater

Water is a critical resource for many sectors, including health and sanitation, energy, agriculture, housing, tourism and industry. Groundwater therefore has strong links to local, national and regional development objectives related to water security. Access to water, especially groundwater, contributes to a range of developmental objectives. This is illustrated in the figure below, showing the relation of water security to the United Nation's Sustainable Development Goals (SDGs), 17 of which are related to water security.

This means that overall, groundwater planning must involve a range of government ministries to ensure the optimal allocation of resources, to coordinate public and private spending, and to avoid policy conflicts. This is an important departure point in thinking about aligning your project objectives towards development objectives.

To align your groundwater project idea with development objectives, you need to:

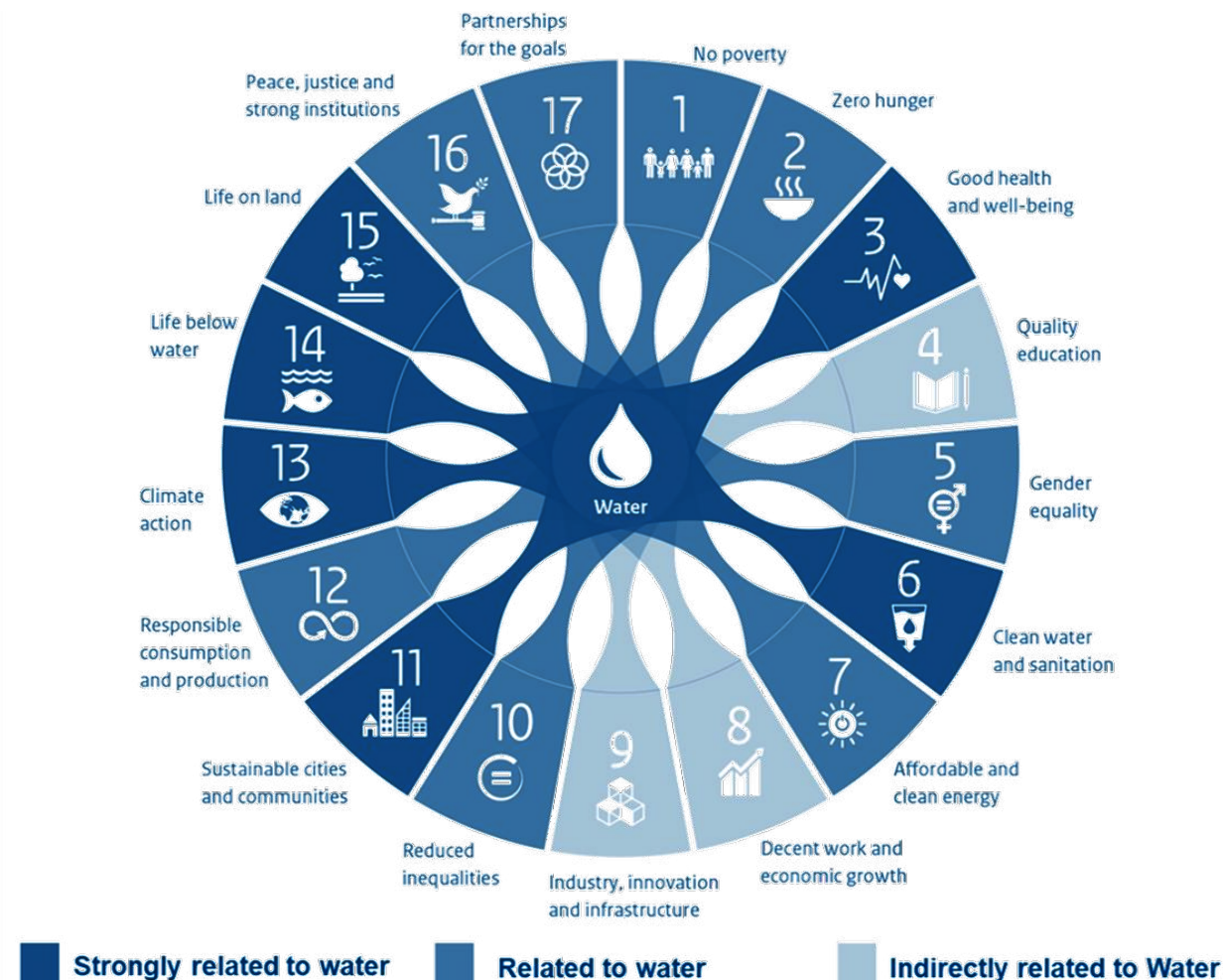
- clarify the sector to which your project adds the most value, and justify this
- partner with that sector in developing your project idea
- identify the sectoral and national development objectives that your project contributes to, and their relation to climate change.

Misalignment between project objectives, sectoral objectives and national water, climate change and development objectives is a common pitfall that should be avoided when accessing financing from ICPs.



It is crucial your project objectives form part of your project rationale. To see where this applies See: Indicative Proposal Framework: Section 3.1 Background, Rationale and Approach

Figure 6: Sustainable Development Goals related to water (Source: PBL 2018)



The water-energy-food nexus and Integrated Water Resource Management

Fresh water, energy and food are essential for human well-being, poverty reduction and sustainable development. Each of these resources is critical to the water-energy-food nexus, and global projections indicate that demand for them is likely to increase significantly over the coming decades.

Fortunately, there is potential across the SADC region to use groundwater resources more sustainably and to a greater extent, to support industrial development, agricultural needs, and growing populations, both urban and rural.

The development of Integrated Water Resources Management (IWRM), combined with the development and management of land, energy and related resources, must therefore be coordinated. According to the Global Water Partnership (GWP) definition of IWRM, this will “maximise economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems and the environment”.

To ensure that your groundwater project proposal is attractive to ICPs, you should ensure that:

- it demonstrates how it will address food and water security for positive human development
- it emphasises its impact on the holistic management of water

- it promotes IWRM
- it builds the climate resilience of the beneficiary target group.

To help you frame your project concept note, write down how your project idea relates to each of the three points above.

As water stakeholders we should work to enable policy shifts *and* to increase investments in IWRM for climate adaptation.

To improve your project idea, make sure that it correlates with one or more of the following approaches:

- **Mainstreaming adaptations** within the broader development context
- **Strengthening governance** for water resource development
- **Investing in transparent data collection and dissemination** to improve knowledge and information on climate and adaptation measures
- **Institutional strengthening** to build long-term resilience
- **Investment in sustainable groundwater development** through appropriate infrastructure and ecosystem enhancement
- **Leverage and blending of finance** from national budgetary allocations
- **Innovative funding mechanisms** including international funds for adaptation.

2.1.2. What are the links between groundwater and climate change adaptation?

Urgent adaptation to climate change is required across our region. Water is a stress multiplier of climate change, in that water is often present where climate change impacts. Even though climate change responses in the water sector account for 80% of climate change adaptation in the region, these water resource development measures are still under-represented in national development and sector plans. As water stakeholders we therefore need to do what we can to enable policy shifts and increase investments.

Groundwater investments increasingly qualify for climate finance. For example, the UN Food and Agricultural Organization (FAO) has succeeded

in accessing finance from the Green Climate Fund (GCF) and other funds for groundwater development projects. Adaptation solutions for agriculture and food security are often developed in areas where, due to climate change, rainfall is unseasonal and less predictable, causing extended droughts. In projects such as these, the need to adapt to climate change is the main driver for groundwater development. Hence the need to mainstream climate change in agricultural development plans.

Climate change affects all kinds of systems. Natural ecosystems and water resources, agricultural systems, infrastructure systems, socio-economic systems,

municipal systems, household systems and human health coping strategies, are all vulnerable to climate change. This is demonstrated in the figure below, which shows current and future groundwater risk projections for the SADC. Climatic risks and water resource vulnerability are likely to increase across the region, impacting negatively on the resilience of the water sectors in each of the Member States.

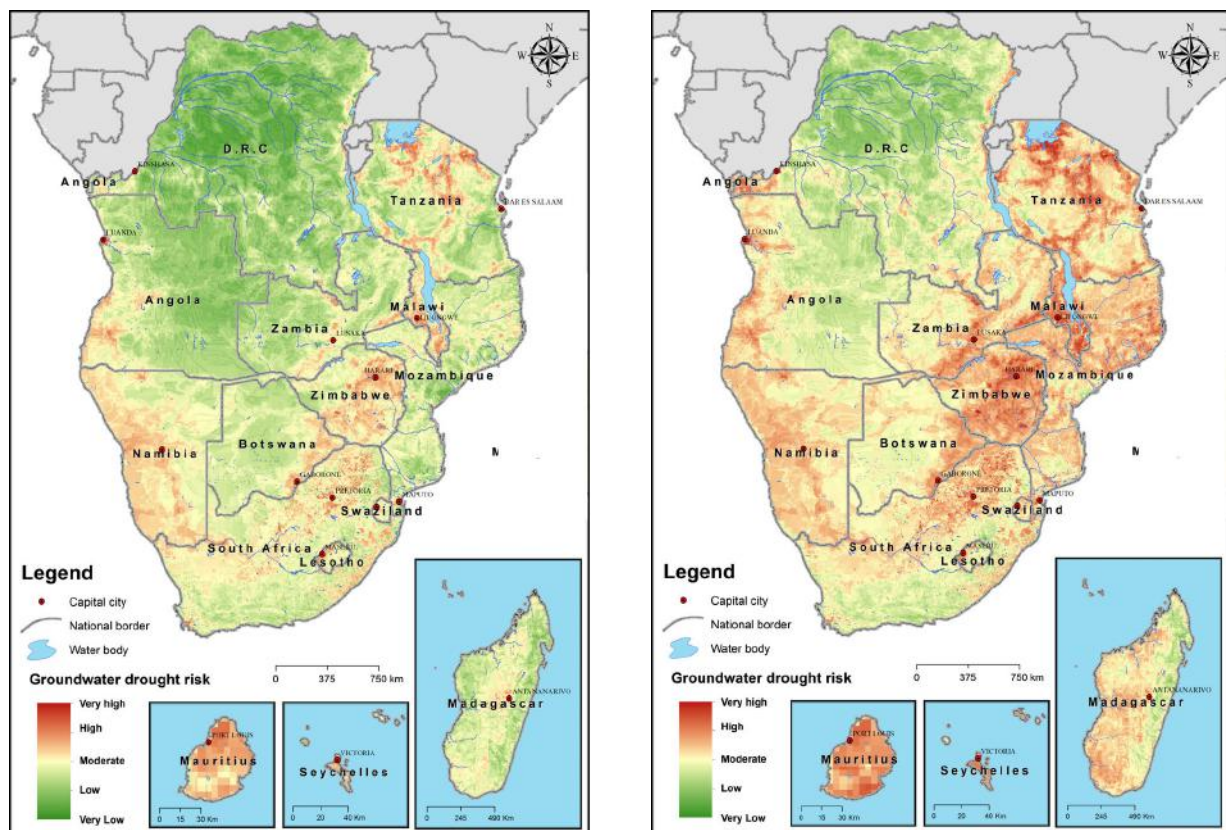
As climate impacts cascade through a system, they impact upon resilience in a series of feedback loops. Their negative impact on groundwater management is reinforced by drivers such as rapid urbanisation, widespread poverty and food insecurity. There are continuing needs across the region for basic domestic water supplies in both rural and informal urban areas. Drought security planning needs to be part of all water provision (Braune and Adams, 2013).

The direct link between groundwater and climate change is indisputable. Most aquifers are recharged by rainfall, and since climate change is affecting and will continue to affect the pattern and intensity of rainfall, groundwater recharge will also be affected.

In addition, as is happening all over the world, groundwater stores are being depleted by extraction. Where extraction takes place faster than recharge can restore water reserves, the implications for agriculture, particularly in arid regions such as Southern Africa, are severe. To make matters worse, as droughts are enhanced by climate change, resulting in more rapid levels of groundwater depletion, farmers respond by desperately trying to maintain higher levels of agricultural output against the deteriorating climatic conditions. Communities are also turning to groundwater because of its ability to buffer the impacts of climate change as opposed to surface water which is readily impacted upon.

Climate change is also linked to an unprecedented increase in the variability of weather events, with more extreme levels of intensity. While groundwater supply is directly linked to rainfall, there may be a time lag between the rainfall event and its manifestation in the aquifer. Increased rainfall variability may therefore have the effect of retarding the achievement of equilibrium in the aquifer, leading to an increased risk of variations in water quality and quantity.

Figure 7. Current (2013) and future (2080 – 2099) groundwater drought risk in SADC



Source: Villholth et al., 2013 in: SADC-GMI, 2019

These findings suggest the need for increased levels of governance and discipline in the management of groundwater-dependent economies, especially during times of drought. It should be noted that parts of the United States, Brazil, India, Australia and Southern Africa have recently experienced unprecedented droughts (between 2018 and 2020). The link between climate change and the loss of

sustainability is increasingly important in development planning, whether at sector or national level. Climate change is impacting the way we move forward with development, since it has become increasingly clear that **development plans that are not climate resilient and sustainable are likely to fail**. Mainstreaming climate is thus about the integration of climate change into development plans.

2.1.3. Mainstreaming climate change into groundwater planning

In your groundwater project, effective climate mainstreaming requires planning for both climate risk mitigation and climate change adaptation. This means integrating with national IWRM and related objectives, and aligning with the relevant sector objectives.

Mainstreaming climate change in your groundwater project should therefore be a critical and central feature of your planning. This applies whether you are applying to a climate fund, or to funding sources whose main focus is not climate change (although it may likely be a secondary focus). As mentioned previously, adaptation measures in water resource development are still under-represented in national development and sector plans.

The first step in mainstreaming climate change into groundwater planning is to identify how climate change

might impact on your development objectives.

Ask yourself the following questions:

- Are you trying to de-risk your project from climate change impacts?
- Are you developing this project in direct response to long-term climate change impacts?
- Are you mainstreaming climate change to ensure that your project will not become a stranded asset (an unused investment) because of climate impacts?
- Are you designing this project because development pathways and climate change impacts (present or future) leave you with little alternative?



Mainstreaming climate change into your project forms a key part of your project rationale. See: Indicative Proposal Framework Section 3.1 Background, Rationale and Approach

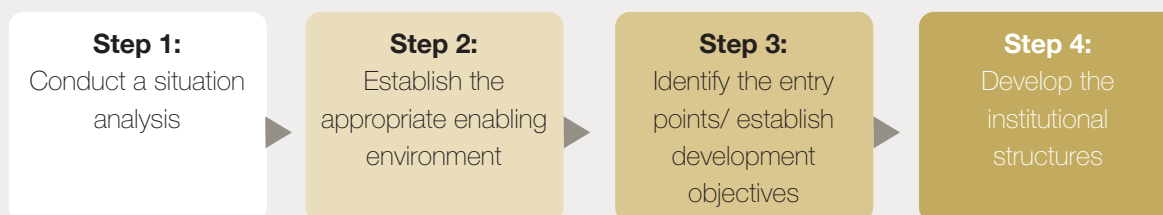
Box 1. Mainstreaming climate change step by step

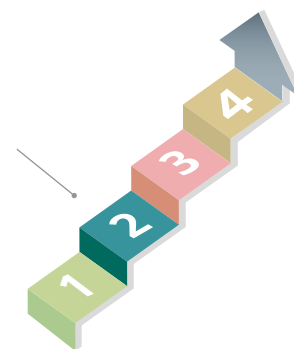
Key steps in mainstreaming climate change

The key steps in the figure below are your building blocks for achieving climate mainstreaming. They will assist you in mainstreaming 'no-regret' or 'low-regret' adaptation measures into your groundwater project. As you develop your analysis of the political economy factors that underlie your project idea, think about how climate mainstreaming can be integrated without losing sight of your primary project goal.

Establishing a theoretical foundation for mainstreaming climate change in your project will enhance the likelihood of a winning proposal that attracts the right sort and the right amount of finance. It will also ensure better streamlining of implementation because, in doing so, you will have established policy links, forged strong partnerships and instituted appropriate institutional arrangements.

These steps are explored in greater detail in the PowerPoint: "Mainstreaming Climate Change", which you can find in the Digital Library.





SECTION 2.2

Applying a Theory of Change

In this section we will explore the Theory of Change methodology and how it applies to groundwater

resilience, but first there are a few key terms that you should be familiar with before we proceed.

KEY TERMS

Theory of Change

A Theory of Change (ToC) is both a methodology and a tool or procedure for defining long-term goals, and how to meet them. The ToC procedure begins with identifying and concretising your long-term goal. Once this has been set and defined, the ToC assists you to map backwards in order to understand what needs to happen in order to meet the goal. It also helps you to detail the project pathway, from the need it is looking to address, to

the changes stakeholders want to make, to the plan of action that is to be enacted. The ToC is often closely linked to a Logframe (logical framework).

Paradigm Shift

In science, a paradigm shift is a fundamental change in thinking that accompanies a change in accepted theory in a particular discipline. The phrase 'paradigm shift' has entered the world of development theory to indicate a real, radical change in thinking about the way the way something should be done.

2.2.1. Defining your Theory of Change

You can see a theory of change on page 52. Developing a Theory of Change is a key step in proposal development. But before you come to it, you first need to have formulated an initial project idea, and have done some scoping or pre-feasibility work based on your analysis of the political and economic context in which your project will be embedded.

As is shown in the figure above, you come to the project with an idea in mind, which is why the origination of your idea is labelled Step 0.

Step 1 requires a thorough contextual analysis of the political economy aspects that are likely to impact on the project, and a scoping process in which you investigate and discuss the potential of your project and the effects that, if successful, it might have on the community or environment in which it is located.

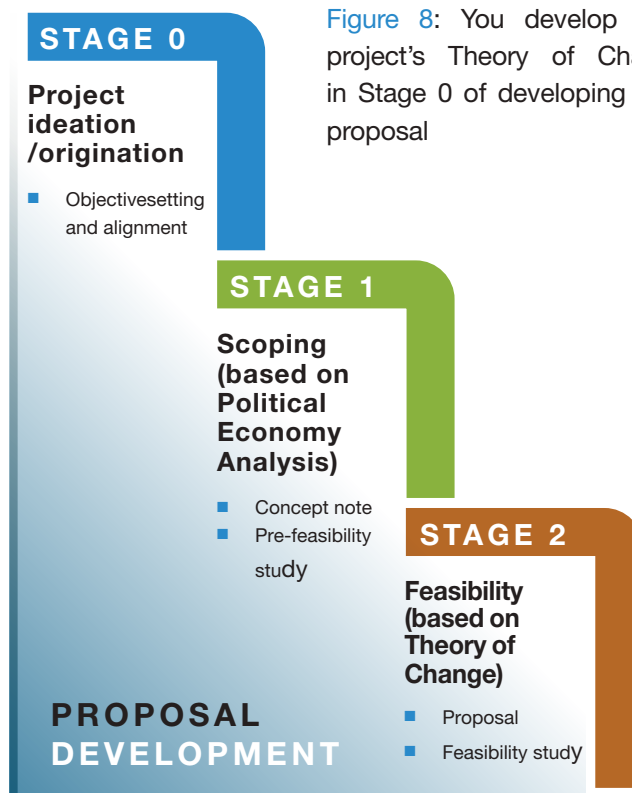


Figure 8: You develop your project's Theory of Change in Stage 0 of developing your proposal



Step 2 is where you define and develop your ToC, which will help enable you to excavate and explain the relationships between the problem you are addressing, and the strategies you will be developing in order to address the problem.

Developing a ToC should be a collaborative process to connect with stakeholders, clarify a common pathway to a shared goal, promote understanding of stakeholders' roles and establish a sense of ownership among those involved. It is also a tool to enhance

accountability, explaining the value in particular activities – thus justifying the use of resources. This is why this tool is very popular with ICPs.

Central to a TOC is the **identification of assumptions**. Analysing and talking through these assumptions can help you to identify and plan for potential risks. Your project funders want to know that you have thought through your project risks and planned for these effectively.

2.2.2. The purpose and benefits of a Theory of Change Model

Developing a ToC should be a collaborative process to connect with stakeholders, clarify a common pathway to a shared goal, promote understanding of stakeholders' roles and establish a sense of ownership among those involved. As a tool, the ToC is very popular with funders because it serves to enhance accountability, challenge key assumptions, identify risks that may need to be mitigated, explain the value of particular project activities, and justify the use of required resources.

Central to any ToC is the **identification of assumptions**. Your project funders want to know that you have thought through your project risks and planned for these effectively. Analysing and talking through your own assumptions and those of your stakeholders will help you to identify and plan for potential risks.

The development sector, in which we all operate, is results driven. You, as project developers and implementers, are accountable to a range of stakeholders, ranging from primary beneficiaries – or those stakeholders directly affected by the project – to ICPs, partners, and groups internal to your own organisation. Meeting such accountability requirements requires a level of rigour in the system you design. It is therefore essential that you undertake a critical analysis of all the key steps that must be

taken in order to achieve the social change you desire. In developing your ToC, a range of interrelated elements will need to be identified and analysed to help ensure that you are on the right path. If you plan well, your ToC will help ensure that your project framework is fit for purpose, likely to lead to the desired changes, and therefore, more fundable.

A Theory of Change can have several different formats, but it commonly involves a diagram with boxes and arrows to show how the different elements fit together, and why following the proposed flow could result in the desired change and yield the stated outcomes and impact. You can find a theory of change template in Appendix 4, and in the Digital Library. In the next section you will find a completed Theory of Change for the Case Study as an example (see Figure 9).

Put simply, a Theory of Change includes the following components:

It is critical that your Theory of Change is the result of an effective participatory process, where stakeholders work together to define and refine the model. This will help ensure that your stakeholders and beneficiaries feel that they 'own' the result, thus enhancing accountability and giving your project more chance of success. The tables below show the key purposes and benefits of a Theory of Change.

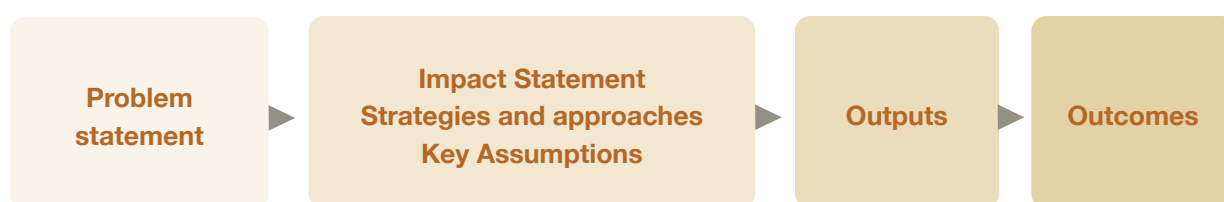


Table 4. Key purposes and benefits of a Theory of Change

Purpose	Benefits
Agree next steps needed for social change	Establish and shape stakeholder ownership

Applying the model will ensure that you as the project developer, think through all key assumptions, risks and mitigation actions. The model allows you to make adjustments over time, through collaboration with your stakeholders.

Purpose	Benefits
Enhance accountability	Facilitate understanding
Coherently elaborating on all aspects of the model will enable transparency throughout your project lifecycle. The cause and effect pathways, and the assumptions , will allow stakeholders, at each point in a project lifecycle, to see why you have done what .	

Purpose	Benefits
Mitigate against risk	Challenge assumptions
Applying a Theory of Change model can help you to mainstream climate change into your groundwater planning efforts	

To learn how to develop a Theory of Change, watch the video, where Ms. Belynda Petrie, CEO and finance expert from OneWorld, provides an annotated explanation of how to use a Theory of Change. The Theory of Change developed is based on the Case Study (see following page) to illustrate this process.



CASE STUDY 2.1

Theory of Change for the Lilongwe Water and Sanitation Project

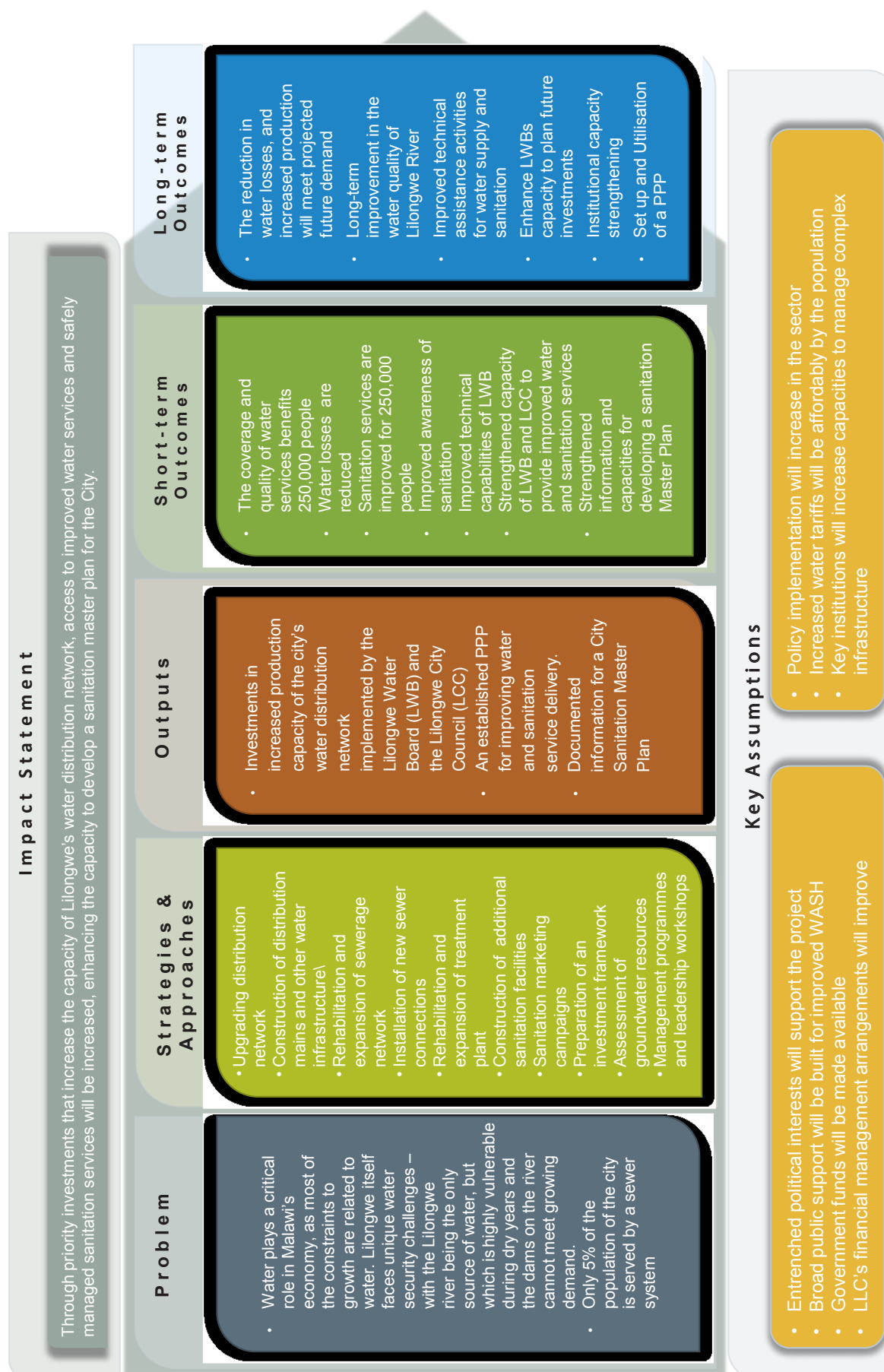
The infographic on the next page provides a worked Theory of Change as an example based on the Case Study. It illustrates how you can lay out your Theory of Change, and the various steps which you must describe. At a high level, your Theory of Change must explain the impact your project will have, what problem it is looking to solve, the strategies and approaches which must be taken to solve the problem and which will help contribute to your desired impact. From there you must explain the outputs of your project, and then the short- and long-term outcomes thereof – which will be the pathway

in which your impact statement is fulfilled. This is all underpinned by the key assumptions of your project. The infographic on the next page illustrates how you can lay out your Theory of Change, and the various steps which you must describe.

The Theory of Change will help you conceptualise the details of your project. See: Indicative Proposal Framework [Section 3.2 Project Details](#)



Figure 9: Theory of Change for the Lilongwe Case Study
(<https://sites.google.com/view/gwfundingcourselibrary>)



2.2.3. How could your Theory of Change help you to achieve a paradigm shift?

Groundwater resource development is relatively less understood and engaged with than surface water development in our region. Business as usual in water resource development is to focus on surface water and this part of our water resource is thus much easier to attract finance for. We therefore need a paradigm shift in how we develop water resources in our region, to ensure that planners consider groundwater carefully, and that investors understand it better.

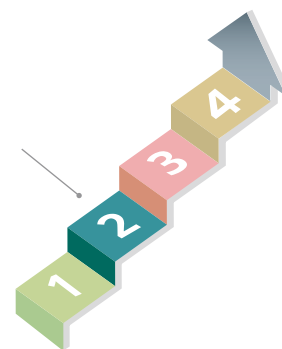
On top of this need for transformational change, comes the climate change phenomenon. Climate change is challenging development science as we have known it – necessitating a new normal, or a fundamental shift away from business as usual. All water resources are impacted in some or other way by climate change and mostly negatively. Groundwater planning must therefore be looked at through a fundamentally different lens for our future investments to be sustainable.

In developing a well-thought-out Theory of Change model, you can stimulate these paradigm shifts in a number of ways. Please refer to the Theory of Change template (in Appendix 5 and the Digital Library) as well as the completed Theory of Change for the case study example, in the previous section. While developing your own Theory of Change (as per the indications in the video), consider how to achieve a paradigm shift by:

1. Capturing the change you want to effect through your project succinctly in the **Purpose statement**. (The purpose statement should not be more than one sentence stating your project and the change it seeks to achieve.)
2. Identifying the **Problem(s)** your project wishes to solve and framing these as situations you wish to change, or problems you wish to solve, through your project.
3. Identifying the **Strategies** that you will use to achieve these changes, or resolution.
4. Targeting the **Constituencies and beneficiaries** through whom your project will achieve the change you seek. In other words, who will effect change through your project, and who will benefit from those changes coming about?
5. Identifying the **Outcomes, or measurable results** or changes that will result in both the short term, and the long term, from the strategies you apply in delivering your project.
6. Clearly establishing the **Ultimate Impact** your project aims to achieve. Your **impact statement** should be aspirational and articulate what the ‘world’ will look like when your project has achieved its purpose. Note that this impact will not be achieved by the actions of your organisation alone. Rather, you will need to take into consideration what others are doing as well. The ultimate impact will outline the paradigm shift, or transformation that your project will have contributed towards bringing about.

