ZIMBABWE NATIONAL ACTION PLAN FOR THE BUZI, PUNGWE, AND SAVE RIVER BASINS

2025-2034

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Disclaimer:

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The publication was informed by a comprehensive Transboundary Diagnostic Analysis (TDA) conducted in the BUPUSA river basins, under the same project. The analysis incorporates findings from studies, causal chain analyses, and stakeholder consultations. All literature used in the document is reference and acknowledged in the TDA.

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The International Union for Conservation of Nature is an international organization working in the field of nature conservation and sustainable use of natural resources. The International Union for Conservation of Nature (IUCN) is a membership Union uniquely composed of both government and civil society organisations. By harnessing the experience, resources and reach of its more than 1,400 Member organisations and the input of some 16,000 experts, IUCN is the global authority on the status of the natural world and the measures needed to safeguard it. Working with many partners and supporters, IUCN implements a large and diverse portfolio of conservation projects worldwide. These projects combine the latest science with traditional knowledge of local communities to work to reverse habitat loss, restore ecosystems and improve people's well-being.

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Global Water Partnership Southern Africa is one of 13 regional networks that make up GWP, an international network created in 1996 to foster the implementation of integrated water resources management: the coordinated development and management of water, land, and related resources that maximise economic and social welfare without compromising the sustainability of ecosystems and the environment. Global Water Partnership Southern Africa (GWPSA) offers practical support for sustainably managing water resources to 16 countries in the Southern African Development Community (SADC). The network manages activities and convenes stakeholders in this region and at pan-African level to address issues that have an impact on water security.

The Buzi, Pungwe, and Save Watercourses Commission (BUPUSACOM)

The Buzi, Pungwe, and Save Watercourses Commission (BUPUSACOM) was established on 17 May 2023, in Harare, Zimbabwe. It was launched on 19 July in Beira, Mozambique. The tri-basin institution has oversight on the planning, development, and management of the water resources within the Buzi, Pungwe, and Save (BUPUSA) River Basins, which are exclusively shared by Mozambique and Zimbabwe. The BUPUSA Commission promotes the equitable and sustainable development of the water resources of the Buzi, Pungwe and Save River basins, which are exclusively shared by Mozambique and Zimbabwe. The BUPUSA Commission provides a forum for consultation and coordination between the riparian states to promote integrated water resources management and development within the basins.

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Foreword

The National Action Plan (NAP) for Zimbabwe is a strategic implementation plan for addressing priority environmental concerns in the Zimbabwean part of the Buzi, Pungwe, and Save (BUPUSA) basins. The NAP is based on an assessment of the priority environmental concerns as identified by the BUPUSA Transboundary Diagnostic Analysis (TDA) and defines technical and management interventions to address them.

The NAP for the BUPUSA basins was developed through an extensive consultation process in order to ensure that it reflects the priorities of the country. It is well aligned with the country's national development and sector plans, as well as the institutional frameworks at national and local level.

The NAP is based on an assessment of the priority environmental concerns as identified by the BUPUSA Transboundary Diagnostic Analysis (TDA) and defines technical and management interventions to address them. It is closely aligned with the and will complement the BUPUSA Strategic Action Programme (SAP) and Mozambique NAP.

The Zimbabwe NAP is a critical tool for the implementation of SAP priority actions at national level and the integration of transboundary and basin concerns into the country's national legislative, policy, and budget decision-making processes. The NAPs and SAP are developed for a ten-year planning timespan, with targets set for that period.

We hope that this NAP will shed light on the key issues that need attention in the basins and provide the necessary guidance in addressing them at national level. We implore all BUPUSA stakeholders to support the initiative and proposed interventions for the conservation, sustainable use, and mitigation risk in these shared water resources.

Eng. Tinayeshe Mutazu

BUPUSATEC Co-Chairperson

Zimbabwe

Acknowledgements

The development of the BUPUSA National Action Plan (NAP) for Zimbabwe was achieved through a broad-based consultative process involving key stakeholders at the national, and provincial levels. Special acknowledgments are extended to various stakeholders including traditional leaders, civil society organizations, academia, the private sector, local communities, government line ministries and departments, cooperating partners, direct contributors, reviewers, revisers and layout specialists for their contribution to the development of this NAP

The Buzi, Pungwe, and Save Watercourses Commission (BUPUSACOM) would like to express its gratitude and thanks to all the stakeholders who contributed to the process of developing the Zimbabwe NAP for the BUPUSA-tri basin. The document guides the Zimbabwean government, stakeholders and interested parties in identifying priority issues in the basin, the causes, and possible interventions and provides a pointer to the investments that will be required to address some of the issues.

The production of the Zimbabwe NAP would not have been possible without the support of the Global Environment Facility (GEF), which provided a contracting mechanism for the lead author and offered financial and technical support for engaging experts.
We extend our sincere gratitude to the International Union for the Conservation of Nature (IUCN) for providing the technical assistance necessary to engage experts who led the development of various chapters and compiled the information into a comprehensive and dynamic product.

We also appreciate the Global Water Partnership Southern Africa (GWPSA) for guiding the BUPUSACOM Secretariat in identifying key stakeholders to target through the consultation process, thereby enhancing stakeholder ownership of the final product. GWPSA facilitated the involvement of diverse stakeholders to review and provide input into the NAP and oversee the overall management of the development process.
BUPUSACOM is thankful to the governments of Mozambique and Zimbabwe, which through the Project Steering Committee led by Engineer Macias Macie, National Director of Water Resource Management in Mozambique's Ministry of Water and his Zimbabwean counterpart Engineer Gilbert Mawere, Technical Committee, representatives from various ministries, departments, and agencies provided tremendous support during the development of this NAP. Their availability for consultations, particularly through workshops conducted during the process, was invaluable in producing the final product.

The Commission also acknowledges the contributions of water resources management agencies, including the Zimbabwe National Water Authority (ZINWA) and its sub catchment councils, ZINWA Save and ZINWA Runde.

The development of the Zimbabwe NAP could not have been achieved without the day-to-day project management and coordination jointly undertaken by the GEF-BUPUSA Project Management (PMU). IUCN's Regional Programme Manager for Integrated Water Resources Management, Mr Davison Saruchera and GWPSA's leadership composed of Executive Secretary, Mr Alex Simalabwi, Senior Technical Advisor, Mr Andrew Takawira and Dr Loreen Katiyo, the Transboundary Lead from GWPSA, provided immense leadership to the PMU composed of Dr Pinimidzai Sithole, Miss Leticia Ngorima, and the Project Implementation Unit (PIU).

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The Zimbabwe NAP could not have reached completion without the dedicated commitment of the various project stakeholders, who are applauded most sincerely for their contributions, the invaluable knowledge, support and collaboration provided by various local and national institutions which include government departments, local authorities, water resources management agencies the private sector, civil society, and community leaders is acknowledged and appreciated.

Acronyms

BUPUSA	Buzi, Pungwe, Save
BUPUSACOM	Buzi, Pungwe, Save Watercourse Commission
BUPUSAWIS	Buzi, Pungwe, and Save Water Information Systems
CC	Catchment Council
EMA	Environmental Management Agency
GCF	Green Climate Fund
GEF	Global Environment Facility
GoZ	Government of Zimbabwe
IUCN	International Union for Conservation of Nature
IWRM	Integrated Water Resources Management
MAR	mean annual runoff
MHCC	Ministry of Health and Child Care
NAP	National Action Plan
NDS	National Development Strategy
PCN	Project Concept Note
RDC	Rural District Council – Zimbabwe
RIDA	Rural Infrastructure Development Agency SADC
SADC-GMI	Southern African Development Community Groundwater Management Institute
SAP	Strategic Action Programme
SAZ	Standards Association of Zimbabwe
SCC	Sub-Catchment Council
TDA	Transboundary Diagnostic Analysis
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
WASH	Water, Sanitation and Hygiene
ZINWA	Zimbabwe National Water Authority

I Background

1.1 Purpose of the National Action Plan

The National Action Plan (NAP) is a strategic implementation plan for addressing priority environmental concerns in the Zimbabwean parts of the Buzi, Pungwe, and Save (BUPUSA) basins. It is closely aligned with the BUPUSA Strategic Action Programme (SAP), a programme addressing priority environmental concerns at the basin-wide level, and the corresponding Mozambique NAP for the three basins.

The NAP is a critical tool for the implementation of SAP priority actions at national level and the integration of transboundary and basin concerns into national legislative, policy, and budget decision-making processes. The NAPs and SAP are developed for a ten-year planning timespan, with targets set for that period.

The Zimbabwe NAP for the BUPUSA basins was developed through an extensive consultation process in order to ensure that it reflects the priorities of the country. It is well aligned with the country's national development and sector plans, as well as the institutional frameworks at national and local level.

1.2 Relationship with the Transboundary Diagnostic Analysis, Strategic Action Programme and National Action Plans

The NAP is based on an assessment of the priority environmental concerns as identified by the BUPUSA Transboundary Diagnostic Analysis (TDA) and defines technical and management interventions to address them. The TDA is a scientific and technical assessment of the priority environmental concerns and shared management issues in the basins. For the priority issues, the analysis identifies the scale and distribution of environmental and socioeconomic impacts at national and basin levels and, through an analysis of the root causes, identifies potential remedial and/or preventative actions.

Like the NAP at national level, the SAP is a negotiated document that provides a basin-wide framework for the implementation of a prioritised set of national and joint transboundary actions and investments. At national level, the (national component of the) SAP initiatives are based on and integrated into the respective NAPs. Neither the NAPs nor the SAP works independently – the SAP reflects basin-wide priorities identified through the TDA/SAP development processes in the Basin States, and the NAPs provide the framework for the national-level implementation.

The economic policies and the policy and legal framework for the management of water and other natural resources in Zimbabwe are described in the TDA. The NAP is developed to address specific concerns within the Zimbabwean part of the BUPUSA basins in line with these national guiding documents. The purpose of the NAP is therefore to complement national policies and provide a tool to support resource mobilisation and on-the-ground implementation of national policy objectives.

Mozambique and Zimbabwe Stakeholders review the final text for the BUPUSA TDA and launch the discussion on the SAP and NAPs. Photo credit: GEF-BUPUSA Project.

1.3 Geographical coverage

The Zimbabwe NAP covers the Zimbabwean part of the BUPUSA basins. The envisaged targets and proposed interventions for each priority area of concern (as identified and described in the TDA) are presented in this NAP.

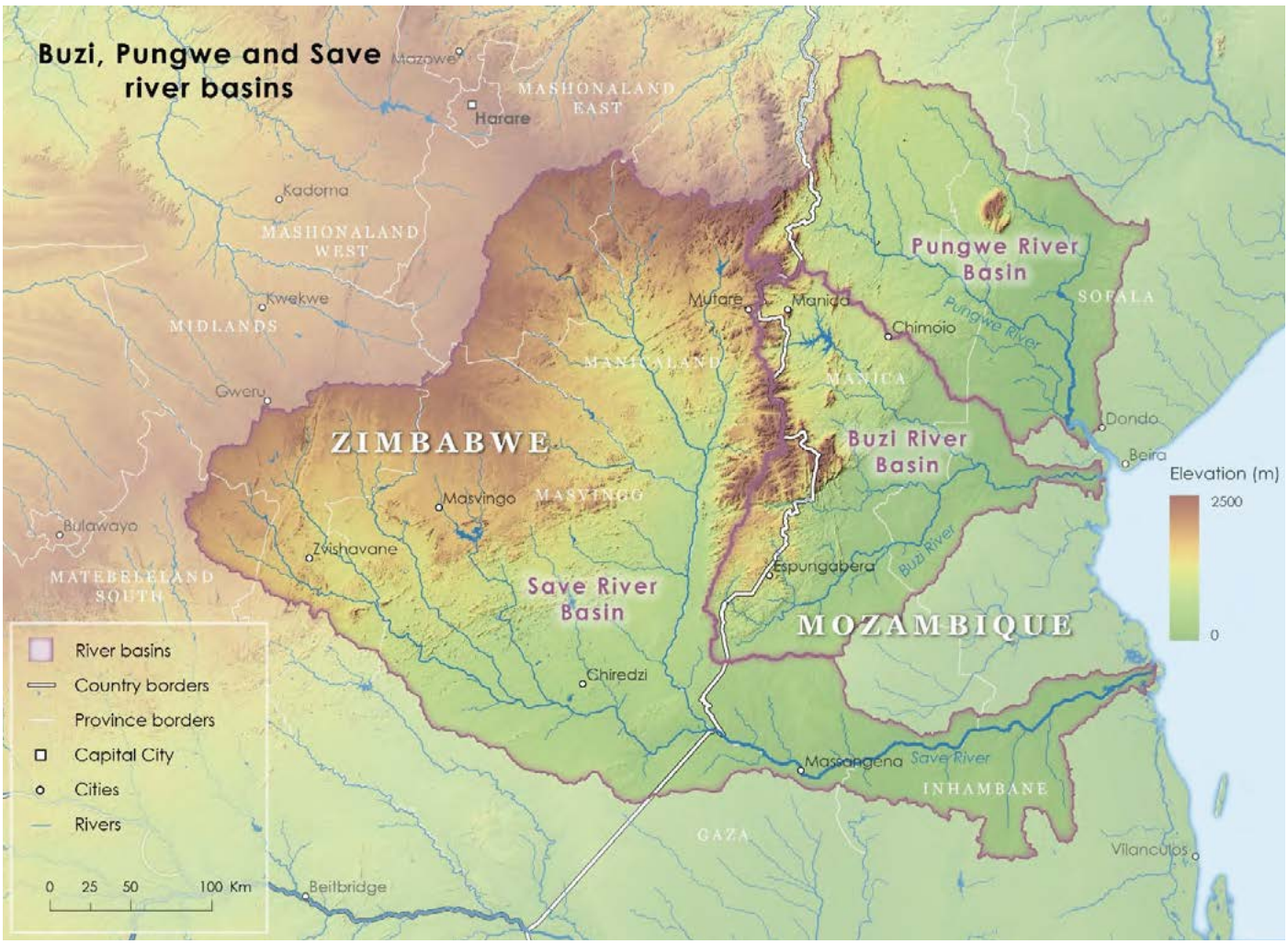


Figure 1: Buzi, Pungwe and Save River Basins (Source: GWP-SA, 2023, Copyright: Grid Arendal)

1.4 National Action Plan structure

The NAP is structured around the five environmental priority areas of concern identified in the TDA. Through the NAP consultation process, each country prioritised the five areas of concern from its national perspective. In response to each priority area of concern, national targets were set to address these concerns over a ten-year time period. Interventions were then identified to meet the targets. In line with national policies, strategies, and plans, project concepts were developed that package the proposed interventions into structured, implementable projects. These Project Concept Notes (PCNs) form the backbone of the NAP.

