Hydropower Sustainability Standard

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Assessment Report

Project Name: Cahora Bassa South Bank HPP

Installed Capacity: 2 075 MW

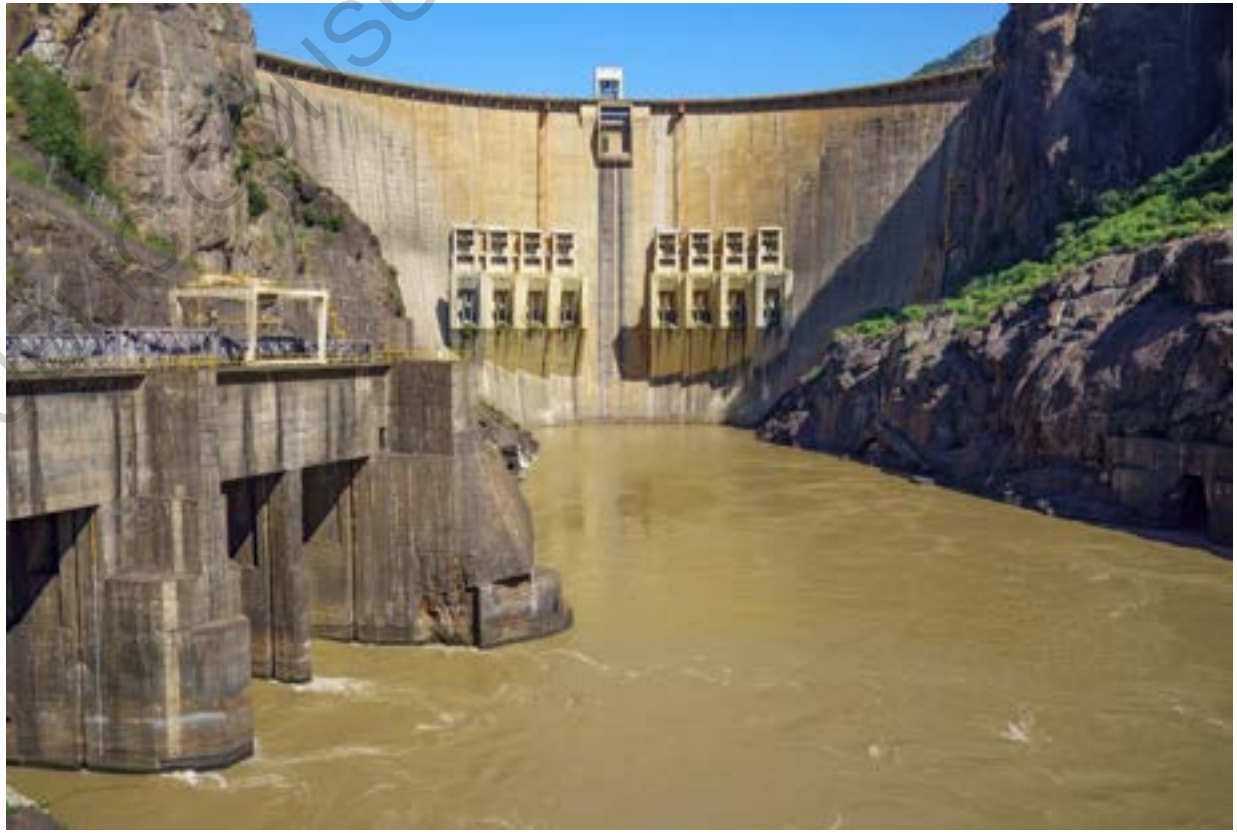
Country: Mozambique

HIDROELÉCTRICA DE CAHORA BASSA

Project Sponsor: Hidroeléctrica de Cahora Bassa

Report Authors: Dr Bernt Rydgren, Mr Simon Howard, Mr Pelle Bågesund, Mr Vito Mandilovich, Ms Filipa Newton

Report Date: 2 February 2026



Operation

Cahora Bassa, 2 075 MW, Mozambique

Cover page photo: The Cahora Bassa dam and tailrace, viewed from downstream

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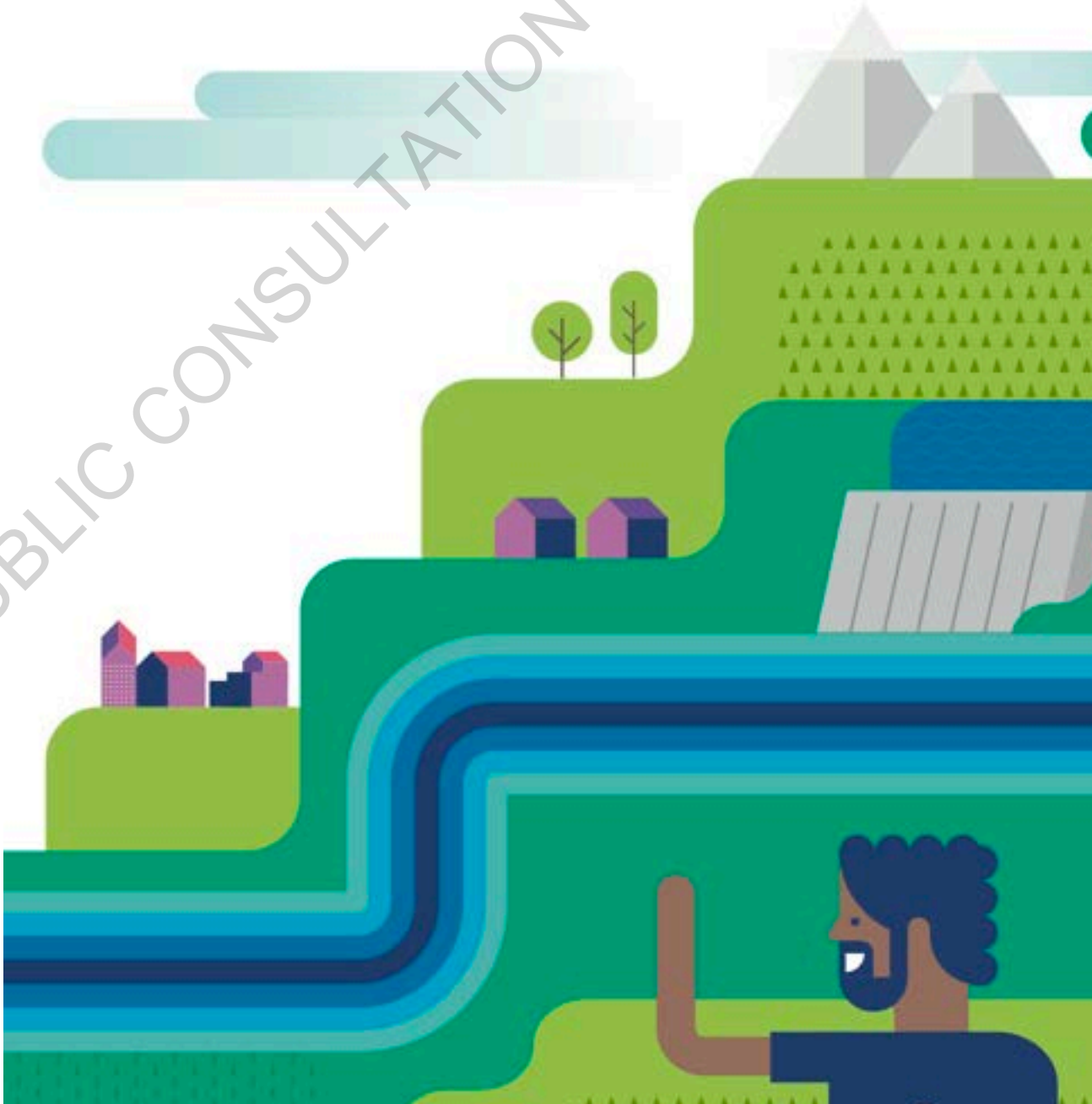
The findings in this report are based on an independent assessment conducted in compliance with the processes set out in the Hydropower Sustainability Assurance System.