Your Theory of Change is an important component of your proposal as it is the basis for your project narrative and should be included in your proposal.





SECTION 2.3

Developing a concept note and understanding the full proposal framework

In this section you will learn about the key aspects of developing a concept note and unpack the components of a full funding proposal template

or framework. First there are a few key terms that you should be familiar with before proceeding.

KEY TERMS

Additionality

Additionality refers to the official flows for climate change and adaptation, additional to the traditionally allocated Overseas Development Assistance (ODA). Identifying exactly what is new and additional to ODA in climate adaptation is not straightforward, and separating out the amount of finance specific to the climate change component from the development component of a climate compatible development objective can be difficult. However, additionality is important in minimising the risks of double counting.

Bankability

A project is bankable when one can demonstrate its ability to yield optimal returns, whether financial, environmental, socio-economic or for water security. For the ICPs, projects are bankable if they meet their funding criteria and can contribute to their key results areas. Thus, bankable projects must be able to demonstrate the scientific evidence base for meeting criteria and contributing to funder's key results areas. Additionally, the project should meet the result areas of the implementor and beneficiaries of the project, so that the project provides benefits for all parties.

Concept Note

A concept note lays out the key aspects of a proposed project/programme, as a summary. It is the first thing that you would present to potential funders. The feedback you receive from them will immediately tell you whether the concept is aligned with their specific objectives, policies and investment criteria. This feedback will give you the information you need to further develop and strengthen the project/programme idea into a full proposal.

Paradigm shift potential

The potential to catalyse impact beyond a one-off project or programme investment. This refers to transformational change, i.e. showing that the project will lead to a shift from business as usual to a new normal, an evolved situation, after the first investment.

Project Proposal

A Project Proposal, very simply, is a detailed, structured document containing key information and details about your proposal, which you present to potential funders to receive funding or get your project approved. Your Project Proposal contains all the required information about your project, and will be the basis and deciding factor in whether your project is accepted or rejected for financing.

2.3.1. What the ICPs look for in a concept note or proposal: How to increase the bankability of your groundwater project proposal

Groundwater projects are underfunded in the SADC region – despite the high dependence on the resource by Southern Africa’s populations for drinking water and sanitation, livelihoods, agriculture, ecosystem health and industrial growth (World Bank, 2017). Access to funding in the region is constrained by institutional frameworks for water resource management that do not adequately incorporate groundwater, at both national and regional levels. Key contributing factors to this undesirable situation are a lack of human capacity, and a lack of information systems that are adequately harmonised to both measure and monitor groundwater. This means that proposals are often not fundable because they lack the evidence base and links to national development objectives – both critical criteria for most ICPs.

This **lack of impactful and fundable proposals**, in both SADC and national pipelines, is explained in more detail below. The key factors are:

- The direct **link between the groundwater project and the development impact of the proposed interventions** is weak in many proposed projects. Theories of change for projects are often not strong enough (i.e. do not clearly show all aspects of the project’s impacts, activities, etc.)
- A **strong paradigm shift is often missing** from most project ideas, or where present, is weakly articulated. As project developers, we need to work harder to analyse and describe the potential for transformational change and/or replicability of the projects we propose. This means clearly thinking through and elaborating a strategy for project upscaling and mainstreaming change. For example, a key transformation might lie in improving information management through harmonised data sharing and monitoring of groundwater between and within countries.
- A number of project proposals **focus solely on research and capacity building**. To be eligible for ICP funding, these activities need to be part of a larger project, and/or bundled with other interventions, or clearly demonstrate how the capacity development or research outcomes will lead to increased and improved groundwater infrastructure and resource development investments.
- Inadequate **mainstreaming of gender and Environmental and Social Safeguards (ESS)** considerations throughout the components of a proposal, is another common weakness.

Box 2. Summary of ICPs’ key proposal requirements

Typically, funders’ proposal requirements contain several aspects. These include:

- **catering for environmental and social safeguards (ESS)**, having a clear **gender development strategy**, as well as a **monitoring and evaluation (M&E) strategy** and a **risk assessment strategy**
- ensuring a high level of **country ownership** in potential projects and programmes, which can be demonstrated through clear links to national development objectives and local stakeholder participation – with some ICPs also considering a focus on climate resilience
- clearly demonstrating that proposed projects and concepts will benefit the poor through **pro-poor development, while delivering value for money**
- including, where applicable, **private sector involvement** in projects and programmes
- including **strong technical, financial and environmental arguments**, which are evidence-based and logical, and demonstrate the correlation between ICP and national objectives.

These aspects are detailed below whilst you will work with some of these further in Modules 3 and 4.



How to increase the bankability of your groundwater project proposal

To ensure that your project has the capacity to attract funding, you need to **provide sufficient evidence**, backed by the best available data, to convince the potential funder that the **project is viable** and that, if it is funded, there will be a **net benefit, with value for money**. These are important considerations for the **bankability** of your project, to ensure that the project will yield optimal returns (can be financial, environmental, socio-economic or to improve water security).

The key questions are: what will the benefits of the project be, who is going to do the work, who will this project benefit and how, and how much previous work has been done in preparation for this work (or the next stage of this work, if it is an ongoing project).

So, to develop your proposal you will need to be able to answer these questions:

- What is the problem that the project seeks to address?
- What is the aim/ objective of your proposed project?
- Who will this project benefit and how?
- What resources are available?
- What resources are needed, and what resources are available?
- What is the timeframe of the proposed project (how many months or years)?
- What exactly is the financing to be used for (e.g. grey (hard) infrastructure 70% + training 30%)?
- In what part of the project is government and/or other stakeholders involved?
- Are there policy and regulatory issues that need to be complied with, for example in your country's Public Finance Management Act?

- Are there any gaps in your national policy framework that may hinder your project, such as legislation for Public-Private Partnerships (PPPs)?



Answering these questions will be key in your proposal. See: Indicative Proposal Framework where this information applies. Section 3.1 Background, Rationale and Approach

Do you need funding for a whole project or one stage of a bigger project?

Whether you are looking for funding for a whole project, or for one stage of a project or programme, you will still need similar items of information in your proposal. (For example, you may be seeking funding for anything from establishing the potential capability/ yield of the resource to delivering water to consumers). In some cases, funders will only fund stages of a project and funding for further stages will depend on the successful completion of earlier stages. This is generally true for bigger projects. Smaller projects might be done in one go, but you will still need similar items of information in your proposal.

What technical information and studies do you need?

You will need to provide relevant technical documentation at each stage of your proposal development (this is explored on the next page). The components of a water resources project (groundwater in this case) need to be specified into elements of **project formulation and appraisal**, and you will need to include elements of these in the funding proposal. The proposal will not include the full report of the items detailed below, but it will need to point to the source of the information and the key elements from those reports.

2.3.2 Designing Your Groundwater Project and Proposal: Step By Step

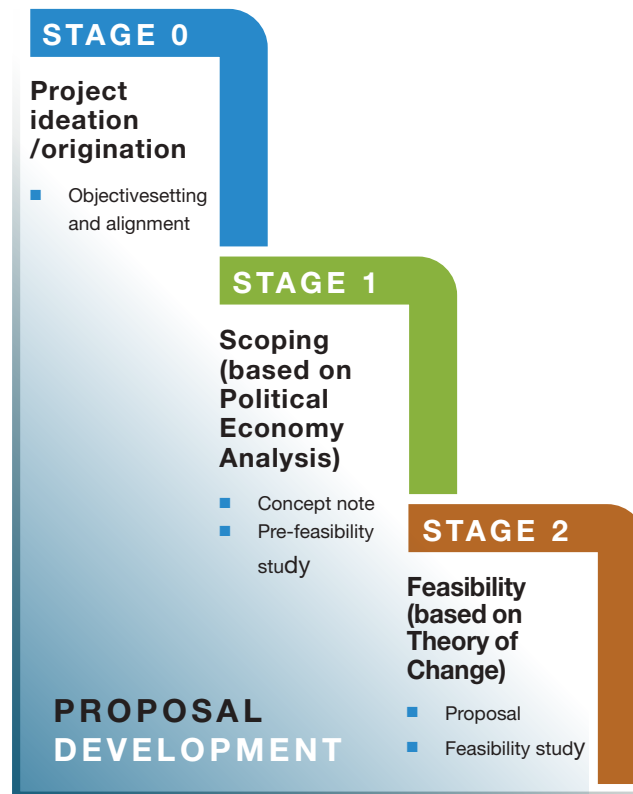
This section lays out the steps for designing your groundwater project and proposal, in Stages, and step by step, from your original project idea, to delivering the proposal. The stages are shown alongside:

Stage 0: Establishing your project idea

Stage 1: SCOPING – Find out if your project is realistic and practical (Concept note)

Stage 2: FEASIBILITY – Is your project feasible? Who are the beneficiaries? What staffing capacity will the project need? How much will it cost (ballpark)? What is the existing level of knowledge about the project? What other studies are required to confirm this?

Stage 2 leads on to the **Feasibility Report and your Project Proposal**.



Stages 0, 1 and 2 are outlined in more detail below.

STAGE 0: *Establish your Project Idea and align it with ICP and Country Objectives*

STEP 1: Establish your project idea

Broad project definition, or vision/objective of the project. Describe the general location and purpose of the prospective project.

STEP 2: Align your project idea with ICP and country objectives

Make sure your Project Idea aligns broadly with the key ICP objectives listed below.

- **Include a pro-poor development aspect.** All donors stipulate that projects and concepts need to clearly benefit the poor and contribute to pro-poor development, poverty alleviation, or socio-economic development, aimed at ending inequality. Investments in groundwater resource development improve people's lives by enabling economic growth, integrating green and grey infrastructure to promote the sustainable use of a scarce resource, and uplifting the social conditions of target beneficiaries.
- **Demonstrate stakeholder buy-in.** Your project will benefit stakeholders and require their participation in making it work. These stakeholders are outside

of your project management team, and your funders. They could include government but are primarily the end users of the water resources your project aims to generate. The absence of the buy-in of your stakeholders, and their ownership of the project from the outset, will likely create obstacles to project sign-off and/or implementation down the line. It is critical that you obtain the buy-in of key stakeholder groups at the project outset – and then maintain this throughout the project lifecycle.

- **Show Impact Potential and Paradigm shift Potential.** Impact Potential is the potential of the project to achieve the ICP's objectives and key results areas. Your Theory of Change can help you to clearly and succinctly articulate the impact potential of a project. Paradigm shift potential is the potential to effect transformational change or change that brings lasting and positive impacts beyond the project's initial investment cycle.
- **Show Country Ownership.** Your project needs to align with your country's national development plans, laws and policies. It should also align with past related programmes, and with ones underway at a national level to ensure the project is integrated and sustainable.



- **Contribute towards climate resilience.** Groundwater-related projects contribute to climate resilience if they consider and promote climate change and environmental sustainability, while ensuring inclusivity. ICPs are looking for projects/programmes that contribute directly towards climate resilience. For example, projects that show the impact of a geographical climate vulnerability hotspot; address a particular climate impact; or build adaptive capacity amongst the most vulnerable groups.
- **Identify policy and regulatory alignment.** The national policy and regulatory framework in place in your country can enable your project, or it can establish barriers to its implementation. It is important that you understand how the

policy framework in your country will enable or constrain your project's implementation. For example, if the enabling legislation for public private partnerships (PPPs) does not exist or is outdated and your project relies on a PPP, this will prohibit your project from getting off the ground.

Tip: Leveraging the co-benefits of IWRM

If you are considering a green infrastructure project, the box below shows you the advantages of this approach for accessing climate finance.

Question: *Does your project idea align with the key objectives above? Is your project idea likely to be practical and feasible? If yes, you can go to the next step.*

Box 3. The importance and co-benefits of IWRM and Nature-based Solutions for accessing finance

Hurricane Idai, and the broader, increasingly better understood convergence of the dependencies between nature and human development, has rapidly **advanced the socio-economic case for investing in Nature-Based Solutions (NbS). Multiple studies estimate the benefits from biodiversity and ecosystem services, such as climate regulation and water purification.** There is emerging consensus that the benefits from NbS significantly outweigh the costs. As such, there is a business case to be made for investing in NbS.

A 2018 UNDP report states that "Nature-based solutions are effective and cost-efficient and deliver multiple co-benefits" – including for cities. The report highlights that **more than 3,200 of the world's largest cities could significantly improve their water quality and quantity through NbS for a cost as low as US\$2 per person/annum.** Forest restoration has already become an investment asset class in many cases (UNDP 2018).

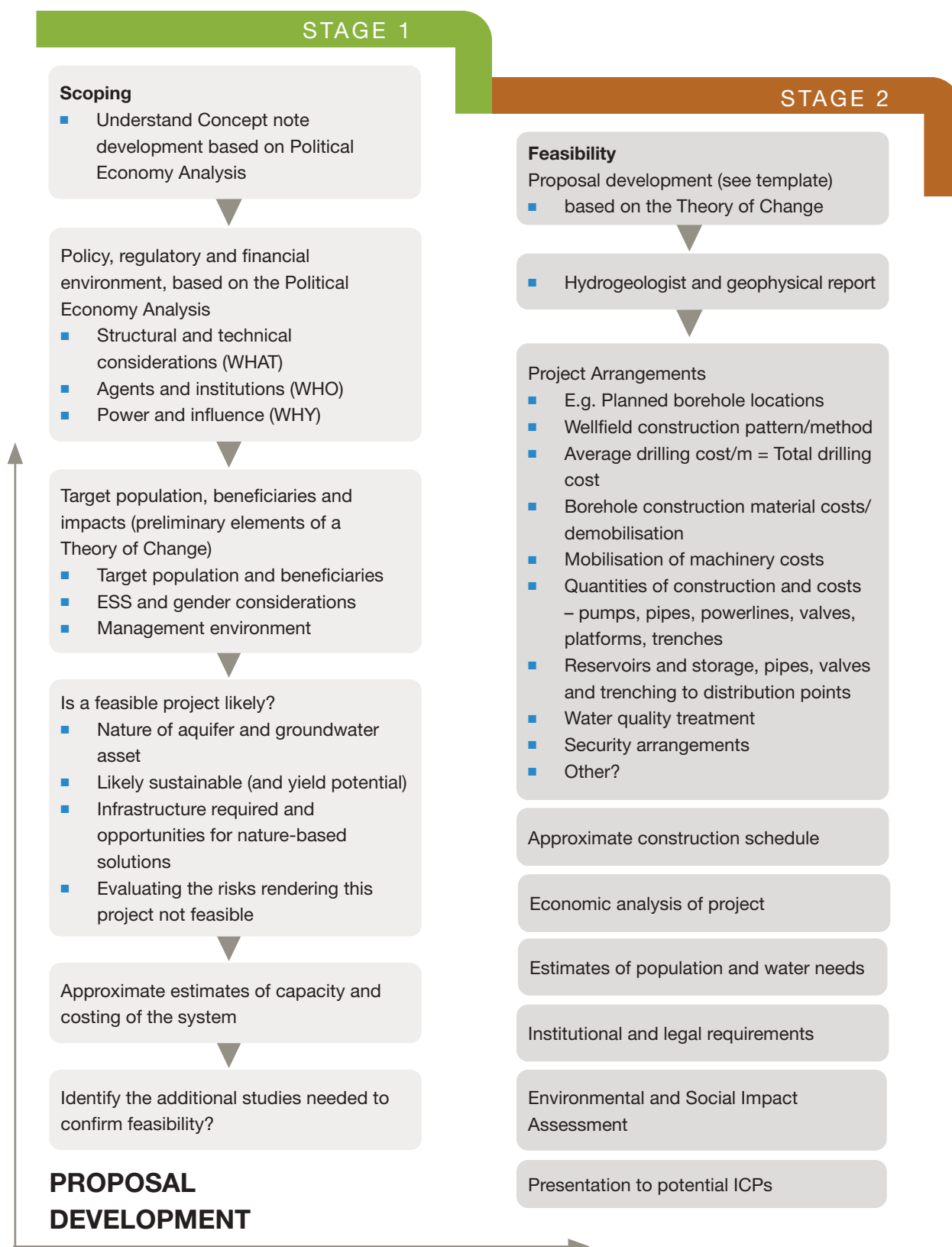
This is augmented by consensus around the argument for NbS and the integrity of ecosystems being central to building resilience and adapting to climate change (Aronson et al., 2019) while helping to advance sustainable urban development, through promoting the conservation, sustainable management and restoration of natural ecosystems. NbS can be a cost-effective means to mitigate and adapt to climate change, while securing water, food and energy supplies, reducing poverty and driving economic growth (IUCN, 2014).

The numerous co-benefits of NbS are becoming increasingly important in dynamic and integrated sustainable development planning and governance. **A key insight from across related programmes and projects in Africa is that, if applied effectively, these co-benefits are important levers for unlocking finance flows, both from domestic and international sources. This is because co-benefits from NbS investments, bundled in terms of broader, climate resilient socio-economic development, reflect returns on investment that extend beyond the primary, or immediate benefit, including for the progress of the SDGs and avoidance of losses to human life, resource access and infrastructure.**

STAGE 1: SCOPING PHASE (Scoping/preliminary report and Concept Note)

You can see the steps and the information you need in Stage 1 and Stage 2 in Figure 10.

Figure 10: Stages in developing a groundwater infrastructure project and proposal (detailed)



STEP 1.1: Gather the technical information you need

Stage 1 is the preliminary stage when you will answer the following questions:

1. Is a feasible project likely? (Is it practical, achievable and realisable?)
 - Aquifer characterisation (geology, aquifer type, estimated transmissivity, probable yields) or state of knowledge on the nature of the aquifer
 - Likely groundwater sustainable yield (yield potential, annual recharge, size of wellfield)
 - Distance from end-users and costs of developing the project
 - Opportunities for parallel nature-based solutions/ developments to improve sustainability
2. Who are the chief beneficiaries?
3. Approximate estimates of capacity and cost (ballpark estimates to give the appraisers an idea of what they are looking at)
4. What additional studies are needed to confirm that the project is feasible?

The above are desktop studies, using available information (including maps and publications) from sources such as government departments, municipal records and reports, university studies and others (e.g. consultancies, the Internet). Information includes geological reports, previous groundwater studies, climatological studies, the likely scale of the project and some information on the consumers or beneficiaries.

In the following pages you will find a table (Table 5) that shows in detail the components you need to develop in your proposal. These components build off this preliminary scoping.

At the end of this stage, you will have developed a **scoping report**.

STEP 1.2: Develop a concept note

It is also a very good idea to complete a **concept note**, and some ICPs require this. However, these can be time-consuming and some ICPs have extensive, very detailed templates, that take some effort to complete. Also, lengthy feedback-response processes from the funder can inhibit moving onto the full proposal development stage.

Submitting a concept note is sometimes optional. So why should you prepare one if you don't have to?

Benefits of developing a concept note

Developing a concept note is useful and is the ideal time and opportunity to:

- **clarify timeframes and financial resources** and capacities you need to develop the full proposal.
- ensure you will be able to develop a **solid scientific evidence base** to underpin your argument that your project will promote the sustainable development of the groundwater resource
- **establish if you are on the right track**; this is the time to find out if you should change your approach or stop before you waste time and resources in preparing an unsuccessful bid
- obtain **technical inputs** from the funder
- align your project idea with **national development plans and processes**
- **engage stakeholders** on the project idea and establish ownership
- **Identify key risks or barriers**, e.g. in the national policy framework to your project

You also need to capture your key insights from developing the Theory of Change (see Module 1): your project purpose; the ultimate impact it seeks to achieve; the strategies for achieving the outcomes to enable the ultimate impact.

Your proposal should build on your concept note, so there will be areas of strong overlap between the information in the concept note and the project proposal. The project proposal will expand and detail all aspects of your concept note.

Components of your groundwater concept note

The table below provides a set of questions that will help you identify and list the components required for your Groundwater Concept Note.

First, ensure that your project aligns with the specific funder's requirements. Your proposal has to be technically sound and include a number of components. Therefore, it is suggested that you adopt the two-stage approach outlined above: first develop the Concept Note and get this endorsed; then develop the full proposal.

Tip: Concept notes are often read by a broad audience, including people who are not necessarily technocrats. Too much technical detail is often intimidating and detrimental to a positive outcome, so it is more useful to use a narrative approach, with the technical approach as an annex.

Table 5. Questions you need to respond to in your Groundwater Concept Note (STAGE 1: SCOPING)

Policy and regulatory environment	<ul style="list-style-type: none"> What are the legislative requirements that may affect the proposed project? (This differs for different countries). E.g. What are the impact assessment and licensing requirements for groundwater extraction systems? What lead times for approval are likely? (This could affect financing and completion dates.)
Financial environment	<ul style="list-style-type: none"> How will the finances (fiscal management) of the project be handled? Who will receive the ICP or lender funds and how will this be audited? How will project costs and disbursements on invoice be handled? What clarity could you give the funders with regard to transparency and cost effectiveness?
Target population / Beneficiaries	<ul style="list-style-type: none"> What is the size and location of the target population? What are its water demands, deficit, population growth rate, future needs, and socio-economic character of target population?
Gender and ESS considerations	<ul style="list-style-type: none"> What is your proposed means of meaningfully mainstreaming gender into your project? How do you intend to ensure that environmental and social safeguards will be considered and maintained?
Management environment	<ul style="list-style-type: none"> How will the project be managed and who manages it? What indicators of capability and reliability can you provide? Does the delivery entity have the competence to deliver the project? What are the cost recovery systems, including operational costs for a sustainable project, maintenance and repair costs? What is your assessment of the ability of consumers to pay for services? What level of attention have you paid to sustainable groundwater resource management, bearing in mind that over-extraction can permanently damage the groundwater resource? How will sustainable groundwater resource management take place?
Nature of aquifer and groundwater asset	<ul style="list-style-type: none"> Can you quantify the size of the aquifer resource? Can you describe the geological setting of the aquifer (i.e. delineation of the groundwater resource unit)? Have you included adequate reference to topography and geomorphology, groundwater levels and flow directions, temporal hydrostatic response patterns, quality of the groundwater and possible quality mitigation systems, current use and stresses, existence of groundwater-dependent ecosystems (i.e. matching the target market with the resource)? Should you not have all this information, are you able to highlight the current level of knowledge of the aquifer and groundwater asset, based on best available data? If the objective of your project is precisely to define the nature of the aquifer, and to add to the geo-hydrological knowledge of the area, have you stated what the state of this knowledge is?

Continued...



Safe/sustainable System yield	<ul style="list-style-type: none"> ■ Are you able to quantify by what proportion the proposed groundwater project could go towards meeting the needs of the target population? What can be reliably and sustainably delivered by the groundwater project? What are the expected sustainable yields of the borehole(s)? ■ Can you specify the use of pump tests or blow tests (which are different and have different reliabilities)? ■ What are the groundwater unit recharge rates? What proportion of groundwater unit recharge is designated for use? How sustainable is the resource? What are its drawdown limitations? ■ Have you included descriptions of exclusion zones and sensitive areas?
Infrastructure required	<ul style="list-style-type: none"> ■ Are you able to describe and quantify the total infrastructure proposed in the call for funding? Do boreholes already exist, or must they be drilled? What is the situation with regards to tie-in pipelines, pumping, and reservoirs? ■ Are there opportunities to implement nature-based solutions? ■ What energy sources are needed (e.g. electricity from solar, wind or coal, other sources?) ■ If the proposal is for a component of the water project, what funding sources will cover, or are proposed to cover, the remainder of the project?
Risk assessment	<ul style="list-style-type: none"> ■ What are the key risks and assumptions made about the project, and how will the project design and implementation ensure that these will not impede project progress?
Costing of the system	<ul style="list-style-type: none"> ■ Have the capital and operating costs of the infrastructure been modelled and are they ready for presentation? How are the costs calculated? ■ Are the methods to be used clearly described? Are maintenance costs included as part of operating costs?
Monitoring and evaluation (M&E)	<ul style="list-style-type: none"> ■ How will you ensure that the funders are comfortable with the progress of the project? What will be the indicators of the success of a completed, sustainable project? ■ What indicators do you need to include, in order to show the funders that your project is likely to achieve what it sets out to achieve?

STAGE 2: FEASIBILITY COMPONENT (Feasibility Report and Proposal development)

STEP 2.1. Compile your feasibility report

You will now use and build on the information you have been gathering into a **feasibility report**. This report contains sufficient information to allow funders to make a decision on whether the project can be implemented, so it must be fairly detailed. It provides the results of previous technical studies, specifically including financial and economic analyses and plans for implementation that give the potential funder greater confidence that you have thought the project through carefully and provided all the information, accurately.

In some instances, depending on the template, this section illustrates the information and data requirements necessary before a good proposal (more likely to be funded) can be prepared:

1. For hard (grey) infrastructure: Confirms wellfield construction feasibility – the hydrogeologists' report and geophysical report; where the water is located and the potential resource quantity and quality;
2. Project arrangements and individual project features of note:
 - a. Construction methods – drilling pattern and tie-in of boreholes to a water distribution network and storage facilities
 - b. Planned borehole locations
 - c. Average drilling cost per metre (estimates by experienced driller) and total drilling costs
 - d. Borehole construction material costs – casing, screen, gravel pack, sanitary seal, well head
 - e. Mobilisation and demobilisation costs of machinery, equipment and materials movement
 - f. Principle quantities of construction and costs of platforms, pumps and powerlines/transformers – pumping, piping, valves, trenching
 - g. Local storage reservoir – construction costs. Siting, quantities of materials, pipes, valves and trenching to distribution point
 - h. Water quality treatment, if necessary and its associated costs
 - i. Arrangements for security of the installation and associated operating and capital costs.
3. Approximate construction schedule
4. Economic analysis of the project – year-by-year costs (operating), revenues, depreciation and

subsidies. If more than one potential project exists,

the full details of all projects must be provided as differentiated line items (not lumped together).

5. Estimates of population and water needs (characteristics of the consumer, including gender considerations). Information on demographics and population projections is required, with economic-demographic projects (is the project likely to serve an economically growing market and can the consumers sustain the project in the longer term with revenues?), technical capacity and maintenance, the water resource needs of the population and the price elasticities of water demand, if known.
6. Institutional and legal requirements – laws governing use of resources, zoning laws/easements, environmental laws, servitudes; lines of accountability, legal issues around financing, payments, accounting statements (who will manage the money and how will it be accounted for), construction permits and permitting processes.
7. Assessment of environmental and social impacts of construction and operation, including gender considerations (Will the project have an impact on gender equality (positive or negative)?).

STEP 2.2 Develop your project proposal

In broad terms, your project proposal should:

- Define the problem and present the solution
- Provide clear deliverables and success criteria for the project
- State the approach
- Outline the schedule, and budget
- Outline the Gender and ESS considerations
- And conclude as to why your project should receive funding.

Proposals comprise various components or sections. You need to become familiar with these components and the ICP's particular template, and be able to articulate each one accurately and with the required level of detail. Most ICPs have their own templates and layouts, however the Indicative Proposal Framework, see Appendix 4, and the [Digital Library](#), can help guide you by providing an indication of the sections which will need to be included. You can see more information on Step 2.3 after the table.



Table 6. Proposal Components

Component	Description
1. A project/ programme summary	<p>Highlights whether the project will be considered as being administered in majority by the public or private sector.</p> <p>The summary details the size of the project, its lifespan, its risk category, the project's alignment and coherence with national and funder policy and programmes; and the amount of financing required (Note: In some instance, the financial information needs to be separated from the technical content for procurement purposes, but this is stipulated clearly in the proposal template).</p> <p>Additionally, the summary needs to stipulate what the programme or project's quantitated water security impact is.</p>
2. Project/ programme information	<p>Provides an outline of the project context, which includes a description of the problem the project aims to address (climate impacts, water insecurity); and a Theory of Change which provides information on how the project serves to shift the development pathway toward water security.</p> <p>An implementation structure which outlines legal, contractual, institutional and financial arrangements (for instance from and between the GCF, the Accredited Entity, the Executing Entity or any third parties and beneficiaries).</p> <p>A justification of why the project or programme requires the investment, from the specific investor.</p> <p>An exit strategy and sustainability plan which explains the sustainability of the project or program.</p>
3. Financing information	<p>It includes an outline of the total amount of funding needed for the project, the names of any co-financing institutions and the currency and the amount that they will be contributing to the project.</p> <p>Additionally, some ICPs require a breakdown of costs per component of the project.</p>
4. An analysis of expected performance against investment criteria	<p>Outlines the project impact potential and its paradigm shift potential. This is the section where you need to show the contribution of the project to the result area of the ICP (e.g. sustainable development or addressing the vulnerability of the country beneficiary groups).</p> <p>This component of the proposal also requires addressing country ownership, including alignment with existing national adaptation, mitigation and social development policy strategies.</p> <p>This section also presents the efficiency and effectiveness of the funding, including outlining how the financial structure of the project will contribute to its successful implementation.</p>
5. A methodological framework	<p>Involves a technical analysis of the impact that the project will have.</p> <p>It will also need to outline the links of the project to fund-level outcomes and indicators.</p> <p>The monitoring and evaluation strategy will be explained here (means of verification; the activities that will be undertaken; and a statement of monitoring, reporting and evaluation arrangements).</p> <p>For all ICPs, this analysis also gives the expected number of direct and indirect beneficiaries (disaggregated by sex).</p> <p>You will have to show how your project will shift national or sectoral developmental pathways, and water security. In some cases, the development goals must link to those for climate resilience and the project will need to articulate how the project or programme will contribute to climate resilient sustainable development.</p>
6. A risk assessment and management analysis	<p>Requires an outline of all risks, including financial, technical, operational, political and other risks that might prevent the programme from being enacted and its objectives being achieved. This must also include risk mitigation measures that will be put into place to directly address each identified risk.</p>
7. Adherence to specific donor policies and standards	<p>According to the requirements of the ICP, this can include signing a disclosure to the ICP which allows them to disclose the proposal in full; provide proof of existing internal operational policies, such as financial management and procurement policies, gender and ESS policies or agreement to those of the ICPs.</p>
8. Completion of all annexes	<p>An environmental and social risk assessment, a gender assessment and action plan, or a financial management and procurement plan, appendices. Inclusive of a non-objection disclosure document, timetables and budget spreadsheets, legal due diligence, etc.</p>

STEP 2.3 (continued) Check your proposal meets the ICP's requirements

The proposal will not include the full reports of the items detailed above but will need to point to the source of the information and the key elements from those reports. However, your proposal needs to specifically articulate all the components presented in Table 2.2 above.