1.5 National Action Plan development process

The NAP development process involved intersectoral dialogue to achieve integration of water resources management and, most importantly, national endorsement of the NAP. The NAP feeds into the SAP but is an independent planning product and its success depends on receiving the full support of both state and non-state stakeholders.

In practice this means that the political and technical guidance for the NAP comes from the countries, through a NAP Working Group as well as a broader National Stakeholder Forum. While it is part of the National Stakeholder Forum, the NAP Working Group is smaller in size, comprised mostly of individuals holding

positions in government related to water, planning, and finance. With support from the consultant team, the NAP Working Group was primarily responsible for the development of the NAP (and the SAP, together with the NAP Working Group of the other Basin States) and provided technical and political guidance for the formulation of the NAP.

The National Stakeholder Forum consists of stakeholders representing a wide range of role-players, including both state and non-state participants. Four workshops of the National Stakeholder Forum were held, in addition to regular meetings of the (smaller) NAP Working Group. Furthermore, the National Stakeholder Forum from the two Basin States met collectively thrice throughout the process to ensure synergy between the two NAPs, as well as joint development of the SAP as the basin-wide planning document.

BUPUSA Tri - basin Stakeholders review the Draft SAP in Chimoio, Mozambique in May 2024. Photo credit: GEF-BUPUSA Project.

II

Governance framework

2.1 National legal and policy framework for water and natural resources management

Zimbabwe is a republic and multiparty democracy, with the separation of powers (Legislative, Executive, Judiciary) enshrined in the Constitution. The President is the Head of State. The Cabinet is made up of the President (Head of Cabinet), the Vice-Presidents and Ministers appointed by the President. Section 110 sets out the executive functions of the President and Cabinet (Constitution of Zimbabwe, 2013).

The legislature of Zimbabwe consists of Parliament, which is made up of the Senate and the National Assembly. Parliament has the power to amend the Constitution, to make legislation and to confer subordinate legislative powers (for example, the power to make regulations) upon another body.

Judicial power in Zimbabwe vests in the courts. The role of the judiciary is essentially to interpret the law and to adjudicate legal disputes in accordance with the law.

Administratively, Zimbabwe has a centralised government and is divided into ten provinces. Each province has a provincial capital from where government administration is usually carried out. The provinces are subdivided into districts and wards (sometimes referred to as municipalities). Each district is coordinated by a district development coordinator or reporting to provincial development coordinator. There is also a Rural District Council (RDC), which appoints a chief executive officer. The RDC is composed of elected ward councillors, the district administrator, and one representative of the chiefs (traditional leaders appointed under customary law) in the district. Other government functions at district level are carried out by district offices of national government departments.

The legal and institutional framework derives from the provisions of the Constitution of Zimbabwe of 2013. The national vision and strategic development goals for the country are guided by the national Constitution, which is the principal law of the land.

Zimbabwe has, over the years, been implementing various economic consolidation programmes such as the Economic Structural Adjustment Programme 1990-1995, the Zimbabwe Agenda for Sustainable Socio-Economic Transformation 2013-2018, and the Transitional Stabilisation Programme 2018-2020. Zimbabwe's macroeconomic development is currently guided by the National Development Strategy 1 (NDS 1). The current five-year implementation period (2021-2025) is geared at meeting the objectives of the country's Vision 2030.

One of the key objectives of the NDS 1 is 'ensuring sustainable environmental protection and resilience', which is implemented through the following strategic priorities of:

- environmental protection;
- climate resilience and natural resource management;
- infrastructure and utilities; and
- disaster management.

The NDS 1 also provides for the mainstreaming of cross-cutting issues such as gender, youth, people living with disabilities, arts and creative industry, environment, and information communication technology in all thematic working programmes during its implementation.

The primary pieces of legislation dealing with integrated water resources and environmental management are the Water Act, the Zimbabwe National Water Authority (ZINWA) Act and the Environmental Management Agency (EMA) Act, as summarised below:

The Water Act of 1998 governs the use and management of water resources in Zimbabwe. The repealing of the Water Act of 1976 brought in the Water Act of 1998, which is entrenched in an integrated and stakeholder-driven water resources management framework. The following were the main weaknesses of the Water Act of 1976, which was repealed by the current Act

- The issue of all water rights was centralised at the Water Court in Harare and the water right was issued in perpetuity on a first-come first-served basis. In the event of a water shortage, the process of reallocation was very long and complex;
- A water right would not be revised, even if the right holder was not exercising his or her water rights;
- The water rights could only be revised if the holder volunteered to do so;
- The process of acquiring a water right was very long;
- Once granted, there was no requirement to pay for the possession of the water right or to contribute towards general water service provision;
- The Act was silent on water quality and factors

relating to the environment; and
- There was little consideration given to groundwater supplies.

The Water Act of 1998 is founded on economic efficiency, environmental sustainability, and equity of use of water resources within Zimbabwe. The Act established stakeholder-driven institutions that have more say on water allocation and general water management on a day-to-day basis. Thus, water management has been decentralised to stakeholder-managed Catchment Councils (CCs) and Sub-Catchment Councils (SCCs). CCs and SCCs are therefore key institutions tasked with the day-to-day management of water resources, with SCCs being the lowest-tier water management institutions. The Minister of Lands, Agriculture, Fisheries, Water and Rural Development, through the Department of Water Resources Development and Utilisation Zimbabwe, provides oversight of the operations of CCs and SCCs.

The Zimbabwe National Water Authority (ZINWA) Act was promulgated in 2000, giving birth to ZINWA. ZINWA was formed with the primary role of taking over the commercial functions of the Department of Water Resources Development and Utilisation as well as water resources management. Furthermore, ZINWA is designated to assist local authorities in the provision of potable water. The Minister of Lands, Agriculture, Fisheries, Water and Rural Development provides oversight to the operations of ZINWA and delegates tasks to the National Water Authority.

The Environmental Management Act was promulgated in 2000. It provides for:

- the sustainable management of natural resources and protection of the environment;
- the prevention of pollution and environmental degradation;
- the preparation of a National Environmental Plan and other plans for the management and protection of the environment;
- the establishment of an Environment Fund; and
- the establishment of the EMA. The EMA is a body corporate capable of suing and being sued in its own name.

The Act repealed various Acts, including: the Natural Resources Act (Chapter 20:13), the Atmospheric Pollution Prevention Act (Chapter 20:03), the Hazardous Substances and Articles Act (Chapter 15:05), and the Noxious Weeds Act (Chapter 19:07).

Other Acts that are relevant to water management include the Urban Councils Act (Chapter 29:15), 1996 edition, the Rural District Councils Act (Chapter 29:13), 1996 edition, and the Mines and Minerals Act (Chapter 21:05), 1996 edition, the Public Health Act (2018) and Civil Protection Act, 2011.The various Acts that deal with water in Zimbabwe are not synchronised. While the Urban Councils Act allocates responsibilities to Urban Councils, it does not specify duties and responsibilities of local authorities to ensure availability, access, and affordability of services. The EMA Act addresses pollution in general but is inadequate to ensure correction and prevention. Penalties and fines are not linked to better performance and corrective action. The Water Act is not adequately linked to the ZINWA Act, Urban Councils Act, and Public Health Act.

2.2 National institutional framework for water and natural resources management

The Ministry of Lands, Agriculture, Fisheries, Water and Rural Development is the primary institution responsible for water matters in Zimbabwe. Within the Ministry, the Department of Water Resources Development and Utilisation in the Ministry is responsible for oversight of the water sector in Zimbabwe. Its main functions are to develop policies to guide the orderly and integrated planning of the optimum development, utilisation, and protection of the country's water resources in the national interest; to ensure the availability of water to all citizens for primary purposes; to meet the needs of aquatic and associated ecosystems, particularly when there are competing demands for water; and to ensure the equitable and efficient allocation of the available water resources in the national interest for the development of the rural, urban, industrial, mining, and agricultural sectors.

This overall planning, development, and water resources management responsibility is supported by ZINWA, CCs and SCCs.

Coordination in the water sector is undertaken by the National Action Committee on Water Supply and Sanitation, chaired by the Ministry and supported by a Department of Water, Sanitation, Hygiene and Pollution coordination as the Secretariat. The committee is the apex inter-ministerial body that was formed to coordinate all aspects of water development and management in Zimbabwe.

It comprises three sub-committees: the Water Resources Management, Urban, and Rural Sub-committees, responsible for sub-sector coordination.

The Ministry of Health and Child Care (MHCC) is a key player in the Rural Water, Sanitation and Hygiene (WASH) sub-sector responsible for water quality monitoring and promoting safe water supply and household sanitation. The MHCC is responsible for promoting improvements in domestic hygiene, specifically through adoption of safe self-supply drinking water systems such as covered family wells and rainwater harvesting, and household investments in improving excreta disposal and safe sanitation. The MHCC has the lead role in promoting health and hygiene education and encouraging healthy sanitation and hygiene. The Ministry of Transport and Infrastructure Development, through the Department of Infrastructure Development, hosts a unit to appraise and manage infrastructure projects funded from the Rural Capital Development Fund. A specific component of this fund is dedicated to financing rural WASH activities. The Rural Infrastructure Development Agency (RIDA) chairs the rural National Action Committee sub-committee and is responsible for sector coordination. The Office of the President and Cabinet hosts the Rural Infrastructure Development Agency (RIDA), which maintains a small unit for backup borehole drilling, deep well sinking and pump repair and rehabilitation in each RDC area. The RIDA provides technical guidance and expertise to RDCs in planning and supervising rural WASH development, in addition to advising District Water and Sanitation Committees on borehole drilling and pump maintenance.

The Ministry of Environment, Climate and Wildlife, through the EMA, is responsible for environmental issues as a regulatory institution on all issues, including water and water issues such as water pollution control, water source protection, and water allocation for the environment. It is also responsible for coordination on climate change.

The Ministry of Energy and Power Development, the Ministry of Mines and Mining Development, and the Ministry of Local Government, Public Works and National Housing, through Urban and Rural Councils, are responsible for water use and therefore management at consumer level. They represent different constituencies of water users (Zimbabwe National Water Policy, 2012). The Ministry of Finance and Investment Promotion, the Ministry of Energy and Power Development, development partners, and the private sector are major players with regard to the financing of the water supply system. The Ministry of Women Affairs, Community, Small and Medium Enterprises Development, Confederation of Zimbabwe Industries, Urban Residence Associations, and ordinary members of society are also important interested parties in water issues, as they are impacted directly or indirectly.

ZINWA is a statutory body established in terms of the ZINWA Act 20:25. Its main responsibility is to manage the country's water resources in the seven major catchments. Its role is also to advise the Minister on the formulation of national policies and standards on water resources planning, management, development, hydrology and hydrogeology, dam safety, borehole drilling, and water pricing. Its role is also to ensure that CCs discharge their functions in accordance with the Water Act (Chapter 20:24). It is further mandated to operate and maintain any waterworks owned by the State and managed by authority, to sell any water therefrom, to dispose of wastewater, to construct boreholes, and to provide design and construction services. In the transboundary context, it promotes such mechanisms for the cooperative management of international water resources as the Minister may determine. ZINWA was established as a self-financing institution which generates revenue to finance its operations through the provision of raw water services, sale of agreement water, groundwater investigation, and service provision. In terms of the ZINWA Act, ZINWA is also mandated to provide potable water supply services to local authorities and government institutions that are not yet able to take on this responsibility themselves. Therefore, ZINWA has two distinct functions, the first being that of water resources development and management, and the second being a limited potable water supply function. However, this still presents ZINWA as both a player and referee in the sector, given that it regulates and also supplies potable water directly to consumers.

The CCs are statutory bodies established in terms of the Water Act (Chapter 20:24) to promote a stakeholder-driven water resources management. Their main roles include preparing catchment management plans in consultation with the stakeholders, granting permits for water use, regulating and supervising water use, supervising the performance of SCCs as well as resolving conflicts within their areas of jurisdiction.

The SCCs are statutory bodies and grassroots-level water resources management institutions that are a product of efforts by Zimbabwe to fully implement Integrated Water Resources Management (IWRM) throughout the entire water resources management framework, thereby promoting a participatory and decentralised approach in water management and utilisation.

Table 1 below provides an overview of institutional responsibilities for key water resources management functions in Zimbabwe. This is followed by Table ?, which provides an analytical overview of the current challenges (gaps, overlaps, inconsistencies) within the framework of water resources management responsibilities.

2.3 Stakeholder typology

This NAP is aimed at guiding the management of water-related environmental problems for enhanced functioning of the BUPUSA basins. All land use, natural processes, and environmental disturbances interact with the hydrological cycle and balance within the basins. For this reason, development and management strategies for natural resources will be more effective if implemented over the whole basin, reflecting the relationship between the basin's ecosystem and people, water, land, vegetation, and fauna. The specific institutions and their roles in the basinsare outlined in Table 1.

Table 1: Overview of water resources management functions in Zimbabwe

Institution	Functions/Roles
Foreign Affairs, Attorney General's Office, Parliament, responsible ministries	Formulation of laws and regulations
Ministry responsible for Water, ZINWA, CCs, and SCCs	Water resources management and policies
ZINWA and EMA	Monitoring of surface water quantity and quality
ZINWA and EMA	Monitoring of groundwater quantity and quality
Ministry responsible for Water, ZINWA, CCs and SCCs	Water resources classification
EMA, ZINWA, Standards Association of Zimbabwe (SAZ), Health, RIDA, Local Authorities	Water quality standards and enforcement
EMA, SAZ	Standards for pollution discharges for classified water resources
ZINWA, CCs and SCCs, EMA, Ministry of Mines and Mining Technology	Monitoring of water use and pollution discharge
EMA, ZINWA, RIDA, Local Authorities, Ministry of Health	Monitoring of drinking water sources and quality, and recreational water quality
Meteorological Services Department, ZINWA, Department of Civil Protection	Monitoring of meteorological conditions
Department of Water Resources Development and Utilisation, ZINWA, CCs, SCCs, river basin organisations, RIDA, local government	Maintenance of water resources databases
Department of Water Resources Development and Utilisation ZINWA, Local Authorities	Development of National Water Programme
Department of Water Resources Development and Utilisation, ZINWA,	Development of Basin Management Plans
CCs, SCCs, EMA, Local Authorities	
CCs	Issuance of water user permits
Department of Water Resources Development and Utilisation, Standards Association of Zimbabwe (SAZ)	Development of rules and procedures for compliance assurance
ZINWA, EMA, SCCs, Ministry of Health, RIDA	Implementation of compliance assurance procedures for regulations and permit conditions
ZINWA, EMA, SCCs, Local Authorities	Supervision of payment of water withdrawal and water discharge fees
Zimbabwe Republic Police, ZINWA, EMA, SCCs, Local Authorities, Ministry of Mines and Mining Development	Application of penalties and fines
ZINWA, EMA, RIDA, SCCs, Department of Health, traditional leaders	Protection of drinking water sources
Department of Water Resources Development and Utilisation, Ministry responsible for Finance	Development of a policy and mechanisms for financing water management
Ministry responsible for Lands, Agriculture, Fisheries, Water and Rural Development	Formulation of agricultural policy and sector plan
Agricultural and Rural Development Authority, Department of Agricultural, Technical and Extension Services, ZINWA, private sector	Management of irrigation and drainage systems
Department of Water Resources Development and Utilisation, CCS, local government	Water system use licence and tariffs
Local government	Formulation of municipal water supply policy
Local authorities	Management of municipal water systems
Local authorities, ZINWA	Operation of municipal water systems
EMA, local government, CCs	Regulation (issuance of water system use permit and approval of tariffs)
EMA, ZINWA, Department of Water Resources Development and Utilisation, RIDA, higher and tertiary institutions	Training and capacity building

III

Buzi, Pungwe and Save River Basins

3.1 Geographical setting

The BUPUSA river basins are hydrologically delineated river systems exclusively shared by Mozambique and Zimbabwe. The river systems eventually discharge into the Indian Ocean, draining through urban areas, farmlands, and forestlands. Zimbabwe forms the headwater catchment of the three river basins, and Mozambique is downstream.