Hydropower Sustainability Standard

About the HSS	The Hydropower Sustainability (HS) Standard is the normative document that sets out the performance requirements of the Hydropower Sustainability Certification System, a global labelling and certification scheme outlining the expectations for hydropower projects around the world. The HS Standard recognises hydropower projects for their environmental, social and governance (ESG) performance by setting minimum and advanced performance requirements for the sector and acknowledging projects for meeting these requirements. The HS Standard is aligned with the safeguards of key lenders (e.g. IFC and World Bank) and can be used to attract climate-aligned finance through green bonds certified by the Climate Bonds Initiative and support electricity sales to RE100 companies. The HS Standard is managed by the Hydropower Sustainability Alliance. The HS Alliance was established in October 2023 to act as the independent and multistakeholder standard-setting body that oversees the Hydropower Sustainability Certification System.
Intended users and uses	The HS Standard includes three separate stages: Preparation, Implementation and Operation. These reflect the different stages of hydropower development and have been designed to be used as standalone documents. Each reporting template provides an action plan to help project teams address any gaps against minimum (good practice) and advanced requirements (best practice). Official HS Standard assessments are carried out by Accredited Assessors, who take an evidence-based approach based on data triangulation. All findings are supported by objective evidence, which is factual, reproducible, objective and verifiable. The HS Standard is most effective when operators and developers commit to implement the recommendations provided and resolve identified significant gaps. Hydropower development and operation may involve public entities, private companies or combined partnerships, and responsibilities may change as the project progresses through its life cycle. It is intended that the organisation with the primary responsibility for a project at its particular life-cycle stage will have a central role in any HS Standard assessment.
Structure of the reporting template	The HS Standard comprises 12 sections that cover the environmental, social, governance and climate change impacts, both negative and positive, that arise from hydropower development and operation. Summary sections at the beginning of the report include: (A) Assessment Overview, (B) Project Details, (C) Performance against Minimum Requirements, (D) Performance against Advanced Requirements, (E) Environmental and Social Action Plan and (F) Abbreviations and Acronyms. The summary sections are followed by

	the 12 ESG sections where requirements for good and best practices are presented and project findings are provided. The report finishes with three appendixes that list the types of evidence used in the assessment.
Supporting resources	Additional guidance on the structure, content and history of the HS Standard can be found online at: www.hs-alliance.org
Version date	October 2023

A. Assessment Overview

Assessor(s)	Dr Bernt Rydgren, Lead Assessor; Simon Howard, Pelle Bågesund, Vito Mandilovich and Filipa Newton
Assessment objectives	• Benchmark HCB's ESG practices against international standards; • Increasing transparency and commitment to sustainability practices; • Enhance the relationship with stakeholders; • Showcase HCB's commitment to sustainability. • Harmonisation with the Hydropower Sustainability Standard with the intention to receive HSS certified hydro
Assessment dates	6 – 14 May 2025 (inclusive of international travel)
Assessment report date	17 July 2025, amended after gap-resolution process 2 February 2026
Summary of key findings	***Section 1:*** The project meets minimum requirements for environmental and social management. While some advanced elements are present, areas for development include systematic integration of daily and long-term risk and opportunity tracking, monitoring of trends, and expanded use of early-warning tools. The full potential of the Integrated Management System (IMS) is not yet realised, as it is still primarily used for documentation and reporting rather than active operational guidance. Furthermore, the dispersion of environmental, social, and ESG responsibilities across different portfolios and divisions may hinder coherence and internal coordination. ***Section 2:*** The project's Health and Safety Management system is in full compliance with Mozambican legislation and has many elements that are aligned with GIIP (the company is certified and audited against ISO 45001 and in the process of becoming certified against ISO 37301) with their comprehensive systems responding to both emerging risks and opportunities. Thus, all the minimum requirements are met. Furthermore, there is an ongoing improvement process where an ESG reporting system with a large number of labour/safety-relevant indicators will be implemented. This reporting process will follow up on staff-related issues, for instance the number of workers, hiring rate, turnover rate, maternity/paternity leave etc. The main issue identified is the lack of a compliance register (or the confusion around whether there is one or not which, in itself, is a gap) and evidence on how HR-issues are handled for contractors. ***Section 3:*** Water quality is monitored in an impressive number of sampling points on the reservoir and in rivers and streams flowing into the reservoir. The parameters covered and the frequency of monitoring are satisfactory, and the water-quality status is good in both inflow and outflow. Sedimentation in the reservoir is not regularly monitored, as a result of a detailed bathymetric study conducted in 2017 which showed very minimal sedimentation in the reservoir over the 42 years of operation. The loss of dead storage