After you complete and present the feasibility report, you will find out if your proposal will be accepted or not. If it is accepted you will proceed to stages 3, 4 and 5 – the project development, as you can see in the Step diagram on page 25.

- **Demonstrate value for money.** Proposals must show that the project's funding and resources will be used effectively, efficiently, and economically – adding significant value project beneficiaries. Achieving value for money means that the project developer has weighed up the costs and benefits of the different options for methods and approaches, and chosen the combination that meets the objectives and gives the greatest benefit relative to the cost (World Bank, 2016).
- **Enable private sector mobilisation.** Investors see the private sector as a critical partner in delivering effective development cooperation. Companies can play an important role in driving green growth, and adaptation in developing countries (OECD, 2017), if they are mindful of environmental issues and conform with all regulations and policies. Public-Private Partnerships and capacity-building projects related to groundwater and agricultural projects including groundwater extraction

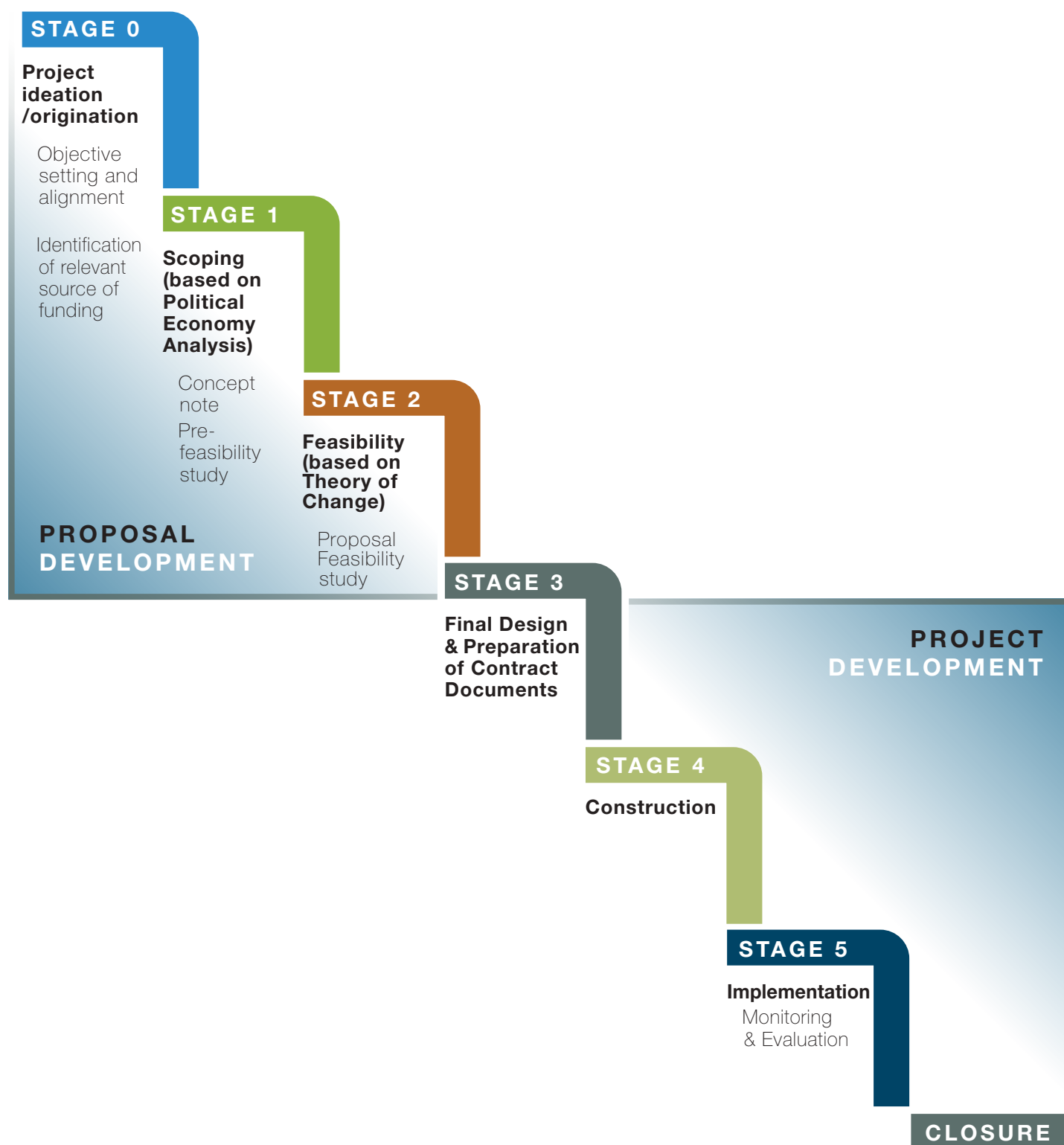
and management contribute to private sector development and regional economic integration.

- **Environmental and social safeguards (ESS) assessment** – Your ESS assessment outlines how your project will identify environmental and social impacts and mitigation measures to lead to improved environmental and social outcomes, through a risk and outcomes-based approach.
- **A gender development strategy** –All ICPs require you to include a gender assessment with your funding proposal. The assessment should include a snapshot of the gender equality situation in the region, country or project area; the gender issues that may be relevant to the proposed project; and the opportunities to bring about positive change for both women and men.
- **A monitoring and evaluation (M&E) strategy** –A well-thought-out M&E framework is essential. A good M&E framework helps you to define your project goals and objectives and think through your project's strategies, activities, amongst others.
- **Risk assessment and risk management analysis** –Your **risk assessment** identifies risks to your project (financial, political, technical and environmental). Your **risk management strategy** shows how you will manage these risks and safeguard the project.

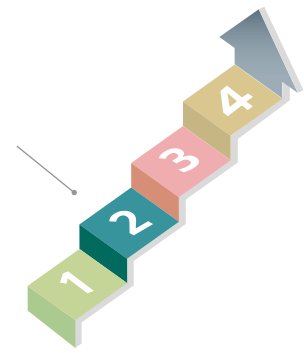
Tip: You will see how to develop these aspects in **Module 4:** ESS, gender development strategy, M&E strategy and risk assessment.



Figure 11. The complete proposal and project development cycle



SECTION 2.1: Groundwater and sustainable development planning.
SECTION 2.2: Theories of change to increase groundwater resilience
SECTION 2.3: Developing a concept note and understanding the full
proposal template
SECTION 2.4: Accessing Project Preparation Facilities (PPFs)



SECTION 2.4

Accessing Project Preparation Facilities

In this section we'll explore how to access Project Preparation Facilities (PPFs) but first there are some Key Terms you should know before we proceed.

KEY TERMS

Project Preparation Facility

Project Preparation Facilities (PPFs) are used as a means of developing bankable, investment-ready projects. A PPF may provide technical and/or financial support to project owners/developers. Such support may cover a wide range of activities. These include: project feasibility studies, which may include a value for money analysis; assistance developing procurement documents and project concessional agreements; social and environmental studies; and awareness creation amongst stakeholders.

PPFs can also provide financial assistance to local governments or special public sector agencies to support the financial, legal and technical advisory services required to facilitate private investment into infrastructure projects.

Direct Access Entity

Direct Access Entities are sub-national, national or regional organisations that the National Designated Authority of a developing country nominates to access funding and readiness support from funders such as the GCF.

ICPs recognize the variety of challenges involved in developing project proposals. The support they provide for the preparation of potential projects and programmes includes financial assistance in the form of grants (including repayable grants), equity (in certain cases), and technical assistance, provided through Project Preparation Facilities (PPFs).

Most ICPs that have ongoing groundwater-related projects in the SADC region have these facilities available. These include the Green Climate Fund (GCF), the Global Environment Facility (GEF), the Climate Resilient Infrastructure Development Facility (CRIDF), the African Development Bank (AfDB), the Development Bank of Southern Africa (DBSA), and the African Water Facility. More details of these facilities are provided below. Different donors support different aspects of project preparation.

Different ICPs support different aspects of project preparation. However, most ICPs cover at least some of the following aspects of project preparation:

- establishment of an enabling environment which is related to specifically unlocking projects
- project definition
- project feasibility assessments
- project structuring
- and project transaction support, which includes legal structuring, procurement and negotiation.

To access a PPF, you will need to fill out the project preparation **funding application** of a particular ICP. Additionally, in some cases, such as for the GCF, you will need a no-objection letter, and you will need to complete a concept note template.

2.4.1. AfDB: PPF of the African Development Fund

The AfDB's PPF is a complementary facility of the AfDB's Technical Assistance Fund. The facility's

resources are geared to the support of preparatory activities of a limited scope that are required to validate



data and revise documents before project appraisal and execution. The PPF assists applicants with:

- Feasibility Studies and Detailed Design
- Environmental Impact Assessments, Gender Studies and other studies on Cross Cutting Issues.
- Pre-contract Services Including Revision of Tender Documents
- Other Related Project Preparatory Activities – including consultancy services and other unforeseen preparatory activities unique to the targeted project provided that sufficient justifications are made.

2.4.2. DBSA Project Preparation Facility

The DBSA has created a PPF unit to provide project preparation funds and technical support for developing infrastructure projects. The unit was created to support the pipeline of DBSA's financing divisions. The funds are intended to be used for the following:

- Creating an enabling environment for infrastructure projects to be implemented
- Conducting pre-feasibility studies
- Conducting bankable feasibility studies
- Assistance with costs to reach financial closure

2.4.3. GCF: Project Preparation Fund

The GCF's PPF provides up to USD 1.5 million for each application to the PPF. The PPF is especially designed to support Direct Access Entities for projects in the micro and small-sized category. However, all Accredited Entities are eligible to apply. Support is in the form of grants and repayable grants, while equity

may be considered for private sector projects. Funding proposals developed with PPF resources need to be submitted to the GCF Board within two years of approval of a PPF application.



SUPPLEMENTARY RESOURCE: FUNDING PROPOSAL TEMPLATES OF VARIOUS ICPs

We have developed a work pack with several of the key groundwater ICPs' proposal templates, which you can access in the Digital Library. This work pack contains the following ICPs' templates, which you can additionally access through the links provided below. You can download the various templates by clicking on the [links](#) below:

- GCF Proposal Template (Template <https://www.greenclimate.fund/document/funding-proposal-template>)
- GEF Proposal Templates (<https://www.thegef.org/documents/templates>)
- Adaptation Fund Template (<https://www.adaptation-fund.org/apply-funding/>)
- AWF Proposal Template follow the AfDB Template
 - **consultancy services:** Quality and cost-based; quality-based; under a fixed budget; or Least Cost selection (<https://www.thegef.org/documents/templates>)
 - **procurement of work:** standard bidding document (<https://www.thegef.org/documents/templates>)
- CRIDF Proposal Template (based on DfID template) (<https://www.thegef.org/documents/templates>)



DISCUSSION FORUM / REFLECTION

Now that you have had the opportunity to review this module's content as well as review the mandatory readings, please reflect on the following questions and share your thoughts with your fellow participants:

- Is climate change mainstreaming a priority for your country? Should it be?
- Have you ever developed a concept note and project proposal? Did you take into account all of the project proposal components as listed in section 2.3? Would taking these considerations into account have helped develop a "winning" proposal?
- What are the challenges you have experienced in accessing Project Preparation Facilities?

MODULE QUIZ

The module quiz below will allow you to check the knowledge you have gained over the course of this module. (The answers appear in Appendix 3.)

Instructions

- Please read each question carefully, and then read the answer option(s).
 - Be aware that some questions may have more than one correct answer.
 - When you have a clear idea of the question, select the correct answer(s) from the list.
 - ✓ Single choice: Only one option is correct (including the option "all are correct")
 - ✓ Multiple choice: Two or more options may be correct responses.
 - ✓ True / False
11. Assume that you have a groundwater project, and you want to mainstream climate change into it. Which of the options below describes the first two steps of the process, in the correct order?
 - a. First identify the entry points, then establish the enabling environment.
 - b. First establish the enabling environment then conduct a situation analysis.
 - c. First conduct a situation analysis, then establish the enabling environment.
 - d. First develop the institutional structures, then identify the entry points.
 12. Choose the correct answers. Which of the statements below about a Theory of Change are true? (select all which apply)
 - a. A Theory of Change defines the long-term goals of your project and describes your project pathway (from needs to behavioural change).
 - b. A Theory of Change comes with a budget, which lays out the costs associated with your project.
 - c. A Theory of Change is required for certain funding proposals.
 - d. A Theory of Change is only useful for the development of large projects or programmes.
 13. Which of the following are outputs, in terms of the Theory of Change for the case study? (select all which apply)
 - a. The establishment of a Private-Public Partnership for improving water and sanitation service delivery
 - b. Investments in increased production capacity of the city's water distribution network
 - c. Reducing the risk of climate impacts for the City
 - d. Constructing additional sanitation facilities
 14. What quality should your proposal have? (select all which apply)
 - a. It should focus specifically on a specific groundwater management aspect, such as research and capacity building.
 - b. It highlights the potential for replicability of the project and elaborate a strategy for its upscaling.
 - c. It should relate to the national project portfolios and include transformative development pathways.
 - d. It does not necessarily address gender and Environmental and Social Safeguards, since these aspects can have their own specific assessments and action plans.
 15. Which activity or activities can a project preparation facility (PPF) support? (select all which apply)
 - a. Project feasibility studies, including the value for money analysis
 - b. Implementing the projects M&E activities
 - c. Recruitment of a consultant to develop a proposal
 - d. Developing procurement documents and project concessional agreements
 16. True or False. A project proposal should highlight the project's potential for replicability and elaborate a strategy for its upscaling.
 - a. True
 - b. False
 17. True or False. Assumptions are not a form of risk?
 - a. True
 - b. False
 18. What are the first two stages of developing a proposal?
 - a. Feasibility and proposal development
 - b. Scoping and feasibility
 - c. Pre-feasibility and feasibility
 - d. Political economy analysis and feasibility
 19. How do you develop a feasibility report for your project?
 - a. By hiring an expert consultant
 - b. By using the information you have been gathering during the scoping exercise
 - c. By looking at feasibility reports from similar projects
 - d. By developing a project proposal
 20. What is the purpose of a gender development strategy?
 - a. To follow the ICPs requirements
 - b. To analyse the gender equality situation
 - c. To highlight the opportunities to bring about positive change for both women and men
 - d. To mitigate against the risk of increasing gender inequality by the project



Developing a project



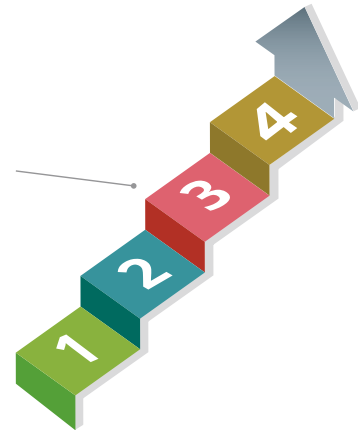
In this module you will review the elements that make a “viable” project. You will learn about the various stages of a project lifecycle, and the tools used to plan a logical project flow and “storyline”. You will also find out about the tools used to measure your project’s impacts, through Monitoring and Evaluation (M&E).

Stakeholders and community engagement is a key aspect underpinning all aspects of developing your project and proposal.

MODULE OVERVIEW

This module has four parts:

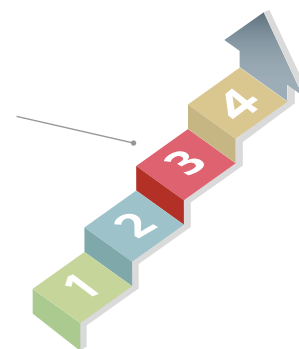
- SECTION 3.1: Ensuring the viability of a project
- SECTION 3.2: The project life cycle and Logical Framework
- SECTION 3.3: Financial and economic modelling for groundwater investment projects
- SECTION 3.4: Developing a project budget and management mechanisms



Learning Objectives: At the end of this module you should be able to:

- ✓ Identify and describe the elements of a “viable” project
- ✓ Understand project lifecycle planning and logical flow, and identify the various stages of a project lifecycle
- ✓ Understand the importance of entry points for stakeholder and community engagement
- ✓ Measure and assess the project’s desired impacts through Monitoring and Evaluation (M&E), using indicators and a Logical Framework
- ✓ Create a “project storyline” and complete a Project Lifecycle Framework





SECTION 3.1

Ensuring Project Viability

In this section you will explore the elements of a project which make it viable. This will strengthen your project offering, as donors and other funders will not

fund a project which is not viable and which does not have a strong rationale.

KEY TERMS

A Viable Project

A project that is viable achieves the desired outcome efficiently, is supported by the beneficiary communities, is designed to promote equity, targets vulnerable populations, is able to attract funding from a variety of sources, and the project will be sustained beyond the duration of the project funding.

Bankability

A project is bankable when one can demonstrate its ability to yield optimal returns, whether financial, environmental, socio-economic or relate to water security. For the **International Cooperating Partners (ICPs)**, projects are bankable if they meet their funding criteria and can contribute to their key results areas. Thus, bankable projects must be able to demonstrate the scientific evidence base for meeting criteria and contributing to funder's key results areas. Additionally, the project should meet the result areas of the implementor and beneficiaries

of the project, so that the project provides benefits for all parties.

Sustainability

A project is sustainable if it meets both present and future needs of the beneficiaries, without compromising the current and future economic, environmental and social systems that support it. Thus, project sustainability has three components: economic, environmental and social.

Iterative Process

Having an iterative process to planning your project ensures that the project plan can be adapted as the project unfolds, based on feedback from the monitoring process, changes in the project assumptions, or risks and changes in scope, budget or schedule. This is necessary to provide sufficient flexibility in the project for unavoidable or unanticipated obstacles which have to be overcome.

3.1.1. What are the elements of a viable project?

The first step in ensuring that a proposal will be successful is to make sure that it:

1. appeals to potential funders,
2. is **viable**,
3. has a strong rationale, and
4. is iterative

(**Tip:** Refer back to Module 1.2: Understanding key result areas and investment criteria). Your proposal needs to provide an argument and convince the funder why you are proposing this particular project to

implement, and why it is necessary for you to receive their financing. As such, you need to ensure your project rationale, as well as the background elements that support it, encompass the full range of elements that are likely to make your project viable.

Ensuring your project has a strong rationale is key. To understand where this fits with your project proposal,



See: Indicative Proposal Framework
[Section 2.2 Project Information](#)

A viable project thus has the following elements:

- It achieves the desired outcome efficiently (minimal waste, maximising the benefits of the project per unit of cost)
- It is supported by the beneficiary communities
- It is designed to promote equity and targets vulnerable populations
- It is able to attract funding from a variety of sources
- It is sustainable, even beyond the duration of the project funding
- Its planning is iterative, allowing for adaptation to changing circumstances
- It is **bankable**.

The bankability of a project depends on how convincing the expected returns or benefits of the project are. Therefore, it is necessary to illustrate the sustainability of the project and to highlight the net benefit(s) that the project would bring.

The sustainability of a project should be viewed through three lenses, namely:



Economic sustainability: The ability to financially support the continued success of an intervention beyond the lifecycle of the project.



Environmental sustainability: The ability of the project to meet the needs of the current benefactors without compromising the health of the ecosystems that provide services for them.



Social sustainability: The ability of a project to contribute to the healthy and inclusive functioning of formal and informal processes, systems, structures, and relationships of a society, in both the present and future.

To ensure that your project is sustainable and bankable, and thus that it is viable, is not simply a matter of ticking boxes. Rather, it is an iterative process, meaning that the project plan can be adapted as the project unfolds, based on feedback from the monitoring process, changes in the project assumptions, or risks and changes in scope, budget or schedule. Iterative

planning thus requires an understanding of each of the project elements and how these relate to one another.

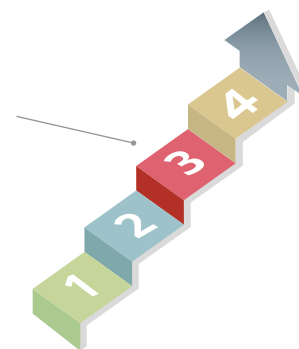
There are seven project elements that need to be showcased in your proposal. These are summarised and detailed in Table 7. on the next page.

Table 7: Elements to ensure a project is viable

Element	Components (What makes the project viable)	Sources (How to meet these components)
1. Manageable and implementable	<p>Projects must have credible management structures, including structures and systems for project oversight, dissemination of funds, and M&E.</p> <p>These supporting systems must be identified and evaluated in the Scoping stage (Stage 1). This is a necessary stop/go point. If these systems are not in place, the project will probably not be viable.</p>	Identified and evaluated in the design phase
2. Founded on good governance	<p>Successful projects must be built upon a foundation of strong and strategic partnerships. These will ensure that there is stakeholder buy-in. This is necessary to validate the selection of the project and to get the project off the ground during the implementation phase.</p> <p>Communication and partnership strategies (<i>what supportive partnerships are needed to make this project viable?</i>), and accountability structures (<i>who is holding this project accountable for delivery?</i>) must be put in place during the Scoping stage (Stage 1). Both civil society and the private sector play an essential role here as both can help to bridge capacity gaps in local public institutions.</p>	Conducting a Political Economy Analysis (<i>Hint: You learnt this in Mod 1</i>) can help you identify the strategic partnerships which can be built on. Additionally, conducting stakeholder engagement with key partners, and civil society, will be beneficial in ensuring this is met.
3. Feasible (ease of implementation)	<p>Once key partnerships are identified, stakeholder buy-in must be established.</p> <p>Who needs to buy into the project in order for it to be successful and sustainable? (Tip: Think back to <u>Module 1.4: The Political Economy Analysis</u>.)</p> <p>Stakeholders must understand what they will be doing and why. They must also be enabled with the funding, capacities, and tools to deliver on these responsibilities.</p> <p>A community stakeholder engagement plan that incorporates a communication and accountability strategy (see point 2, above) needs to be developed in the Scoping stage (Stage 1).</p>	Desktop study to assess the practicality of a proposed project. Additionally, can be established through community/ stakeholder engagement. (A political economy analysis can be useful here)
4. Evidence-based	<p>A good project proposal will have a strong evidence base that outlines a clear business case and rationale with regards to the envisaged returns. This evidence base must be outlined as part of the Feasibility stage (Stage 2). A clear impact – i.e. one that is measurable and based on science and analysis – must be identified.</p> <p>Building and illustrating the evidence base will need to draw on a variety of sources. These might include Water Resource Assessments, Groundwater Data Monitoring results, Risk and Vulnerability (R&V) assessments, Socio-economic Analysis, Technological Needs Assessments, and National Climate Assessments, amongst others.</p>	R&V assessments, socio-economic analysis, DSAs, national climate assessments

<p>(continued) 4. Evidence-based</p>	<p>One of the critical gaps that currently exist in SADC Member States accessing climate financing (financing reserved specifically for projects which provide climate change mitigation and adaptation) from ICPs, is a lack of sufficient evidence-based climate and environmental analysis.</p> <p>In the case of groundwater specifically, this critical gap often has to do with a lack of groundwater data and knowledge, for example on recharge rates or resource availability. However, this should not stop you from accessing available research data to help identify, analyse and interpret knowledge gaps that may exist.</p> <p>Your proposal must be backed up by the best science available to you at the time.</p>	<p>R&V assessments, socio-economic analysis, DSAs, national climate assessments</p>
<p>5. Needs and solutions-oriented</p>	<p>To get both political buy-in and to access the necessary funding, projects must be linked to country water priorities, both at the national level and the local level. Throughout the project design process, there must be a clear understanding of the particular need(s) the intervention is addressing. The impacts it will bring to address the identified needs must also be clearly understood (<i>Tip: Think back to <u>Module 2.3: The Theory of Change</u>, what are the impacts identified for your project).</i></p> <p>This means that planners need a good understanding of national and local development plans. They also need access to economic analysis, Risk and Vulnerability (R&V) assessments, and mitigation and adaptation assessments.</p>	<p>National and local development plans, economic analysis, Climate R&V mitigation assessment.</p> <p>Additionally, this can be established through community/ stakeholder engagement</p>
<p>6. High, measurable impact</p>	<p>The project must produce an impact that is results-based, with quantifiable targets. In order to identify indicators of achievement, there needs to be a clear baseline from which progress toward achieving these targets can be measured.</p> <p>These indicators of achievement will form the basis of the project's M&E framework. A good place to start the process of identifying and formulating indicators of achievement, is to look at national, local, and programmatic development plans, and how their M&E indicators and baseline studies have been framed. Indicators must answer the following questions:</p> <ul style="list-style-type: none"> ■ Who will be impacted and to what extent by the project? ■ Is there funding available for the long-term beyond the scope of this project's lifecycle? ■ Will this project avoid maladaptation? ■ Does the project promote social development and equality? 	<p>National, local and programmatic M&E indicators, baseline studies, development plans</p>
<p>7. Sustainability</p>	<p>The success of the project will depend on its sustainability. Financial, environmental and social sustainability is critical. Levels of sustainability can be determined through a variety of tools, including environmental and social impact assessments. An economic analysis can help prove to a range of funders that the project is attractive.</p> <ul style="list-style-type: none"> ■ Is there funding available for the long-term beyond the scope of this project's lifecycle? ■ Does the project promote social development and equality? 	<p>Economic analysis Credible project attractive to broad funders; attracts domestic resources; indicators</p>





SECTION 3.2

Performance Management Framework: Project Life Cycle and Logical Framework

KEY TERMS

Impact

A project's impact is the change that occurs as a result of carrying out or completing the project. Impacts may be short-term, medium-term, or long-term, as well as direct or indirect.

Intervention Logic

The intervention logic of your project is the underlying reasoning that connects project inputs (such as materials) to the desired change that the project is trying to achieve (measurable results). If the project design is robust, the logic will flow from immediate inputs (project materials, personnel, activities) to short-term outcomes (project results), to long-term outcomes (project impacts) through cause-and-effect relationships. This is often called the 'IF-AND-THEN' reasoning. For example: IF the activity is completed AND the external conditions for success hold, THEN the project will achieve the desired results.

Project Lifecycle

The lifecycle of the project is the sequence of phases that it goes through from initiation to closure.

Project Lifecycle Framework

The Project Lifecycle Framework (also called a Logical Framework, or **LogFrame**) is a systematic, visual representation of the Intervention Logic behind the organisation of the different elements of a project. The LogFrame allows project planners to hone their focus and enhance the robustness of proposed projects, in order to increase the probability of success. The LogFrame is a critical step in attracting funding and support to projects, and forms the foundation of the project's Monitoring and Evaluation (M&E) Framework during project implementation.

Monitoring and Evaluation (M&E)

M&E refers to the process of measuring and assessing progress of a project towards its desired impacts. M&E tracks results, accountability, and learning from project experience in order to determine whether investment in the project was worthwhile. M&E indicators are based on the components that make up the Logical Framework (LogFrame) of the project.

3.2.1 The Project Lifecycle Framework

As you design your project and write your proposal, it is important to understand how the project is likely to unfold during the course of its **lifecycle**. The project lifecycle should follow a specific sequence of events:

1. **Initiation:** The project definition, including the statement of needs, constraints and problems.
2. **Preparation and Planning:** The detailed planning, estimation and scheduling before the project can be executed (which includes conducting feasibility assessments).
3. **Execution:** The securing of the project team, and the implementation of the project development and management
4. **Closure:** Controlling, closure and review of the project.

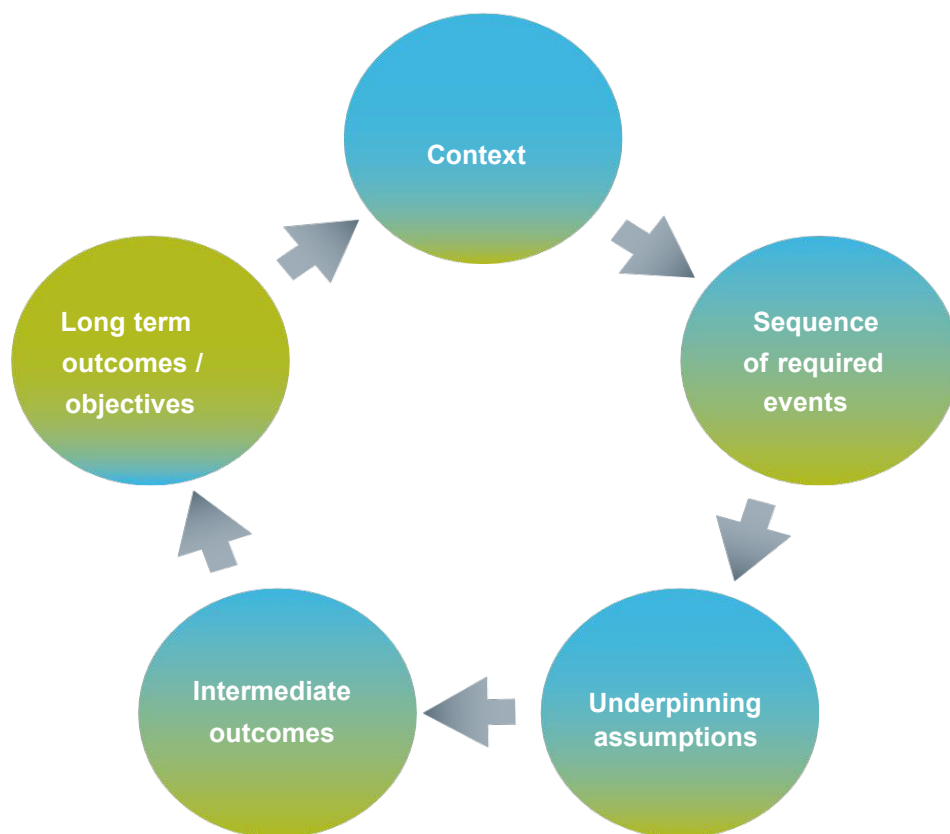
The Lifecycle framework involves organising and thinking through the various components of a project design, and linking them together in a coherent story. The components of the lifecycle framework are:

- the project context (rationale)
- the actions required to make the project happen, to achieve the desired impact

- the assumptions that underpin the project
- the medium-term and long-term outcomes and objectives of the project.