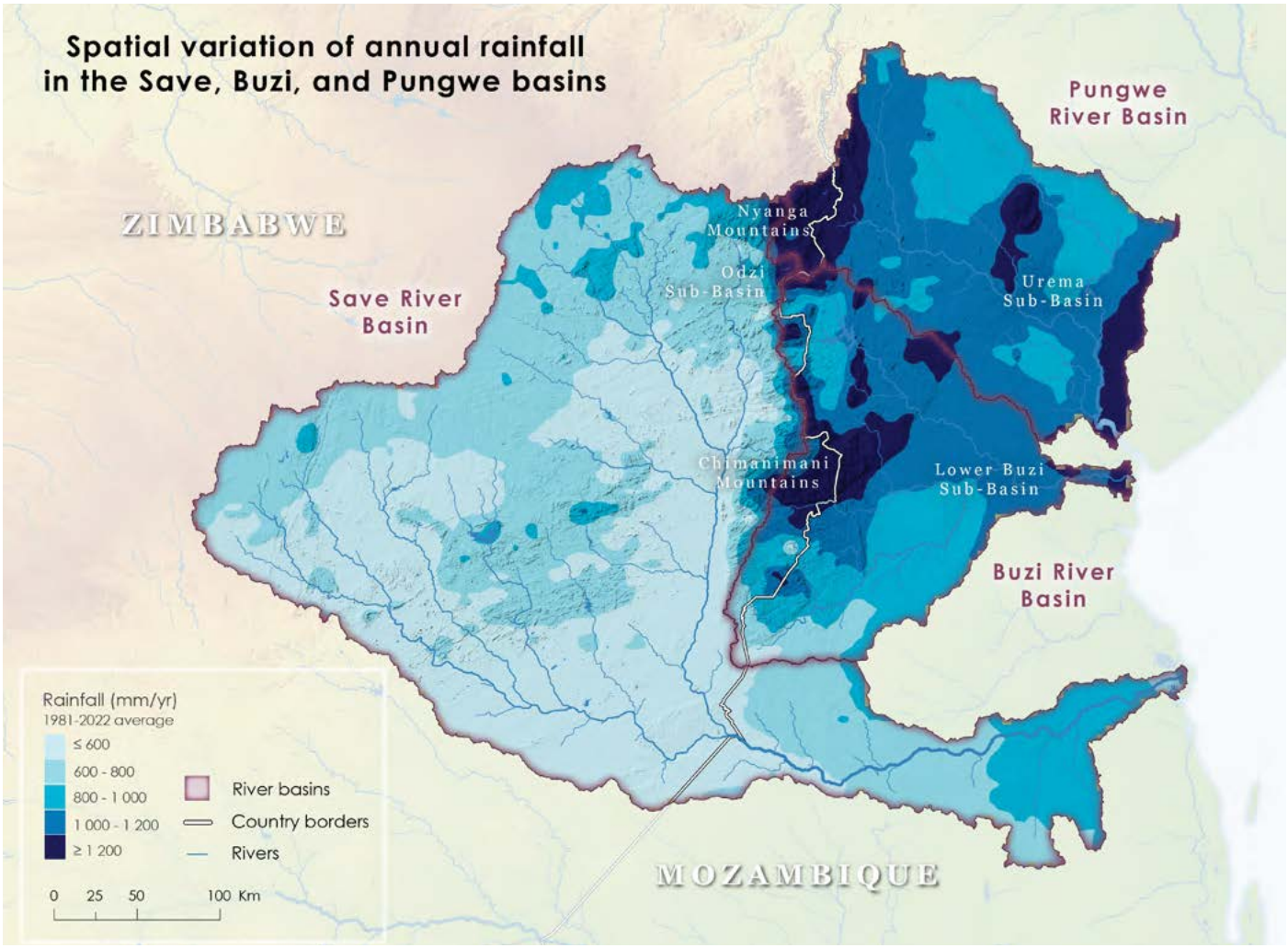


Figure 2: Spatial variation of annual rainfall in the Buzi, Pungwe, and Save River Basin. Source: GEF-BUPUSA Atlas 2024

The Buzi River Basin originates in the mountainous areas in east Zimbabwe at an altitude above 3,000 m and extends eastwards to the Mozambican coast through Manica, and Sofala provinces, ending in the Indian Ocean. The basin has an area of approximately 28,800 km², of which 13% is within Zimbabwe and 87% is in Mozambique (Sweco, 2011). The basin comprises three main tributaries, the Buzi River, Rusitu River and Revue River, each flowing from the mountainous areas in the western part of the basin (in Zimbabwe) through the relatively flat plains in the central and lower regions to the east (in Mozambique) before discharging into the Mozambique Channel just west of Beira, where the Buzi forms a large estuary with the Pungwe River.

The Pungwe Basin covers an area of 31,022 km2, of which 1,465 km2 (4.7%) are in Zimbabwe (generating 24.2% of the mean annual runoff [MAR]; MAR = ~62.1 Mm3), and 29,555 km2 (95.3%) are in Mozambique (generating 75.8% of the MAR; MAR = ~194.1 Mm3) (Sweco, 2004). The Pungwe River is ~414 km long and its source is in the foothills of the Nyanga Mountains, which form the northernmost extent of the Eastern Highlands of Zimbabwe. The river rises below Mount Nyangani, which, at an altitude of 2,592 m above sea level, is the highest mountain in Zimbabwe. The river flows southeastwards through the Honde Valley, crossing into Mozambique near Katiyo Estate, ~60 km from its source. It then flows through the Mozambican provinces of Manica and Sofala for ~340 km before reaching the coastal floodplains and estuary. The low-lying and gentle slopes that characterise most of the basin give rise to a wide, meandering river with large floodplains and extensive wetlands. The Pungwe River flows into the Mozambique Channel in the Indian Ocean at Beira Port (Southern Waters, 2023). The principal tributaries of the Pungwe River in Zimbabwe are the Honde River on the right bank and the Nyazengu, Chiteme, Nyamhingura, Nyawamba, Nyamukombe, and Rwera rivers on the left bank. The main tributaries

in Mozambique are the Nhazonia, Txatora, Vunduzi, and Urema rivers rising from the north to join the main river on its left bank, and the Honde, Metuchira, and Muda from the south (Southern Waters, 2023).

The Save Basin is approximately 102,000 km2 in size, with 83% of its total area lying in Zimbabwe and 17% lying in Mozambique (COWI, 2013; COWI, 2011). In Zimbabwe the Save River Basin covers approximately 22% of the country's land area, comprising two major river systems, the Save River system and the Runde River system. The Save River drains from the northeastern part of the basin and the Runde drains from the western part of the basin. The Save River system originates 65 km southwest of Marondera town, at an altitude of approximately 1,450 m above sea level in a 600 mm to 700 mm rainfall area. It flows south-eastwards for approximately 200 km and then southwards before it joins the Runde River at an altitude of about 500 m above sea level and enters Mozambique. The Runde system stretches as far west as the vicinity of the town of Gweru. Administratively, the Save Basin straddles the four Zimbabwean provinces of Masvingo, Mashonaland East, Midlands and Manicaland, and Sofala, Manica, Gaza, and Inhambane provinces in Mozambique.

3.2 Environmental and socioeconomic conditions in the Buzi, Pungwe, and Save basins

A detailed description of the environmental and socioeconomic conditions in the three basins is provided in the BUPUSA TDA.

Community vegetable gardens are a significant source of nutrition and income play for rural communities in the BUPUSA Tri-basin. This plays a huge role in improving the livelihoods of the rural population who are depended on natural resources. Photo credit: GEF - BUPUSA Project

IV

Priority areas of concern

The population in the BUPUSA river basins is vulnerable to a combination of social, economic, and environmental factors that interact with climate change. The resulting priority environmental problems identified in the TDA are closely inter-related and share the same underlying driving forces.

4.1 Underlying drivers

4.1.1 POPULATION DYNAMICS

The population in the three river basins is increasing steadily and this, with the concurrent increase in demand for goods and services, is a key driver of change in the basins. Throughout the basins, there is a trend towards increasing urbanisation associated with population growth and limited alternative livelihood options. Although the population in the basins is still predominantly rural, the urban and peri-urban centres are all growing in size. Increased urbanisation leads to increased demand for services such as water supply and sanitation, which, if not regulated, could for example lead to increased water pollution and over-abstraction of water from the rivers. The low-lying areas, mainly in the Save River Basin, are increasingly susceptible to flooding, both from storm surges accompanying cyclones and flooding from precipitation upstream. The human, material, social, and economic impacts of floods are exacerbated by the increase in human settlements in the buffer zones and floodplains of the river systems. The rural communities are also extremely vulnerable to droughts because of reliance on rainfed crops and floodplain agriculture. With the increasing population, there is higher demand for the harvesting of natural resources and for the clearing of new farmland. All these lead to increased land degradation.

4.1.2 LAND USE CHANGE

Land use change is a driving force for changes in sediment dynamics, water quality and abundance, and distribution of biota, and through deforestation has impacts on the hydrological regime. It is linked strongly to population growth, and its impact is incremental and often very difficult to reverse. Despite the relatively low population densities in the three basins, the changes in land use and vegetation cover have been considerable. There is increased demand for land for crops, and with an increasing population this trend will only accelerate. Likewise, artisanal mining, especially gold panning, has increased exponentially over the last two decades and contributes significantly to land use change and resulting environmental problems. Overall, the impact of land use change may be more significant than that of increased water use, and its control may be a more difficult challenge to manage.

Pits left by sand poachers in Mutare, along the Odzi Sub-catchment in the Save Basin in Zimbabwe. The increase in population in both rural and urban settlements have created a demand for wood fuel; clay (brick making); sand (both pit and river sand) and quarry. Photo credit: Edimus Masona

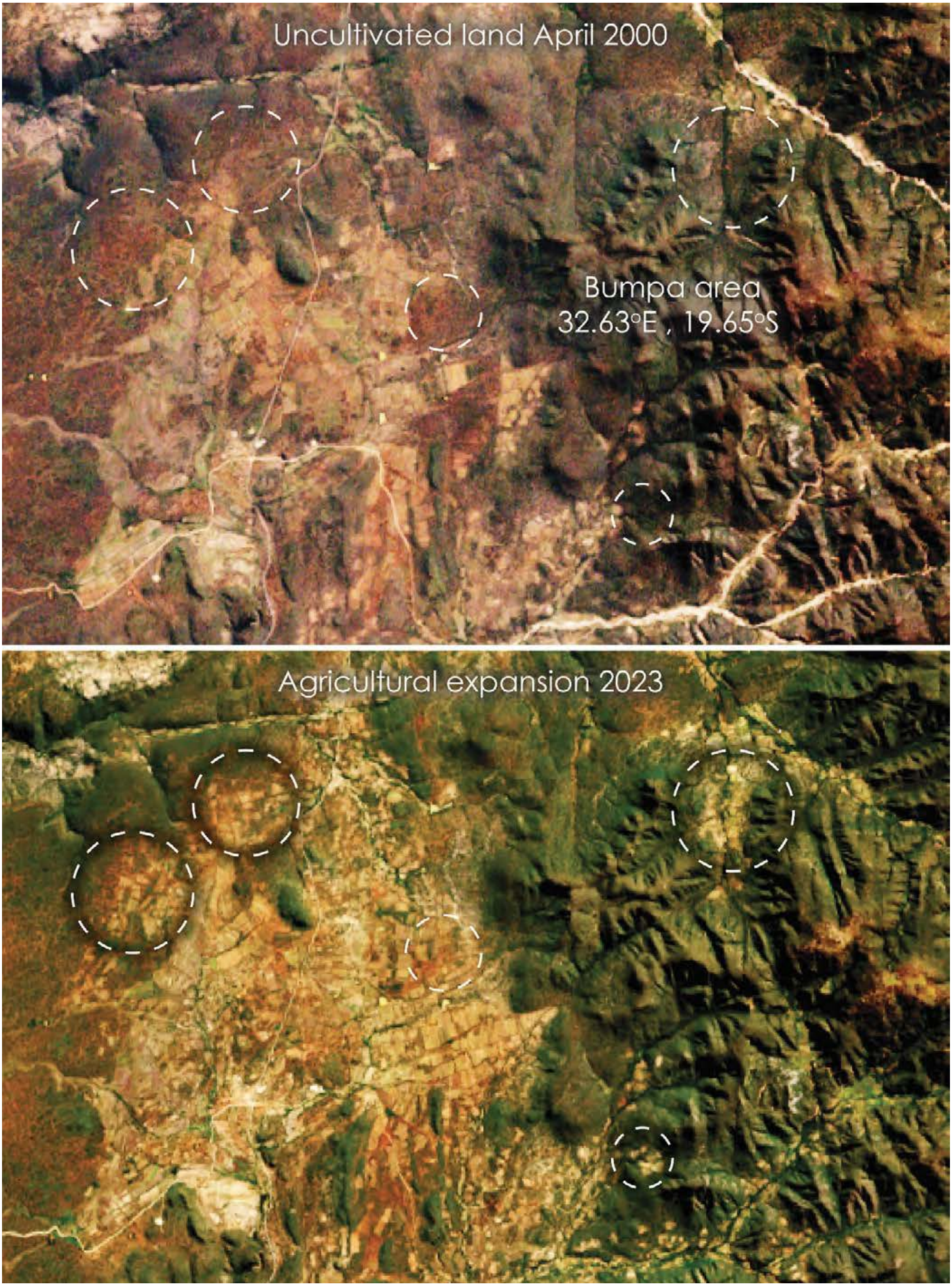


Figure 3: Land use change due to agriculture in Bumba Village along the Buzi River in Chimanimani, Zimbabwe. Source: GEF-BUPUSA Atlas, 2024

4.1.3 POVERTY

Poverty is a feature of the human populations in all three basins and is a key driver for the environmental problems experienced. The basins' economy is fragile, with high levels of poverty. Most of the people living in the basins live in the rural areas, with roughly 70% of the population depending on rainfed agriculture, and high levels of poverty result in maladaptation. As the population increases, so the pressure on natural resources will increase. Increasing deforestation rates, and pasture and land degradation are drivers of vulnerability in the basins. Assuming that the current patterns of use of natural resources remain the same, the pressure on natural resources will increase substantially. This will inevitably lead to further degradation and loss of critical habitats such as the floodplains and riparian woodland as trees are cut for timber and firewood, reedbeds are converted to grazing or agricultural land, and reeds and grasses are cut for household use, baskets, and matting. To some extent, such natural resources are sustainable, growing again each year, but if they are overharvested the vegetation may be depleted or lost completely, so that the wider habitat is changed. There is evidence in some parts of the basins that the riparian vegetation has been so changed that it no longer provides the natural resources it used to. It is therefore essential for the rivers to remain in good condition, since their natural resources are often important 'safety nets' for poor communities in adverse times. It should be noted that while water use developments are aimed at increasing the amount of income coming from the river system, this may not necessarily reduce poverty if the right type of developments is not pursued. The reason is that where developments form part of the formal sector, and particularly where (some or even most of) the economic linkages fall outside the basins, the benefits will be skewed towards high-income segments of society. The poorest elements of resident societies in the three basins have tended to rely on the direct use of natural resources and to depend on the fact that access to these resources provides them with a safety net in times of adversity.