	to sedimentation is considered irrelevant in comparison to other limiting factors for project (economic) life. There are no indications of downstream erosion or sediment issues resulting from the project's operations. ***Section 4:*** Although no commitments were made at the time of the project's planning and construction, the project delivers substantial benefits to the local population, such as clean water and electricity at symbolic costs, health campaigns, incineration of hazardous medical waste, and additional considerable support to the rural hospital. As a consequence, it has improved the living standards of the Songo community considerably. A stakeholder mapping of the dam and transmission-line areas is in place and project-affected communities are monitored. The project has a well-structured dam-safety programme. An External Emergency Response plan is under development, which will include scheduled internal and external drills. ***Section 5:*** Not Relevant for this assessment. ***Section 6:*** HCB continuously follows up its biodiversity-related impacts identified in the ESMP. In addition to this, they have recently established a Biodiversity Action Plan (based on the 2022 biodiversity assessment) whereby they will monitor and manage additional biodiversity-related issues. Consequently, the procedures to address these issues are in place and all the minimum requirements are met. The ESMP is monitored and reported in the biannual monitoring reports and there are follow-up procedures to address identified issues related to this plan. However, at the time of the assessment it is not clear how the Biodiversity Action Plan is being monitored and followed up. ***Section 7:*** Not Relevant for this assessment. ***Section 8:*** Not Relevant for this assessment. ***Section 9:*** HCB has established strong governance foundations and meets minimum requirements, with a coherent suite of corporate policies in place, including a company-wide Code of Ethics, Anti-Fraud and Conflict of Interest Policies, and a binding Supplier Code of Ethics and Conduct. Procurement processes incorporate anti-corruption controls and post-award ESG compliance clauses, and key governance risks are reflected in strategic planning. Performance against advanced requirements is strong in places, with the alignment of contractor obligations with HCB's governance standards, with all suppliers contractually bound by ethical and legal expectations and subject to monitoring and enforcement. Recent updates to the procurement framework have further strengthened the integration of sustainability and anti-corruption criteria at the supplier pre-qualification stage, representing positive progress. However, while a formal compliance policy framework has been adopted, centralised organisation-wide compliance assurance is not yet fully established. Key improvement areas remain, including full integration of departmental risk updates into a unified corporate

	risk management system, operationalisation of the Risk and Audit Committee approved in 2022 but not yet active, and further development of the compliance management framework through a centralised, verifiable corporate compliance register. Additional priorities include consistent implementation of updated procurement requirements, completion of the procurement of an independently managed grievance mechanism with anonymous reporting channels planned for 2026, and improved tracking and execution to address delays in resolving legacy audit issues and implementing agreed biodiversity and governance measures. ***Section 10:*** The project engages with the communities on a regular basis and with appropriate methods and the staff has local knowledge, including of local languages and dialects. A stakeholder mapping exercise was implemented between 2018 and 2020, involving communities in the dam and transmission line areas, updated in 2025. Communications and consultation plans and processes are in place, and a grievance redress mechanism guaranteeing anonymity is on track to be implemented. Most significant project reports are publicly available, including the existing G-Res Tool and Climate Resilience Assessment reports. ***Section 11:*** The hydrological resource is well known and carefully monitored, utilising both field measurements, information from the upstream Zambezi dams as well as a hydrological model and long-term meteorological forecasting mainly focussing on El Niño/La Niña phenomena. Reservoir management is strongly focussed on ensuring water availability for energy generation and the project has recently updated and improved its rule curve and management measures to address recurrent long-term droughts in the catchment. Downstream flows are not regulated and the balance between environmental, social and economic priorities is clearly leaning in favour of social and economic objectives, leaving the environmental (mainly flood-flow pulses to the Zambezi delta on the Indian Ocean) largely unsatisfied. Power-system opportunities (potentially addressing present limitations) have led the owners HCB to again consider the development of a North Bank extension to the Cahora Bassa HPP, a project that had been dormant for more than a decade. ***Section 12:*** HCB has taken substantial steps toward improving their Climate Change Mitigation and Resilience performance in comparison to the 2018 Hydropower Sustainability Assessment Protocol assessment, which is clearly reflected by the fact that there are no gaps at the minimum-requirement level. The project has ticked all the boxes when it comes to Good International Industry Practice related to Climate Change, and the project's alignment with the national strategies and NDCs has been confirmed by the National Directorate of Climate Change. At the advance-requirement level there are still some uncertainties regarding the project's ability to prove "low-emitter" status, ability to off-set existing emissions and ability to reduce some of the existing risks in order to become a fully resilient project.

	Concluding remarks: The project was assessed in 2018 with the Hydropower Sustainability Assessment Protocol (HSAP), the predecessor of the Hydropower Sustainability Standard used for this assessment. The project's sustainability performance has been significantly improved in the seven years between 2018 and 2026, and is now generally good, passing all minimum-level requirements. However, there are some lingering issues identified in 2018 which either still have not been addressed, or were addressed as a "one-off" and not maintained and/or periodically updated as required by the HSS. This has resulted in a number of advanced-level requirement not being met. Many of these can be corrected, given time and dedication.
Limitations of the assessment	Due to slow procurement and the concomitant pressed time schedule, the assessment team only gained access to most of the documentary evidence the same week as the field assessment started. This meant that the assessors had little to no time to prepare for key issues to investigate.