You can see how these elements are linked in the below figure.

Figure 12. The Project Lifecycle Framework

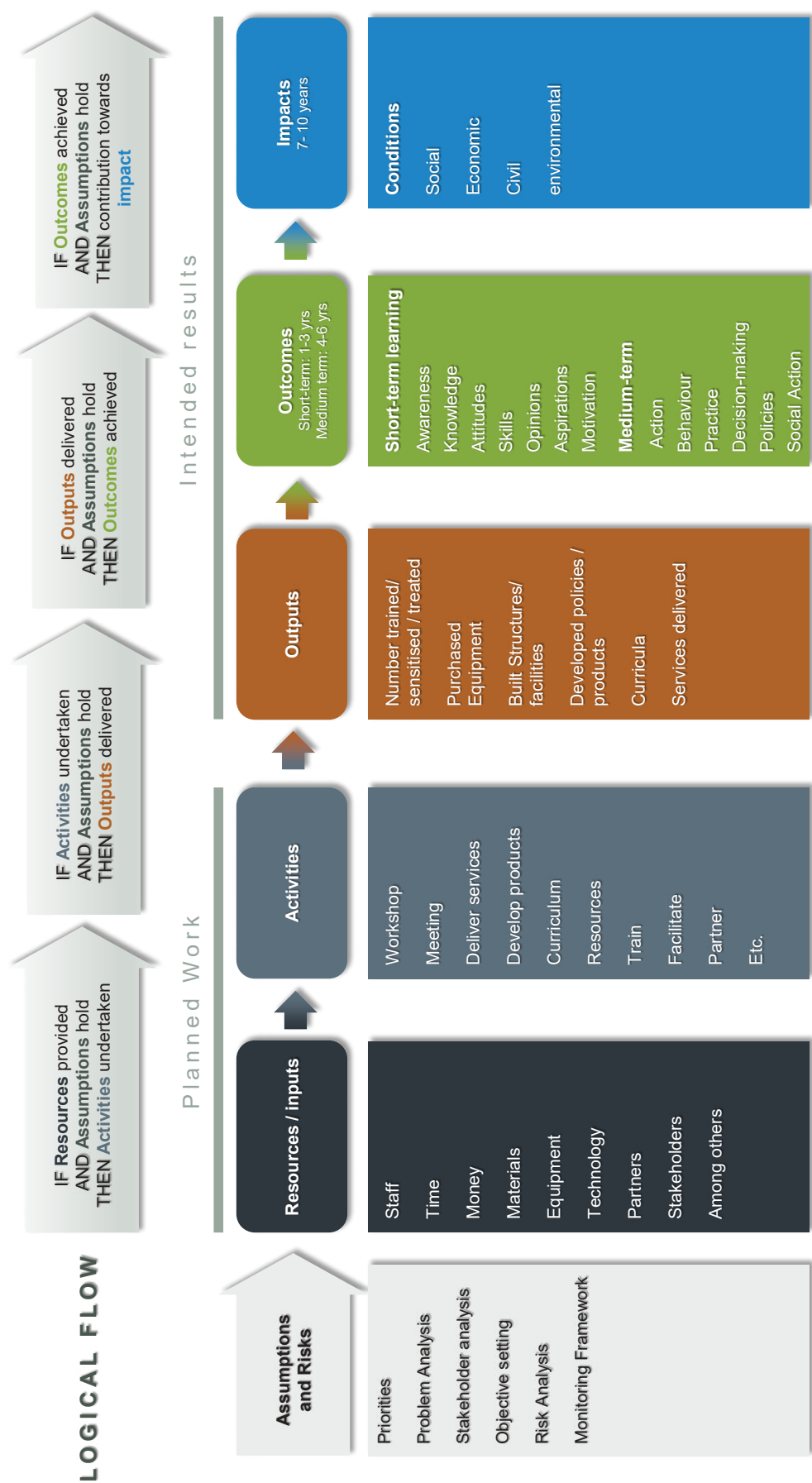


3.2.2 Aligning your groundwater proposal with the Project Lifecycle Framework

These first two phases are critical to the success of the project, as you will plan all the project components during that time, which drive the actual implementation of your original project idea. Using appropriate tools, especially the **LogFrame** is one of the best ways to ensure that you have planned for

all the project components and that you will be able to implement the project in the most efficient way. The figure below shows how the elements that make the project viable fit into the project lifecycle. Each grey arrow at the top of the chart shows a cause-and-effect relationship between actions, assumptions and results.

Figure 13: The logical flow of a project lifecycle Source: Adapted from Petrie., et al. 2016.



3.2.2 The logical flow of a project lifecycle: Logical Framework or LogFrame

Now you are going to see how to read and use the LogFrame template in the Digital Repository before you watch the accompanying video.

Video: Using a LogFrame

The video below illustrates how to use the LogFrame. Please watch the video and familiarise yourself with the content of the LogFrame, a key aspect in developing a successful project proposal.



The LogFrame is an important planning tool to help you design and plan the implementation of your project. It provides a structure that enables you to specify and organise all the components of the project, including the **Inputs, Outputs, Impact, Assumptions** and **Risks**, and Outcomes. This will allow you to assess whether your project is **viable**, which as discussed in section 3.1, are integral in developing a successful proposal.

The **Intervention Logic** of your project, the underlying reasoning that connects project inputs to the desired change that the project is trying to achieve, expressed in the form of measurable results, needs to be very clear. It often takes the form of “IF-AND-THEN” reasoning: i.e. IF the activity is completed AND the external conditions for success hold, THEN the project will achieve the desired results.

If the project design is robust, the logic will flow from inputs (project materials, personnel, activities) to

short-term outcomes (project results), to long-term outcomes (project impacts) through a cascading series of cause-and-effect relationships.

In short, **the LogFrame is a tool that helps you build a coherent project “storyline”**.

This takes the form of a logical narrative that begins with the project idea and runs all the way through the project lifecycle. The LogFrame effectively helps you to organise your thinking, so that specific activities can be linked to desired outputs and impacts, so that performance indicators can be set to measure project success, so that roles and responsibilities can be delegated to project members and stakeholders at various levels of governance, and so on. Importantly, the LogFrame functions as a communication tool which enables you to communicate the project storyline in a coherent way that makes sense to all concerned.

The LogFrame also guides the development of your project budget, and its review from time to time. Importantly, the LogFrame ensures that the logic behind the project is sound and aligned with prioritised needs, by asking:

- How will this project contribute to national/ regional development goals?
- How will this project contribute to the objectives of a particular fund or programme (e.g. The World Bank)
- Where is there overlap between these objectives?

Using a LogFrame can assist you in designing your project. To see where this can apply in a proposal,



See: Indicative Proposal Framework
Section 3.2 Project Details

3.2.3 Guide: How to develop a LogFrame

The following guide outlines the process of populating the LogFrame. Please ensure you understand the fundamentals of this framework. (If you are doing this work as part of a course, you will be asked to develop a LogFrame for your own selected project at the end of

this course.) The five steps below describe the process you must go through to construct the LogFrame, using the LogFrame template provided below (and in the Digital Library).

Note to trainers

It is important to note that the components of a LogFrame are not a simple step-by-step process. It involves going back to revise previous steps if you find that all the component are not properly aligned. For example: if a groundwater infrastructure development objective does not have clearly measurable outputs, you may need revise earlier steps to identify and specify the desired output for that objective.

Measurable outputs are critical to determining and monitoring the impact of a project intervention over time. For example, how many vulnerable people is this project benefitting? To what extent are their lives and livelihood, their access to water, and their agricultural production improved? In order to be able to identify, generate and measure progress towards targeted outputs, you need to have available, reliable baseline data.

In this explanation, we will refer to the various cells in the LogFrame template above. This template can be separately downloaded from the Digital Library and a blank version for you to complete appears in Appendix 5.

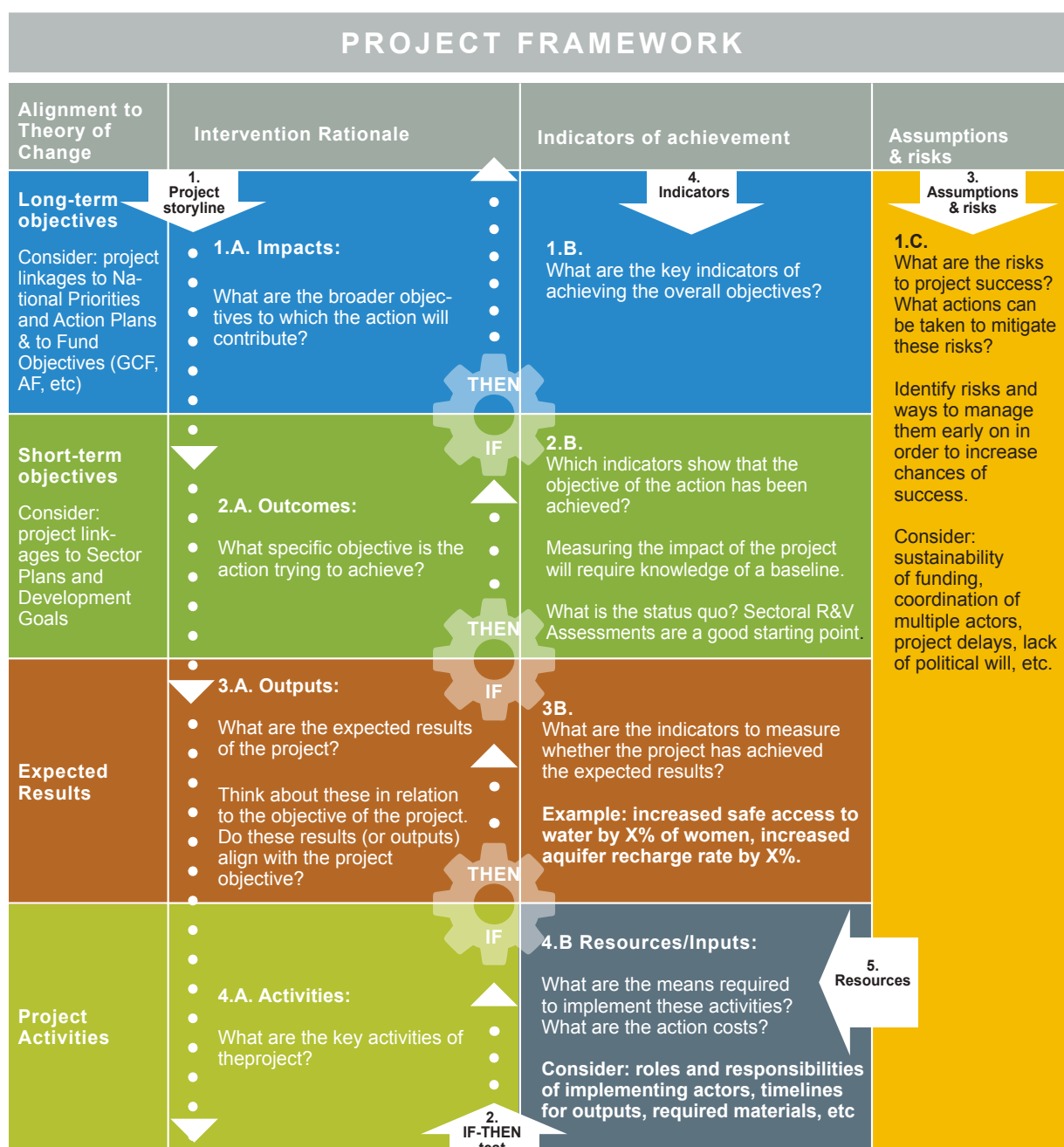
STEP 1: Construct the Project Storyline

In this first step you construct the storyline, which follows a coherent Intervention Logic. As part of this step you define the specific objectives of the project and align them with the long-term overarching objectives (see the left-hand column of the LogFrame Template).

1. Define the long-term objectives (Impacts) of the project:
 - ✓ What is the broad, long-term purpose or objectives of your project? What is the Ultimate Impact that you are aiming for? If they are achieved, how will your project impact on society?

- ✓ Consider how the project will contribute to goals outlined in national development plans, national adaptation plans, and national climate change strategies. If you are submitting the project to a specific fund or programme, consider how the project contributes to the broader objectives of that programme. List these objectives as well as their sources in cell 1.A of the LogFrame Template.
2. Define the short-term objectives (Outcomes) of the project:
 - ✓ What is the purpose of the project? What are the specific outcomes of the project? Consider how the project aligns with specific groundwater development priorities and needs. List these project outcomes as well as the specific development objectives they link to in cell 2.A.

Figure 13: The LogFrame - Template



- ✓ While the project may contribute to a variety of long-term objectives (Impacts –Cell 1A), the short-term objectives (the Outcomes) should be very focused. If the scope of your project becomes too large, this may weaken the design of the project make it less feasible.

Note to trainers

Work with participants to define the scope of their projects so that the intervention remains manageable given existing capacities and funding.

- Define the expected results (Outputs) that your project will lead to:
 - ✓ Outputs are specific, quantifiable deliverables that the project aims to provide. List these as specific deliverables describing what exactly the project is going to deliver. If there are multiple outputs, they should all produce the desired outcome described in Cell 2A.
 - ✓ Later, when monitoring the impact of the project, these outputs will be used to hold the project team accountable. Did the project deliver the

intended results? When you think about the expected results in terms of M&E it is important to frame these results as discrete outputs that are measurable against an existing baseline.

4. Define project activities:

- ✓ What are the activities that will allow the project team to achieve the expected result? This is where participants will get into the actual planned work and will form the basis of a project work

plan in later stages of design. For the purposes of the Lifecycle Framework the scope should be limited to key activities. Note that you should keep in mind roles, responsibilities, and project management and support structures when listing activities in cell 4.A. Are these activities feasible given resource and skill constraints?



STEP 2: Verify the Project Storyline using the IF-THEN Test

Once have completed your project storyline, use this model to test whether your intervention logic is sound.

In a well-planned Framework, cells 1.A. to 4.A. will flow from one to the other, following a cause and-effect pattern. Starting at the bottom (cell 4.A), you should be able to make the following logical connections:

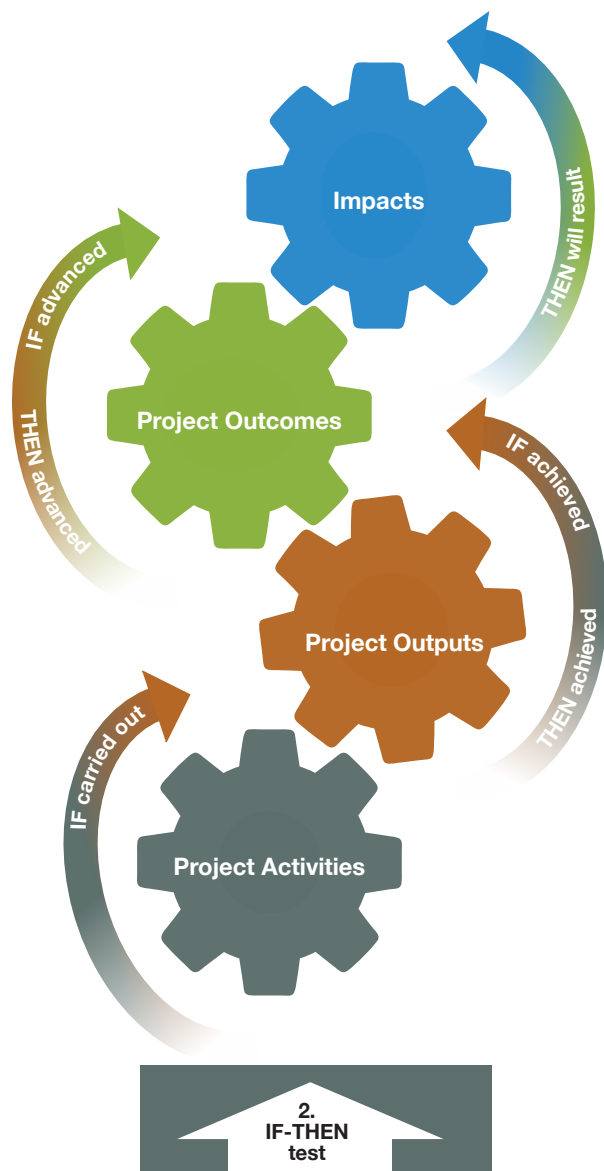
- IF the Project Activities are effectively carried out, THEN the planned Project Outputs will be achieved.
- IF the Project Outputs are achieved, THEN the expected Project Outcomes will be advanced.
- IF the shorter-term Project Outcomes are advanced, THEN the longer-term Impacts may be witnessed.

The stronger the cause-and-effect linkages are between each level, the stronger the overall project design will be.

STEP 3: Identify Assumptions and Risks

This is a critical step in all project design processes. Even if the Project Storyline follows a clear intervention logic with strong cause-and-effect linkages, there are always external factors that may prevent a project from being successful or that must be in place in order for the project to be effective.

1. Assumptions are statements that highlight an external condition that enables the project to move forward. Project planners will be aware of



these conditions, but will also know that they are outside of their control. When designing a project, there are some elements that planners have to assume will happen in order for the project to be a success.

- Example: When sinking a new borehole, it is assumed that borehole users and beneficiaries will understand how to manage the resource to ensure equitable access and to avoid contamination.
2. Risks are statements that anticipate what might go wrong, or prevent the project from being successful, as a result of external conditions or factors. While assumptions are external conditions that planners expect to happen in order for the project to be successful, risks are conditions that planners want to avoid in order for the project to be successful.
- Example: Given the political and economic climate in donor countries, it is a risk that funding could be withdrawn from the project before completion. Given that water recharge systems vary according to climate, it is a risk that a borehole may not yield as much water as expected or that the water table may drop permanently, negatively impacting all three sustainability dimensions of the intervention (financial, social and environmental).

These terms are two sides of the same coin. They can be related to natural conditions (e.g. rainfall), human factors (e.g. active community participation), budgetary factors (e.g. timely release of funds), or external economic factors (e.g. fuel prices).

Assumptions and Risks complete the Intervention Logic by adding the linking AND factor to the IF-THEN Test. The Test now becomes IF-AND-THEN. For Example: IF the project team successfully rehabilitate the existing water treatment facilities in Lilongwe City, AND there is behavioural change to sanitation due to the campaigns THEN the sanitation within the City will improve, which will have positive effects on people's health and safety. The assumption here is that the behavioural campaign which is part of the project actually changes the sanitation behaviour of residents. It is necessary for the success of the project, but it is an external condition that is outside the control of the project team.

Acknowledging assumptions and anticipating risks is a key step in designing your project. It helps you to start thinking about ways to mitigate risk. Mitigating risk decreases the probability of negative external events hampering the successful outcome of your project, and increases the probability of positive external conditions being in place.

This is extremely important when submitting project proposals to possible funders, who naturally want to see that the project has a high probability for return on investment.

STEP 4: Identify Indicators of Achievement

In each cell of Column B, with the exception of Cell 4B., you will need to identify measurable and verifiable indicators of achievement. These should be listed for each row for long-term Impacts, short-term Outcomes, and project Outputs. A good indicator will be directly tied to the objectives in Column A. Note that it is easiest to begin at the top – at Cell 1B. Indicators for this cell will be tied to long-term objectives of an overarching programme, vision, or strategy. For this reason, indicators for success are often already established in existing documents and will include targets and timelines that extend past the lifecycle of this project.

Basic indicators can describe quantity, quality, and/ or timeframes of achievement.

STEP 5: List necessary resources and inputs for project completion:

The final step of completing the LogFrame is to define what resources, materials, and funding the project will require to be successful. Note that when you are actually designing your project, this step is a lengthy process!



CASE STUDY 3.1

LogFrame of the Lilongwe Water and Sanitation Project

Please refer to the Digital Library to see a worked example of a LogFrame for the Lilongwe Water and Sanitation Project (and here). You will notice this example is in an expanded format of the LogFrame we have provided in this chapter. You may need to follow a similar format when developing your own LogFrame to capture all the detail sufficiently, whilst the template and example provided earlier in this module are useful for illustrative purposes.

Figure 14. Worked example of a LogFrame (Lilongwe Water and Sanitation Project)

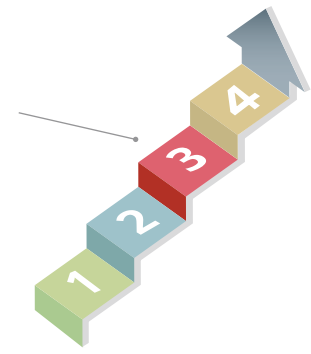
PROJECT TITLE (max. 50 characters)		To increase access to improved water services and safely managed sanitation services in Lilongwe City	
GOAL (Long term objective)	Indicator	Baseline	Target
IMPACTS: Overall Vision: Increase access to improved water services and safely managed sanitation services in Lilongwe City The Project is aligned with the current Country Assistance Strategy (CAS) by improving water supply and sanitation to contribute to economic growth and poverty reduction. The project contributes to theme 1 (promoting sustainable, diversified and inclusive growth) and theme 2 (enhancing human capital and reducing vulnerabilities) of the CAS The Project is also in line with the Government's priorities, and contributes to the Malawi Growth and Development Strategy, by reducing poverty through sustainable infrastructure development. The project also contributes to the WBG's twin goals of ending extreme poverty and promoting shared prosperity, especially given the historical inequities in water service levels in Lilongwe.	Number of people (disaggregated by gender and poverty quintile) receiving improved water services;	0	250,000 of which 50%, or 125,000, are women 40%, or 100,000 from the poorest two quintiles of the population
	Number of people (disaggregated by gender and poverty quintile) gaining access to safely managed sanitation services	0	250,000 of which 50%, or 125,000, are women 40%, or 100,000 from the poorest two quintiles of the population
		Source Project progress reports and LWB M&E system	Source Project progress report



PURPOSE (OUTCOMES)		Indicator	Baseline		Target	Assumptions and Risks
Unsafe drinking water and poor sanitation are a binding constraint to Malawi's growth and poverty reduction. This project therefore in the short term will address these issues, in part, in the city of Lilongwe, to provide improved access to water to city residents and improved access to sanitation services. Specifically, the project will increase the coverage and quality of water services in Lilongwe and assist in removing key bottlenecks in the water supply network. The project will also address the major challenge of sanitation for 250,000 people in the city. The Project will aid the Lilongwe Water Program (LWP), a series of investments designed to address the immediate and medium term water security needs, and support to a long-term solution to Lilongwe's growing water demands. This will aid in the reduction of physical water losses will help reduce pressure on existing water sources for Lilongwe, which will help alleviate the water challenges facing the City, which is a priority of the National Government. It will also alleviate the implications of poor sanitation on public health and groundwater.	250, 000 people have improved water services (18 hours of water supply a day, supplied at an average pressure of 12m at predetermined points in the distribution network, for over 300 days a year.	0	500 000	Sufficient availability of necessary financial resources to upscale best practices Severe drought or other extreme weather events (exogenous climate and disaster risks) LWB and LCC have no prior experience of working together, and the policy uncertainty around institution roles poses a risk to the sustainability of the project outcomes related to sanitation		
	250,000 people benefit from safely managed sanitation services (90,000 direct benefit from rehabilitation and expansion of the sewerage network.	Source				
	160,000 will benefit from onsite sanitation interventions.					
	Water losses reduced from 36% to 26%. Health benefits from improved sanitation.					
INPUTS (\$)		IDA Grant (\$)	Government of Malawi (GoM) (\$)	Other (\$)	Total (\$)	World Bank SHARE (%)
	World Bank (\$)	IDA Credit (\$)				
	US\$ 100 million	US\$ 75 million	US\$ 25 million	N/A	US\$ 102 million	98%

CASE STUDY 3.1 continued...

Component 1: OUTPUT	Activities	Indicators	Baseline	Target	Resources and Inputs	Assumptions and Risks
<p>Water Distribution Network Rehabilitation, Expansion and Net Revenue Water Reduction: Priority network rehabilitation to remove bottlenecks, increase hydraulic capacity of existing network and reduce losses, and network expansion to increase coverage.</p> <p>The Project will assist in removing key bottlenecks in the water supply network. The hydraulic capacity of existing network will be increased and expanded. These will assist in reducing water losses from the water system.</p> <p>The Project will increase the coverage of water services in Lilongwe to areas of the city which have no access to piped water services.</p> <p>Help reduce water losses and improve the quality of water services (pressure and hours of service) for Lilongwe Water Board customers.</p>	Upgrading of 142km of existing distribution network and creation of pressure zone boundaries	Length of water supply pipeline laid under the project	0km	169km	Machinery (drilling, digging, lifting, etc)	Political and Governance risk (substantial)
	Construction of 27km of transmission mains, eight associated pumping stations and four storage reservoirs with a combined storage of 2,600m ³				Construction materials	Macroeconomic risk (moderate) Institutional capacity for implementation and sustainability (substantial) LWB has limited experience managing complex infrastructure projects. LWB and LCC have no experience of working together.
	Performance-based water loss reduction through improvements in network maintenance, active leakage control, speed and quality of leak repairs and pressure management	Non-revenue water (%)	36%	26%	Suitable expertise (water and sanitary engineers, communication specialists, infrastructure economists, etc)	Environmental and social risks (substantial): The project is exposed to environmental risks from existing surface water contamination due to a degraded Lilongwe river catchment, as well as risks due to natural disasters or short and long term climate change impacting on water resources availability.
	Finance approximately 186 km of distribution network expansion to areas of the city that are currently not served by piped water	Length of water supply pipeline laid under the project	0km	186km	Labour	There will be disturbances to people and infrastructure while pipes are laid. This will result in loss of property, damage to roads. These negative social impacts are temporary, site specific and reversible.
	Source and responsible for data collection:					
INPUTS (\$)	Project progress reports LWB M&E system (LWB)					
	World Bank (\$)	IDA Credit (\$)	IDA Grant (\$)	GoM (\$)	Total (\$)	World Bank SHARE (%)
	US\$ 66 million	65	0	1	66	98%



SECTION 3.3

Incorporating financial and economic aspects of groundwater investments

This section looks at several aspects of incorporating financial and economic aspects in your groundwater project. As we explored in section 3.1, a project needs to be viable (i.e. sustainable and bankable) to have any chance of being accepted for funding.

This section delves into the financial and economic methods you need to use, and aspects you need to highlight in your proposal, and the tools to support your argument.

KEY TERMS

Indirect benefits or co-benefits

An indirect benefit is a profit or benefit from the investment, which cannot be easily measured or directly attributed to the investment. Indirect benefits and co-benefits have a similar meaning. A co-benefit usually refers to an additional benefit that comes from an investment or adaptation measure, over and above the intended direct benefit.

Conjunctive use of Water

The combined use of ground and surface water, for instance the practice during wet years of storing surface water in groundwater basins, and then withdrawing it in dry years (Managed Aquifer Recharge techniques). Conjunctive use of surface water and groundwater is also central to integrated water resources management (IWRM). It is helpful in reducing vulnerabilities of water supply systems and mitigating the water supply stress in responding to climate change.

3.3.1 The economic case for groundwater infrastructure

Water infrastructure projects have the potential to contribute to human development, and will contribute to water security and improve livelihoods wherever they are implemented.

The decision-maker, in our case the investor or ICP, needs to see in your proposal the costs and benefits of taking certain decisions (and therefore invest in your proposal rather than others). Particularly, you need to emphasise the consequences of **business-as-usual decisions** and investments versus the consequences of taking decisions that bring paradigm shifts, such as reducing building climate resilience.

For example, investing in new grey groundwater infrastructure (business as usual) versus an investment that supports the conjunctive use of water and groundwater, in accordance to climate projections and enhancing livelihoods through climate smart agricultural farming practices (signals a paradigm shift).

Expanded groundwater infrastructure development supports increased productivity within an urban or rural space, hence there are clear economic benefits to any infrastructure projects – particularly in light of the infrastructure deficit most of the SADC Member States face. These direct benefits are, in most situations, fairly obvious and should be highlighted in your proposal, as the case study has done.



CASE STUDY 3.2

The Lilongwe Water and Sanitation Project - Direct benefits

The Lilongwe Water and Sanitation project will benefit approximately 500,000 people directly, with improved water services and safely managed sanitation services which will result in significant health and economic benefits for the country. The project also will assist in reducing inequalities in service delivery between different segments of the population.

The activities of the project will lead to improved public health, time saving for city residents who will benefit from having water closer at hand, and an improved business climate. Additional direct benefits include increased revenues for the Lilongwe Water Board, due to the reduction in non-revenue water (water lost due to leakages).

In terms of groundwater, the project will reduce the amount of untreated water and sewage which is currently affecting the groundwater resource around the City. This will lead to a direct improvement in groundwater quality. This will increase the future viability of utilising groundwater in the City, in conjunction with using the Lilongwe river. As such, this project can directly contribute to water security in the City and therefore in Malawi. This conjunctive use and water security aspect is fundamental to the function of groundwater in the SADC region. Therefore, although this project may not specifically target groundwater improvement as a project outcome, there are benefits to groundwater in implementing this project.

3.3.2 The power of co-benefits

Along with the main benefit of any proposed project, there are generally a number of indirect benefits, or **co-benefits**. These co-benefits can be huge boosts for the potential success of a project and you should identify them and highlight them in your proposal, although they may not necessarily be as obvious as the direct economic benefits your project is actively seeking. Nevertheless, understanding these returns and the economic and social development impacts they have is important for development planners.