It is therefore clear that poverty alleviation in the three basins should be a major investment target for the government, and the ambitious water use development plans inherent in the future development plans suggest that this is the case. Zimbabwe has national poverty reduction strategies aimed at improving the welfare and living conditions of its populations through increased economic growth.

4.1.4 CLIMATE CHANGE

Climate change projections for the three basins using the Climate Information Portal models generally point towards a drier, warmer future with delayed onset of the rainy season. At the same time, the basins are exposed to tropical cyclones, and the frequency of occurrence over the last 20 years seems to be on the rise. An increase in the occurrence of extreme flood and drought events (and cases of resulting food shortages) is already being observed. It is estimated that in Zimbabwe, the percentage of the population at very high risk of groundwater drought could rise from 32% to 86% without measures being implemented to adapt to the effects of climate change.

Climate change is expected to amplify other existing water resources challenges in the three basins. Non-climatic factors such as unsustainable land and natural resources use, population increase, and others, will add more stress to the water resources in addition to climate variability and/or change. Initiatives will need to be implemented to help the basins cope with changes in a positive manner. The greater the adaptive capacity, the lower the vulnerability will be, and vice versa.

Initiatives and investments in the three basins should address climate vulnerability linked to social inequities, water insecurity, and environmental degradation, as well as the governance challenges that exist. Investments in adaptation infrastructure are part of the solution, including investment in nature-based solutions to build climate resilience. Investing in water harvesting, storage, and drainage infrastructure will reduce the number of people affected by flooding and drought. Strengthening communities and institutional capacity and building awareness of climate threats will promote climate-responsive planning and development, and local ownership of solutions, including integration of indigenous knowledge systems. The governance and capacity-building aspect of operationalising adaptation initiatives should therefore also receive adequate attention. Overall, a combination of investment projects and policy and institutional reforms is desired if sustainable and resilient development is to be promoted across sectors and at all levels.

4.1.5 INSUFFICIENT GOVERNANCE CAPACITY AND TRANSBOUNDARY COORDINATION

The effective sustainable management of the basins is hindered by considerable constraints in institutional capacity and transboundary coordination. These constraints are largely of a structural nature, namely the fragmentation of management responsibilities across different line function ministries, the lack of intersec-

toral planning, limited coordination between different spheres of government, weak institutional structures at the local level, and a lack of skills, management capacity, and resources for integrated planning and effective monitoring, implementation, and enforcement.

These aspects are exacerbated by weak structures for transboundary coordination for basin planning, management, and development. The political will for such transboundary coordination is evident in previously ongoing coordination through the Joint Water Commission, and recently the establishment of the Buzi, Pungwe, and Save Watercourse Commission (BUPUSACOM).

4.2 Environmental priority problems

Through the various studies conducted as part of the TDA and regional and national stakeholder consultation processes, five priority problems were identified as having led to a decline in the ecosystem health and functioning of aquatic ecosystems in the BUPUSA basins. These are:

- reduced availability of water;
- deterioration of water quality;
- land degradation;
- changes in flow regime; and
- increase in extreme climate events – floods and droughts.

Although all the above problems occur in all three BUPUSA basins, their level of priority in comparison to the other problems among between the three basins. Likewise, the degree of severity of each problem varies among the basins. Table 2 shows a ranking of issues in order of priority for the respective basins and Table 3 indicates the level of severity of the problem for each basin.

Table 2: Priority ranking of issues

Priority issue	Buzi	Pungwe	Save
Land degradation	3	3	2
Deterioration of water quality	2	2	5
Increase in extreme climate events-floods and droughts	1	1	4
Reduced availability of water	5	5	1
Changes in flow regime	4	4	3

1=highest priority; 5 = lowest priority

Table 3: Level of severity of priority issues

Priority issue	Buzi	Pungwe	Save
Land degradation	2	2	1
Deterioration of water quality	3	2	3
Increase in extreme climate events-floods and droughts	2	3	1
Reduced availability of water	4	4	2
Changes in flow regime	4	4	2

1 – severe; 2 – significant; 3 – considerable; 4 - moderate ; 5 - insignificant

A summary description of each of the priority problems is provided in the following sections.

4.2.1 REDUCED AVAILABILITY OF WATER

The water use in the Buzi Basin as a percentage of available surface water and groundwater resources was estimated at 16% in 2020. Irrigation accounts for an estimated 81% of the water demand, followed by water supply for urban centres. Demands are steadily growing, and total demand is estimated to increase to 28% of available surface water and groundwater supplies by 2035. This is slightly above the water allocation agreed in the Water Sharing Agreement for that point in time.

In the Pungwe Basin water use as a percentage of available surface water and groundwater resources was estimated at 28% in 2020 (including environmental flows). Total demand is estimated to increase to 36% of available surface water and groundwater supplies by 2035, which, as in the case of the Buzi, is slightly above the water allocation agreed in the Water Sharing Agreement for that point in time.

The water use in the Save Basin as a percentage of available surface water and groundwater resources was estimated at 117% of MAR in Zimbabwe. By 2035 the water demand will be about 151% of MAR for the whole basin.

In relation to the other priority issues, the problem of reduced availability of water was ranked as the highest priority in the Save Basin, whereas in the Buzi and Pungwe basins it is currently considered the least severe of the five priority problems.

Groundwater is of major importance for most of the rural population in the basins for domestic use, stock watering, and even some small-scale irrigation. The knowledge about the groundwater potential in the basins is improving but is nevertheless still limited and needs to be better understood to determine the potential of the groundwater and how its use could be improved at the local level.

High siltation levels in the Save River at Birchenough Bridge, Zimbabwe, due to poor upstream catchment management or land use practices. This has resulted in a reduction in water available for utilisation. Photo credit: Melisa Mavenge-Matavire

Communal borehole in the drought- prone Chiredzi District, Zimbabwe providing water for more than 200 households from three villages. Photo credit:GEF-BUPUSA Project

The reduced availability of water leads to a range of environmental and socioeconomic impacts described in detail in the TDA. The causes of reduced availability of water are partly related to climate change and are otherwise attributable to water use patterns across the key sectors of agriculture, mining, urban and domestic supply and energy, and to insufficient hydraulic infrastructures for water storage.

There is a keen awareness among decision-makers in the basins that water demand needs to be managed sustainably, especially in the context of having to account for environmental flows, since increasing use of water in parts of the basins – especially in the high-demand upper basin areas of the Save – affects the balance available for downstream users, including the volumes available to the ecosystems. It is important that the water needs across sectors are incorporated into ongoing, joint long-term planning and that at the same time measures are taken to curb the increase in the demand and use of water as efficiently as possible.

A concern in all three basins is the limited understanding of the groundwater resources potential. Rainfall, flow, and groundwater resource monitoring, analysis, and evaluation need to be improved.

4.2.2 DETERIORATION OF WATER QUALITY

The key water quality issues in the three basins are changes in sediment load as a result of erosion caused by inappropriate agricultural practices and (illegal) artisanal mining; eutrophication, which is primarily linked to increased phosphorus and nitrogen concentrations from agricultural runoff; and contamination with pollutants, notably heavy metals used in artisanal mining. The impacts and causes of declining water quality in the three basins are summarised in the TDA. Although the problem of deteriorating water quality is increasingly being recognised as a growing problem throughout the basins, it is currently most severe in the following areas (Table 4):

Table 4: Water quality degradation hot spot areas

Buzi	Pungwe	Save
Rusitu River	Nyamukwarara River	Mutare River
Nyahode River		Odzi River
Haroni River		Save River
Nyabamba River		Runde River
		Shurugwi
		Mberengwa
		Zvishavane

Overall, in relation to other issues, the problem of deteriorating water quality was ranked the second most important issue in the Buzi and Pungwe basins, and the fifth most important in the Save Basin. The relatively low ranking in the Save Basin is, however, not an indication of low severity (the issue in fact has a ranking of considerable severity), but rather an indication that other priority problems are even more pressing.

The causes of the problem are predominantly attributed to three sectors: agriculture, mining, and the urban and domestic sector.

Agricultural return flows containing agrochemicals and seepage from agricultural areas are largely associated with the commercial agriculture sector. This sector is more developed in the upper parts of the three basins in Zimbabwe, mainly the Save Basin. Small-scale and subsistence agriculture contributes significantly to erosion and sedimentation through slash-and-burn practices and the cultivation of marginal lands not suited for agriculture such as steep slopes and riverbanks. Subsistence agriculture is practised throughout the three basins. Poor land use practices have increased the rates of wetland loss and soil erosion, resulting in siltation of rivers. Deforestation, uncontrolled bushfires, inadequate cultivation practices in sloping land, destruction of forest for the harvesting of firewood, charcoal, and building material, and for the manufacture of household utensils, have caused the exposure of soils to erosive effects. This often results in excessive accumulation of sediments in river courses, leading to the deterioration in the quality of water in river courses and reducing the capacity of soils to retain and recharge water into aquifers. Furthermore, considering a possible increase in the number of people living in the catchments and the possible growth in the demand for wood fuel in the surrounding towns and cities, deforestation could worsen in the future, thereby aggravating of the threat of pollution of river courses by suspended sediments.

Heavy metal contamination and high sediment loads because of inappropriate mining practices, predominantly related to artisanal gold panning, are a major concern in some parts of the basins. (See Table 4.)

Inadequate pollution control, wastewater control, and contamination of freshwater resources as a result of inadequate facilities, infrastructure, and maintenance in the urban and domestic sector are issues that need to be addressed in the basins.

Deteriorating of water quality due to stream bank cultivation in Mutare River a tributary of the Save in Zimbabwe

4.2.3 LAND DEGRADATION

Poor land management practices have altered the conditions of the land, affecting its interactions with water and having far-reaching consequences for the health and integrity of riparian and aquatic ecosystems. Not only is the land less productive, with the subsequent loss of livelihood opportunities, but there are also increased risks of changes in water quality and sediment loads during local flooding, groundwater recharge, and invasion by alien plants. The causes of land degradation are often the same as the ones contributing to a deterioration in water quality and are largely driven by the same three sectors: agriculture, mining, and urban and domestic.

In areas where the majority of the basin population rely predominantly on agriculture as their main livelihood option, land degradation and the resulting loss of soil capacity are part of a vicious cycle. The degradation of land, coupled with the effects of climate change, results in lower yields and thus reduced income-earning opportunities and food security, especially in the subsistence sector, which is predominant in the basins. As a consequence, people feel forced to expand cultivation into marginal areas such as steep slopes, riverbanks, and wetlands. This in itself is one of the main drivers of land degradation, thereby continuing and aggravating the cycle.

The problem of land degradation is considered the third most pressing issue for the Buzi and Pungwe basins, and the second most important one in the Save Basin, with the degrees of severity being significant to severe. The problem is common and widespread in the three basins, but certain hot spot areas are particularly affected, as shown in the table below.

Table 5: Land degradation hot spots

Buzi	Pungwe	Save
Rusitu	Nyamukwarara River	Penhalonga
Machongwe		Odzi
Kopa		Shurugwi
Nyanyadzi		Buhera District
		Gutu
		Masvingo

Addressing the problem of land degradation requires greater integration of development sectors with water and environmental sectors to produce and promote sustainable policies, programmes, and alternative livelihood options. At the policy level, interventions related to agricultural practices need to address the issues of inequitable land tenure.

Land degradation in Nyanyadzi on the Odzi sub-catchment along the Save River in Zimbabwe. Photo credit: Edimus Musona

4.2.4 CHANGES IN FLOW REGIME

The hydrological regime of the Save River has changed significantly, largely as a result of dam development and abstraction. In the Buzi and Pungwe rivers the flow changes are somewhat less severe than in the Save Basin but are expected to worsen with the predicted increase in water demand. Overall, the issue has been ranked as the third most important in the Save Basin, and the fourth most important in the Buzi and Pungwe basins.

In addition to an overall reduction in flow, the effect of the changes in the hydrological regime is that the pattern of flow is different from that of the natural river and will increasingly be so given the projected increase in water demand. There is less variability in flow from one year to the next and, within the year, there is a less distinct seasonal pattern. The frequency of smaller floods has also been reduced, with most being absorbed by upstream abstraction and storage.

The reduced volume and timing of water in the system reduces the amount of water to dilute increasing volumes and types of contaminants, and contributes to changes in sediment load and balance and river morphology along its length. This in turn adversely impacts ecosystems and the ecosystem services they provide. By providing opportunities in some areas by ensuring water supply, other options and potential opportunities are lost, especially those reliant on healthy wetland habitats and related natural resources. In addition, direct costs of water treatment, environmental management, and disease control increase.

The main sectors linked to the problem are:

- agriculture, particularly irrigation demands for water during the dry season;
- mining, through diversion and disruption of waterways and wetlands; and
- the urban and domestic sector, through increased abstractions, and increased runoff and return flows.

Each of the above-mentioned sectors is associated with the disruption of the natural flow of the river by requiring water at a time of year when, naturally, it would be less available; by contributing extra runoff through return flows when naturally there would be less runoff; and by disrupting waterways and wetlands through physical excavations and constructions. These immediate causes are largely driven by socioeconomic development priorities. Changes to the hydrological regime of the river are intrinsically linked to demand and the development of the river to ensure supply at times when and places where there would otherwise be a shortfall. Although this is essential to maintain and provide opportunities in certain economic sectors such as agriculture, it affects the overall health of the river, and reduces opportunities dependent on a healthy and well-functioning environment.