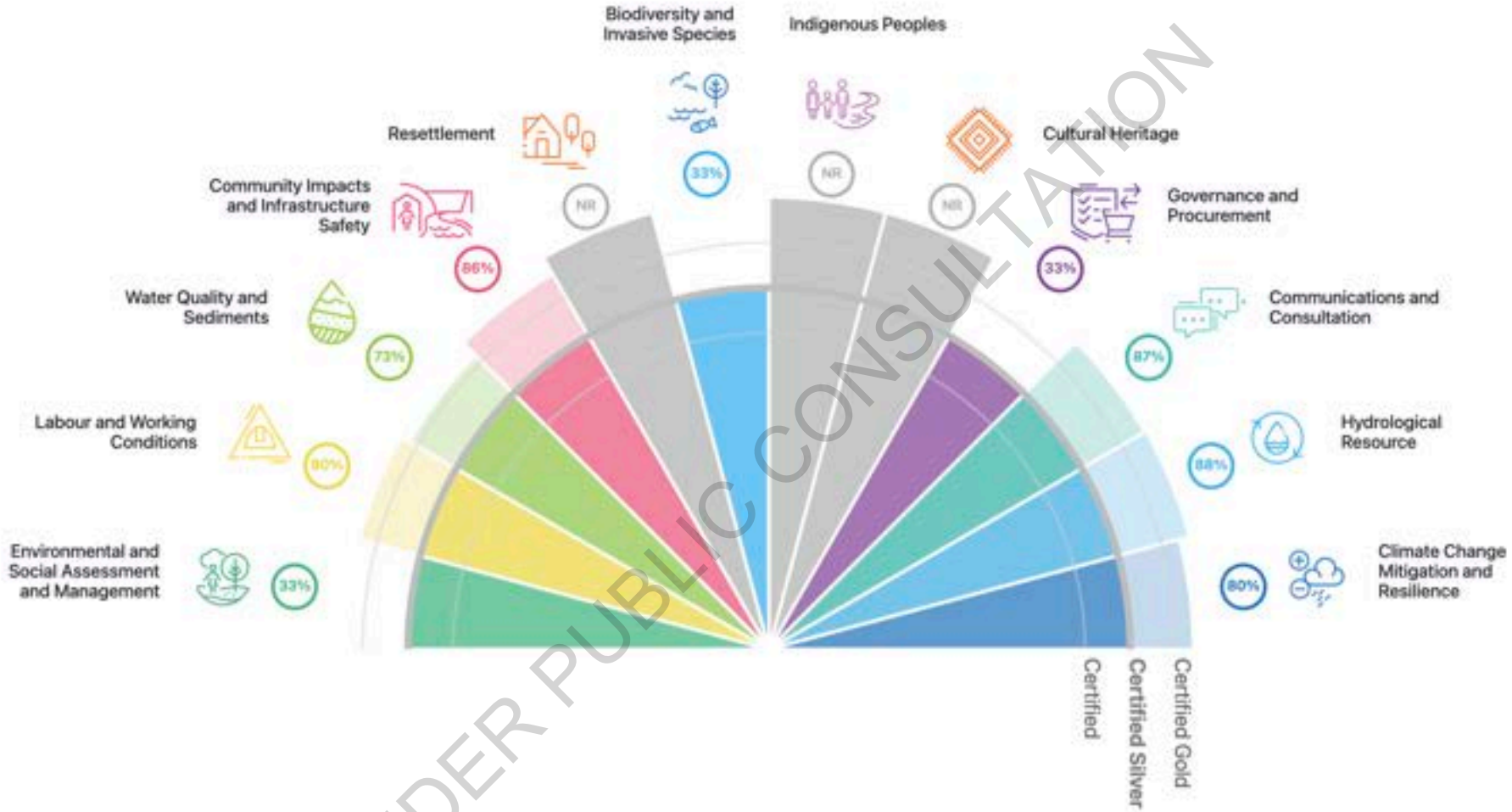


Figure 1 - Hydropower Sustainability Standard (HSS) Results Diagram

B. Project Details

Project name	Cahora Bassa South Bank Hydropower Project
Country	Mozambique
Location	Tete Province, dam site at approximately 15°35'07" S and 32°42'17" E
Purpose	Electrical-energy generation for domestic and export purposes
Developer/Owner	Built mainly during colonial times, owned and operated by Hidroeléctrica de Cahora Bassa
Financer(s)	Consortium between the Portuguese State and Mozambican State
Installed capacity (MW)	2 075 MW
Construction start date (planned or actual)	1969
Commercial operations date (planned or actual)	1977
Annual average generation (GWh/year)	15 255 (average over the last 10 years)
Associated infrastructure: road(s) (length)	Road from Songo village to dam and power house approximately 5 km
Transmission lines and sub-stations (names, lengths and capacities)	• Songo to Apollo substation, 2 x 1 414 km of +-533 kV, HVDC • Songo to Bindura substation, 252 km of 330 kV, HVAC • Songo to Matambo substation, 120+115 km of 220 kV, HVAC • Matambo to Chibata substation, 320 km of 220 kV, HVAC
Total cost (USD m)	517.5 MUSD (cost not corrected to 2025)
Annual operating costs (USD m)	Approximately 243 MUSD (or around 1.6 USc/kWh)

Specific investment cost (USD/MW)	Approximately 250 000
Levelised energy cost (USD/kWh)	N/A
Dam type	Double-curvature arch
Dam height (m)	171
Dam length at crest (m)	303
Units (number, type, MW)	5 Francis turbines with an installed capacity of 415 MW each
Reservoir area at Full Supply Level (FSL) (km^2)	2 665
Average net head at FSL (m)	103.5 (design head)
Average flow (m^3/s)	1 917
Design flow (m^3/s)	450 per turbine = 2 250 (at design head of 103.5 metres)
Load factor	87% in 2024, an extreme drought year. Full generation would result in 2 075 MW x 8 760 h = 18 177 GWh/year. The actual generation in 2024 was 15 884 GWh.
Number of physically displaced households	Unknown
Power density (W/m^2)	0.78 at FSL; 0.87 when using the average reservoir level as basis.
Emissions intensity (gCO_2e/kWh)	Verified G-Res Tool calculation in 2020 resulted in a value of 105.9 gCO_2e/kWh, with the confidence interval of 94 – 119 gCO_2e/kWh. This places the project right at the limit for what is considered a low emitter (100 gCO_2e/kWh).
Contacts/website	https://www.hcb.co.mz/

Cahora Bassa, 2 075 MW, Mozambique

Figure 1 – Google Earth image (22 April, 2025) of the Cahora Bassa Reservoir. At the far left, at the upper (western) end of the reservoir is the borders with Zambia (north of the Zambezi River, and Zimbabwe (south thereof).