The direct benefits from an investment in groundwater infrastructure come from using resources to design, plan and build it properly. These benefits often intersect with other societal goals and are therefore often referred to as co-benefits. The co-benefits may result in direct or indirect consequences, or in returns on investment in the case of climate change resilient infrastructure projects.

Note to trainers : Discussion Forum / Reflection

It is important to spend some time focusing on the importance of co-benefits. Facilitate a discussion around co-benefits of an infrastructure investment, such as a well-field, in the participants' area, district or ward. Key questions to ask are:

- What are co-benefits?
- What co-benefits may arise from your project?
- Why are co-benefits important to understand when considering different investments?

CASE STUDY 3.3

The Lilongwe Water and Sanitation Project - Co-benefits

One of the core direct benefits of this Project is the improvement of people's health, due to improved water quality and better sanitation services, as well as the sanitation campaign which will be implemented. Another direct benefit is the time saved by residents who have to travel less to collect water.

Together, these benefits can have indirect socioeconomic impacts. For instance, residents will be healthier as they are more aware of sanitation and have access to improved sanitation services, which increases their economic productivity and allows them to contribute to the workforce to a greater extent. Additionally, the time saved on collecting water can be used elsewhere, for instance children can spend more time on schoolwork, people can have more time to contribute to their jobs, etc. These co-benefits can then contribute to Malawian Growth and Development Strategy which aims to reduce poverty through sustainable economic growth – as there will be more people spending more time being productive.

Illustrating this intersection is fundamental to maximising the value for money of the project, as funds will not be spent on achieving co-benefits, yet they provide value. Co-benefits can have multiplier effects on the benefits of your project.

3.3.3 The conjunctive use of water

Integrated Water Resource Management (IWRM) is an integrated approach to water resource development and management that is inclusive of the coordinated development and management of water, land and related resources, in order to optimise equitable economic and social welfare without compromising the sustainability of vital ecosystems. Such approaches are central to sustained water security.

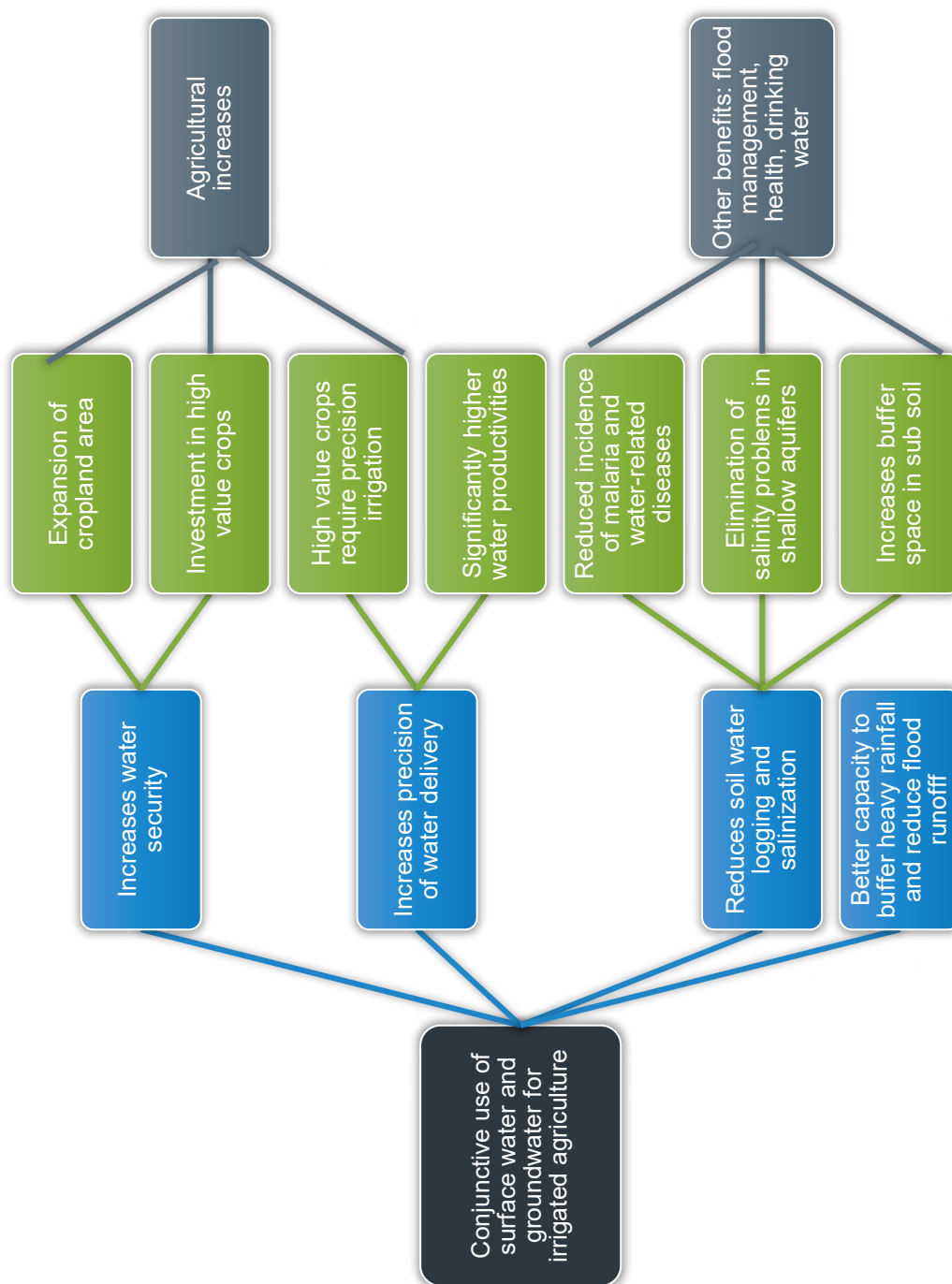
In practice, conjunctive use and management of water is about valuing and combining all sustainable water resources – ground and surface – as integral to water security in a given geography or system. As such, it is central to IWRM. For instance, the practice in wet years of storing surface water in groundwater basins,

and then withdrawing it in dry years (Managed Aquifer Recharge techniques) is integral to securing water resources over time, through effective and efficient practices that align with water conditions that prevail at different points in water resource management cycles.

There are various interventions that support the conjunctive use and management of water resources, such as managed aquifer recharge and groundwater reuse and recycling. Such interventions increase the benefits in terms of storage and supply, flood mitigation, drought mitigation, reducing the risk of salinisation and preserving ecosystems. This is summarised in the figure on the following page.



Figure 15: The benefits from conjunctive water use



Source: SADC-GMI, 2019.

CASE STUDY 3.4

How is water used conjunctively in the Lilongwe Water and Sanitation Project?

According to the case study, Lilongwe does not have groundwater resources which can meet their long-term water needs. The Government of Malawi have also stated that groundwater resources are not likely to form a significant part of the country's investment strategy, as it is relatively scarce compared to surface water resources. Yet, this does not mean there is no role for groundwater to play in Malawi and in Lilongwe. In fact, this is where the conjunctive use of water becomes so important – as although groundwater cannot meet the long-term needs of the City, it still can provide significant inter-seasonal storage to increase water supply security for the City. In particular this conjunctive use will be of vital importance during periods of low river flows, where this groundwater resource can be turned to in times of emergency. As such, it is fundamental to take into account the conjunctive use of water in your project proposal. In this project they undertook a detailed groundwater study to understand its potential use in an emergency, as well as for improving the sanitation services of the City to directly aid groundwater quality, to aid water security.

3.3.4 The phasing of groundwater financing projects

Essentially all groundwater is “unknown” until a water source security investigation has been completed, and in many cases, this is the very reason you are applying for funding. The phasing of groundwater financing is therefore critical, and is common practice. Funders will be more likely to fund groundwater infrastructure projects if the groundwater resource has been explored. The opposite is also true: funders will be less likely to fund a groundwater infrastructure development project if the groundwater resource itself is an unknown.

If you are structuring your project in a phased manner, for example to enable you to further explore the sustainability of the resource you wish to exploit and

therefore cement the bankability of your project, you will need to account to your funder for your phased approach. One way of achieving this is through establishing milestones and ‘stop/go’ points in your project proposal and design. For instance, you could have a stop/go decision point at the end of the exploration phase, allowing the funder to choose whether or not to continue funding the project.

Thus, you must bear in mind whether the project you’re proposing has a good, well researched understanding of the groundwater resource in question. Table 8 that follows provides some key points to consider in terms of the phases of groundwater projects.

What phase of groundwater development are you in?



Are you setting up a project to explore the resource, or exploit it?



If you’re about to exploit the groundwater resource, has it been explored?

IF IT HASN’T BEEN EXPLORED: your project proposal is to fund the early stages of groundwater resource development.

IF IT HAS BEEN EXPLORED, then the nature of your funding application is likely to be more specific, for example for a reticulation project, or for a climate resilience measures project.



If you have already developed the groundwater resource, then you are in fact not applying for funding of a groundwater project, but for a reticulation project, or a climate resilience building project.



Table 8: Groundwater project phases

Exploration Phase Activities	Groundwater exploitation	Groundwater Management
Desktop study of the identified aquifers	Requires little investment compared to surface water infrastructure. Can be linked to a reticulation project, and must highlight a conjunctive use of water resources approach.	Requires larger investment but brings co-benefits, reducing costs in the long-term.
Determination of groundwater development target areas in the identified aquifers		Need to relate to climate resilience building, IWRM.
Exploratory drilling and test pumping in the aquifers		
Resource quantification through e.g. groundwater modelling.		

Generally, the exploratory phase, as well as the activities related to the monitoring and management of the resource can become costly and are thus often

overlooked. The next section looks at ways to improve access to funding for groundwater management.

3.3.5 Attracting finance for groundwater management

In order to improve access to financing and increase flows for groundwater management, we need to take a strategic approach and look at various types of activities that funders are willing to invest in for groundwater management. The following issues are key points to consider in developing proposals that will attract funding for groundwater management, specifically.

Improved Data and Information

The role of adequate data and information to support revenue collection is important. This means improving groundwater monitoring and metering so that both regulators and water users can understand what is being used. This also means you need to include **groundwater monitoring** into your project proposal. Data and information are becoming paramount to the sustainability of projects. There is relatively little appetite for funding groundwater monitoring projects, and as such the monitoring considerations must be a part of the project offering.

Understanding tariffs

Water users pay for the services that enable them to effectively use the groundwater resource, noting that for many, water is a basic human right, and is largely economically undervalued around the world – and is thus relatively cheap. Furthermore, in countries where

groundwater rights are linked to property rights, those that access groundwater through their property do not pay tariff for the resource in the main, although they may pay for the infrastructure outlay.

Valuing water – surface and ground – is a large topic currently on the international water agenda.

Knowledge sharing and raising awareness

Much effort is needed to raise awareness around all aspects of water services, delivery and pricing. In particular, groundwater is seen as a commodity that is “free” and largely infinite, reflecting the need for improved awareness raising. In addition, the concept of **groundwater for growth and development** needs to be entrenched in broader government – and governments need to support initiatives in strategically attracting funds and investing in groundwater. Groundwater is recognised as a crucial driver to rural development and poverty alleviation, and falls under the broad umbrella of Goal 6 of the SDGs. The drive towards attaining these goals is an opportunity to attract funding. Projects must therefore demonstrate how they will contribute to this, through the scientific evidence base in order to be bankable.

Partnerships for finance and knowledge sharing

Governments in the SADC region need to support

initiatives that strategically attract funding for groundwater and should fully support initiatives that ensure that water resources are effectively managed. In addition, there are networks and partnerships established in the region that support IWRM conjunctive use and groundwater, such as the Global Water partnership southern Africa. IWRM and partnership strategies are also well in line with SADC Water's current (and likely future) Regional Strategic Action Plan (RSAP). If your project can demonstrate its contribution to this regional plan, it will help you to leverage funding for your project.

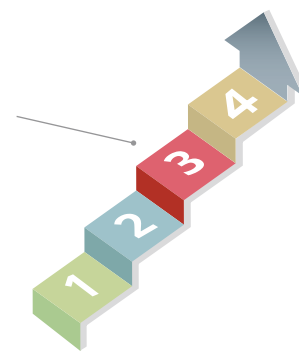
The opportunity exists to build a **coherent knowledge infrastructure partnership** that includes national governments, universities and the private sector (Pietersen and Beekman, 2016). Opportunities also exist for the public sector, private sector and civil society to finance groundwater development and

management programmes and projects in their mutual interest and benefit, such as the GIZ International Water Stewardship Programme (Pietersen and Beekman, 2016). Finally, projects are required that link knowledge production (e.g. WaterNet) with knowledge application in government line departments and municipalities.

Institutional roles

There is a need to clarify institutional roles and responsibilities, noting any regulatory or policy requirements, for example from PPP structures set up to implement projects. With this clarity there can be assistance from differing partner institutions in improving the effectiveness of project design and implementation. Furthermore, better coordination between institutions can realise improved levels of efficiency and effectiveness in the use of the limited financial resources.





SECTION 3.4

Developing a project budget

Developing a detailed and comprehensive project budget will allow the ICP to see what the components of your proposed project will be, and the costs associated with these components. Without a clear, transparent budget, potential funders will not accept your proposal. Your budget must be realistic and well thought through. Applying your LogFrame will enable you to achieve this. A detailed budget will break down the costs attached to various items under each phase of the project. It must show how these item expenditures will contribute to the project outcomes and impact articulated in your Theory of Change, and LogFrame.

Developing and managing a realistic budget is an important part of developing and implementing a successful project. Careful attention to issues of financial management and integrity will enhance the effectiveness and impact of the project.

Funders usually have their own (different) formats for laying out the project budget, and use different currencies. However, the principles of budgeting remain the same, and it is helpful to keep the following points in mind.

Guidelines for developing your budget

- Include costs which directly relate to efficiently carrying out the activities and producing the objectives set out in the proposal. Other associated costs should be funded from other sources.
- The budget should be realistic. Find out what planned activities will actually cost, and don't assume that you will be able to manage with less.
- The budget should include all costs associated with managing and administering the project. In particular, include the cost of monitoring and

evaluation. For multi-year projects, it is useful to include a percentage of the budget for each year as a contingency fund against cost fluctuations, or for example, against exchange rate fluctuations.

- Typically, “indirect costs” or administrative overhead costs such as staff salaries and office rent are not funded by donors. These therefore should not be part of the budget.
- The budget line items are general categories intended to help you think through where money will be spent. If a planned expenditure does not appear to fit in any of the standard line item categories, list the item under other costs, and state what the money is to be used for. All planned expenses, e.g. in terms of material, salaries, travel (visa and disbursements), editing time, publication costs, administrative costs, etc.) should be laid out clearly in your budget.
- The figures contained in the Budget should concur with those on the Proposal Cover page. And notes or clear explanation of each budget line must be provided, to ensure that your budget is understandable and can be referred to at a later stage.

For instance, the table below illustrates the budgeting per component for the case study project. For any project proposal you will have to lay out your budget in a similar way, or against the budget template of the funder. Note that some funders require a much greater level of budget detail than others, with some wanting to see a lumpsum amount for each component of the budget, while others want to see a budget broken down line item by line item. The proposal template provided in the resources folder provides an indication of how you should structure your own project budget. However, it is critical that you establish budgeting requirements with your proposed funder early on in your proposal development process.

Figure 16: Lilongwe Water and Sanitation Project budget

CASE STUDY 3.6

The Budget for the Lilongwe Water and Sanitation Project

The Lilongwe Water and Sanitation Project is based on the following budget. As you can see, the Lilongwe project clearly demarcates the funds required for the four project components.

Project Component	Estimated Cost (US\$ Million)	Financing (US\$ Millions)		
		IDA Credit	IDA Grant	GoM
Network Rehabilitation, Expansion and NRW reduction	66	65		1
Priority Sanitation Improvements	19		18	1
Technical Assistance	8.5	5.5	3	
Institutional Capacity Strengthening	8.5	4.5	4	
Total	102	75	25	2

3.4.1 Understanding the Costs

Consultancy fees (maybe rates for water engineers, hydrogeologists)

There are a number of factors relevant for calculating daily consultancy rates, however the number of years of experience is usually the main decider. These rates may vary depending on whether the organisation is based in the European Union, North America, or Asia. Additionally, the fees may vary depending on the country where the work is taking place

Figure 17: Indicative Consultant Fees

Source: Development Aid, 2020

Daily fees of consultants according to experience factor

12 years experience

EURO 500 – 750 per day

6 years experience

EURO 350 – 500 per day

3 years experience

EURO 200 – 350 per day

Disbursements rates

Disbursement rates are daily allowances for accommodation and per diems for experts and project developers that need to spend time in the project field area to develop the project and subsequently to oversee or evaluate its implementation. These costs need to be factored into your budgets, so that you may claim them back from your project funds as you expend against these items. Per diem and accommodation rates vary between ICPs, and are highly dependent on the country of implementation. However, you can find guidelines on the websites of international institutions such as the UN agencies and the European Union (EU). For instance, the International Civil Service Commission, for the UN, has a breakdown of disbursement rates which can be found [here](#), where you can then select a specific country to explore their disbursement rates in more detail

Budget Template

In the “Additional resources” tab you have access to an Indicative Budget Template ([Here](#)), which you can utilise to develop your own project budgets. Please note however, most ICPs have their own budget templates which you will be expected to adhere to. In the main, these templates align with LogFrame language. As you will see from the template provided here for example, the budget is aligned with the project outcomes as would be envisaged in a LogFrame.





DISCUSSION FORUM / REFLECTION

Now that you have had the opportunity to review this module's content as well as review the supplementary readings, please reflect on the following questions and share your thoughts with your fellow participants:

- Have you ever developed or utilised a LogFrame? Do you think now that you have seen how to construct and use the LogFrame tool that it will be useful for your project planning going forward?
- What are the co-benefits of developing groundwater infrastructure for rural use? And for urban use?
- Are there examples of conjunctive water use in your country? Do they contribute to overall water security?
- Have you ever contributed to the development of a project budget? Are there any lessons you can share with regards to developing a budget? Are there any particular difficulties you have encountered with developing a project budget for a proposal?



Having a realistic budget for a project is key. To see where you will set up a budget for your project, See: Indicative Proposal Framework [Section 3.6 Detailed Project Budget](#)

MODULE QUIZ

Test the knowledge you have gained through this module, using the quiz below. The answers appear in Appendix 3.

Instructions

- Please read each question carefully, and then read the answer option(s).
- Be aware that some questions may have more than one correct answer.
- When you have a clear idea of the question, select the correct answer(s) from the list.
 - ✓ Single choice: Only one option is correct (including the option "all are correct")
 - ✓ Multiple choice: Two or more options may be correct responses.
 - ✓ True / False

21. Which of the following statements about a LogFrame are true? (Select all that apply)

- a. Assumptions are not important to state, as they have no bearing on the outcome of the project.
- b. It is necessary to identify measurable and verifiable indicators of achievement.
- c. For the IF - THEN Test, IF the project outputs are achieved, THEN the Project Activities will be carried out
- d. The long-term objectives of the project need to be defined

22. In a LogFrame (select all the statements which are true)

- a. The long terms objectives should consider linkages to National priorities
- b. The selected activities should lead to the desired outputs
- c. Assumptions and Risks can impact on every step of the LogFrame
- d. The resources and inputs available will constrain which project activities are available

23. True or False. The conjunctive use of water resources is an example of Integrated Water Resources Management?

- a. True
- b. False

24. How does the Logical Framework build off the Project Lifecycle?

- a. there is no relation between a Logical Framework and a Project Lifecycle
- b. The Logical Framework explores the fundamentals of a Project Lifecycle
- c. The Project Lifecycle explores the fundamentals of a Logical Framework
- d. The Project Lifecycle is the Logical Framework

25. Complete the sentence below. Select all the correct answers.

“A project is sustainable when it...”

- a. is financially sustainable and can continue beyond the project lifecycle
- b. meets the needs of the beneficiaries but damages the ecosystems that provide services for them.
- c. contributes to the inclusive processes, systems, structures, and relationships of a society, now and in the future.
- d. involves stakeholders from only the public sector and ensures economic gains for them.

26. Which of the following are steps that you follow to develop a LogFrame?

- a. Construct the Project Storyline and verify it
- b. Identify the Project Needs with a Problem Tree
- c. Identify Assumptions and Risks
- d. Compile the inputs needed in a budget

27. True or False. Co-benefits are not necessary to highlight in the project as they are outside of the scope of the project.

- a. True
- b. False

28. How is a budget structured?

- a. By project activities
- b. By project components
- c. By project phases
- d. By project implementers

29. How do you make sure your project proposal will attract funding? (select all that apply)

- a. By using adequate data and information to support revenue collection
- b. By raising awareness around all aspects of water services, delivery and pricing
- c. By making sure that the partners involved in your project will ensure that water resources are effectively managed
- d. By setting clear institutional roles and responsibilities

30. What are the potential activities of a groundwater exploration project?

- a. Desktop study of the identified aquifers; Determination of groundwater development target areas in the identified aquifers; Exploratory drilling and test pumping in the aquifers; Resource quantification through e.g. groundwater modelling.
- b. Exploratory drilling and test pumping in the aquifers; and reticulation infrastructure
- c. Determination of groundwater development target areas in the identified aquifers; and gender analysis
- d. Resource quantification through e.g. groundwater modelling; groundwater infrastructure management; nature-based solutions; and stop/go approach



MODULE 4

Implementing a groundwater project



This module delves into the implementation phase of a groundwater project. Specifically, it discusses project risk management – how to assess risks and how to mitigate against them – and the activities related to maintaining stakeholder ownership of the project, and Monitoring and Evaluation (M&E).

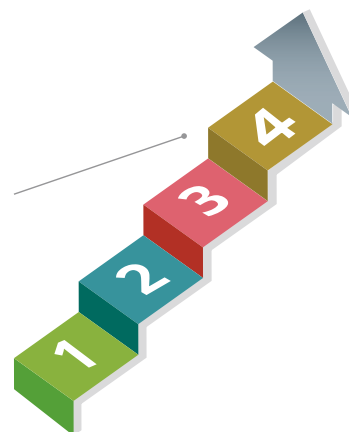
At the project planning stage, it is critical that you assess the risks your project might face, such as

political, financial macroeconomic, environmental, and social risks, and make plans to mitigate against any of these potential risks. Additionally, you will need to design suitable social, environmental and gender plans, as these are integral to the ongoing sustainability and inclusivity of your project, and are required by all ICPs. Lastly, it is critical you also plan how to exit the project, how to ensure that the project outputs are continued even after the project itself has ended.

MODULE OVERVIEW

This module has five sections:

- SECTION 4.1: Project risk management
- SECTION 4.2: Designing and implementing ESS and Gender Plans
- SECTION 4.3: Project monitoring and reporting
- SECTION 4.4: Improving efficiencies in operations and management
- SECTION 4.5: Project exit strategies



Learning Objectives: At the end of this module you should be able to:

- ✓ **Explain** several methods/approaches for managing and mitigating risks in your projects
- ✓ **Explain** the importance of carrying out environmental, social and gender assessments and plans for your project, and how to do these
- ✓ **Outline** the requirements for designing environmental and social plans, (or environmental and social safeguards (ESS)) and gender plans, and explain how they relate to a groundwater project
- ✓ **Explain** and describe the tools to use for M&E, specifically the tools for executing, monitoring and reporting on your project, as well as for improving efficiencies in project management, and accounting for ESS and gender
- ✓ **Explain** project exit strategies and develop these for a groundwater project

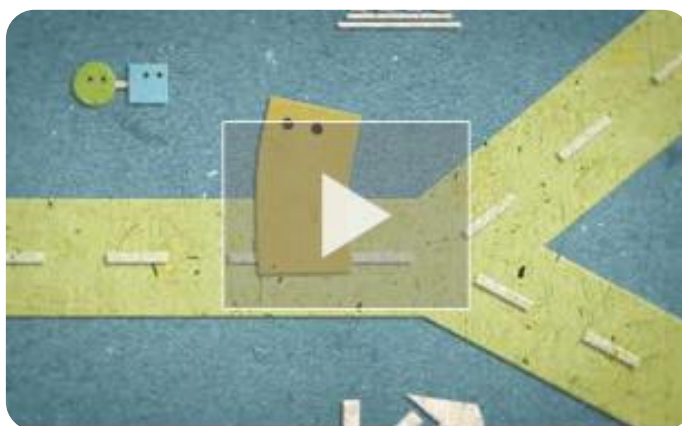
MANDATORY READINGS

1. Exit Strategy and Performance Assessment for Watershed Management: A Guideline for Sustainability. Gete Zeleke
2. Strengthening Climate Resilience in the Kafue sub-Basin (SCRiKA) Project: Training Manual. Petrie et al. (OneWorld). **See page 77 for a Case Study related to decision making around water equality interventions in Mazabuka, Zambia.** Using a Multi-Criteria Decision Making (MCDM) tool helped a group of decision-makers to prioritise interventions ranging from drilling boreholes to forming water management committees.
3. Landscape Vulnerability Decision Support Framework. Petrie et al. (OneWorld). See pages 22-23 for further background on using the 1st-to-4th and the 4th-to-1st Order Impact Assessment Framework for assessing interventions, particularly with how gender relates to building climate resilience (see section 4.1.2 in this module).



ADDITIONAL RESOURCES

1. Please refer to the following for more information on groundwater infrastructure in the SADC-GMI region. SADC-GMI Guidance Document: Operation and Maintenance of Groundwater Schemes [Conor: add live link pls]
2. Video: For an introduction to ESS, watch this YouTube video, which illustrates ESS from the GCF's point of view. [Setter pls add link to Youtube video]



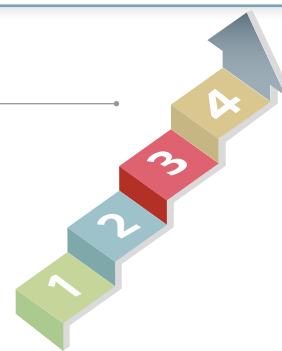
SECTION 4.1: Project risk management and risk mitigation planning

Section 4.2: Designing and implementing ESS and Gender Plans

Section 4.3: Project monitoring and reporting

Section 4.4: Improving efficiencies in operations and management

SECTION 4.5: Project exit strategies



SECTION 4.1

Project risk management

Before examining project risk management there are some key terms you should know.

KEY TERMS

Project Risks

There are a number of internal and external factors which, if they occur, may have an effect on the project. They may impact on the implementation of the project, or may prevent a project from being successful.

Project Assumptions

Assumptions are statements that highlight external conditions which enable the project to make progress. These can often be framed as the positive outcome of implementing risk mitigation strategies. Project planners will be aware of these conditions, but will also know that they are outside of their control.

Project Risk Management

Identifying, evaluating and mitigating against the risks facing a project. It is important to identify all the risks

the project faces, and evaluate these risks in terms of their likelihood and severity to determine and rank the overall risk these pose to the project. Once risks have been evaluated, the risks which pose the greatest threat to the project need to be mitigated against – using a risk mitigation plan – to ensure that the project will be protected against the overall threat.

Risk Mitigation

Risks that pose a significant and likely threat to a project need to be identified and mitigated against. Risk mitigation involves taking pre-emptive actions against the risks a project faces, such that if the risk were to happen, its impacts would be reduced. Risk mitigation is not about removing the risk, it is about reducing the potential impact it will have on the project should it occur.

4.1.1. Introduction to Risks and Assumptions

Even if your project storyline follows a clear intervention logic, with strong cause-and-effect linkages (TIP: Think back to setting up your LogFrame in Module 3), there are always internal and external factors that may prevent a project from being successful. These are known as project risks, or risks, and refer to uncertain events or conditions that, if they occur, can have either a positive or a negative effect on project objectives. It is important to take a step back in the proposal development process and identify relevant Assumptions and Risks pertaining to your project, for it to become a resilient and viable investment in groundwater. This is a critical project planning and design step that must take place before you implement your project.

Assumptions are another way of framing your project risks. They reflect a positive rather than a negative outcome, based on the implementation of your risk mitigation strategies. For example, in the Lilongwe Water and Sanitation Project, a key project risk is

that: The different authorities that need to be involved in the project, with the Lilongwe City Council and the Lilongwe Water Board being key actors, but have had no prior experience of working together.

With this, the policy uncertainty around institutional roles poses a risk to the sustainability of the project outcomes. If the project developer assumes that their risk mitigation strategies, of institutional reform and development, and capacity building, are going to be successful, these risks could be framed as assumptions: The key authorities involved in this project, will be capacitated to effectively cooperate with each other. Their institutional roles and responsibilities will be understood and be clear and distinct.

Thus, you should write your assumptions in such a way that they reflect both the risk and the risk mitigation strategy (or strategies). Together, these form the assumptions of your project.

4.1.2 Types of Risks

There are three main types of risks: internal risks, external risks, and strategic risks, all of which require risk management, or mitigation plans:

- Internal Risks are risks that are controllable or avoidable because they are internal to the project, and that ought to be eliminated or avoided by the proposed project from its conception stage. These are risks that can and should be actively prevented by monitoring operational processes, and guiding people's behaviours and decisions toward desired norms.
- External Risks arise from events outside the project and are beyond its influence or control. Examples are natural disasters and major macroeconomic events, as well as political shifts. Because you cannot prevent such risks from occurring, rather focus on quickly identifying them, and mitigating, or minimising their impact.

- Strategic Risks are risks that are not inherently undesirable. These are the risks needed for the project to achieve the transformative results being sought. The risk outlined earlier (that the City Council and Water Board have never worked together) is an excellent example of a strategic risk. Although it is risky that these authorities have never worked together before, it is desirable that they do, thus enabling one of the key project outcomes, which is an integrated Water and Sanitation Masterplan for the city of Lilongwe.

Strategic risk typically needs a targeted project intervention. In the case of the Lilongwe Project, implementing institutional development and reform, and the capacity building intervention of Component 3 will aid in reducing the probability that the risk results in a negative outcome.