Flow regime changes signified by a dry river bed along the Save River Basin, due to upstream water abstraction. Photo credit: Moses Makwanise

4.2.5 INCREASE IN EXTREME CLIMATE EVENTS – FLOODS AND DROUGHTS

The three basins are prone to heavy rains and flooding during the rainy season (between October and April) but also to dry spells and drought in the dry season because of water scarcity arising from poor water management and high evaporation (1,800 to 2,000 mm/year in the Save Basin, and 1,100 to 1,400 mm/year in the Buzi and Pungwe basins). These high evapotranspiration rates substantially affect the availability of water resources, particularly in surface water bodies. Most dams will lose about 10% to 20% a year of the water stored as a result of evaporation, thereby reducing the reliable water yield. As described in the previous sections, that area is also affected by overexploitation of natural resources, land degradation, soil erosion, deforestation, invasion of water hyacinth, and pollution from industry and commercial farming.

Climate change is expected to amplify existing water resources challenges in the basins. Increased temperatures, decreased and late-onset rainfall, and decreased total flows can be expected in the basin under the most probable emission scenarios. Although this points towards a drier future, it is expected to still be characterised by sporadic and increasingly frequent extreme climate events such as severe flooding. Non-climatic factors such as land use, population growth, development, and other factors will add more stress to the water resources in addition to climate variability and change. Initiatives will need to be implemented to help the basin cope with changes in a positive manner. The greater the adaptive capacity, the lower the vulnerability, and the lower the adaptive capacity, the greater the vulnerability.

For floods, the main hot spot areas identified are the low-lying areas, especially in these areas:

- Buzi Basin: Chipinge (Checheche, Chibuwe); Chimanimani (Tongogara Refugee Camp, Kopa, Jopa, Rusitu);
- Pungwe basin: none; and
- Save Basin: Chiredzi, Tongogara Refugee Camp, Nyanyadzi, Chibuwe, Birchenough, Middle Sabi, Mwenezi District around Neshuro.

The drought risk is considered to be especially severe in the Buhera, Chivi, Bikita, Marange, Checheche in Chipinge, Gutu, and Zaka areas of the Save Basin. With subsistence agriculture being rainfed and highly dependent on natural resources that may be decreased or degraded as a result of climate change, coupled with high poverty levels and low education/literacy, people's options for making agricultural activities more climate-resilient are limited.

A crop field in Gutu district, a drought hotspot in Zimbabwe. The rural population in Zimbabwe relies on rain-fed subsistence agriculture. Photo credit: Davison Saruchera

V

Interventions and investments addressing the priority problems in the Buzi, Pungwe, and Save river basins

Table 6: Priority Area 1: Increase in extreme climate events – floods and droughts

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 1: Increase in extreme climate events – floods and droughts					
Objective: The climate resilience of the basin population is strengthened.					
Target 1: Improved forecasting and early warning systems established	Operationalise and implement the flood and drought forecasting and early warning system	Buzi/Pungwe and Save	**Zim NAP PCN 1:** Strengthening climate resilience in the BUPUSA basins in conjunction with SAP PCN 7: Strengthening climate resilience in the BUPUSA basins, and Moz NAP PCN 1: Strengthening climate resilience in the BUPUSA basins	• Global Environment Facility (GEF) BUPUSA Project: Management of Competing Water Uses and Associated Ecosystems in the Pungwe, Buzi, and Save River Basins • United Nations Educational, Scientific and Cultural Organization (UNESCO) Project: Community-focused flood early warning system for the Buzi, Pungwe, and Save • National Climate Outlook Forum • United Nations Development Programme-Green Climate Fund (UNDP-GCF) automatic gauging stations (Save Birchenough Bridge), automatic weather stations in schools – one in Buhera • Civil Protection Unit: Disaster Risk Reduction awareness programmes • International Fund for Agricultural Development, UNOPS and Cyclone Idai Recovery Project, Gudyanga and Tonhorai rehabilitation of boreholes, canals and pumps – Save • UNDP: weather forecasting equipment installation in schools in Murambinda, Chipinge and Chimanimani • Civil Protection: Disaster Risk Reduction strategies and monitoring	• Regional Flood Forecasting and Early Warning Centre • Disaster Risk Management Contingency Plans • Disaster Risk Reduction Master Plans • Zimbabwe Water Resources Master Plans • Buzi IWRM Strategy • Save IWRM Strategy
	Establish community-led flood and drought management systems in vulnerable areas	Buzi/Pungwe and Save			
	Rehabilitate, densify, and upgrade the hydro-climatological network and integrate it with the Buzi, Pungwe, and Save Water Information Systems (BUPUSAWIS)	Buzi/Pungwe and Save			
Target 2: Climate adaptation and mitigation strategy developed	Develop and implement the BUPUSAWIS and operationalise the Data Sharing Protocol	Buzi/Pungwe and Save		• Towards a community focused flood Early Warning System for the Buzi-Pungwe and Save (BuPuSa) Transboundary River Basins (UNESCO) Project • National Civil Protection Structure • Civil Protection: Disaster Risk Reduction strategy for each district • Local Initiatives and Development Agency: Disaster Risk Management (funded by French Cooperation)	• Climate Change National Adaptation Plan • Zimbabwe National Climate Policy • Zimbabwe Climate Change Response strategy • Zimbabwe Climate Change Gender National Plan • Catchment Outline Plans • Water Resources Management strategy; Water Resources Master Plan • Climate Change Response Strategy
	Develop a basin-wide Climate Mitigation and Adaptation Action Plan/ Disaster Management Planning	Buzi/Pungwe and Save			
	Develop/review and update Disaster Risk Management Plans	Buzi/Pungwe and Save			
	Establish community-based climate information services	Buzi/Pungwe and Save			

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 1: Increase in extreme climate events – floods and droughts					
Objective: The climate resilience of the basin population is strengthened.					
Target 3: Climate adaptation and mitigation strategy implemented	Implement appropriate water infrastructure projects and associated technologies (including Indigenous Knowledge Systems) for poverty alleviation and climate resilience.	Buzi/Pungwe and Save	**Zim NAP PCN 1:** Strengthening climate resilience in the BUPUSA basins in conjunction with SAP PCN 7: Strengthening climate resilience in the BUPUSA basins, and Moz NAP PCN 1: Strengthening climate resilience in the BUPUSA basins	• Management of Competing Water Uses and • Associated Ecosystems in the Pungwe, Buzi, and Save River Basins (GEF BUPUSA Project); • Towards a community focused flood Early Warning System for the Buzi-Pungwe and Save (BuPuSa) Transboundary River Basins (UNESCO) Project – Buzi/Save • GCF • Climate Adaptation Water and Energy Project – UNDP supported by Foreign, Commonwealth and Development Office • Tobacco Wood Energy Programme – Buzi • Duri and Buwu hydropower schemes (NRE): Renewable Energy – Pungwe/Buzi • Hauna growth point water supply (ZINWA) – Pungwe • GEF 7 in Chivi doing a project on environment, nutrition gardens, 3, 8, 15, 16, 25, 29 • Resilience Anchors in Chiredzi doing boreholes, nutrition gardens, human wildlife conflict 23, 2, 24, 1 • Mercy Corps, World Vision, and Methodist Development and Relief Agency: 22 piped water schemes in Buhera – Save • Local Initiatives and Development Agency: Disaster Risk Management (funded by	• Climate Change National Adaptation Plan • Zimbabwe National Climate Policy • Zimbabwe Climate Change Response Strategy • Zimbabwe Climate Change Gender Action Plan
	Promote investments in alternative renewable energy sources	Buzi/Pungwe and Save			
	Undertake awareness programmes on climate change and disaster management	Buzi/Pungwe and Save			

Table 7: Priority Area 2: Deterioration of water quality

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 2: Deterioration of water quality					
Objective: The water quality in the basins is maintained at adequate levels for socioeconomic development and the functioning of healthy ecosystems					
Target 1: Water resources quality objectives (both surface water and groundwater) are set and a monitoring system is operational	Establish effective and sustainable basin-wide water quality monitoring system and integrate with BUPUSAWIS	Buzi/Pungwe and Save	**Zim NAP PCN 2:** Improved water quality in the BUPUSA basins in conjunction with SAP PCN 4: Reducing water and environmental pollution in the BUPUSA basins, and Moz NAP PCN 2: Improved water quality in the BUPUSA basins	• ZINWA, EMA monitoring plans • Research work – GEF BUPUSA Project through MSc WaterNet students • SAZ • EMA, Chipinge RDC, police, ZINWA, Buzi Sub-catchment: Joint blitz programmes of continuous monitoring of Haroni river for illegal gold panning – Buzi • EMA: Rehabilitation of mined-out areas in Haroni channel Buzi • EMA, City of Mutare, police, ZINWA, Pungwe Sub-catchment and Mutare Border Timbers: Joint programme of continuous monitoring of Nyamukwarara and Nyakaunga rivers and other gold panning hot spots – Pungwe • EMA: 15 water quality monitoring points along Odzi River and Mutare River, 18 in Save tributaries, and all effluent discharge points in sugar and tea plantations in the catchment – Save • Groundwater Monitoring in the Save Alluvial Aquifer of Zimbabwe supported by the Southern African Development Community Groundwater Management Institute (SADC-GMI)	• Pungwe Project Second Phase (PP2) Gold Panning Strategy • EMA Act • Mines and Minerals Act
	Develop water quality Decision Support System and link with BUPUSAWIS	Buzi/Pungwe and Save			
	Operationalise platforms for cross-sectoral coordination on pollution control	Buzi/Pungwe and Save			
	Carry out regular operational research on water quality				
Target 2: River health monitoring programme implemented	Implement effective and sustainable river health monitoring programme and integrate results with BUPUSAWIS	Buzi/Pungwe and Save		• ZINWA • EMA Bio-monitoring in hot spot areas	• EMA Act • ZINWA Act • Local Environmental Action Plans
	Document and disseminate information on river health status	Buzi/Pungwe and Save			
	Build capacity on river health monitoring	Buzi/Pungwe and Save			
Target 3: Mechanisms for pollution control developed, enforced, and implemented	Implement community-based programmes for the rehabilitation of highly degraded water quality hot spots	Buzi/Pungwe and Save		• ZINWA Water Resources Management Mandate • EMA monitoring plans • Local authorities (Chipinge and Chimanimani councils) • EMA, Chipinge RDC, police, ZINWA, Buzi Sub-catchment: Joint blitz programmes of continuous monitoring of Haroni River for illegal gold panning – Buzi	• EMA Act • EMA State of Environment Reports • Mining regulations (Mines and Minerals Act) • Environmental regulations
	Promote environmentally friendly and innovative technology for effluent quality improvements	Buzi/Pungwe and Save			

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 2: Deterioration of water quality					
Objective: The water quality in the basins is maintained at adequate levels for socioeconomic development and the functioning of healthy ecosystems					
Target 3: Mechanisms for pollution control developed, enforced, and implemented	Strengthen WASH infrastructure and initiatives (urban and rural WASH)	Buzi/Pungwe and Save	**Zim NAP PCN 2:** Improved water quality in the BUPUSA basins in conjunction with SAP PCN 4: Reducing water and environmental pollution in the BUPUSA basins, and Moz NAP PCN 2: Improved water quality in the BUPUSA basins	• EMA, City of Mutare, police, ZINWA, Pungwe Sub-catchment and Mutare Border Timbers: Joint programme of continuous monitoring of Nyamukwarara and Nyakaunga rivers and other gold panning hot spots – Pungwe • EMA: Rehabilitation of mined-out areas in Haroni channel Buzi • Local authorities (Mutare, Mutasa, Chipinge, and Chimanimani councils)	• Pungwe Project Second Phase (PP2) Gold Panning Strategy • EMA Act • Mines and Minerals Act
	Establish framework for sustainable gold panning and develop alternative livelihood projects/programmes	Buzi/Pungwe and Save			

The highly silted Odzi River close to the confluence with the Save River, in Zimbabwe has an almost permanent light brown water colour due to silt load caused by upstream soil erosion. Photo credit: Edimus Masona

Table 8: Priority Area 3: Land degradation

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 3: Land degradation					
Objective: The basins' land resources are sustainably managed to ensure agricultural productivity and functioning ecosystem services					
Target 1: Land Use Planning Improved	Develop a strategy for the rehabilitation of degraded areas and reducing siltation	Buzi/Pungwe and Save	**Zim NAP PCN 3:** Sustainable land management in conjunction with SAP PCN 5: Rehabilitation of land degradation hot spots in the BUPUSA basins, and Moz NAP PCN 3: Sustainable land management	• Environmental/Catchment Protection Mandate (ZINWA, EMA, SCCs)	• National Land Use Plans (local government, local authorities and RDCs) • ZINWA Act and Catchment Outline Plans • Buzi Basin Strategy • Forestry Act • Communal Land Forest Produce Act • Forestry Policy • Land and water use strategy in Pungwe Basin • Mines and Minerals Acts • Lands Acts • Local Authorities Act • Spatial Planning Act
	Review and update the River Basin Plans	Buzi/Pungwe and Save			
	Develop a comprehensive strategy to protect ecologically sensitive areas (e.g., conservancies)	Buzi/Pungwe and Save			
Target 2: Land degradation reversed	Rehabilitate environmental degradation hot spots	Buzi/Pungwe and Save		• Environmental protection (ZINWA, EMA, sub-catchments) • Establishment of cooperatives for gold panning • Rehabilitation of mined-out areas on Haroni River channel and banks – Buzi • Rehabilitation of mined-out areas along Mutare River – Odzi • GEF 7: sustainable land management (doing capacity building, nutrition gardens, gully reclamation, fire management and afforestation in Chipinge and Chimanimani with the help of the Buzi Sub-catchment and EMA) • Zimbabwe Environmental Law Association: Capacitation of farmers supported by Oxfam on environmental management planning and conflict management – Save • In Gutu wards 13, 14, and 15: Development Aid from People to People Zimbabwe creating community gardens and implementing farmer training in Gutu wards 14 and 15 on land management – Save	• National Land Use Plans (local government, local authorities and RDCs) • ZINWA Act and Catchment Outline Plans • Buzi Basin Strategy • Forestry Act • Communal Land Forest Produce Act • Forestry Policy • Land and water use strategy in Pungwe Basin • Mines and Mineral Acts • Lands Acts • Local Authorities Act • Spatial Planning Act
	Promote optimal and sustainable use of land and water resources, e.g., conservation agriculture	Buzi/Pungwe and Save			
	Strengthen community-based natural resources/disaster management practices through the creation and upscaling of pilot projects	Buzi/Pungwe and Save			
	Implement alternative livelihood projects to reduce land degradation	Buzi/Pungwe and Save			
	Promote awareness of sustainable water and land use planning	Buzi/Pungwe and Save			