C. Performance against Minimum Requirements

There are no significant gaps against the minimum requirements.

Note that sections 5, 7 and 8 are Not Relevant (NR) to this assessment.

D. Performance against Advanced Requirements

	Sections											
	1. Environmental and Social Assessment and Management	2. Labour and Working Conditions	3. Water Quality and Sediments	4. Community Impacts and Infrastructure Safety	5. Resettlement	6. Biodiversity and Invasive Species	7. Indigenous Peoples	8. Cultural Heritage	9. Governance and Procurement	10. Communications and Consultation	11. Hydrological Resource	12. Climate Change Mitigation and Resilience
TOTAL NUMBER OF REQUIREMENTS	6	5	11	21	5	6	8	5	6	15	16	15
NUMBER OF REQUIREMENTS MET	2	4	8	18	NR	2	NR	NR	2	13	14	12
PERCENTAGE OF REQUIREMENTS MET	33	80	73	86	NR	33	NR	NR	33	87	88	80

Note:

- A project must meet all Minimum Requirements on all relevant sections to achieve HS Certified label.
- To receive the HS Silver label, a project must meet all Minimum Requirements on all relevant sections AND meet at least 30% of the Advanced Requirements on each relevant section.
- To receive the HS Gold label, a project must meet all Minimum Requirements on all relevant sections AND meet at least 60% of the Advanced Requirements on each relevant section.

E. Environmental and Social Action Plan (ESAP)

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
1	Lack of strategic and integrated assessment of broader environmental and social issues.	Update the ESMS to require regular assessment of broader E&S issues, including regular reviews and stakeholder input.	HCB	ESMS includes documented procedures and tools for assessment of broader E&S issues, with evidence of regular reviews and stakeholder input.
1	Risk and information management is reactive and report-driven, with no live risk register, delayed reporting, and limited use of data in operational decision-making.	Establish a live risk register, including corrective actions. Strengthen data integration so it can be used for operational decision-making. Use the system to ensure timely reporting, issue escalation, and feedback into strategic planning. The tool should be integrated into day-to-day operations.	HCB	Live risk register in place and actively used by the environmental and social departments, with regular updates, shared access, and integration into operational decision-making (evidence from e.g. planning meetings, action logs, or dashboard reviews).
1	Similar to gaps under Section 6 - the Biodiversity Action Plan (BAP) is still in a stage of very early implementation after many years.	Implement BAP, particularly the actions for which HCB is responsible, and integrate those actions in the ESMS management system.	HCB	BAP implementation on track.
1	Delays on long-standing E&S commitments and multiple audit-identified improvements, highlighting the	Integrate existing ESMS processes (e.g. follow-up on commitments, audit findings, and environmental monitoring) into day-to-day operational management. This should be supported by a centralised IMS platform that ensures shared access,	HCB	E&S commitments and audit findings are tracked and delivered using the centralised platform. Actions are reviewed regularly as part of management routines,

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
	need to strengthen ESMS implementation and follow-up.	version control, and systematic tracking of E&S information, risks, and actions.		with evidence of progress, updates, and issue resolution. % of open E&S commitments with documented progress updates
2, 9	Remediation trackers show pending actions from 2024, with inconsistencies in document control. Records often lack key metadata (e.g. dates, signatories, responsible units). Compliance processes remain manual and fragmented, with no centralised system in place and the assessment team was unable to meet with any contractors to verify their processes.	Establish a centralised compliance and remediation tracking system and ensure timely follow-up of outstanding actions, with clear responsibilities, deadlines, and progress monitoring. Standardise document management procedures to ensure all records include key metadata (e.g. dates, signatories, responsible units) and implement a digital document control system to replace fragmented processes. Finalise certification against ISO 37301.	HCB	All remediation actions from 2024 onwards tracked in centralised system, with progress status and assigned responsibility. Audit or management review confirms system-wide adoption of new compliance and document control processes. Certification against ISO 37301.
3	The lack of regular monitoring of sediment inflow to, and sedimentation in, the reservoir.	The regular re-assessments of reservoir sedimentation recommended in the 2017 bathymetric report should be implemented, possibly with longer intervals than suggested though.	HCB	Periodic re-assessment of reservoir sedimentation (at a minimum every 10 years, next one latest by 2027).
3	The project does not contribute to addressing water-quality issues beyond those impacts caused by the operating hydropower facility.	The only realistic option open to the project for resolving this is to address the point-source pollution from the commercial aquaculture operations on the reservoir. This is, however, likely not an efficient use of resources, which are better spent in other areas.	N/A	N/A

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
3	There are no processes in place to anticipate and respond to emerging public-health risks and opportunities.	A comprehensive assessment of options for the anticipation and response to public-health risks.	HCB, via expert consultants.	A report by public-health experts outlining options to be considered by HCB.
4	There are no processes in place to anticipate and respond to emerging public-health risks and opportunities.	A comprehensive assessment of options for the anticipation and response to public-health risks.	HCB, via expert consultants.	A report by public-health experts outlining options to be considered by HCB.
4	Safety risks have not been avoided, minimised and mitigated without identified gaps.	Develop the External Emergency Response Plan and revise the Internal Emergency Response Plan including regular emergency simulations/drills.	HCN	Formal approval of the External Emergency Response Plan and revised Internal Emergency Response Plan including regular emergency simulations/drills.
4	Safety issues have not been addressed beyond those risks caused by the operating facility itself.	See above.	See above.	See above.
6	There is no satisfactory evidence of ongoing monitoring and follow-up on the BAP at the time of the assessment, this also contributes to the project not being able to demonstrate contributions to biodiversity over and above its own impacts. This means that two separate requirements are not met.	Implement the actions of the BAP and monitor the outcomes.	HCB	Periodic re-assessment of the biodiversity-related targets and goals including monitoring of the BAP with clear progress indicators.