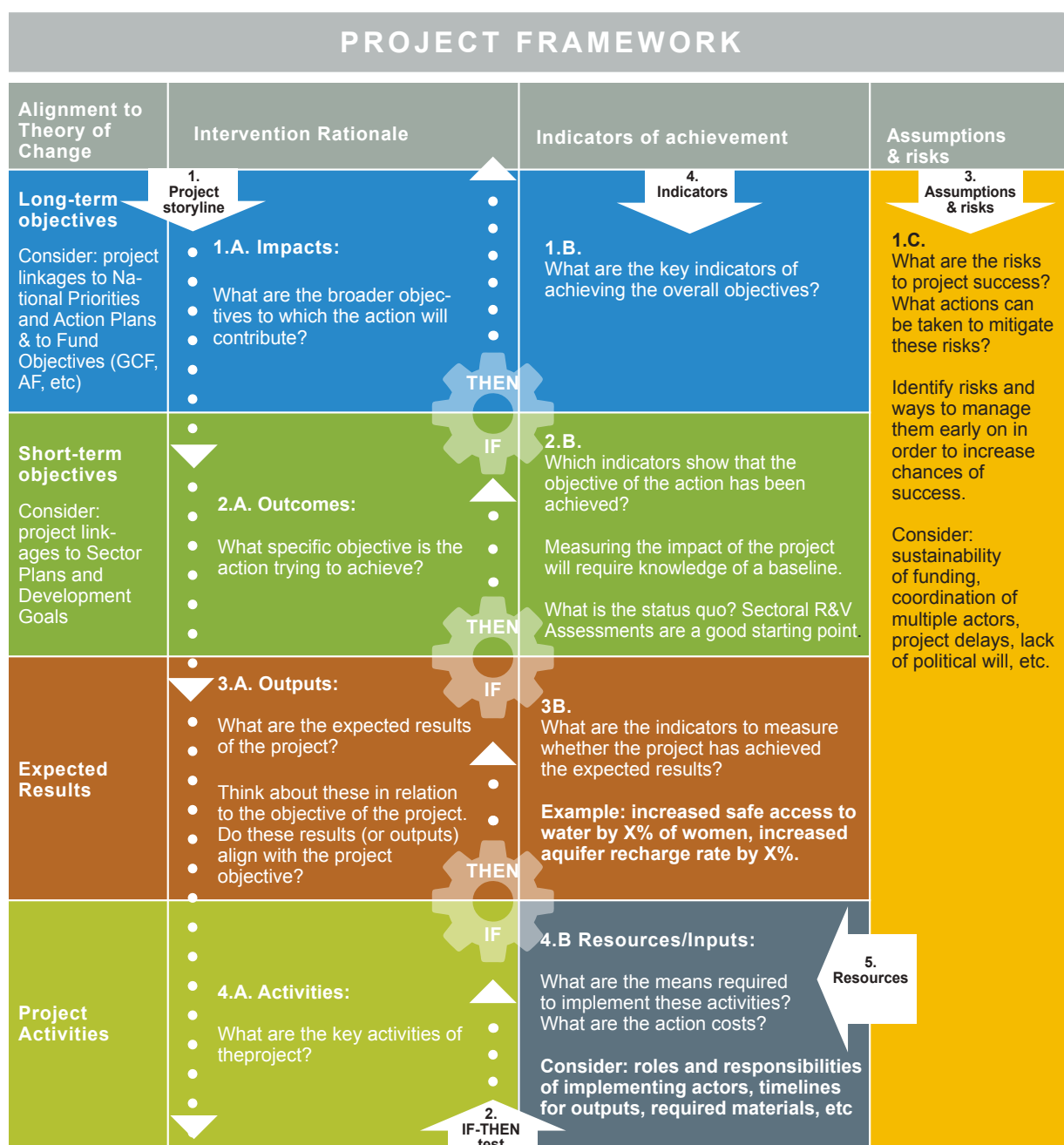
4.1.3 Identify Project Risk using the LogFrame

The LogFrame can help you frame these risks as assumptions. The LogFrame template below, which you are familiar with, builds on assumptions you identified in your Theory of Change in Module 2.

Identifying your project risks and establishing the assumptions which underpin the project, is an important step in your LogFrame development. Module 3 saw you develop these simply, but now you will find out how to classify your risks and assumptions, and develop mitigation strategies as part of your project risk management.



Figure 18. Logframe Template



Source: Petrie B., et al. 2016

Once you have elaborated your Logframe, and the details of the activities, it is now time to assess the financial sustainability, the technical and operational conditions, the social and environmental impacts of the project or any other risks that might prevent the project/programme objectives from being achieved.

The table on the following page reflects risks for the Lilongwe project, against the dimensions of internal, strategic, and external. Applying a risk categorisation matrix like this ensures you think about the extent of risk your project faces. Failure to identify a project risk means you will be unlikely to manage it. In this way, an 'unseen' risk can cause your project irreparable damage.

Table 9. Risk categorisation matrix, example from the Lilongwe Water and Sanitation project

CASE STUDY 4.1

Risks for the Lilongwe Water and Sanitation project

Project dimensions	Types of risk		
	Internal Risks	Strategic Risks	External Risks
Financial	Insufficient financial resources and skills to sufficiently upgrade the distribution system to enable increased construction of water and sanitation supply systems, thus not meeting the project targets.	The key institutions (the Lilongwe City Council and the Lilongwe Water Board) fail to cooperate effectively and their institutional (policy) mandates, prevent them from doing so.	National governance risks which can cause ICPs to withdraw funding (such as the misappropriation of funds).
Technical and operational	Local beneficiaries are unable to contribute to the maintenance of the water and sanitation systems because of lack of capacity and knowledge.	Failure to plan for upgrading local skills to manage and govern the operations of the project for sustainability.	Local technical competence leaves for a career paths elsewhere – external demand
Social and environmental	Governance actions fail to respond to changing conditions (i.e. over-extraction of resource, failure to monitor adequately, failure to act on warning signals).	Failure to produce and implement a monitoring and action plan for corrective actions.	Lack of technical support due to poor access to national databases, or because databases are not well maintained. Exogenous climate hazards such as flooding.
Political	Local political interference in project procurement processes.	Failure by the project developers to anticipate and develop prevention measures against political risk.	Political interference at national level.

To develop an effective and efficient risk management and risk mitigation plan, you must also rank the severity of your identified risks as low medium or high, versus the probability, or likelihood, of their occurrence. This will provide you with an indication of the greatest risks your project faces, which will require the most priority attention in terms of developing specific mitigation measures.

You can see this in the risk assessment matrix here, which allows you to clearly demarcate the risks which should be your priority to mitigate against.

		Severity		
		Low 1	Medium 2	High 3
Likelihood	1 Low	- 1 -	- 2 -	- 3 -
	2 Medium	- 2 -	- 4 -	- 6 -
	3 High	- 3 -	- 6 -	- 9 -

Figure 19. Risk Assessment and Mitigation Matrix



Once you have applied this assessment matrix, you will be better placed to establish your risk mitigation plan against each identified risk and to budget for this plan. Your budget will need to reflect that you

have thought through which risks need the most investment. The most severe and most likely risks will probably require the greatest level of investment.

Table 4.2. Risk mitigation plan

CASE STUDY 4.2

The Risk mitigation plan of the Lilongwe Project

Risks and Risk category	Mitigation Measures
How is the asset impacted? e.g. High, Medium, Low	What will be done to protect the asset?
<p>Political and Governance Risks: High (high likelihood and high severity)</p> <p>There are widespread political and governance risks at both national and local levels.</p> <p>The shortage of potable water in Lilongwe has become a political issue, so a lot of political will has been dedicated to providing long-term solutions to water supply, leading to increased political pressure.</p> <p>Entrenched political interests may impede decision making.</p>	<p>The project is mitigating this risk by building broad public support for the project. The public pressure to improve the credibility of the government is high, so there is greater scrutiny of public sector performance. A communication strategy will be implemented by the Lilongwe Water Board to disclose project information to the public. Additionally, the institutional strengthening of the LWB is a key output of the project.</p>
<p>Macroeconomic risk: Medium (medium likelihood, medium severity)</p> <p>The prevailing fiscal conditions may undermine the achievement of project objectives as it may reduce the available counterpart funds.</p>	<p>The requirement for counterpart funds has been limited to the resettlement compensation costs, which are expected to be relatively minor. Price fluctuations have been taken into account in the project cost estimates.</p>
<p>Environmental Risks: High (high likelihood, high severity)</p> <p>Project is exposed to environmental risks from surface water contamination from the degraded river catchment, as well as from natural disasters in the short term, and long-term climate impacts will affect on water availability</p>	<p>These risks have all been considered in the design of the water supply infrastructure (for instance, flood proof pipes have been identified and will be utilised in the expansion of the water supply network).</p>
<p>Social Risks: High (high likelihood, medium severity)</p> <p>Project interventions will result in negative social and environmental impacts (largely associated with the civil works of the construction phase of the project, which will cause disturbances to residents, traffic, etc.).</p>	<p>Mitigated through the application of standard World Bank safeguard instruments. Safeguard expertise will also be recruited to the Projects implementation unit to strengthen capacity for monitoring the implementation of these safeguards.</p>

Ensuring you explicitly express the key risks your project faces, and how you plan on mitigating these risks is vital to a successful proposal. To understand where this fits with your project proposal,



See: Indicative Proposal Framework
Section 3.4 Project Risks, Monitoring and Evaluation

When you identify the risks to your project, you must think of ways to avoid the risk or manage its impacts

if the risk is inherent to the project. You must include risk mitigation measures that will be put into place to

address each identified risk. In the case study below, you can see how the key risks in the project were addressed.

CASE STUDY 4.3

The Lilongwe Water and Sanitation Project – Risk management

In the Lilongwe Water and Sanitation project, the strategic risk of limited institutional cooperation is highly likely, and the impacts would be severe. Managing and mitigating this risk requires:

- Investment of financial and human resources in institutional development and capacity building will need to be significant. But as a key project intervention, and thus budget line item, this could be a highly worthwhile investment toward long term sustainability of the project and is thus a key risk management or mitigation strategy.
- Moreover, institutional cooperation of this kind, is likely to also negate the possibility of corruption, through inter-institutional accountability.

Gender inequality and negative environmental and social impacts that may arise from your project's implementation are important project risks and need to be addressed. Targeted Gender mainstreaming and

ESS plans are required to ensure that these risks are carefully planned for and mitigated against.

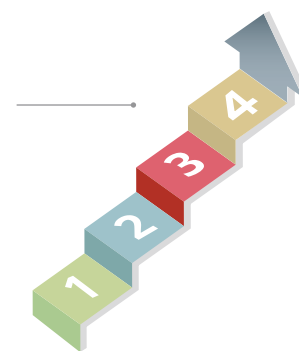
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SECTION 4.2

Designing and implementing ESS and Gender Plans

KEY TERMS

Environmental and social safeguards (ESS)

These are policies, standards, and procedures, which prevent and minimize and/or mitigate any adverse environmental and social impacts of a project, a programme, or an investment. For the World Bank, ESS refers to Environmental and Social Standards.

Gender analysis

A study that carefully analyses detailed aspects of the gender-related impacts, benefits, and mitigation activities of a project, such as targets, inclusion, and opportunities.

Gender Plan

A clear action plan that ensures that the project, programme, or investment proposed is advancing gender equality and reducing the gender gap.

Gender mainstreaming

Considering both women's and men's interests and concerns in policymaking, project development or any other activities related to social development.

An indicator

An indicator is a piece of information you use to measure and indicate the state or level of something (e.g. the number of women with access to clean water), in terms of your project activity outcomes. Indicators are part of an M&E framework, that you use to measure the results of your project activities. A sex-disaggregated target is a project target that is measured for women, and for men, separately, to account for differentiated gender impacts or opportunities. An exit strategy provides a plan for the project once the actual project implementation is complete. It envisions the various scenarios your project will face at its end point.



4.2.1 Why include social, environmental and gender analysis and plans in groundwater proposals?

The purpose of designing social, environmental, and gender plans is to meet the shared, global goals of **sustainability** embodied in the Sustainable Development Goals (SDGs). These aim to achieve universal gender equality, consideration of indigenous peoples' issues and a sustainable environment, amongst others. Furthermore, the quest for inclusive sustainable development necessitates that projects explicitly address the rights and needs of vulnerable groups such as women, children, the disabled, and indigenous peoples. In addition, to achieving Agenda 2030, it is vital to ensure that no one is left behind, on the understanding that this will benefit multiple countries and societies.

In addition, there are benefits for your project in addressing these sustainability issues, such as:

- Indigenous knowledge drawn from engaging vulnerable communities familiar with local contexts and conditions is extremely valuable, but frequently overlooked.
- Research has repeatedly shown that women-led investments (notably in climate adaptation) often yield the greatest returns.
- Overall, indigenous knowledge and inclusion of gender considerations contributes further to the development of community owned solutions – and to stakeholder ownership.

Addressing gender equality and socio-economic risks is key to the viability and sustainability of a project, and projects and investments can directly impact on these

aspects. Some projects directly and explicitly address environmental impacts, in the case of groundwater mapping and ecosystem assessment for instance, but do not seem directly linked to gender equality enhancement or social development. However, in all cases, groundwater infrastructure related projects have impacts (positive or negative) on environmental, social and gender considerations, and these impacts need to be clearly identified for the ICP who will fund a specific of a project or programme. Your social strategy needs to ensure that the impacts of the project are not detrimental to the most vulnerable segments of society, such as women, children and the elderly, or indigenous people. Most importantly, such a strategy ensures that women and the most disadvantaged members of the community benefit from the proposed project.

In summary, ICPs will look more favourably on a development project if there is significant net social benefit and no loss of natural resources. It is therefore important to specify these aspects in your proposal. While an ESS plan could cover gender issues within its risk ranking, in Africa it is of critical importance to give more detail of how the groundwater project will solve at least one of the region's more pressing gender problems (for example improved access to resources, or increased leadership and decision-making power).

The box below analyses the impact of gender equality on water.

Analysing the links between gender equality and water

Gender and water – related to health, education, livelihoods and development

The time spent collecting water falls primarily on women and children and this has potential negative health effects, especially when collection times are high. The physical demands are also very high, entailing for example carrying 20 kg of water, often by head loading, for 30 minutes or more, over uneven, and varied terrain, to and from various water sources. This can result in fatigue, musculoskeletal damage, spinal pain, and early degenerative bone and soft tissue damage (Geere et al., 2010; Graham et al., 2016)

Collecting water takes even longer if there are long queues of people waiting to collect water. The difficulty involved in carrying water means that less water is collected, so less water is available to households. This reduces the amount of cooking, reduces levels of personal hygiene for the household and may increase levels of diseases such as trachoma, which causes blindness (Graham et al., 2016), or increase infant mortality risks. Moreover, the time consumed to fetch and carry water, is time taken away from performing other tasks and activities, such as schooling, especially of young girls, or activities related to livelihoods generation.

Your gender analysis should assess and quantify (using scientific data) the situation of women before the project (the baseline), according to your chosen indicators (such as distance to reach a water source). You then analyse the impacts your project will have on women, because of your project.

4.2.2 Planning for ESS and Gender

Figure 20. Stage 2 The Feasibility Component includes an Environmental and Social Impact Assessment

In pursuit of the sustainability goals, ICPs require that projects adhere to and implement their ESS standards, and gender and indigenous people's policies in all proposals, and in project design and implementation documents and features. An Environmental and Social Impact Assessment (ESIA) is an integral part of the feasibility component of your project proposal in ensuring your project meets ESS standards.

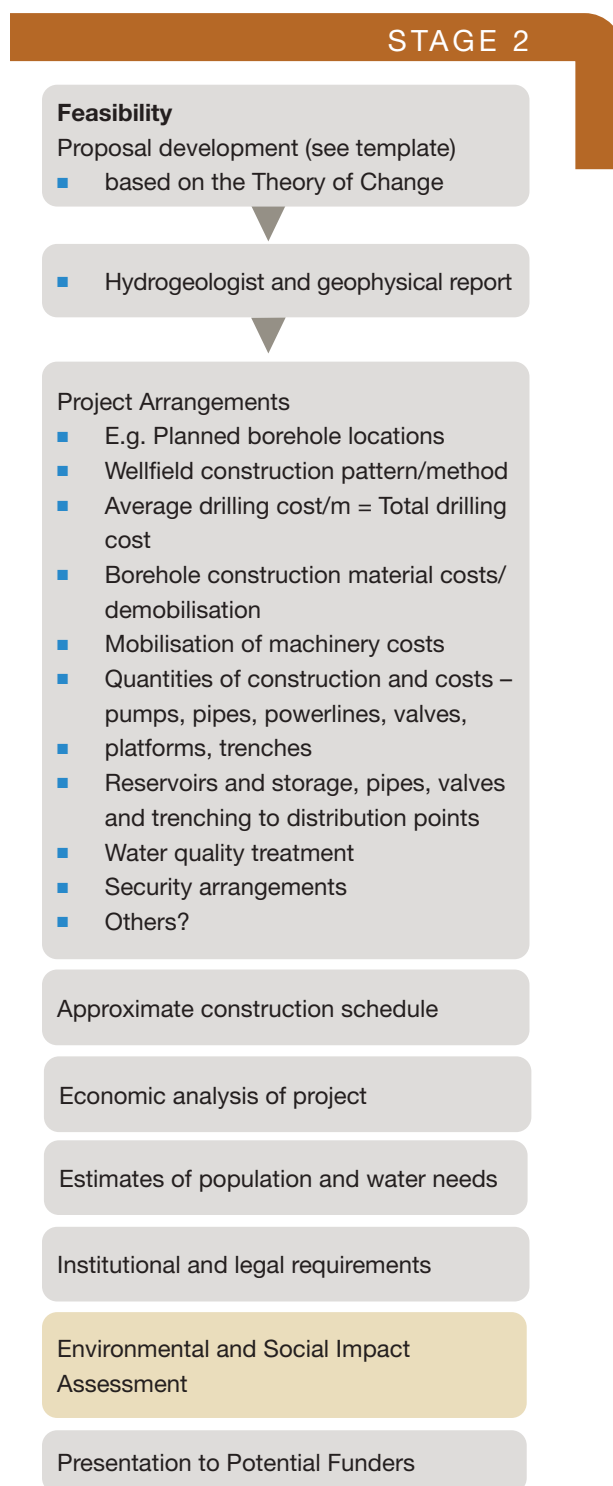
specifics of what goes into the ESIA differs between various ICPs, however, fundamentally your ESIA should contain the following:

- Project description
- Analysis of relevant policy, legal and administrative framework
- Stakeholder identification, analysis and consultation
- Environmental and social baseline
- Assessment of environmental and social impacts
- Analysis of alternatives
- Environmental and social management plan, including a mitigation plan

For instance, the World Bank has an Environmental and Social Framework (which you can access [here](#)), which provides 10 (ten) Environmental and Social Standards, applicable to various environmental and social aspects which may your project may involve. The Bank's first Environmental and Social Standard, ESS1, the Assessment and Management of Environmental and Social Risks and Impacts, is particularly relevant for ensuring projects are environmentally and socially sound.

The International Union for Conservation of Nature (IUCN) has a useful Guidance Note on ESIA's, which you can refer to [here](#).

Tip: Stakeholder engagement is critical in designing these aspects of the project. Gender Plans and ESS cannot be designed or implemented without involving the concerned stakeholders. From inception through policy development, implementation, and monitoring, ESS and Gender Plans will emanate from stakeholder engagements and be driven by the impacts your project aims to achieve.



4.2.3 How should you approach gender in your proposal?

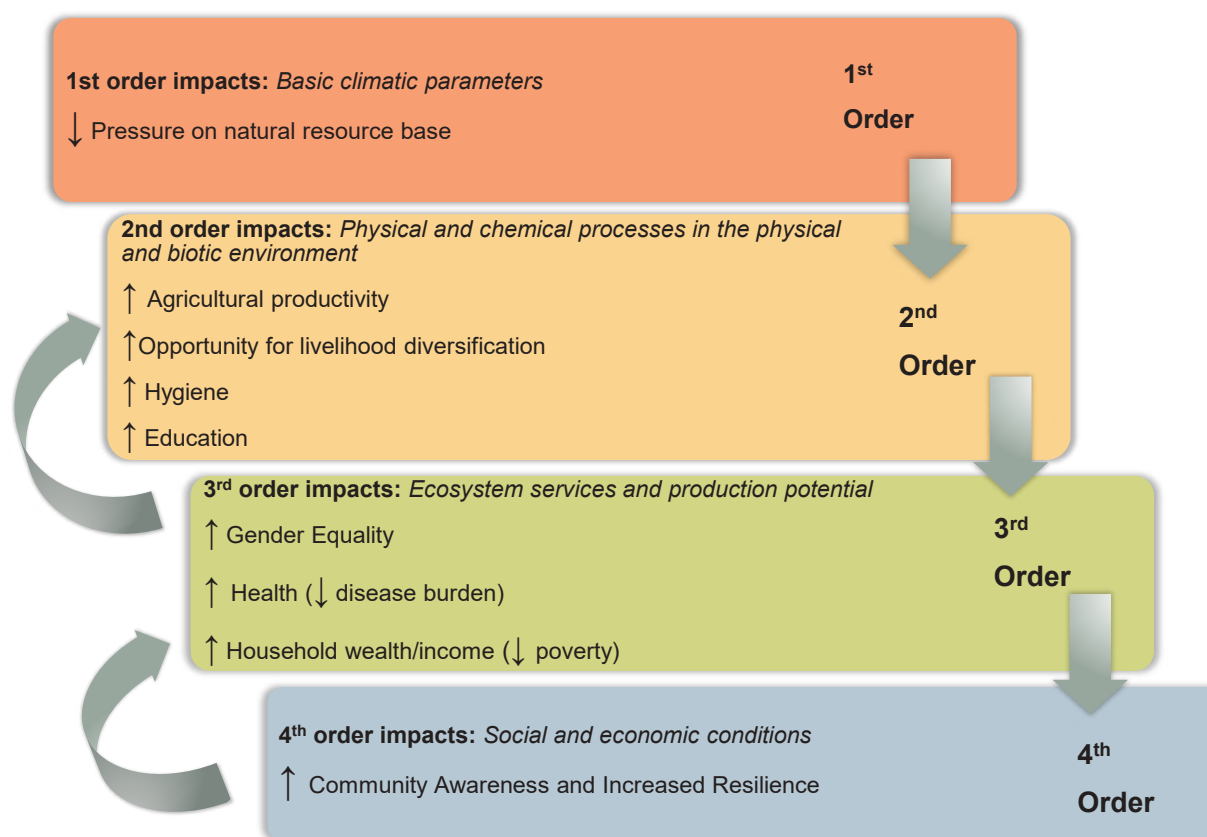
Gender equality can be a highly disputed indicator. To see just how gender equality impacts adaptive capacity, you can utilise the 4th-to-1st Order impact assessment framework, (below) for gender equality. This model begins at the bottom, with the desired impact or intervention - in this case, community awareness and increased resilience - and then flows through the resulting outcomes of changing the level of gender equality. As the intervention takes effect, feedback is expected - for instance improving community awareness and increasing resilience at a societal level will improve the health of people, which in turn can provide a boost the agricultural productivity of a community. At the same time, a boost in agricultural productivity will lead to greater household income, which can lead to greater community awareness as behaviours are reinforced.

In the figure, the up arrows (▲) indicate an increase in the factor; the down arrows (▼) indicate a reduction in the factor.

The figure also shows how increasing community awareness of gender roles, and increasing the gender equality targets, can lead not only to improved gender equality, but too much improved climate resilience. Improved gender equality in the form of equal sharing of household workloads and associated benefits and risks, leads to numerous benefits, as shown in the 3rd and 4th orders. These benefits include increased agricultural productivity, better hygiene, higher education levels and better opportunities for livelihood diversification.

These impacts ultimately result in improved health and household income indicators, as well as a decreased reliance on natural resources. These positive outcomes contribute towards improved adaptive capacity and lower vulnerability to climate change.

Figure 20. 4th-to-1st Order Impact Assessment of Increased Gender Equality



Source: Petrie et al., 2018

Conducting a gender assessment

The assessment is carried out at the project preparation stage (identified in the concept note and carried out during the proposal development stage), as it informs the final proposal you will submit.

The gender assessment should include:

1. a snapshot of the current (pre-project) gender equality situation in the region, country, or project area;
2. the opportunities to bring about positive change for both women and men because of the project;
3. the gender-responsive activities the project will undertake;
4. the relevant gender-performance indicators (indicators that allow the measurement of the impact (negative and positive) of the project on men and women);
5. sex-disaggregated targets (e.g. how many women will benefit from this project? How many men?);
6. the timelines and responsibility for conducting and reporting on these activities; and
7. a budget against each proposed activity (this applies to the ESS and the gender plan).

The gender analysis should answer specific questions regarding the gender distribution of benefits, as outlined in the box below. ICPs require gender-specific (or gender-differentiated) data.

Gender analysis: Typical questions to be answered in a structured proposal

- Will the project have positive or negative social impacts? Give details
- Might there be any unintended negative social impacts? Explain. (This might include the need for resettlement, for example.) How will these be mitigated? (For example, using social safeguard instruments, such as the World Bank safeguard policy on involuntary resettlement)
- Who benefits from the proposed project? Which women and/or children or men benefit? Who may lose? (Give numbers of men and of women and of children, each separately)
- Have the different groups (women and men) been consulted (separately) about the project? What are the findings? (Note that it is important to consult women and men separately in cases where women are not comfortable speaking in the presence of men.)
- Are there options for encouraging women to participate in the project construction? Describe options and how women participate.
- Who controls the resource(s), services, and decision-making? Are women involved in control and decision-making, and do they have access to the services provided?
- Does the project alter the existing division of tasks, responsibilities and resources among men and women? How and how much?

Source: modified from EIGE, 2020

4.2.4. Mainstreaming Gender and ESS

Based on the results of your analysis, you can develop your gender and social assessment required by ICPs. You must include your gender and ESS assessment, as well as a gender mainstreaming action plan and/or an action plan for ESS, with your funding proposal.



Ensuring you effectively mainstream gender and ESS into your proposal is vital, See: Indicative Proposal Framework Section 3.3 Implementation Plan

The case study below demonstrates a successful approach to mainstreaming gender and actioning ESS.



CASE STUDY 4.3

Mainstreaming gender and ESS in the Lilongwe Water and Sanitation Project

As discussed, the main objective of this project is to improve the water security of Lilongwe. As the project is being implemented in residential areas in the city, including peri-urban areas where water and sanitation services are poor, the social aspects are an important consideration. The project is anticipated to generate positive social impacts, whereby 500,000 people in the city will gain access to improved water services and sanitation. Any negative social impacts will be mitigated using the World Bank's social safeguard instruments.

Similarly, the project is expected to have positive environmental impacts, with investments in sanitation expected to reduce the levels of sewage which end up in the environment. This is anticipated to reduce the groundwater contamination. There are negative environmental impacts expected because of construction, however these will be small scale and temporary in nature. The environment will also be safeguarded through compliance with the World Bank's environmental safeguard instruments.

The project appraisal document outlines how the project addresses gender dimensions within the project design and throughout its implementation. One of the objectives of this project is to identify and integrate interventions to provide gender responsive and transformative results. Therefore, the project description outlines the environmental and social safeguards, as well as impacts of and on gender equality, and includes these aspects in various parts of the project document.

Addressing Gender Gaps through Gender Differentiated Targets

To ensure that women reap the maximum benefit from the project, and to address existing gender gaps, particularly in employment, the project is addressing two key gaps: women and young people are disproportionately unemployed; and lack participation and representation in decision making on water and sanitation at the utility level. The project will track beneficiaries using gender-disaggregated data. Firstly, the project will encourage contractors to train and employ women and youths in the design and construction phase (with a target of 50% female staff trained). Second, career training will also be provided through the utility to increase women's participation, decision making and capacity, in the utility (with a target to increase female staff in decision making roles from 10% (baseline) to 30% at the end).

The lead implementing agency (the Lilongwe Water Board) is responsible for managing and implementing the project, and for results monitoring and evaluation of safeguards.

4.2.5 *The entry points for mainstreaming gender in different parts of your project*

Now let us look at where and how you can mainstream gender into the various parts of your project:

Stage 1: Scoping

- The project objectives and project concept note Consider how gender is/is not an integral part of your project objectives against the baseline you established earlier where you took environmental, social and gender considerations into account. If one or more of your objectives is to alter the status quo, or baseline considerations, through progressive gender differentiated outcomes, then these objectives should be clearly articulated right from the concept note stage and throughout your proposal.

- **Project rationale**

The rationale section of your concept note, and proposal should highlight the differentiated levels of vulnerability of the project beneficiaries, according to gender roles. Vulnerability is not the same for men and women (for example, women are often responsible for household duties such as fetching water). The project therefore needs to address the beneficiaries'/recipients' needs accordingly and build adaptive capacity and resilience, while acknowledging and addressing the gender gap.

For instance, you will need to say that your project will affect XXX number of women by reducing the amount of time they will spend on carrying water.

- **Sustainable development potential**

The sustainable development potential includes the environmental, social, and economic co-benefits (additional, indirect benefits) of the project, as well as the gender-sensitive development impact. This means that your proposal should state how the project addresses gender equality and how this contributes to the sustainable development trajectory of the community and the country.

Box 4. Gender equality in the Project exit strategy

Stage 2: Feasibility

- **Feasibility study, Theory of Change and Logframe** The feasibility study component of your project proposal should include an assessment, integrated throughout this component, of how you will practically achieve your gender objectives as articulated in your concept note, project rationale and project objectives. The practical pathways your outline in your feasibility study should then be captured in your project Theory of Change and Logframe, while also feeding into the M&E plan and your results framework.

- **Monitoring and evaluation plan and results management framework**

The M&E and reporting system, and results framework needs to be gender sensitive and must include monitoring of environmental impacts. In other words, you need to break down the indicators you will use for M&E into gender-differentiated targets in your results framework, and then you will monitor and report against these throughout the lifecycle of your project. It is important to note that the project governance structure, such as a project steering committee, is responsible for overseeing performance against the project's results based framework, while the project management structure, for example the project implementation unit is responsible for conducting the M&E and reporting against the results based framework, including of ESS and Gender.