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 3: Land degradation					
Objective: The basins' land resources are sustainably managed to ensure agricultural productivity and functioning ecosystem services					
		Buzi/Pungwe and Save	**Zim NAP PCN 3:** Sustainable land management in conjunction with SAP PCN 5: Rehabilitation of land degradation hot spots in the BUPUSA basins, and Moz NAP PCN 3: Sustainable land management	• GEF 7: Gully reclamation, afforestation, and capacity-building training in schools and communities in Buhera – Save	
Target 3 : Impact of silt and sediment reduced	Strengthen the capacity of the key institutions in mapping, monitoring, and conducting hydrographic surveys	Buzi/Pungwe and Save		• K39 environmental/ catchment protection (ZINWA, EMA, Sub-catchments) • ZINWA (hydrographic surveys and sediment sampling) • Soil and water conservation initiatives by Ministry responsible for Agriculture • Development of integrated land use planning • GEF	• Land use Plans (local authorities and RDCs) • ZINWA Act • Water Act
	Undertake research and implement technologies/ innovations to reduce the impact of siltation	Buzi/Pungwe and Save			
	Strengthen stakeholder coordination and participation of institutions involved in catchment protection	Buzi/Pungwe and Save			
Target 4: Critical wetlands rehabilitated	Develop effective and sustainable wetlands management plans			• GEF BUPUSA Project • EMA policing and monitoring programmes • International Union for Conservation of Nature (IUCN) projects • Practical action (nutrition gardens, wetland protection and beekeeping in wetland protected areas in Bumba, Biriiri and Nhedziwa – Buzi • UNDP-GCF in Shashe, Tokwe and Bindamombe: Wetland protection in Bikita (funded by Christian Care) – Save • UNDP-GEF Limpopo project: Development of inventory database on wetlands training	• EMA Act • LEAP (Local Environmental Action Plans) • EMA State of Environment Reports • Water Act • Wetlands Policy
	Undertake rehabilitation and restoration of degraded wetlands (control of invasive alien species, reseeding and rehabilitation structures) to other areas through community involvement				
Target 5: Socioeconomic and environmental benefits from vital ecosystems optimised	Characterise and delineate ecologically sensitive ecosystems in the river basin Conduct ecosystem services assessments	Buzi/Pungwe and Save		• Nyanga National Park • Gonarezhou National Park • Chimanimani National Park	• Wildlife Protection Act • EMA Act • Forest Act • Traditional Leaders Act
	Implement community-based natural resources management and livelihoods initiatives	Buzi/Pungwe and Save			

Table 9: Priority Area 4: Changes in flow regime

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 4: Changes in flow regime					
Objective: Objective: The adverse effects of the changed hydrological regime mitigated					
Target 1: Environmental flows regime established and implemented	Conduct comprehensive environmental flows assessments	Buzi/Pungwe and Save	**Zim NAP PCN 4:** Implementation of environmental flows in conjunction with SAP PCN 6: Basin-wide environmental flows regime, and Moz NAP PCN 4: Implementation of environmental flows	• GEF BUPUSA Project (environmental flows study) • EMA • ZINWA	• EMA Act • Local Environmental Action Plans • Water Act • ZINWA Act
	Develop principles and guidelines for environmental flows management	Buzi/Pungwe and Save			
	Improve institutional capacities on upscaling, monitoring, and implementing environmental flows requirements	Buzi/Pungwe and Save			

Dry river bed along the Save River Basin in Chiredzi, Zimbabwe. Photo credit: Melisa Matavire-Mavenge

Table 10: Priority Area 5: Reduced availability of water

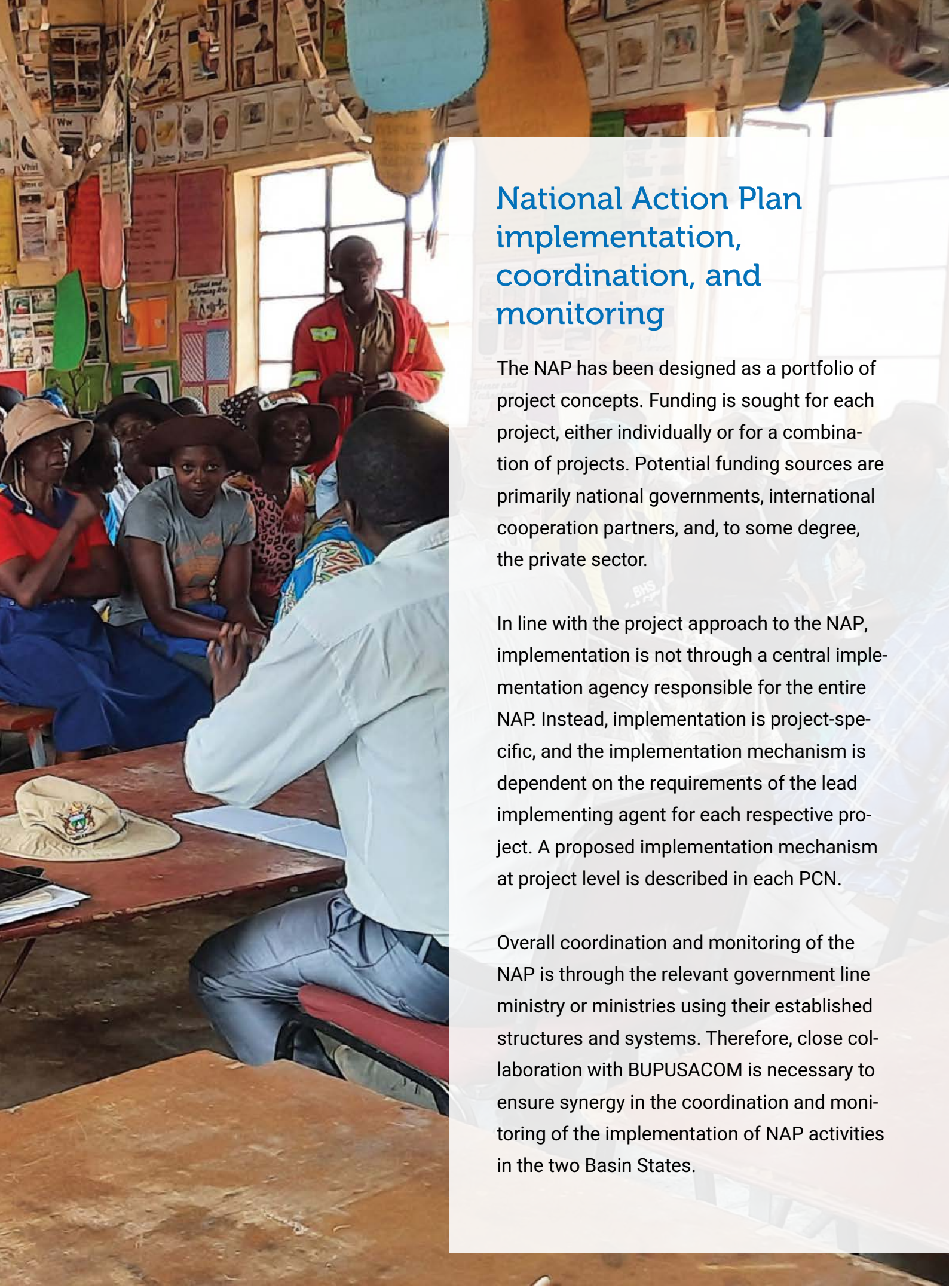
Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 5: Reduced availability of water					
Objective: The water resources of the basins are developed and managed sustainably for increased socioeconomic development and improved livelihoods					
Target 1: Groundwater resource potential established	Characterisation/detailed investigation of the occurrence, availability, and use of groundwater in the basin, including identification of recharge and discharge zones	Buzi/Pungwe and Save	**Zim NAP PCN 5:** Conjunctive use of surface water and groundwater in conjunction with SAP PCN 2: Sustainable groundwater management in the BUPUSA basins, and Moz NAP PCN 5: Conjunctive use of surface water and groundwater	• SADC-GMI input (GEF BUPUSA Project) – Mapping Groundwater-dependent Ecosystems	• GEF BUPUSA Project (inclusion of groundwater into the Joint Water Commission/ BUPUSACOM) and TDA)
	Carry out groundwater vulnerability mapping, including determination of diffuse and point sources of pollution	Buzi/Pungwe and Save			
Target 2: Conjunctive use options for surface water and groundwater implemented	Develop groundwater sources and implement conjunctive use schemes	Buzi/Pungwe and Save		• UNESCO Initiatives on Groundwater • SADC-GMI input (GEF BUPUSA Project) – Mapping Groundwater-dependent Ecosystems • WASH initiatives (government departments, public-private partnerships) • GCF and Government of Zimbabwe: Mhakwe rehabilitation of irrigation pipeline and weir for irrigation and water supply • Drilling of boreholes under presidential scheme • Joint strategy on protecting groundwater recharge zones, well fields, wetlands, and natural springs	• GEF BUPUSA Project (Inclusion of groundwater into the JWC/BUPUSACOM) and Transboundary Diagnostic Analysis - TDA • Zimbabwe Water Resources Strategy • Zimbabwe National Water Policy • Water Resources Master Plan
	Improve the development and management of surface water and groundwater resources at institutional and community level	Buzi/Pungwe and Save			
	Promote sand aquifer abstraction for optimal socioeconomic benefits	Save			
	Implement managed aquifer recharge (MAR) in priority locations	Buzi/Pungwe and Save			
Target 3: Improved monitoring and assessment for conjunctive use of surface water and groundwater resources	Design, upgrade, and sustain a surface water and groundwater monitoring and modelling system Strengthen capacity of institutions in monitoring of water use	Buzi/Pungwe and Save		Upgrading and expanding the hydrometric network through the following projects: • GEF BUPUSA Project • UNESCO Project • United Nations Office for Project Services • UNDP • TDHI Department of Water Resources Development and Utilisation and ZINWA Annual Plans (Government of Zimbabwe or GoZ)	• Optimal Strategic Hydrometric Network • Buzi Surface Water Assessment (PP1) • Buzi Water Sector Study • GEF BUPUSA Hydrometric Network Design • SADC-HYCOS Hydrometric Network Design Report (Phase 3) • SADC-GMI Hydrogeological Portal • Met Services Bulletins (Meteorological Services Department)
	Upgrading the surface water database and developing the groundwater database to improve data management (water uses, water levels, permits, etc.)	Buzi/Pungwe and Save			

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 5: Reduced availability of water					
Objective: The water resources of the basins are developed and managed sustainably for increased socioeconomic development and improved livelihoods					
			Zim NAP PCN 5: Conjunctive use of surface water and groundwater in conjunction with SAP PCN 2: Sustainable groundwater management in the BUPUSA basins, and Moz NAP PCN 5: Conjunctive use of surface water and groundwater	• Data integration platform (e.g., ZEDNET Software) • Joint blitz programmes of continuous monitoring of Haroni River by EMA, Chipinge RDC, police, ZINWA, Buzi Sub-catchment – Buzi • GCF installing automatic gauging stations in Tokwe River, Shashe and Bindamombe – Save • GEF-BUPUSA Project -3 radar sensors • UNESCO Project (flood risk mapping in Chipinge and Chimanimani) – Save • UNDP Project: installation of radar sensors (Birchenough Bridge) – Save • TDH Projects: installation of radar sensors at Tanganda Bridge, installation of flood risk beacons in Tongogara – Save	• Hydrological Bulletins (Department of Water Resources Development and Utilisation, ZINWA) • Pungwe Water Sector Study (Consultec, 2011) • Met Services (Integrated Database)
Target 4: Water demand management strategy developed	Develop a water demand management strategy	Save	**Zim NAP PCN 6:** Water demand management and water use efficiency in conjunction with SAP PCN 3: Improving sustainable water supply for socioeconomic development in the BUPUSA basins, and Moz NAP PCN 6: Water demand management and water use efficiency	• Water allocation through permits and agreement (by ZINWA, CCs and SCCs) • Local authorities, e.g., Mutare, Hauna, Chipinge, and Chimanimani towns (water rationing), Masvingo, Hwedza, Chiredzi, etc. • Decentralisation programmes/initiatives (central government) • Climate-smart agriculture, e.g., Agroecology (Fambidzanai Permaculture Centre) • Development of master plans for all local authorities	• Save Water Sharing Agreement • Save Water Resources Strategy • Save Water Sector Study • Save Monograph
	Support the development of local development plans	Save			
	Develop or update Water Resources Master Plans	Save			
Target 5: Water demand management strategy implemented	Promote efficient water use and incentivise best practices (assess and minimise transmission losses)	Save			• Small and Medium Dam Strategy • Devolution and Decentralisation Policy, 2020 • National Agriculture Policy Framework 2019-2030 • Save Water Sharing Agreement • Save Water Sector Study • Save Monograph
	Implement pilot projects/ programmes on water use efficiency	Buzi/Pungwe and Save			
	Capacity development on water demand management to relevant institutions	Save			

Targets	Project concept note	Affected Basin/Basin for Intervention	Project concept note	Ongoing initiatives	Corresponding agreements/ strategies/plans/ programmes
Environmental Priority Interventions					
Priority Area 5: Reduced availability of water					
Objective: The water resources of the basins are developed and managed sustainably for increased socioeconomic development and improved livelihoods					
Target 6: Basin water resources security improved	Support infrastructure development (green and grey, and for intercatchment transfers), including those identified in Water Sharing Agreements	Buzi/Pungwe and Save	**Zim NAP PCN 6:** Water demand management and water use efficiency in conjunction with SAP PCN 3: Improving sustainable water supply for socioeconomic development in the BUPUSA basins, and Moz NAP PCN 6: Water demand management and water use efficiency	• ZINWA Water Resources Management • CCs and SCCs Water Resources Management	• BUPUSA Water Sharing Agreements • BUPUSA Water Sector studies • BUPUSA Monographs • Water Act
	Synchronise dam operations in the Save Basin	Save			
	Strengthening of infrastructure maintenance programs, e.g., dam safety plans	Save			