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
6	Several ecosystems affected by the hydropower facility that are not in a healthy state.	The issue of the Marromeu Delta is not practical to resolve since the present flow regime is based on a balanced priority set by the government. The Mágoè National Park issue will be covered by actions recommended for the assessment / monitoring gaps above.	HCB	Not solvable. See box above.
6	Commitment that no illegal logging and poaching takes place in a 250-metre buffer zone from the reservoir FSL.	Not practical to resolve since it is a commitment that remains from the colonial era with almost no possibility to enforce.	N/A	N/A
9	Risk updates across departments are not regular nor systematic, and integration into a central risk system is incomplete. The approved Risk and Audit Committee is not yet active, limiting independent oversight and institutional consolidation.	Complete the implementation of the central risk management system and require regular, cross-departmental risk updates aligned with governance cycles. Operationalise the Risk and Audit Committee to strengthen independent oversight.	HCB	Central risk system and live risk register operational and regularly updated by all departments % of departments submitting quarterly risk updates to the central system Risk and Audit Committee fully operational and providing documented oversight of corporate risk processes.
9	The existing corporate obligations matrix (*Mapa de Avaliação de Conformidade Legal*) lacks compliance status, verification, and supporting evidence.	Implement the Legal Compliance Assessment Procedure (PRO-GAR-013), including the development of a centralised and verifiable compliance register.	HCB	Legal Compliance Procedure approved and operational, with a central register and management system populated with

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
				compliance status, responsibilities, and evidence.
9	Key governance measures remain unresolved, including the activation of the Risk and Audit Committee, and the centralised compliance system foreseen in the 2018–2022 Strategic Plan. Some historical audit findings, such as cost appropriation adjustments, also remain unresolved.	Ensure timely implementation of governance actions already highlighted above and in progress. Review and close outstanding audit findings, including those considered non-material, to demonstrate follow-through on past recommendations and reinforce institutional credibility.	HCB	The Risk and Audit Committee fully operational and providing documented oversight of corporate risk processes. Legal Compliance Procedure approved and operational, with a central register and management system populated with compliance status, responsibilities, and evidence. All pending audit findings reviewed and formally closed, with documented evidence.
10	The stakeholder map lacks detail in some areas.	Address all blanks and complete the stakeholder map with all contact information	HCB	A complete stakeholder map, to be updated as indicated in the procedures.
10	The HCB public web site is only in the Portuguese language, in spite of significant stakeholders not being Portuguese-speaking, and the web site is difficult to navigate.	Improve the web site to make it easier to navigate and include, at a minimum, key communication in the English language, including significant documents of interest to stakeholders.	HCB	An improved web site, addressing the actions as described to the left.

Advanced Requirements				
Section	Why requirement is not met	Action(s)	Responsibility	Indicator of achievement
11	Identification of risks and opportunities relating to downstream-flow regimes is not well covered.	A comprehensive assessment of options for improved downstream flows, analysing the environmental, social and economic priorities to arrive at a scientifically proven regime.	HCB, via expert consultants.	A report by downstream-flow experts outlining flow-regime options to be considered by HCB with specific attention to trade-offs between environmental, social and economic priorities.
11	There are no commitments to downstream flows and no measures to monitor such flows.	See above.	See above.	See above.
12	There is no site-specific assessment of reservoir emissions demonstrating clear compliance with the < 100 gCO_2e/kWh requirement. This affects two requirements.	Bluemethane completes the site-specific assessment, resulting in < 100 gCO_2e/kWh and/or HCB commissions an updated G-Res Tool study for the project with the inclusion of the North Bank extension.	HCB	Clear, publicly available, documents demonstrating specific emissions < 100 gCO_2e/kWh.
12	The project is not demonstrated to be resilient under a broad range of scenarios	Implement the North Bank extension and/or other actions such as a large solar-PV installation, which would enhance the resilience of HCB to a climate-changed future.	HCB	The start of CBN project implementation or other effective measure.

F. Abbreviations and Acronyms

Abbreviation	Clear text
ADVZ	Agência de Desenvolvimento do Vale do Zambeze (Zambezi Valley Development Agency)
APCER	Associação Portuguesa de Certificacao (a Portuguese certification audit firm)
ARA-Centro	Administração Regional de Águas do Centro (Regional Waters Administration - Centre)
AQUA	Agência Nacional para o Controlo da Qualidade Ambiental (National Environmental Quality Agency)
BAP	Biodiversity Action Plan
BDE	Base Design Earthquake
CBN	Cahora Bassa North Bank HPP (in the planning stage)
CBS	Cahora Bassa South Bank HPP (existing project, assessed in this report)
CRA	Climate-Resilience Assessment
CSR	Corporate Social Responsibility
CTV	Centro Terra Viva (Live Earth Centre)
DINAB	Direcção Nacional do Ambiente (the National Directorate for Environment)
DIPREME	Direcção Provincial dos Recursos Minerais e Energia (Provincial Mineral Resources and Energy Directorate)
DNGRH	Direcção Nacional de Gestão de Recursos Hídricos (National Water Management Directorate)
DNT	Direcção Nacional de Terras (National Land Directorate)
DPA	Direcção Provincial da Agricultura (Provincial Agriculture Directorate)
DPADT	Direcção Provincial de Ambiente e Desenvolvimento Territorial (Provincial Environment and Land Development Directorate)
EDM	Electricidade de Moçambique (the national electricity utility company of Mozambique)
EERP	External Emergency Response Plan
EMP	Environmental Management Plan
ESA	Eskom South Africa
ESG	Environmental, Social and Governance
ESIA	Environmental and Social Impact Assessment