- **Exit strategy**

Considerations around gender equality, and gender roles, gathered from the gender analysis, inform the proposal and are woven throughout, from the executive summary to the link to the ICPs' investment criteria, and the project exit strategy. The project exit strategy involves building capacity in the local community, to make the project sustainable once project activities have ended. Gender and gender equality need to be included in the project exit strategy too.



4.2.6. *Environmental and Social Safeguards (ESS):*

CASE STUDY 4.4

Including gender equality in the Lilongwe Water and Sanitation Project

Gender Equality dimension:

The LWB conducted a specific gap analysis to understand which issues may prevent women from benefitting from the project. The results show that women and children disproportionately bear the burden of a lack of access to improved water services as they are largely responsible for the collection of water for households. Women also disproportionately care for children who have contracted an illness from poor sanitation and water access. Women and the youth disproportionately access fewer jobs and opportunities in the water and sanitation sector. Lastly, there are gaps in women's participation and representation in water and sanitation in decision making at a utility level.

The project explicitly aims to close specific gender gaps to ensure women fully benefit from the project, and that these benefits accrue once the project has concluded. Project beneficiaries will be tracked using gender-disaggregated data, to ensure women are benefitting from the project. To address these issues and gaps, the project will monitor benefit flows to women by collecting gender disaggregated data on project beneficiaries. This information will be used by the project implementing agencies to enhance gender inclusiveness. The expected result is that as more households gain access to water and sanitation, there will be benefits to women who will not have to collect water or care for the sick. This is specifically referred to in the Results Framework, where 50% of the people receiving improved water services, and 50% of those gaining access to sanitation services will be female.

Additionally, the project will focus on addressing two gender gaps (1) the lack of access to jobs and employment opportunities in the water and sanitation sector for women and youth, and (2) the gaps in women's participation and representation in water and sanitation decision making at the utility level. Also, project contractors will be encouraged (through relevant contractual provisions) to engage women and youths in project design and during the construction phase and provide them with training opportunities (for opportunity post the project). 50% of the staff trained under the project will be female, according to the Results Framework.

Lastly, the project will, specifically through Component 4: The Institutional Capacity Strengthening, support the utility to provide career training and increase the capacity of women in the utility, by improving the percentage of females in decision making roles from 10% to 30% by the end of the project. Once again this will provide lasting impact after the project concludes.

As a result, the project interventions will allow for the various gender issues to be addressed and monitored, which will have lasting benefit for gender inclusiveness after the conclusion of the project.

All these gender-differentiated targets are part of the Results Framework, which is discussed later in the module. These targets should form part of your project's results framework too, which will help monitor the success of these actions.

Categorising risks to your project

A groundwater project needs to specify what environmental and social safeguards (ESS) are in place or will be instituted if a project takes place. The ESS plan needs to identify any risks to environmental and social assets and then specify what precautions the

project will take to prevent the assets being damaged by the project, as shown in the table below. Remember to refer to the risk matrix to categorise these risks, and mitigate accordingly.

Table 10. ESS risk categorisation template

Asset at Risk	Risk category	Mitigation option
	How is the asset impacted? e.g. high, medium, low	What will be done to protect the asset?
Biodiversity, Ecosystems and Natural Habitats		
Local water resources availability and quality		
Groundwater quality		
Involuntary resettlement / displacement		
Cultural Heritage		

Source: modified from FAO, 2015

In terms of ESS there are good international industry practices you could follow, with relevant guidance. At a minimum, a groundwater infrastructure project should be motivated and supported by the following:

1. A Stakeholder Engagement Plan and Project-Level Grievance Redress Mechanism. These aspects provide for stakeholder engagement consultations related to the process for assessing and managing environmental and social risks and impacts. This includes obtaining free, prior and informed consent (FPIC) from the stakeholders to take part in the process.
2. Environmental and Social Risks Screening: This is a process to rapidly assess the main risks of

environmental and/or social impacts from the investment in groundwater infrastructure.

Once you have covered the aspects above, and assessed the risks, you might need to design a mitigation plan, according to the severity of the impacts assessed.

Please note: In most cases, you will need a Water Usage License to conduct the groundwater activities related to your project. These licenses will have their own requirements, such as additional specialist studies to assess the site conditions and the impact of on-site sanitation on groundwater resources, as well as the definition of buffer protection zones

4.3 Project monitoring and reporting

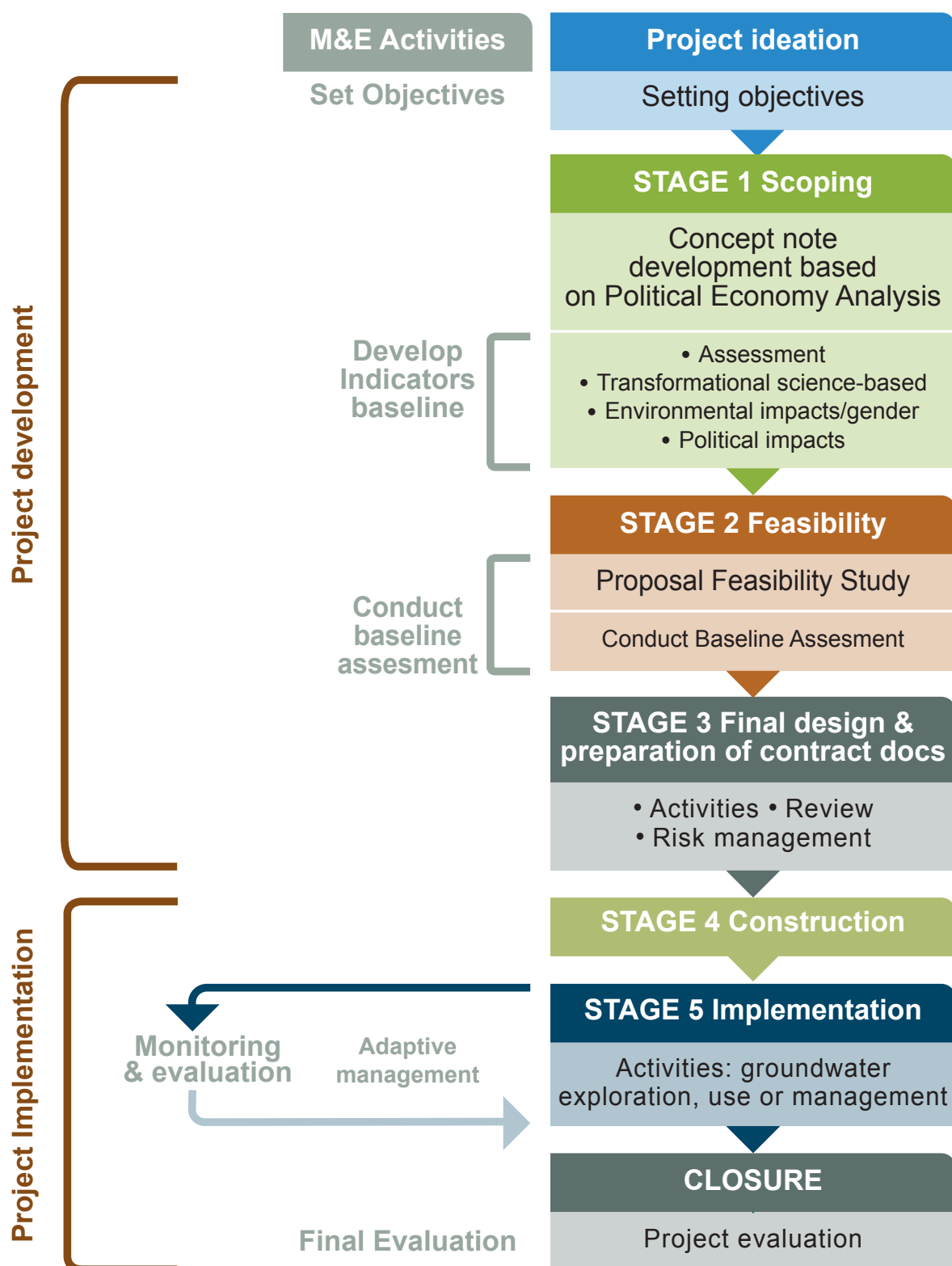
M&E activities, as well as the reporting requirements related to M&E, are an important component of a groundwater project or programme. It is difficult to know if programmes and investments are viable or potentially successful if the expected results are not clearly laid out and measurable.

As a continuation of your project LogFrame, setting up indicators is a critical step to project monitoring and ESS and Gender reporting. The figure illustrates the processes involved in M&E activities within the project lifecycle.

Figure 21. M&E activities in a groundwater project



Source: Adapted from Petrie., et al. 2016.



4.3.1 Monitoring and reporting

Monitoring and reporting should be part of a system that includes all aspects of operating and maintaining a water supply scheme. Monitoring should focus on

- groundwater parameters,
- the implementation of gender mainstreaming,
- ESS implementation, and
- the infrastructure to ensure proper functioning (SADC-GMI, 2019).

Good M&E frameworks help to develop sound monitoring and evaluation plans and implementation of monitoring and evaluation activities. They articulate programme goals and measurable short, medium and long-term objectives, clarify the relationship between programme activities and external factors, and demonstrate how activities will lead to desired outcomes and impacts, especially when resources are not available to conduct rigorous impact evaluations. Such M&E frameworks often display relationships graphically.

The benefits of a strong M&E framework include the following:

- If you define precisely what your programme or investment will achieve, and by when, you will be able to keep sight of the objectives of the project, track progress, monitor its advancement, re-adjust the course of the project and communicate the results of the investment.
- Planning M&E activities throughout a groundwater project, programme or investment helps you to progress toward those objectives and assists you with adjusting and managing the programme during its implementation (you can see how and where this happens in the previous figure M&E activities in a groundwater project).
- A well-thought-out M&E framework is imperative for thinking through programmatic strategies, objectives, and planned activities, and whether they are really the most appropriate ones to implement.

4.3.2 Develop indicators as metrics and measures of your M&E framework

You can use the LogFrame to help you design your M&E framework and decide on the indicators that will allow you to measure the progress and impact of your project. This is the fourth step of your LogFrame development (as seen in Module 3). See Figure 21 below.

In each cell of Column B (Indicators of Achievement), with the exception of cell 4.B., you will need to identify measurable and verifiable indicators of achievement. These should be listed for each row for long-term Impacts, short-term Outcomes, and project Outputs. A good indicator will be directly tied to the objectives in Column A.

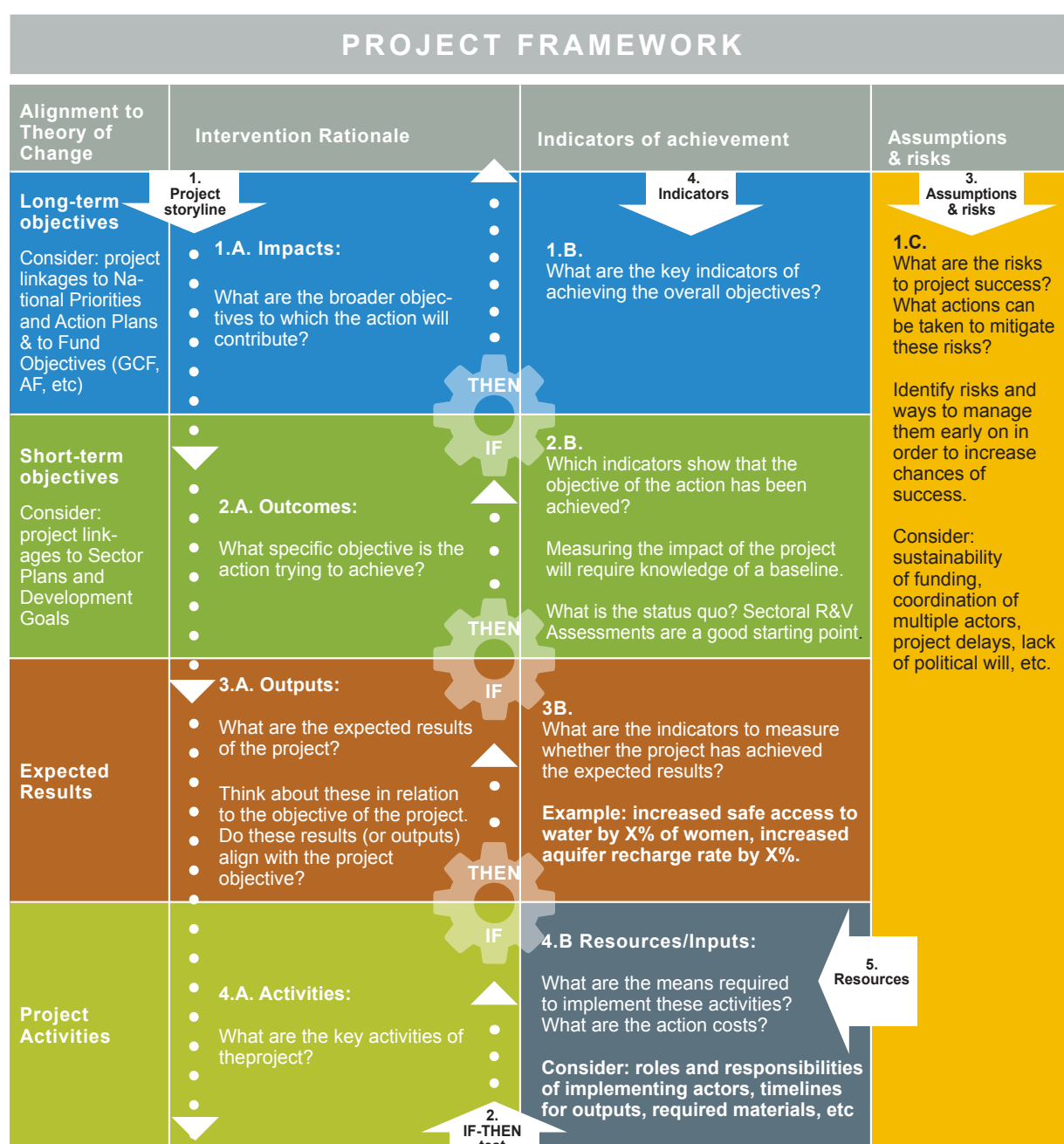
Note that it is easiest to begin at the top – cell 1.B. Indicators for this cell will be tied to long-term objectives of an overarching programme, vision, or strategy. For this reason, indicators for success are often already established in existing documents and will include targets and timelines that extend past the lifecycle of this project.

Indicators describe what will be measured, within your M&E framework. To be able to measure results effectively, indicators need to be **SMART**: specific, measurable, achievable, relevant and timebound, as shown in the box below. Basic indicators can describe quantity, quality, and/ or timeframe of achievement.

Figure 21. How the Indicators are set up in a LogFrame



Characteristics of Effective— or SMART —Indicators



- 1. Specific.** Indicators should reflect simple information that is communicable and easily understood.
- 2. Measurable.** Are the changes objectively verifiable and measurable? For example students' learning achievement can be verified with test results; the value of land can be verified by the number of hectares, multiplied by price per hectare; or the number of beneficiaries in a project can be verified using the percentage of customers who are satisfied with the availability of potable water or electricity.
- 3. Achievable.** Indicators and their measurement units must be achievable and sensitive to change during the life of the project.
- 4. Relevant.** Indicators should reflect information that is important and likely to be used for management or immediate analytical purposes.
- 5. Time bound.** Progress can be tracked at a desired frequency for a set period of time.

Source: World Bank Group

4.3.3 ESS and gender metrics and measures of your M&E framework

You need to incorporate ESS and gender metrics in your groundwater project, across the various levels of impacts in the Theory of Change (**Tip:** Refer to your Module 2.2: Theories of Change). This will allow you to fully understand and measure the impacts and viability of the project you are developing into a proposal (see the table below).

Table 11. ESS and Gender Metrics aligned with the Theory of Change components

Theory of change component	LogFrame component	Example of indicators	ESS and Gender indicators example
Inputs	Resources	Amount of investment, person/month (rate/hour) needed Type of technical capacity needed Institutional capacity needed	
Activities	Activities	Existence of a coordinating body to supervise the groundwater resource management (policy, M&E) The coordinating body has sufficient authority and resources to be efficient	Parity (gender equality) levels in coordinating body e.g. 50% female Gender-bias in distribution of powers (e.g. Do men have more decision-making power than women in the community? How are these powers given effect?)
Output	Output / Project Results	Reports and mapping documents Database for M&E data gathering Amount of water yielded	Disaggregated data (e.g. number of women in decision-making positions in a water utility; number of women with access to clean potable water)
Outcome	Project Outcome / Purpose	Groundwater mapping and assessment, M&E of the aquifer (including M&E of the recharging ecosystem) is set and functional, baseline is established. Collaborating bodies are established and manage water resources in an integrated manner.	Extent to which vulnerable households, communities, businesses, and public sector services are included in the assessment (use of disaggregated data)
Impact	Project Goal/ Programme Objective	Groundwater resources are understood and managed using IWRM approaches. Conjunctive use of water is enhanced.	Impacts of this project on gender equality (reduction of the gender gap) Number of direct and indirect beneficiaries, disaggregated by sex and income level. Reduction of social and gender-related and climate-related risks due to the project

4.3.4 M&E Framework

Each of your project indicators must then be assigned to a specific project stakeholder, to ensure it is reported on, and that someone is accountable for it, including the ESS and gender indicators.



Reporting responsibilities

Each reporting entity will be expected to prepare or contribute to the logic model (the LogFrame) and will therefore contribute to the overall aims and goals of the investors or ICPs, who agreed to fund a project.

This is on the basis that the Theory of Change and the LogFrame were aligned.

Once finished, the reporting framework of your project, with which you will measure the progress of your project, will look like this:

Indicator description line	Expected Results	Indicators	Baseline data	Targets	Data Sources and Collection Methods	Frequency	Reporting Responsibility
A brief description of the indicator	The results you set in the LogFrame	The indicators you decided on	What is the pre-project situation	Set target you want to achieve with your project	How do you collect the data, where is it coming from?	When do you collect data?	Who is responsible for collecting data?
Explanation	e.g. Increased access to improved water services	e.g. Number of women receiving improved water services because of the project	0	Example: 4,000 (mid-term) and 8000 (final) direct male and female beneficiaries (50% women and 50% men) benefiting from improved water services	Surveys; monitoring and evaluation reports	e.g. mid-project	e.g. Executing Entity
	Increased employment of women and youth in the sector	e.g. Number of women and youths trained during construction phase					This indicator measures the number of women and youths who receive training during the construction phase

Example from the case study

4.4 Improving efficiencies in operations and management

Groundwater infrastructure may consist of wellfields, water treatment systems, a reticulation system, storage infrastructure, and in some cases provision for a managed aquifer recharge scheme and a monitoring

network for the developed wellfield. Wellfields can be developed for any production water supply, such as agricultural irrigation, mining, or rural water supply.

4.4.1 *Groundwater infrastructure operation and maintenance in rural and urban areas*

A groundwater infrastructure system ranges from a handpump-equipped borehole to more complex schemes consisting of a borehole, pump, disinfection system, a distribution system and storage. The more advanced the groundwater system and water supply scheme, the more advanced the organisation and management of the resource will need to be. This requires capable local institutions and water governance arrangements.

You need to describe the specific operation and maintenance tasks (preventative and breakdown) which need to be carried out to keep a groundwater source functional, in your proposal. Examples are servicing, repairs, replacement of parts, complying with pump duty cycles or maximum yields, testing, and so on. This will add to the sustainability aspect of your project offering, and ICPs need to see these steps are in place such that after implementation the infrastructure will not be wasted.

Additional reading

- Please refer to the reading below for more specifics on groundwater infrastructure in the SADC-GMI region.
- SADC-GMI Guidance Document: Operation and Maintenance of Groundwater Schemes

4.4.2 *Green infrastructure operation and maintenance*

In the water sector, and with groundwater in particular, green infrastructure refers to methods of managing the landscape that conserve water in the landscape to encourage infiltration. It means managing the landscape in ways beneficial to aquifer recharge and storage. This implies maintaining an adequate vegetative cover to inhibit surface runoff, which includes maintaining a substantial litter layer through grassland preservation and an optimal tree coverage (Ilstedt et al., 2016). The approach is most appropriate to regions which receive most of their rainfall through high-intensity storms.

Just as importantly, certain types of vegetation should not be allowed to grow in recharge zones, such as specifically invasive alien species (Dzikiti et al., 2017, 2013) (or Mesquite). Some invasive species have long tap-roots and are able to extract water from 10 m and more and can therefore have a significant impact on groundwater reserves as well as recharge (Le Maitre et al., 1999) because of its direct and indirect influence on recharge and because of the dependence of vegetation communities on groundwater. Despite this, groundwater and surface water have traditionally been treated as separate legal entities in South Africa

and scientific disciplines have also tended to view them as separate, or at least separable, hydrological systems. This situation is beginning to change as South Africa's new Water Act recognizes them both as inseparable elements of the hydrological cycle. The Act also requires that water resources be managed sustainably and a much greater understanding of these interactions is needed to meet this obligation. This paper provides a review of what is known about groundwater – vegetation interactions based on local and international literature and on information from the “grey” literature and unpublished sources. Changes in vegetation cover and structure, particularly from low vegetation such as grassland to tall vegetation such as a forest can have a significant impact on groundwater recharge by altering components of the hydrological cycle such as interception and transpiration. Recent research has shown that root systems often extend to more than the 1 m maximum used in defining agricultural soils and frequently to more than 10 m deep where the physical conditions permit root penetration. Woody plants have the deepest root systems and are capable of extracting large volumes of water from depths of 10 m or more. In South Africa the impacts of vegetation changes on base flow or



groundwater have been documented in both humid and sub-humid catchments but the greatest changes in groundwater levels have followed type conversions in semi-arid savanna and on the coastal plains of Zululand. Transpiration of water by plants accounts for about half of the largest changes in the water balance associated with vegetation type conversions.

Many plant communities, particularly those of wetlands and riparian strips are highly susceptible to changes in the depth to the groundwater, both annual and seasonal. The rate of change (positive or negative and discharge, which can affect stream flow. It is therefore important to understand the role of vegetation in the groundwater landscape as some vegetation types are seriously harmful, particularly in

sensitive aquifer systems, having ecologists as part of the project team will help.

Other green infrastructure approaches are to reduce pollution of surface water, especially in recharge zones through proper waste management, including preventing contamination of groundwater by pit latrines and septic tanks and other sources of surface water pollution (Dzwairo et al., 2006; Graham and Polizzotto, 2013) on-site sanitation is preferred to off-site sanitation and groundwater is the main source of water for domestic uses. Groundwater pollution potential from on-site sanitation in such areas conflicts with Integrated Water Resources Management (IWRM).

4.5 Project exit strategies

4.5.1 Types of exit strategies

As in all projects - small or large, personal, or professional, groundwater or forest conservation related - you need to plan for the start as well as the end of the project. In doing so, you can envision your intervention from start to finish and plan for the various scenarios your project will face at an end point. You also need to consider the timeframe – will this project continue for decades? Why is that? What justifies this length, and what would happen at the end of this period?

In principle there are two kinds of exit approach: phase out and phase over.

- Phase out refers to the withdrawal of project inputs or support without making explicit arrangements for inputs or activities to be continued. At this point in time, the inputs will not be provided anymore, and the project will end. The activities will cease, and a few events can follow the end of activities: releasing staff and equipment, informing stakeholders of the closure of the project, handing over the deliverables to your beneficiary or client, cancelling supplier contracts, and so on.
- The phase over approach refers to an exit strategy where the objectives, the inputs and/or the outcomes of the projects are transferred to the stakeholders or beneficiaries involved. Given the required transformational nature of

developmental projects, the project should result in changes that are likely to be sustainable without continuity of support or arrangements.

Given the nature of the water resource and of groundwater management, being a continuous process, there are always more activities to be carried out by communities, local authorities, entrepreneurs, activists, government representatives and technical analysts, to enhance integrated water and groundwater resource management.

Ways of ensuring good, phase-over exit strategies are rooted in the legitimacy of the project from its project design. For the enabling environment surrounding the project to ensure that the stakeholders involved are supportive of the continuation of the project, the following must happen:

- Stakeholders are on board: private sector, NGOs and CSOs, government and research institution/s are involved in the groundwater project, its design and implementation, to ensure a sense of ownership and increase the sustainability and viability of the project.
- The project must be based on a consultative process initially, as well as an initial feasibility study. Thus, the project is rooted in both community support, and science and can prove its potential success.

- The project is anchored in an existing and perennial institution. If this is not the case, then

you will need to define the financial and legal sustainability of the project in some other way.

4.5.2 What do exit strategies look like in groundwater projects?

To ensure a phase over exit strategy in a groundwater project, and ensure that the stakeholders and the project remain and have positive impacts in the future, you can consider some of the following activities:

1. Financial involvement of all parties: co-investments by government institutions and communities. The project leverages domestic co-financing in the form of government financing, and business models include community and beneficiary level engagements.
2. Provision for skills transfer
3. Summary on gender equality dimension: This states the outcomes of the project, as assessed in the Gender assessment or analysis. States the

positive impacts and their relation to project sustainability; or states the negative impacts and mitigation plans.

4. The training and upskilling of communities: Community based projects will often require some form of training provided to the community members to ensure they can continue benefitting from the resource. Involving the community in the project implementation is a useful mechanism for ensuring this upskilling so the positive effects of the project continue. This community buy-in can ensure the sustainability of the project.
5. Technology sustainability assessment.

Discussion Forum / Reflection

After reviewing this module's content as well as the mandatory readings, please reflect on the following questions (and/or share your thoughts with your fellow participants):

1. Go through the Impact Assessment on increasing gender equality above, to see how it works and discuss this with other participants.

2. Now consider your groundwater project, and draw up a 4th-to-1st order impact assessment, to see how increased gender equality will affect the project. Discuss or make a note of your findings and thoughts.



MODULE QUIZ

The **module quiz** below allows you to assess the knowledge you gained over the course of this module.

Instructions

- Please read each question carefully, and then read the answer option(s).
 - Be aware that some questions may have more than one correct answer.
 - When you have a clear idea of the question, select the correct answer(s) from the list.
 - ✓ Single choice: Only one option is correct (including the option "all are correct")
 - ✓ Multiple choice: Two or more options may be correct responses.
 - ✓ True / False
1. A robust M&E system includes
 - a. A clear M&E plan
 - b. Indicators that are specific to the project and its components
 - c. An ESS and gender action plan
 - d. Disaggregated indicators (by gender, age, location)
 2. Which of the following risks are preventable? (select all answers which apply)
 - a. Insufficient financial resources to complete the project
 - b. ICPs withdraw before the project has achieved milestones
 - c. Political interference at national level
 - d. Failure to act on warning signals
 3. True or False. Environmental and Social Safeguards (ESS) do not need to be considered in a project proposal, because a project does not have to necessarily be sustainable.
 - a. True
 - b. False
 4. When should an exit strategy be set up?
 - a. At the onset of the project
 - b. During the project
 - c. By the end of the project
 - d. An exit strategy is not needed
 5. Which types of indicators should you use when developing indicators for your M&E system?
 - a. CLEAR: Considerable Low-impact Equal Achievable Relevant
 - b. SMART: Sustainable Monitoring and Reporting Techniques
 - c. NEAT: Nature-Based Explicit Accurate Time Bound
 - d. SMART: Specific, Measurable, Achievable, Relevant, Time Bound
 6. Why include social, environmental and gender analysis and plans in groundwater proposals? (select all answers which apply)
 - a. to meet the shared, global goals of sustainability embodied in the Sustainable Development Goals (SDGs) and ensure that no one is left behind
 - b. to meet ICPs requirements
 - c. to ensure that women and indigenous people are included in the project
 - d. to ensure that your project does no damage to local communities or to the environment
 7. True or false. An example of a technical and operational external risk is: Not planning for development of local skills and capacity to manage and govern the operations of your project for sustainability.
 - a. a) True
 - b. b) False
 8. True or false. Your risk mitigation plan does not need to include a budget.
 - a. True
 - b. False
 9. Which of the following are examples of indicators for gender metrics? (select all answers which apply)
 - a. The number of people the project will employ during construction
 - b. The number of women who will have improved access to water
 - c. The number of direct beneficiaries, disaggregated by income level
 - d. Gender equality in decision making bodies related to the project
 10. True or false. You only need to set up the M&E framework and indicators once your project is in operation.
 - a. True
 - b. False

Glossary

Key Terms

Adaptive Capacity

The combination of strengths, attributes, and resources available to an individual, community, society, or organisation, that can be used to prepare for and undertake actions to reduce adverse impacts, to lessen harm, or to make the most of beneficial opportunities (IPCC, 2018).

Additionality

Additionality refers to the official flows for climate change and adaptation, additional to the traditionally allocated Overseas Development Assistance (ODA). Identifying exactly what is new and additional to ODA in climate adaptation is not straightforward, and separating out the amount of finance specific to the climate change component from the development component of a climate compatible development objective can be difficult. However, additionality is important in minimising the risks of double counting.

Assumptions

(see Project Assumptions)

Bankability

A project is bankable when one can demonstrate its ability to yield optimal returns, whether financial, environmental, socio-economic or for water security. For the ICPs, projects are bankable if they meet their funding criteria and can contribute to their key results areas. Thus, bankable projects must be able to demonstrate the scientific evidence base for meeting criteria and contributing to funder's key results areas. Additionally, the project should meet the result areas of the implementor and beneficiaries of the project, so that the project provides benefits for all parties.

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contributing to funder's key results areas. Additionally, the project should meet the result areas of the implementor and beneficiaries of the project, so that the project provides benefits for all parties.

Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), climate change refers to a change in the state of the climate that can be statistically identified by changes in the variability of its properties, and persists for decades, or longer. It may be due to natural internal processes, modulations of the solar cycles or volcanic eruptions, as well as persistent anthropogenic changes (caused by human impact) in the composition of the atmosphere or in land use (IPCC, 2012: 557). Note that the Framework Convention on Climate Change (UNFCCC) has a different definition, defining climate change as 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.' The UNFCCC thus makes a distinction between climate change attributable to human activities, and climate variability attributable to natural causes.

Climate change adaptation

A response to climate change that seeks to reduce the vulnerability of social and biological systems to climate change shocks and stressors, while transforming socio-economic development approaches to align with a new normal, or a different climate and development future (IPCC, 2018).