VI

National Action Plan implementation, coordination, and monitoring



National Action Plan implementation, coordination, and monitoring

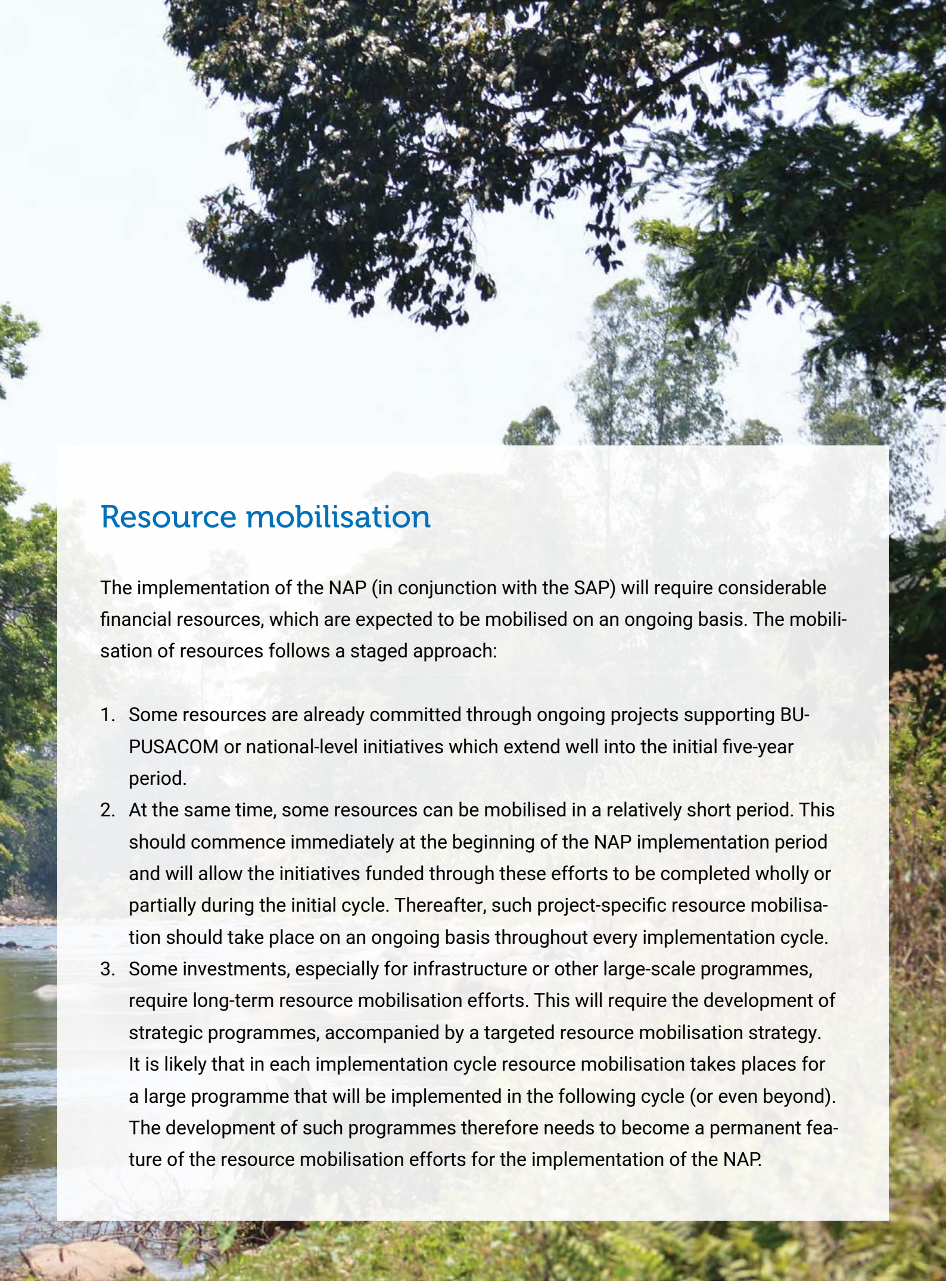
The NAP has been designed as a portfolio of project concepts. Funding is sought for each project, either individually or for a combination of projects. Potential funding sources are primarily national governments, international cooperation partners, and, to some degree, the private sector.

In line with the project approach to the NAP, implementation is not through a central implementation agency responsible for the entire NAP. Instead, implementation is project-specific, and the implementation mechanism is dependent on the requirements of the lead implementing agent for each respective project. A proposed implementation mechanism at project level is described in each PCN.

Overall coordination and monitoring of the NAP is through the relevant government line ministry or ministries using their established structures and systems. Therefore, close collaboration with BUPUSACOM is necessary to ensure synergy in the coordination and monitoring of the implementation of NAP activities in the two Basin States.

VII

Resource mobilisation



Resource mobilisation

The implementation of the NAP (in conjunction with the SAP) will require considerable financial resources, which are expected to be mobilised on an ongoing basis. The mobilisation of resources follows a staged approach:

1. Some resources are already committed through ongoing projects supporting BUPUSACOM or national-level initiatives which extend well into the initial five-year period.
2. At the same time, some resources can be mobilised in a relatively short period. This should commence immediately at the beginning of the NAP implementation period and will allow the initiatives funded through these efforts to be completed wholly or partially during the initial cycle. Thereafter, such project-specific resource mobilisation should take place on an ongoing basis throughout every implementation cycle.
3. Some investments, especially for infrastructure or other large-scale programmes, require long-term resource mobilisation efforts. This will require the development of strategic programmes, accompanied by a targeted resource mobilisation strategy. It is likely that in each implementation cycle resource mobilisation takes places for a large programme that will be implemented in the following cycle (or even beyond). The development of such programmes therefore needs to become a permanent feature of the resource mobilisation efforts for the implementation of the NAP.

Annex 1: Project Concept Notes

Table 11: Zimbabwe National Action Plan Project Concept Note 1: Strengthening climate resilience in the BUPUSA basins

Core data	
Project number	NAP PCN 1
Project title	Strengthening climate resilience in the BUPUSA basins
SAP priority area	Increase in extreme climate events – floods and droughts
Short description	The project seeks to strengthen climate resilience to floods and droughts in the BUPUSA Basins to mitigate the effects of climate change.
Project rationale	
Background	The BUPUSA tri- basin has increasingly been affected by extreme events, especially floods and droughts. Recent studies have pointed to the increasing frequency and intensity of these events, leading to loss of lives and livelihoods. The most recent events include Cyclone Eline (2000), Cyclone Japhet (2003), Cyclone Dineo (2017), Cyclone Idai (2019), Tropical Storm Chalane (2020), Cyclone Eloise (2021), and Cyclone Freddy (2023). Cyclone Idai left more than 800 people dead and resulted in massive destruction to infrastructure. Droughts events are also common in the three basins and are also characterised by increasing frequency and severity, e.g., the 1991, 1992, 1995, 2002, 2003, 2004, 2005, 2007, 2008, 2009, 2015, and 2024 drought events. These events have had extreme impacts on the socioeconomics of riparian communities, mainly extreme poverty and loss of infrastructure. Intergovernmental Panel on Climate Change reports point to a further increase in the frequency and magnitude of these extreme events in the future. Appropriate measures need to be implemented in the basins to safeguard and improve the lives of the communities.
Project Objective	The climate resilience of the BUPUSA basin communities/population is strengthened.
Integration with relevant ongoing projects/initiatives	**A number of initiatives are being carried out in the tri-basin to improve climate resilience. These include:** • GEF BUPUSA Project: Management of Competing Water Uses and Associated Ecosystems in the Pungwe, Buzi, and Save River Basins • UNESCO Project: Community-focused flood early warning system for the BUPUSA basins • Civil Protection Unit: Disaster Risk Reduction awareness programmes • International Fund for Agricultural Development, UNOPS and Cyclone IDAI Recovery Project • Climate Adaptation Water and Energy Project – UNDP supported by the Foreign, Commonwealth and Development Office • Rural development programme, etc.
Project outcomes	1: Improved forecasting and early warning systems established 2: Climate adaptation and mitigation strategy developed 3: Climate adaptation and mitigation strategy implemented
Technical approach	The project has three inter-related elements, focusing on improving climate forecasting and early warning systems, developing climate adaptation and mitigation strategies, and subsequently implementing such strategies at community levels to strengthen community resilience. **Outcome 1:** Improved forecasting and early warning systems established complements the recently designed flood and drought forecasting and early warning system by expanding disaster warning systems to drought monitoring and forecasting. A focus will be on the practical implementation of the flood early warning system and drought early warning system for the benefit of basin communities. The outcome will be achieved through the following outputs:

Core data	
Technical approach	Output 1.1: Flood and drought forecasting and early warning system operationalised and implemented Output 1.2: Community-led floods and drought management systems in vulnerable areas established Output 1.3: Hydro-climatological network rehabilitated, densified, and upgraded, and integrated with BUPUSAWIS Output 1.4: BUPUSAWIS developed and implemented, and Data Sharing Protocol operationalised **Outcome 2:** Climate adaptation and mitigation strategy developed focuses on the development of a basin-wide climate mitigation plan (in conjunction with SAP PCN 7 – output 1.4) and the development of Disaster Risk Management Plans and community-level climate information services Output 2.1: Basin-wide Climate Mitigation, Adaptation Action Plan and Disaster Management Plan developed Output 2.2: Disaster Risk Management Plans developed/reviewed and updated Output 2.3: Community-based climate information services established **Outcome 3:** Climate adaptation and mitigation strategy implemented is geared at implementing the plans developed under Outcome 2 through investments in climate-resilient infrastructure at community level and will be achieved through the following outputs: Output 3.1: Appropriate water infrastructure projects and associated technologies (including indigenous knowledge systems) for poverty alleviation and climate resilience implemented Output 3.2: Investments in alternative renewable energy sources promoted Output 3.3: Awareness programmes on climate change and disaster management undertaken
Assumptions & risks	The project includes investments in local-level projects, including in the field of agriculture and energy. There is a risk that such investments could be affected by extreme climate events, i.e., severe floods or prolonged droughts. Likewise, investments in small-scale storage and water harvesting infrastructure could be affected by such events. There is a risk of slow approval of strategic documents, such as adaptation plans and Disaster Risk Management Plans. However, this is a low risk that can be mitigated through involvement of the authorities from the inception phase.
Implementation	
Project duration	Five years, with potential for expansion in scale and time
Project cost	Ranging from USD 3,000,000 (three million) for pilot sites only to in excess of USD 50,000,000 (50 million) for large-scale investments
Proposed funding sources	GEF
	Adaptation Fund
	GCF
	GoZ
Implementation mechanism	Dependent on scale and funding arrangement

Table 12: Zimbabwe National Action Plan Project Concept Note 2: Improved water quality in the BUPUSA basins

Core data	
Project number	NAP PCN 2
Project title	Reducing water and environmental pollution in the BUPUSA basins
SAP priority area	Deterioration of water quality
Short description	The project seeks to improve the quality of water in the basin affected by anthropogenic activities taking place within the basin.
Project rationale	
Background	The BUPUSA basins have been experiencing rapid deterioration in water quality, particularly over the last 20 years. This has been attributed to a number of point and non-point sources, including but not limited to the following: gold panning, poor agricultural practices (e.g., stream bank cultivation), poor catchment management (land degradation), poor waste and wastewater management, and other diffuse sources. The increasing deterioration is affecting aquatic ecosystems and benefits derived therefrom. Riparian communities are the worst affected, given their direct dependence on these ecosystems. There are also rising health concerns in riparian communities utilising deteriorating water resources, e.g., in cases where mercury is being used in gold panning. Improving the water quality in the rivers will restore the aquatic ecosystems as well as the socioeconomic benefits derived from these rivers.
Project Objective	The water quality in the basins is maintained at adequate levels for socioeconomic development and the functioning of healthy ecosystems.
Integration with relevant ongoing projects/initiatives	• EMA joint monitoring plans and rehabilitation programmes • Local authorities waste management • Research work, e.g., the GEF BUPUSA Project through MSc WaterNet students • Groundwater Monitoring in the Save Alluvial Aquifer of Zimbabwe supported by SADC-GMI
Project outcomes	1: Water resources quality objectives (both surface water and groundwater) are set and a monitoring system is operational 2: River health monitoring programme implemented 3: Mechanisms for pollution control developed, enforced, and implemented
Technical approach	**Outcome 1:** Water resources quality objectives (both surface water and groundwater) set and a monitoring system operational aims at improving and subsequently maintaining the level of water quality monitoring in the three basins, and strengthening mechanisms for pollution control. This will be addressed through the following outputs: Output 1.1: Effective and sustainable basin-wide water quality monitoring system established and integrated with BUPUSAWIS Output 1.2: Water quality Decision Support System developed and linked with BUPUSAWIS Output 1.3: Platforms for cross-sectoral coordination on pollution control operationalised Output 1.4: Regular operational research on water quality carried out **Outcome 2:** River health monitoring programme implemented complements Outcome 1 by gradually expanding the focus from water quality (only) to a broader, integrated river health monitoring system. It will be achieved through the following outputs: Output 2.1: Effective and sustainable river health monitoring programme implemented, and results integrated with BUPUSAWIS Output 2.2: Information on river health status documented and disseminated Output 2.3: Capacity on river health monitoring built **Outcome 3**: Mechanisms for pollution control developed, enforced, and implemented focuses on community-level interventions to address some of the most pressing causes of water quality degradation in the basin and to rehabilitate highly degraded areas. As artisanal gold panning is one of the biggest causes of water quality degradation in the basins, an important focus of this intervention is the development and practical implementation of a framework for sustainable gold panning. Output 3.1: Community-based programmes for the rehabilitation of highly degraded water quality hot spots implemented Output 3.2: Environmentally friendly and innovative technology for effluent quality improvements promoted Output 3.3: WASH infrastructure and initiatives (urban and rural) strengthened

Core data	
Technical approach	Output 3.4: Framework for sustainable gold panning developed and alternative livelihoods projects/programmes implemented
Assumptions & risks	The main assumption is that the polluters will embrace the proposed pollution reduction interventions/technology. There is a risk that the authorities will not have adequate capacity to effectively enforce pollution regulations.
Implementation	
Project duration	5 years, with potential for expansion in scale and time
Project cost	Ranging from USD 5,000,000 (five million) for pilot sites only to in excess of USD 10,000,000 (ten million) for large-scale investments
Proposed funding sources	GEF
	Biodiversity Fund
	Source to Sea Fund
	Nature for Water
	GoZ
Implementation mechanism	GEF implementing agency: IUCN
	Executing agencies: Global Water Partnership Southern Africa, GoZ

Table 13: Zimbabwe National Action Plan Project Concept Note 3: Sustainable land management