Abbreviation	Clear text
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management System
ESKOM	South Africa's national electricity utility company (originally named ESCOM for Electricity Supply Commission)
GAR	Gabinete de Auditoria, Risco e Compliance (Audit, Risk and Compliance Office)
GCI	Gabinete de Comunicação e Imagem (Communication and Image Office)
GIIP	Good International Industry Practice
GRI	Global Reporting Initiative
GRM	Grievance Redress Mechanism
HCB	Hidroeléctrica de Cahora Bassa (the client of this assessment and owner/operator of the Cahora Bassa plant).
IFC	International Finance Corporation (private-investment arm of the World Bank Group)
IOP	Instituto Oceanográfico de Moçambique (the Maritime and Fisheries Institute)
IMS	Integrated Management System
INGD	Instituto Nacional de Gestão e Redução do Risco de Desastres (National Institute for Disaster Management and Risk Reduction)
ISO	International Organization for Standarization
ITZ	Intertropical Convergence Zone
IUCN	International Union for Conservation of Nature
JA!	Justiça Ambiental! (Environmental Justice!)
JOTC	Joint Operations Technical Committee
LEM	Laboratório de Engenharia de Moçambique (Mozambican Engineering Laboratory)
LNEC	Laboratório Nacional de Engenharia Civil de Portugal (Portugal's national civil-engineering laboratory)
m.a.s.l.	metres above (mean) sea level
MAAP	Ministério da Agricultura, Ambiente e Pescas (Agriculture, Environment and Fishing Ministry)
MDE	Maximum Design Earthquake
MIREME	Ministério dos Recursos Minerais e Energia (Mineral Resources and Energy Ministry)
MISAU	Ministério da Saúde de Moçambique (Mozambican Health Ministry)
MITADER	Ministério da Terra, Ambiente e Desenvolvimento Rural (Ministry of Land, Environment and Rural Development) - old Ministry, no longer in place

Abbreviation	Clear text
MoU	Memorandum of Understanding
NGO	Non-Governmental Organisation
PAAI	Annual Internal Audit Plan
PFMA	Potential Failure Mode Analysis
PPE	Personal Protective Equipment
Ramsar	The name of the "*Convention on Wetlands of International Importance Especially as Waterfowl Habitat*"
RE100	Renewable Energy group (https://www.there100.org/)
REN	Redes Energéticas Nacionais, S.A. (National Energy Grids)
RFP	Request for Proposals
SACODA	Safety Control of Concrete Dams
SADC	Southern African Development Community
SOP	Standard Operating Procedure
SPA	Serviço Provincial do Ambiente (Environmental Provincial Services)
ToR	Terms of Reference
WWF	World Wide Fund for Nature
ZAMCOM	Zambezi Commission (cooperation body for the 9 riparian states in the Zambezi River's catchment)
ZESA	Zimbabwe Electricity Supply Authority (the national electricity utility company of Zimbabwe)

1 Environmental and Social Assessment and Management

Scope and Principle
This section addresses the plans and processes for environmental and social issues management. The principle is that negative environmental and social impacts associated with the hydropower facility are managed; avoidance, minimisation, mitigation, compensation and enhancement measures are implemented; and environmental and social commitments are fulfilled.

Background	
Identify the main environmental and social issues during operation	**Key environmental issues:** • balancing reservoir levels against droughts and floods (addressed under Section 11); • monitoring water quality (1 727 samples/semester) and effluents (addressed under Section 3); • safely disposing 114 tonnes of hazardous waste and 867 t of domestic/vegetal waste; • secure chemical storage; • rehabilitating borrow-pits; and • continuous dam-safety, emergency-response and climate-resilience measures (addressed under sections 4 and 12). **Key social issues:** • assisting local Government in offering people living on steep, landslide-prone slopes and beneath power lines a sustainability alternative (addressed under Section 4); • stopping new settlements in protection zones; • ensuring potable-water, waste and health services for Songo; • sustaining worker safety and zero-accident targets (addressed under Section 2); and • financing community roads, schools, sports and rural-water projects to maintain HCB's social licence (Corporate Social Responsibility (CSR), addressed under Section 11).
Identify the environmental regulator	**National level:** • Ministério da Agricultura, Ambiente e Pescas (Ministry of Agriculture, Environment and Fishery);

	• Direcção Nacional da Agricultura (National Directorate of Agriculture); • Direcção Nacional do Ambiente e Alterações Climáticas (National Directorate of Environment and Climate Change); • Direcção Nacional de Terras e Desenvolvimento Territorial (National Directorate of Lands and Territorial Development); and • Direcção Nacional de Florestas e Vida Selvagem (National Directorate of Forests and Wildlife). **Provincial Level:** • Serviços Provinciais de Ambiente (SPA) – Provincial Environmental Services.
Identify other regulators (e.g. on land, water use, Indigenous Peoples)	**Regulatory oversight includes:** • ARA-Centro – Administração Regional de Águas do Centro (Regional Waters Administration - Centre), the regional water authority overseeing water-resource use and river-basin management; • DINAB – Direcção Nacional do Ambiente (the National Directorate for Environment), responsible for environmental licensing; • AQUA - Agência Nacional para o Controlo da Qualidade Ambiental (National Environmental Quality Agency) – responsible for inspections and compliance audits. • APCER – Associação Portuguesa de Certificação - the Portuguese Association for Certification
Summarise the ESIA regulatory requirements	While HCB's original infrastructure predates current legislation, an Environmental and Social Impact Assessment (ESIA) was undertaken in 2013 as part of the proposed Cahora Bassa North Bank (CBN) project. The ESIA also retrospectively assessed Cahora Bassa South (CBS) operations, leading to the development of a unified Environmental and Social Management Plan (ESMP). Although the CBN project is still in its planning stage, the ESMP was also used as the foundation for CBS's stand-alone licensing. In 2018, following the requirements of Decree no. 54/2015, HCB initiated the formal licensing process for CBS as a Category A activity. The updated Operational Environmental Management Plan (EMP) was developed and submitted to the Ministry of Land, Environment and Rural Development (MITADER, now reorganised), which granted a five-year environmental licence in 2020. The EMP includes an Environmental Aspects Identification and Impacts Assessment and 11 Environmental & Social Management Programs. The licence remains valid until November 2025, and HCB is currently preparing for its renewal. Beyond ongoing operations, new infrastructure projects and facility upgrades, such as substations, workshops, or housing developments, are also subject to independent environmental licensing procedures, in line with Decree no. 54/2015, including the requirement for an Environmental and Social Impact Assessment (ESIA) to evaluate potential environmental and social impacts. Environmental licensing is embedded as a contractual obligation for these projects, ensuring compliance from the outset of planning and procurement.