Climate change mitigation

Efforts to reduce or prevent emissions of greenhouse gases using new technologies, renewable energy, as well as rehabilitating ecosystems, improving energy efficiency of old technology, and changing consumer and societal behaviour and practices (IPCC, 2018).

Climate finance

Climate finance refers to a small but important component of development finance, that seeks specifically to reduce carbon emissions, to enhance carbon sinks, and to reduce vulnerability, by



maintaining and increasing the resilience of human and ecological systems to negative climate change impacts (UNFCCC, 2014). Climate finance can be drawn from public, private and alternate sources of funding.

Climate Mainstreaming

Climate mainstreaming is an iterative process whereby climate resilience (Tip: Refer back to your glossary from Module 1 to recap on climate resilience) is integrated from the outset and in a meaningful way into development planning and policymaking. In this way planning for climate change is shifted from a reactive, incremental mode, into a forward-thinking mode led by planners.

Climate Resilience

The ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity of self-organisation, and the capacity to adapt to stress and change (IPCC, 2018). Strengthening a system's climate resilience is a key aspect of climate change adaptation.

Concept Note

A concept note lays out the key aspects of a proposed project/programme, as a summary. It is the first thing that you would present to potential funders. The feedback you receive from them will immediately tell you whether the concept is aligned with their specific objectives, policies and investment criteria. This feedback will give you the information you need to further develop and strengthen the project/programme idea into a full proposal.

Conjunctive use of water

The combined use of ground and surface water, for instance the practice during wet years of storing surface water in groundwater basins, and then withdrawing it in dry years (Managed Aquifer Recharge techniques). Conjunctive use of surface water and groundwater is also central to integrated water resources management (IWRM). It is helpful in reducing vulnerabilities of water supply systems and mitigating the water supply stress in responding to climate change.

Development finance

Development finance is a general term that refers to financial flows aimed at serving communities by providing the resources for building public sector infrastructure. In the public sector sphere, these

finance mechanisms are not geared toward making profits. In this way, credit is transformed from one of making profit to one of increasing human well-being and environmental protection. Overseas Development Assistance (ODA) continues to be the largest single source of external development finance at country level, and its flows are increasing.

Direct Access Entity (DAE)

Direct Access Entities are sub-national, national or regional organisations that the National Designated Authority of a developing country nominates to access funding and readiness support from funders such as the GCF.

Enabling investment environment

The policy, legal and political context, which together, create an environment in which ICPs are comfortable to invest resources. An effective enabling environment for groundwater investments encompasses the laws, regulations and government organisations that reduce investment risks.

Environmental and social safeguards (ESS)

These are policies, standards, and procedures, which prevent and minimize and/or mitigate any adverse environmental and social impacts of a project, a programme, or an investment. For the World Bank, ESS refers to Environmental and Social Standards.

Exit strategy

An exit strategy provides a plan for the project once the actual project implementation is complete. It envisions the various scenarios your project will face at its end point.

Gender analysis (or Gender Assessment)

A study that carefully analyses detailed aspects of the gender-related impacts, benefits, and mitigation activities of a project, such as targets, inclusion, and opportunities.

Gender mainstreaming

The practice of considering women and men's interests and concerns in policymaking, project development or any other activities related to social development.

Gender Plan

A clear action plan that ensures that the project, programme, or investment proposed is advancing gender equality and reducing the gender gap.

Green infrastructure

Green infrastructure, or soft infrastructure, is a strategically planned network of natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services in both rural and urban settings. Wetlands are an example of green infrastructure, as well as strips of conserved vegetation in riparian zones, options to conserve soil integrity, areas or zones maintained for preferential groundwater recharge.

Grey (hard) infrastructure

Grey infrastructure refers to human-engineered, or hard infrastructure solutions. Examples include boreholes, wellfields, pipelines, storage tanks, electricity supply systems, and roads.

Impact

A project's impact is the change that occurs as a result of carrying out or completing the project. Impacts may be short-term, medium-term, or long-term, as well as direct or indirect.

Indicator

A piece of information used to measure and indicate the state or level of something (e.g. number of women with access to clean water), in terms of your project activity outcomes. Indicators are part of an M&E framework, used to measure the results of your project activities.

Indirect benefits or co-benefits

An indirect benefit is a profit or benefit from the investment, which cannot be easily measured or directly attributed to the investment. Indirect benefits and co-benefits have a similar meaning. A co-benefit usually refers to an additional benefit that comes from an investment or adaptation measure, over and above the intended direct benefit.

International Cooperation Partners (ICPs)

The international funders of groundwater projects fall into two main categories: private investors and public investors. Broadly, public investors can be further categorised into: Multilateral Development Banks (examples – African Development Bank (AfDB), World Bank, European Investment Bank, etc.), agencies and funds; and bilateral funders, who focus on country to country funding. In this Training Manual, we will collectively refer to these as International Cooperation Partners (ICPs).

Intervention Logic (IF-AND-THEN logic or reasoning)

The intervention logic of your project is the underlying reasoning that connects project inputs (such as materials) to the desired change that the project is trying to achieve (measurable results). If the project design is robust, the logic will flow from immediate inputs (project materials, personnel, activities) to short-term outcomes (project results), to long-term outcomes (project impacts) through cause-and-effect relationships. This is often called the 'IF-AND-THEN' reasoning. For example: IF the activity is completed AND the external conditions for success hold, THEN the project will achieve the desired results.

Iterative Process

Having an iterative process to planning your project ensures that the project plan can be adapted as the project unfolds, based on feedback from the monitoring process, changes in the project assumptions, or risks and changes in scope, budget or schedule. This is necessary to provide sufficient flexibility in the project for unavoidable or unanticipated obstacles which have to be overcome.

Integrated Water Resources Management (IWRM)

The Global Water Partnership defines IWRM as “a process which promotes the coordinated development and management of water, land and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems”. Recommended in the 1992 Dublin Principles, IWRM relies on balancing between the three principles of social equity, ecological sustainability and economic efficiency.

This central approach toward sustained water security, where no one is left behind, can only be achieved through ensuring that all water investments (including groundwater investments), are made through balancing hard infrastructure investments with green, or ecosystem-based investments, and nature-based solutions. Put simply, the ecosystem services must be strengthened to ensure that the hard, or grey groundwater infrastructure can continue to yield water resources for its beneficiaries sustainably into the future.

For example, groundwater recharge zones exist to control both the quantity and quality of water reaching aquifers. As such, they are central to preventing



pollution and maintaining supply for both drinking water and ecosystems. Protection schemes such as these, currently mainly used in areas supplying drinking water, could be expanded to critical groundwater recharge areas in ecosystems to improve ecosystems resilience and secure the ecosystem services

Lifecycle

(see Project Lifecycle)

Key result areas

ICPs work toward achieving key results, or progress toward specific results (such as increasing inclusive and sustainable growth for Africa), across the different sectors/ geographies/ issues that they fund. These key result areas differ between the institutions. Your project needs to meet ICPs specific result areas to be considered for financing, and your proposal must highlight this. Highlighting this is key, as you can see in the Indicative Proposal Framework (in Annex 1).

Monitoring and Evaluation (M&E)

M&E refers to the process of measuring and assessing progress of a project towards its desired impacts. M&E tracks results, accountability, and learning from project experience in order to determine whether investment in the project was worthwhile. M&E indicators are based on the components that make up the Logical Framework (LogFrame) of the project.

Nature-based Solutions (NbS)

A nature-based solution is a way of tackling a socio-economic problem (such as water or food security) by using a sustainable, nature-based option, such as preserving land cover to increase filtration.

Paradigm Shift

In science, a paradigm shift is a fundamental change in thinking that accompanies a change in accepted theory in a particular discipline. The phrase 'paradigm shift' has entered the world of development theory to indicate a real, radical change in thinking about the way the way something should be done.

Paradigm shift potential

The potential to catalyse impact beyond a one-off project or programme investment. This refers to transformational change, i.e. showing that the project will lead to a shift from business as usual to a new normal, an evolved situation, after the first investment.

Policy

A policy is an official document that sets out the goals and activities planned by government at the national, provincial or municipal levels. Policy, in general, is what the government hopes to achieve, and what it does to achieve such objectives. Policies generally require new legislation to bring them into force.

Political Economy Analysis (PEA)

A political economy analysis (PEA) examines the power relationships that exist in a specific investment environment. This means studying the vested interests, incentives, relationships, distribution and contestation of power between different groups and individuals. Using a PEA lens will provide insight into the political and economic pressures that may affect the success of your project.

Political Flux Analysis

A political flux analysis is a study of the factors that may affect the current political situation and the balance of power, for example an election, or a flood, might change the way that political actors view a particular proposal or project.

Project Assumptions

Assumptions are statements that highlight external conditions which enable the project to make progress. These can often be framed as the positive outcome of implementing risk mitigation strategies. Project planners will be aware of these conditions, but will also know that they are outside of their control.

Project Lifecycle

The lifecycle of the project is the sequence of phases that it goes through from initiation to closure.

Project Lifecycle Framework

The Project Lifecycle Framework (also called a Logical Framework, or LogFrame) is a systematic, visual representation of the Intervention Logic behind the organisation of the different elements of a project. The LogFrame allows project planners to hone their focus and enhance the robustness of proposed projects, in order to increase the probability of success. The LogFrame is a critical step in attracting funding and support to projects, and forms the foundation of the project's Monitoring and Evaluation (M&E) Framework during project implementation.

Project Preparation Facility (PPF)

Project Preparation Facilities (PPFs) are used as means of developing bankable, investment-ready projects. A PPF may provide technical and/or financial supports to project owners/developers. Such support may cover a wide range of activities. These include: project feasibility studies, which may include a value for money analysis; assistance developing procurement documents and project concessional agreements; social and environmental studies; and awareness creation amongst stakeholders.

PPFs can also provide financial assistance to local governments or special public sector agencies to support the financial, legal and technical advisory services required to facilitate private investment into infrastructure projects.

Project Proposal

A Project Proposal, very simply, is a detailed, structured document containing key information and details about your proposal, which you present to potential funders to receive funding or get your project approved. Your Project Proposal contains all the required information about your project, and will be the basis and deciding factor in whether your project is accepted or rejected for financing.

Project Risks

There are a number of internal and external factors which, if they occur, may have an effect on the project. They may impact on the implementation of the project, or may prevent a project from being successful.

Project Risk Management

Identifying, evaluating and mitigating against the risks facing a project. It is important to identify all the risks the project faces, and evaluate these risks in terms of their likelihood and severity to determine and rank the overall risk these pose to the project. Once risks have been evaluated, the risks which pose the greatest threat to the project need to be mitigated against – using a risk mitigation plan – to ensure that the project will be protected against the overall threat.

Risk Mitigation

Risks that pose a significant and likely threat to a project need to be identified and mitigated against. Risk mitigation involves taking pre-emptive actions against the risks a project faces, such that if the risk were to happen, its impacts would be reduced.

Risk mitigation is not about removing the risk, it is about reducing the potential impact it will have on the project should it occur.

Sex-disaggregated target

A sex-disaggregated target is a project target that is measured for women, and for men, separately, to account for differentiated gender impacts or opportunities.

Sustainability

A project is sustainable if it meets both present and future needs of the beneficiaries, without compromising the current and future economic, environmental and social systems that support it. Thus, project sustainability has three components: economic, environmental and social.

Theory of Change

A Theory of Change (ToC) is both a methodology and a tool or procedure for defining long-term goals, and how to meet them. The ToC procedure begins with identifying and concretising your long-term goal. Once this has been set and defined, the ToC assists you to map backwards in order to understand what needs to happen in order to meet the goal. It also helps you to detail the project pathway, from the need it is looking to address, to the changes stakeholders want to make, to the plan of action that is to be enacted. The ToC is often closely linked to a Logframe (logical framework).

Viable Project / Viability

A project that is viable achieves the desired outcome efficiently, is supported by the beneficiary communities, is designed to promote equity, targets vulnerable populations, is able to attract funding from a variety of sources, and the project will be sustained beyond the duration of the project funding.

Water-Energy-Food Nexus

The water, energy and food nexus refers to the set of connections that link water security, energy security and food security to one another. Study of the nexus reveals that action in any one particular area will be likely to have an effect on the other areas. This has significant implications for human development in that food security depends on poverty reduction and sustainable development.



Appendix 1: Indicative Proposal Framework (Template)

The Indicative Proposal Framework (template) provides a high-level idea of the information which is expected in a proposal. Please visit the various ICPs websites for more specific proposal templates. It has three parts, similar to most ICPs' proposal templates:

- Part 1: Table of Contents (the front page of your proposal)
- Part 2: Project/Programme Summary
- Part 3: Project or Programme Details

Tip: Many ICP websites are quite difficult to use, and carry large amounts of information. A quick way to find what you need is to type "Template" into the SEARCH button of the website.



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Lay out the table of contents of your proposal in line with the ICP's funding template.

PART 2: PROJECT / PROGRAMME SUMMARY

This section provides an overview of the programme or the project, the agencies involved, the funding required (inclusive of co-funding), the key thematic areas of the project ('programming directions'), and the contributions of the project to the ICP's Key Result Areas indicators.

2.1: APPLICANT INFORMATION

Organisation name / Executing agency	
Institutional and legal status	Registration number of a company; main activities, etc.; specify the legal authority to manage resources for the project
Organisation and management (structure)	Organisational structure / organogram, staffing, management team; and financial management and governance details; financial reporting; auditing
Year established	
Principal Officer / Team Lead	
Project Coordinator	

**2.2: PROJECT/ PROGRAMME INFORMATION**

Project Title:	
Country(ies):	
Project size classification (if relevant)	Full-sized project / Medium-sized project /
Funding Agency(ies):	e.g. AfDB/ DBSA/ FAO, etc.
Funding Window / Funding Programme	e.g. Least Developed Countries Fund, GEF Trust Fund
Project Executing Entity(s):	
Submission Date:	
Project Duration (Months)	
Proposed start date	
Proposed completion date	
Project/Programme focal areas/ results areas	
Key Result Area(s): This usually depends on the ICP – you choose from their identified result areas/ focus areas. Choose one main focus area. If there are secondary focal areas, explain these in the Project rationale	(Depends on the ICP) Examples: Biodiversity / Climate Change / Water and sanitation/ International waters / Multi-focal areas
Type of project / Category	(select) Applied Research / Demonstration Project / Capacity development / Information/ Policy analysis/

2.3: SUMMARY OF FINANCING INFORMATION

Type of financing requested (e.g. loan, grant, guarantee, etc.) _____

Financing Summary

	Local currency _____	USD / Euros / ZAR / etc
Total funding request from ICP		
Total from other sources / other co-financing (in some cases, this may be in cash or kind)		
Total project cost:		



PART 3: PROJECT OR PROGRAMME DETAILS

(There may be a page limit for this section. Check the requirements of the ICP. The order of these items and how they are presented will also vary by ICP.)

3.1 BACKGROUND, RATIONALE AND APPROACH

Project Summary

- Project rationale and context/ background
- Socioeconomic or environmental problem, and approach to solving the problem (e.g. through infrastructure/ capacity building/ knowledge sharing, etc.)
- Location/ site(s)
- Stakeholders (target community/ beneficiaries).
- Justification/ Link to the ICP result areas/ strategies/ objectives
- Link to National priorities, strategies and programmes

3.2 PROJECT DETAILS

Provide a detailed description of your project, in the form of a narrative. Develop these with a Theory of Change (Module 2), and then expand on these using a Project Lifecycle Framework (Logframe, in Module 3) to outline the following:

- Project Objectives and Expected Results (goal and impacts)
- Outcomes and Outputs
- Activities (detailed description of the activities of the project, usually divided into Phases, with Milestones)
- Risks and assumptions

3.3 IMPLEMENTATION PLAN

Organizational Background and Capacity to implement the Project

- Description of the organisation that will implement / Executing agency
- Resources (human and organisational resources)

Implementation Plan and Timeframe

(Provide a detailed timeframe, e.g. Excel spreadsheet, listing all activities alongside key actors (names) and dates.

Private sector engagement (for some ICPs)

(Explain how and why the private sector will be engaged, and the role they will play.)

Stakeholder engagement plan

(Explain how you will involve and include the community, e.g. community meetings, household survey, focus groups, interviews)

Gender Analysis and Gender Mainstreaming Plan

[See section 4.2.2 in the Training Manual and Course]

(Explain how you will approach and address gender equality within the project, e.g. analyse baseline participation of women in decision-making related to the project; stipulate that construction will include training and capacity building for women and youth. How will the project build gender equality beyond the project lifespan?)

Environmental and Social Safeguards Plan

[See section 4.2.4 in the Training Manual]

Knowledge and Communications

- How will you share and communicate knowledge, and raise awareness around the project?
- e.g. co-develop knowledge with the stakeholders, share key findings/ messages with the community, translate information for all users

Communication of Results and Replication

See section 4.3 in the Training Manual



3.4 PROJECT RISKS, MONITORING & EVALUATION

(also called: MONITORING AND REPORTING)

Risks to Implementation / Risk Mitigation Plan

[See Module 4.1 - Use the logframe, the risk categorisation matrix, and Risk mitigation matrix to identify and assess project risks]

- M&E Plan and Indicators
- Sustainability of Results Achieved

Example of a [Logframe template - African Water Facility \(AWF\)](#)

Project Title:						
Purpose of the project:						
RESULTS CHAIN		PERFORMANCE INDICATORS			MEANS OF VERIFICATION	RISKS / MITIGATION MEASURES
		Indicator (including CSI)	Baseline	Target		
IMPACT						
OUTCOMES						
OUTPUTS						
KEY ACTIVITIES	Component 1 Component 2 Component 3				INPUTS Component 1 : Component 2 : Component 3 :	

3.5 PROJECT EXIT STRATEGY

[See Section 4.5 in the Training Manual]



3.6 Detailed project budget

- Financial Details
- Projected Expenditures
- Bank Details

Indicative Project Description Summary

Project objective:						In (USD, EUR, ZAR)
Project components	Component type	Project Outcomes	Project Outputs	Funding Programme (if applicable)	Project Financing	Co-financing
XXX	Select: <ul style="list-style-type: none"> ■ Technical assistance ■ Investment ■ Etc. 					
Subtotal				Select: <ul style="list-style-type: none"> e.g. GEF Trust Fund 		
Project management cost (PMC)				Select: <ul style="list-style-type: none"> e.g. GEF Trust Fund 		
Total Project Cost						

Indicative sources of co-financing for the project by name and by type, if available

Sources of Co-financing	Name of Co-financier	Type of Co-financing	Investment Mobilized	Amount (USD/EUR/ZAR)
(Select) E.g. <ul style="list-style-type: none"> ■ GEF Agency ■ Donor Agency ■ Private Sector ■ Recipient Country Government ■ Civil Society Organisation 		(select) E.g. <ul style="list-style-type: none"> ■ Grant ■ Loan ■ Equity Investment ■ Public Investment Guarantee ■ Other 	(Select) <ul style="list-style-type: none"> ■ Investment mobilized ■ Recurring expenditures 	
Total Co-financing				

Appendix 2: International Cooperation Partners (ICP) Handbook

The International Cooperation Partners Handbook is a Microsoft Excel workbook compiled for this course: [The ICP Handbook](#). This provides a summary or database of the major financiers of groundwater in the region. The handbook details each ICP's key result areas, investment criteria and typical projects they fund and provides useful instructions on which funder to target, based on your project specifications.

The ICP Handbook can be found in the project digital repository here: https://drive.google.com/drive/folders/1fsjkQv1hiZTZsHGPQNTIxDj_fmEXS70K?usp=sharing [URL /google docs – still to come]

A small excerpt appears on the following page:

ICP	Key result areas	Investment Criteria	Financial Mechanisms available	Typical Groundwater projects funded
The African Development Bank (AfDB)	The AfDB focuses on promoting inclusive and sustainable growth for the African continent. It has two main objectives: inclusive growth and the transition to green growth. AfDB priorities for green growth in Africa entail promoting and maximising opportunities from economic growth through five operational priorities, namely:	For loans: country credit ratings	Grants (Technical Assistance)	A range of projects including green infrastructure, adaptation and mitigation projects
	Infrastructure development	For grants and procurement of goods and works:	Standard Loan Products (Sovereign and Non-Sovereign) Guaranteed Loans	Transboundary cooperation and integrated natural resources management in the Songwe River Basin
	Regional economic integration	The bidder must be from eligible member countries	Local Currency Products	Water Supply and Sanitation Project in Kenya: Unlocking Development Potential for Inclusive Growth Project
	Private sector development	No conflict of interest in the bid	Guarantees	Climate Adaptation for Rural Livelihoods and Agriculture (CARLA) project in Malawi

Appendix 3: Answers for end of module quizzes

Module 1

1. b
2. b
3. a, b, c, d
4. a.
5. a, d

6. b
7. a. True
8. a. True
9. b.
10. a.

Module 2

1. c
2. a, c
3. a, b
4. b, c
5. a, d
6. a
7. b
8. b
9. b
10. c

Module 3

1. b, d
2. a, b, c, d
3. a
4. b
5. a, c
6. a, c

7. b
8. b
9. a, b, c, d
10. a

Module 4

1. a, b, d
2. a, d
3. b
4. a
5. d
6. a, b, c, d
7. b
8. b
9. b
10. b

Appendix 4: Digital Document Library

The online digital library contains the key documents referred to in the training manual, such as templates, and other key documents.

You can find it here: https://drive.google.com/drive/folders/1fsjkQylhiZTZsHGPQNTIxDj_fmEXS70K?usp=sharing

Links to external documents

The rest of this section provides links to external documents that are referred to in the modules. These are organised by module.

Introduction:

World Bank. Malawi Lilongwe Water and Sanitation Project. Available: <https://documents.worldbank.org/en/publication/documents-reports/documentdetail/419171513998119839/malawi-lilongwe-water-and-sanitation-project>

Module 1:

ICP. The International Cooperating Partners Handbook. Available: <https://oneworldsa.sharepoint.com/:x:/g/EeQfokV3qt5Oj8tje0rsDowBV8vcwNDH1pZcZp1GoXXOdQ?e=LtrRT4&wdLOR=cF44B1D75-C7DC-474C-9DD1-7846C2F5DC0D>

1D75-C7DC-474C-9DD1-7846C2F5DC0D

IUCN. Nature-based Solutions. Available: [https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions#:~:text=Nature%2Dbased%20Solutions%20\(NbS\),%2Dbeing%20and%20biodiversity%20benefits%E2%80%9D](https://www.iucn.org/commissions/commission-ecosystem-management/our-work/nature-based-solutions#:~:text=Nature%2Dbased%20Solutions%20(NbS),%2Dbeing%20and%20biodiversity%20benefits%E2%80%9D)



Module 2:

SADC-GMI. Policy, Legal and Institutional Development for Groundwater Management in the SADC Member States (GMI-PLI). Available: https://sadc-gmi.org/wp-content/uploads/2020/03/GMIPLI_GL_Building-GW-Resilience_Final.pdf

SADC-GMI and OneWorld. Mainstreaming Climate Change. Available: <https://drive.google.com/file/d/1EU3Do5bS2Dfr9VWAKH4icbCDWb80VzKw/view>

United Nations. Take Action for the Sustainable Development Goals. Available: <https://www.un.org/sustainabledevelopment/sustainable-development-goals/>

GWP. What is IWRM. Available: <https://www.gwp.org/en/GWP-CEE/about/why/what-is-iwrn/>

GEF. Project Identification Form. Available: https://drive.google.com/file/d/1QkW7DbndAGsyZdnVsRQKK_jODLrbtrX/view

GCF. Funding Proposal Template. Available: <https://www.greenclimate.fund/document/funding-proposal-template>

GEF. GEF-7 Various Proposal Templates. <https://www.thegef.org/documents/templates>

Adaptation Fund. Apply for Funding. <https://www.adaptation-fund.org/apply-funding/>

AfDB African Development Fund. Standard Request for Proposals Quality and Cost-Based Selection of Consultant. Available: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/Standard_Request_for_Proposals_-_Quality___Cost_Based_Selection_QCBS_-_December_2017.doc

AfDB African Development Fund. Standard Request for Proposals Quality-Based Selection of Consultant. Available: <https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/>

Standard_Request_for_Proposals_-_Quality_Based_Selection_QBS_-_December_2017.doc

AfDB African Development Fund. Standard Request for Proposals Selection of Consultant Under a Fixed Budget. Available: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/Standard_Request_for_Proposals_-_Selection_under_a_Fixed_Budget_FBS_-_December_2017.doc

AfDB African Development Fund. Standard Request for Proposals Least-Cost Selection of Consultant. Available: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/Standard_Request_for_Proposals_-_Least_Cost_Selection_LCS_-_December_2017.doc

AfDB. Standard Bidding Document for Procurement of Works. Available: https://www.afdb.org/fileadmin/uploads/afdb/Documents/Procurement/Project-related-Procurement/SBD-_Procurement_of_Works_-_September_2010_-_Revised_-_February_2018.doc

Module 3:

SADC GMI and OneWorld. Case Study Logframe: Lilongwe Water and Sanitation Project. Available: <https://drive.google.com/file/d/1fmP4GMikUkVf88sujTn6PRrESOr01QG8/view>

International Civil Service Commission. Promoting and maintaining exemplary service to the United Nations common system. Available: <https://icsc.un.org/>

SADC GMI and OneWorld. Indicative Budget Template. Available: <https://drive.google.com/file/d/1zkKtaECURiqMRcgmEZanNx9-F8D3Zygi/view>

Module 4:

Zelege, G. Exit strategy and Performance Assessment for Watershed Management. Available: <https://drive.google.com/file/d/1myzyNKsCtbqoW7Yeobx5AJhEaNRkKmry/view>

Petrie et al (OneWorld). Strengthening Climate Resilience in the Kafue sub-Basi (SCRiKA). Available: https://oneworldgroup.co.za/wp-content/uploads/2017/07/SCRiKA.TM_.25.10.pdf

Petrie et al (OneWorld). Landscape Vulnerability Decision Support Framework. Available: https://oneworldgroup.co.za/wp-content/uploads/2018/06/Tralard.web_.25.01.compressed.pdf

SADC-GMI. Guidance Document: Operation and Maintenance of Groundwater Schemes. https://sadc-gmi.org/wp-content/uploads/2020/03/GMIPLI_GL_OperationMaintenance_Final.pdf

World Bank. Environmental and Social Framework. Available: <http://pubdocs.worldbank.org/en/837721522762050108/Environmental-and-Social-Framework.pdf#page=29&zoom=80>

IUCN. Environmental and Social Impact Assessment (ESIA). Available: https://www.iucn.org/sites/dev/files/iucn_esms_esia_guidance_note.pdf

Appendix 5: LogFrame Template

Use the following LogFrame Template to complete your own project LogFrame. Tip: see the full template, which includes instructions in Section 3.2.3. We are putting 2 types of templates here – 5a is the one based on figure 14 and 5b is a table

5a. Simplified Logframe Template

PROJECT FRAMEWORK			
Alignment to Theory of Change	Intervention Logic	Indicators of achievement	Assumptions and Risks
<u>Long-term objectives</u>	<u>1.A. Impacts:</u>	<u>1.B. key indicators</u>	1.C.
<u>Short-term objectives</u>	<u>2.A. Outcomes:</u>	<u>2.B. Indicators</u>	
<u>Expected Results</u>	<u>3.A. Outputs:</u>	<u>3B. Indicators</u>	
<u>Project Activities</u>	<u>4.A. Activities:</u>	<u>4.B Resources/Inputs:</u>	

PROJECT TITLE (max. 50 characters)		XXX	
GOAL (Long term objective)			
IMPACTS of the project <i>What is the overall vision of the project; and</i> What are the long-term objectives of the project?			
Indicator	Baseline	Target	
First indicator of success for the long term objectives	Baseline measure of the indicator	Target measure of the indicator	
	Source Where will the data which underpins the indicator be found?		
Second indicator of success for the long term objectives	Baseline measure of the indicator	Target measure of the indicator	
	Source Where will the data which underpins the indicator be found?		



PURPOSE (OUTCOMES)		Indicator	Baseline	Target	Assumptions and Risks			
What are the short-term objectives (outcomes) of the project?		Indicators of success for the Project Outcomes	Baseline measure of the indicator	Target measure of the indicator	What are the assumptions and risks which affect the project outcomes			
			Source of data					
			Where will the data which underpins the indicator be found?					
Total cost of INPUTS (\$)		Source of Funds 1 (\$)	Source of Funds 2 (\$)	Source of Funds 3 (\$)	Government co-financing (\$)	Other (\$)	Total (\$)	Funders SHARE (%)

PURPOSE (OUTCOMES)	Indicator	Baseline	Target	Assumptions and Risks
What are the short-term objectives (outcomes) of the project?	Indicators of success for the <u>Project Outcomes</u>	Baseline measure of the indicator	Target measure of the indicator	What are the assumptions and risks which affect the project outcomes
		Source of data Where will the data which underpins the indicator be found?		
Total cost of INPUTS (\$)	Source of Funds 1 (\$)	Source of Funds 2 (\$)	Source of Funds 3 (\$)	Government co-financing (\$)
	Other (\$)	Total (\$)	Funders SHARE (%)	



Component OUTPUT	Activities	Indicators	Baseline	Target	Resources and Inputs	Assumptions and Risks
What outputs will the first component of the project result in?	Activity 1 of Component 1	Indicator for success	Baseline measure of the indicator	Target measure of the indicator	Are there specific resources and inputs necessary for the activity?	What are the assumptions and risks underpinning the Output
		Source of data, and who is responsible for data collection: Where will the data which underpins the indicator be found? Who is the responsible party for collecting/ providing this data?				
	Activity 2 of Component 1	Indicator for success	Baseline measure of the indicator	Target measure of the indicator	Are there specific resources and inputs necessary for the activity?	
		Source of data, and who is responsible for data collection: Where will the data which underpins the indicator be found? Who is the responsible party for collecting/ providing this data?				
Cost of INPUTS for Component 1 (\$)	Source of Funds 1 (\$)	Source of Funds 2 (\$)	Source of Funds 3 (\$)	Government co-financing (\$)	Other (\$)	Total (\$)

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