Core data	
Project number	NAP PCN 3
Project title	Rehabilitation of land degradation hotspots in the BUPUSA basins
SAP priority area	Land degradation
Short description	The project seeks to reverse land degradation to optimize Socioeconomic and environmental benefits for the basin communities.
Project rationale	
Background	The BUPUSA basins have been witnessing increased land degradation mainly because of poor catchment management (e.g., deforestation, timber logging, etc.); poor agricultural practices (stream bank and slope cultivation); veld fires; illegal sand abstraction, etc. This has led to a massive loss of soil on productive land, and gully erosion causing siltation in rivers. This has resulted in a loss of dam capacities and soil fertility, leading to a negative impact downstream. Communities benefiting from the basins' resources have suffered huge socioeconomic loss because of a loss of biodiversity.
Project Objective	Land degradation reversed and improved socioeconomic benefits.
Integration with relevant ongoing projects/initiatives	• Environmental protection (ZINWA, EMA, sub-catchments) • Rehabilitation of mined-out areas by EMA (Haroni and Mutare rivers, etc.) • GEF 7: Sustainable land management (gully reclamation) and development of inventory database on wetlands and WEAP training • Zimbabwe Environmental Law Association: Capacitation of farmers supported by Oxfam on environmental management planning and conflict management - Save • ZINWA: Hydrographic surveys and sediment sampling • Soil and water conservation initiatives by Ministry responsible for Agriculture • GEF BUPUSA Project • IUCN projects: Community-Based Adaptation Project (CBA SCALE+) (funded by Christian Care) • Practical action (nutrition gardens, wetland protection, and beekeeping in wetland protected areas) • Wetland protection in Bikita (funded by Christian Care) • Development of integrated land use plans – GEF
Project outcomes	1: Land use planning improved 2: Land degradation reversed 3: Impact of silt and sediment reduced 4: Critical wetlands rehabilitated 5: Socioeconomic and environmental benefits from vital ecosystems optimised
Technical approach	The project focuses on improved land use planning and the rehabilitation of ecosystems and protection of ecosystem services in the most affected geographical areas of the tri-basin. **Outcome** 1: Land use planning improved is geared at developing the necessary policy and planning framework for the on-the-ground rehabilitation and protection work carried out through subsequent outcomes. The outcome focuses on improved land and catchment planning, and developing strategies for the rehabilitation and protection of particularly critical ecological areas. It will be implemented through the following outputs: Output 1.1: Strategy for the rehabilitation of degraded areas and reducing siltation developed Output 1.2: River Basin Plans updated Output 1.3: Comprehensive strategy to protect ecologically sensitive areas (e.g., conservancies) developed **Outcome 2**: Land use degradation reversed focuses on the rehabilitation of critically degraded hot spot areas on the one hand, and on the other hand developing alternative livelihood options and embedding non-degrading land use practices in communities. It will be implemented through the following outputs: Output 2.1: Environmental degradation hot spots rehabilitated Output 2.2: Optimal and sustainable use of land and water resources, e.g., conservation agriculture, promoted Output 2.3: Community-based natural resources management/disaster management practices strengthened and upscaled, through the creation of pilot projects Output 2.4: Alternative livelihood projects to reduce land degradation implemented Output 2.5: Awareness of sustainable water and land use planning promoted

Core data	
Technical approach	**Outcome 3**: Impact of silt and sediment reduced specifically addresses the growing issues of siltation through the following outputs: Output 3.1: Capacity of key institutions in mapping, monitoring, and conducting hydrographic surveys strengthened Output 3.2: Research undertaken and technologies/innovations implemented to reduce the impact of siltation Output 3.3: Stakeholder coordination and participation of institutions involved in catchment protection strengthened **Outcome 4**: Critical wetlands rehabilitated targets the rehabilitation of degraded, critical wetland areas in the basins. This is complemented by developing wetland management plans for future sustainable management and embedding sustainable wetland management practices through community management. Output 4.1: Effective and sustainable wetlands management plans developed Output 4.2: Degraded wetlands rehabilitated/restored (control of invasive alien species, reseeding, and rehabilitation structures) through community involvement **Outcome 5**: Socioeconomic and environmental benefits from vital ecosystems optimised further builds on the strong community management element of the project and focuses on the characterisation and delineation of sensitive ecosystems, and subsequently the assessment and protection of the ecosystem services they provide through community-based natural resources management and livelihood interventions. The outcome will be implemented through the following outputs: Output 5.1: Ecologically sensitive ecosystems in the river basin characterised and delineated Output 5.2: Ecosystem services assessments conducted Output 5.3: Community-based natural resources management and livelihoods initiatives implemented
Assumptions & risks	The government and communities embrace, implement, and upscale the new initiatives. One of the risks may arise from the occurrence of extreme hydrometeorological events such as floods and droughts.
Implementation	
Project duration	Five years, with potential for expansion in scale and time
Project cost	Ranging from USD 5,000,000 (five million) for pilot sites only to in excess of USD 10,000,000 (ten million) for large-scale investments
Proposed funding sources	GEF
	Biodiversity Fund
	GoZ
Implementation mechanism	GEF implementing agency: IUCN
	Executing agencies: Global Water Partnership Southern Africa, GoZ, BUPUSACOM

Table 14: Zimbabwe National Action Plan Project Concept Note 4: Implementation of environmental flows

Core data	
Project number	NAP PCN 4
Project title	Basin-wide environmental flows regime
SAP priority area	Changes in flow regime
Short description	The project is aimed at carrying out all relevant environmental flows assessments to support the implementation of environmental flows in accordance with the basin agreements. Agreement on the implementation of a basin-wide environmental flows regime will be sought through a consultative process, and mechanisms for implementation and compliance monitoring will be supported.
Project rationale	
Background	The provision of water for the protection of the riverine and estuarine ecosystems – and the control of unwanted consequences of degradation – has long been recognised as a key factor in the management of river basins. Environmental flows assessments for the Pungwe Basin have been carried out, and similar assessments are still to be done for the Buzi and Save basins. There is a need to carry out environmental flows assessments and to develop and implement a basin-wide environmental flows plan for each of the BUPUSA basins.
Project Objective	The adverse effects of the changed hydrological regime are mitigated.
Integration with relevant ongoing projects/initiatives	• This project on the environmental flows studies was conducted as part of the GEF-funded project Management of Competing Water Uses and Associated Ecosystems in the Pungwe, Buzi, and Save River Basins • The IUCN Bridge Programme
Project outcomes	Environmental flows regime established and implemented
Technical approach	Based on existing studies for the Pungwe Basin, and additional studies for the Buzi and Save basins, a suite of basin-wide development scenarios will be developed, covering a range of socioeconomic development options and showcasing the resulting ecosystem protection levels. The scenarios will be presented to the Basin States and agreement on a basin-wide environmental flows regime for implementation will be facilitated through a consultative process. Procedures for the implementation of the agreed basin-wide environmental flows regime will be developed and adopted. Thereafter, the Basin States will be supported in setting up the necessary implementation and compliance monitoring systems required for effective implementation. Particular emphasis is placed on the coordination of national-level activities in order to ensure that a coherent and harmonised basin-wide environmental flows regime is implemented in practice. The following outcome and outputs will be achieved through the project: **Outcome 1**: Environmental flows regime established and implemented Output 1.1: Comprehensive environmental flows assessments conducted Output 1.2: Principles and guidelines for environmental flows management developed Output 1.3: Institutional capacities on upscaling, monitoring, and implementing environmental flows requirement improved
Assumptions & risks	The main assumption is that there will be a political willingness to implement the agreed environmental flows regime in accordance with the respective watercourse agreement, the agreed basin-wide environmental flows procedures, and national legislation. The main risks to the success of the project are: (i) limited capacity at basin and/or national level; (ii) resulting noncompliance (the risk for political willingness is considered to be low, whereas the risk for capacity constraints hindering effective implementation is medium); and (iii) a long process for integration of environmental flows into the agreements.
Implemetation	
Project duration	Five years
Project cost	Estimated USD 5,000,000 (five million)
Proposed funding sources	GEF: The project could potentially be a component of a next-phase GEF-funded SAP implementation project
	Others: Alternatively, the project could be implemented as a stand-alone project with funding from national governments or other International Cooperating Partners
	Biodiversity Fund
Implementation mechanism	To be determined based on the selected approach for implementation (see proposed funding sources). Regardless of funding source, the project should be implemented under the auspices of BUPUSACOM.
	GEF implementing agency: IUCN Executing agencies: Global Water Partnership Southern Africa, GoZ

Table 15: Zimbabwe National Action Plan Project Concept Note 5: Sustainable groundwater management in the BUPUSA basins

Core data	
Project number	NAP PCN 5
Project title	Sustainable groundwater management in the BUPUSA basins
SAP priority area	Reduced availability of water
Short description	The aim of the project is to ensure the sustainability of rural water supply through enhancing the understanding of groundwater resources in the BUPUSA basins, to determine the potential for sustainable use, to develop sustainable groundwater management approaches, and to undertake protective measures for groundwater resources.
Project rationale	
Background	Groundwater is a critical resource in the BUPUSA basins, with the majority (70%) of the rural population being dependent on local groundwater resources for household water supply and livelihoods (e.g., livestock stock watering, small-scale gardening, and farming). The full potential for sustainable use of groundwater in the BUPUSA basins is not yet comprehensively understood. Improved knowledge of the resource is required to inform improved protective measures for groundwater and groundwater management approaches that ensure the long-term sustainability of the resource.
Project Objective	Water security of rural populations improved through protection and sustainable management of groundwater resources.
Integration with relevant ongoing projects/ initiatives	• The project builds on preliminary work carried out by the SADC-GMI for the GEF-funded project Management of Competing Water Uses and Associated Ecosystems in the Pungwe, Buzi, and Save River Basins. The project aligns with ongoing national government activities related to groundwater assessment and exploitation • UNESCO regional initiatives on groundwater • Development of master plans for all local authorities
Project outcomes	1: Groundwater resource potential established 2: Conjunctive use options for surface water and groundwater implemented 3: Improved monitoring and assessment for conjunctive use of surface water and groundwater resources
Technical approach	**Outcome 1**: Groundwater resource potential established aims at improving the understanding of the basins' groundwater resources through a detailed mapping that informs the subsequent development of groundwater resource plans that set the framework for sustainable groundwater use planning and exploitation. The outcome has the following outputs: Output 1.1: Groundwater occurrence, availability (recharge and discharge zones), and use in the basins characterised Output 1.2: Groundwater vulnerability mapped and pollution sources determined **Outcome 2**: Conjunctive use options for surface water and groundwater implemented focuses on practical aquifer management interventions, including the development of conjunctive groundwater use schemes at community level and managed aquifer recharge. It will be implemented through the following outputs: Output 2.1: Groundwater sources developed and conjunctive use schemes implemented Output 2.2: Development and management of surface water and groundwater resources at institutional and community level improved Output 2.3: Sand aquifer abstraction for optimal socioeconomic benefits promoted Output 2.4: Managed aquifer recharge in priority locations implemented **Outcome 3**: Improved monitoring and assessment for conjunctive use of surface water and groundwater resources supports the preceding two outcomes by strengthening groundwater monitoring and modelling systems and capacity for sustainable long-term planning of conjunctive surface water and groundwater use. Output 3.1: Surface water and groundwater monitoring and modelling system designed, upgraded and sustained Output 3.2: Capacity for institutions in monitoring of water use strengthened Output 3.3: Database management (water uses, water levels, permits, etc.) improved (surface water database upgrading and groundwater database development)

Implemetation	
Assumptions & risks	The key assumption is that there are adequate groundwater resources to support socioeconomic development and monitoring programmes. The main risk is that there may be low groundwater potential to support the needs of targeted communities.
Project duration	Four years
Project cost	Estimated USD 10,000,000 (ten million)
Proposed funding sources	World Bank
	African Development Bank Group
	GoZ
Implementation mechanism	Dependent on funding mechanism

Groundwater for livelihoods sustenance. Communal Ginger farming for income generation along the Pungwe River. Photo credit: Moses Makwanise, IUCN

Table 16: Zimbabwe National Action Plan Project Concept Note 6: Improved water demand management and water use efficiency in the Buzi, Pungwe, and Save river basins

Core data	
Project number	ZIM NAP PCN 6
Project title	Improving water security for socioeconomic development in the BUPUSA basins
SAP priority area	Reduced availability of water
Short description	The aim of the project is to improve water availability through improved water demand management and water use efficiency in the BUPUSA basins.
Project rationale	
Background	Water is finite. The demand for water in the basins over the years has been on the increase. Recent studies in the BUPUSA river basins indicate an increasing population, without corresponding development of water infrastructure. The situation is being exacerbated by the increase in the frequency and magnitude of droughts. This is leading to a decrease in water resources availability, and this greatly affects the rural population whose lives are heavily dependent on water resources availability for domestic use. One way of improving the reliability of the water supply is through application of appropriate water demand management principles and improved water use efficiency.
Project Objective	Improved water resources security in the basins.
Integration with relevant ongoing projects/ initiatives	• The project aligns with ongoing national government activities related to policing (Water Resources Master Plan, National Water Policy and National Water Strategy); water allocation and decentralisation of water provision services (permitting systems by ZINWA, CCs and SCCs); rationing by local authorities; conservation (climate-smart agriculture); and environmental flows requirements • It also aligns with international Water Sharing Agreements commitments for the BUPUSA basins
Project outcomes	1: Water demand management framework developed 2: Water demand management strategy implemented 3: Basin water resources security improved
Technical approach	The project focuses on ensuring sustainable water supply through a dual approach of improving water use efficiency through a combination of operational and regulatory measures, and investments in water supply infrastructure. **Outcome 1**: Water demand management framework developed focuses on planning interventions to create an enabling environment for the implementation of water demand management interventions and has the following outputs: Output 1.1: Water demand management strategy developed Output 1.2: Development of local development plans supported Output 1.3: Water Resources Master Plans developed and/or updated **Outcome 2**: Water demand management strategy implemented builds on the preceding outcome and focuses on practical interventions aimed at strengthening water demand management capacity and the implementation in practice of demand management and water use efficiency interventions. It will be implemented through the following outputs: Output 2.1: Efficient water use promoted, and best practices incentivised (assess and minimise transmission losses) Output 2.2: Pilot projects/programmes on water use efficiency implemented Output 2.3: Capacity of relevant institutions for water demand management developed Output 2.4: Programmes to raise public awareness on water use and conservation implemented Output 2.5: Water demand projections regularly reviewed and updated **Outcome 3**: Basin water resources security improved is directed at infrastructure. It has a dual focus on developing, where necessary, new water supply infrastructure, and optimising the use of existing infrastructure, especially through the synchronisation of dam infrastructure in the Save Basin Output 3.1: Infrastructure development (green and grey, and for intercatchment transfers) supported, including those identified in Water Sharing Agreements Output 3.2: Dam operations in the Save Basin synchronised Output 3.3: infrastructure maintenance programmes, e.g., dam safety plans, strengthened

Assumptions & risks	The main assumption is that the Water Demand Management Strategy will be mainstreamed and implemented. Also, the technology for water use efficiency will be embraced and applied. The main risk is that of long processes in mainstreaming the proposed interventions.
Implementation	
Project duration	Five years
Project cost	Estimated USD 5,000,000 (five million) and in excess of USD 10,000,000 (ten million) for large-scale investments
Proposed funding sources	World Bank
	African Development Bank Group
	GoZ
Implementation mechanism	Dependent on funding mechanism

Baobab tree in Nyanyadzi, around the Save Basin in Zimbabwe a land degradation hotspot. Restoration of the ecology by conserving ingenuous trees will enhance better likelihoods, through nutrition coming from the fruits nutrition. Photo Credit: Moses Makwanise, IUCN

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