Describe the non-physical cultural heritage in the project area	The non-physical cultural heritage in the project-affected area consists mainly of spiritual beliefs and cultural practices tied to the natural landscape, particularly the Zambezi River and surrounding areas. Some communities around the reservoir hold traditional beliefs about sacred sites, ancestral spirits, and natural features, which influence their relationship with the land and water. These intangible values are not all formally mapped by HBC but are recognised through community engagement processes and are considered in land use planning to avoid cultural disruption.
Other relevant information	Some environmental responsibilities linked to the project's operations extend beyond the responsibilities of HCB's Department of Environment but are coordinated internally to ensure regulatory compliance. For example, waste collection in the village of Songo is carried out by another HCB Division – Direcção de Serviços Gerais and the Department of Environment acts as supervisor, ensuring that waste-management practices align with environmental standards and are properly reflected in inspections and reports to the authorities. In addition, water and energy services, including sampling and analysis of water quality and wastewater, are conducted by HCB's environmental laboratory, which supports the implementation of the Water Quality Monitoring Plan and ensures compliance with national and internal benchmarks.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Systematic processes are in place to identify any ongoing or emerging environmental and social issues associated with the operating hydropower facility	✓	HCB's Environmental and Social Management System (ESMS) includes processes to identify environmental and social issues. These follow the Environmental Management Plan (EMP) approved in 2019, the Social Responsibility Strategy (integrated into the Corporate Strategic Plan), the ESMS Manual and its associated procedures. Environmental issues identification is guided by the Environmental Aspects and Impacts Identification Matrix, updated monthly through inspections	Processes to identify ongoing and emerging environmental and social issues take into account broad considerations, and both risks and opportunities	✗	HCB continuously look for emerging risks through field engagement during environmental and social education initiatives, participation in the biannual local leadership meetings across the 12 communities, and grievance channels through which community complaints, needs, and requests are submitted. The criterion is, however, not fully met because current processes focus primarily on site-specific compliance

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		and monitoring. Work is also guided by an Action Plan for the Implementation of HCB's Operational Environmental Management Plan. A 2018-2019 baseline study and stakeholder mapping in 12 local communities informed the Strategic Social Responsibility Plan, now part of the Corporate Strategic Plan.			and do not systematically address broader issues or long-term dynamics. Although social processes such as stakeholder and community engagement go beyond legal obligations and demonstrate a proactive approach to identifying risks and opportunities, the routine identification of environmental and social risks and opportunities remains limited. Key issues like biodiversity, climate risks, urban expansion, and informal settlement pressures are acknowledged but are generally addressed reactively rather than through strategic planning. As a result, opportunities for integrated planning, regional collaboration, and long-term environmental and social investment may be missed, limiting the project's capacity to manage emerging and systemic risks.
The processes utilise appropriate expertise	✓	Environmental- and social-issues identification is led by qualified staff, supported by external audits (e.g. AQUA, APCER). The ESMP was developed by a licensed external consultant in 2019.			
Monitoring programmes are in place for identified issues	✓	HCB has monitoring systems for all key environmental and social issues. These are defined in the ESMP, the Water Quality Monitoring Plan, and the Annual Environmental Inspection Plan. Monitoring includes regular water-quality sampling, waste tracking, and dam-safety inspections, as well as audits of chemical storage, workshops, and effluent management. Environmental inspections are guided by an annual calendar and weekly follow-ups. Issues identified are recorded in a register of non-			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		conformities, which includes corrective actions and preventive measures. All are documented in monthly environmental reports. Social monitoring covers the project's original resettlement areas, urban growth, health services, and community infrastructure. Programme delivery is tracked through milestone monitoring, contractor oversight, and regular site visits. Monitoring focuses on deliverables, timelines, and stakeholder satisfaction, based on feedback from community members and authorities. Performance results feed into compulsory biannual Environmental Performance Reports to follow-up on the ESMP implementation, and to inform future planning.			
MANAGEMENT					
Environmental and social management system is in place to manage measures to address identified environmental and social issues	✓	The ESMS defines responsibilities, procedures, and monitoring tools for managing both environmental and social issues. The ESMS is certified against ISO 14001 and HCB is also certified against ISO 9001 and ISO 45001 and	Processes are in place to anticipate and respond to emerging risks and opportunities	✗	Although HCB has monitoring tools and inspection routines in place, the management system remains largely reactive and focused on compliance. There is no live or regularly updated risk register, and persistent issues (e.g. delays in the implementation of

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		working towards certification against ISO 37301. The ESMS is informed by audit findings, regulatory requirements, and community feedback. Key components of the ESMS include standard operating procedures (SOPs), inspection and monitoring plans, an environmental aspects and impacts identification matrix, and a weekly scorecard of operational performance across health, safety, and environment. This scorecard consolidates data on spills, accidents, and corresponding corrective actions. Environmental management is led by the Environmental and Laboratory Department, which prepares and implements an action plan aligned with HCB's Operational Environmental Management Plan. This is done in coordination with environmental focal points embedded across HCB's operational areas. The action plan is structured around the 11 thematic programmes of the ESMP, covering areas such as water resource management, hazardous chemicals, climate resilience, occupational health			the Biodiversity Action Plan – BAP) highlight long response cycles. While comparative trend analysis is discussed annually at board level using Tableau dashboards, this is not yet translated into day-to-day operational decision-making or action. Information management remains primarily report-driven, and some gaps exist in the systematic recording and escalation of issues – for instance, monthly environmental control reports were behind schedule at the time of assessment. This limits responsiveness to emerging risks and weakens the feedback loop into strategic planning, so this requirement is not met.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		and safety, emergency preparedness, dam safety, and social responsibility. On the social side, HCB operates a CSR strategy that goes beyond regulatory compliance. It is embedded within the broader Corporate Strategic Plan and supports community development in health, education, water, sanitation, and infrastructure. The Social Responsibility Plan is implemented through a decentralised model, coordinated by local staff under the Communication and Image Office. This department oversees programme implementation, including deliverables, budget execution, community engagement, and grievance management. In 2025, HCB launched a tendering process for an external evaluation of its social responsibility programme to assess impact and inform future strategic planning.			
This management system is implemented utilising appropriate expertise (internal and external)	✓	Management is carried out by trained teams. Environmental staff are skilled in inspection, monitoring, and identification of corrective action(s). The Social Responsibility Department includes field-based staff, and HCB's recruitment process ensures the team	Plans and processes are embedded within an internationally recognised environmental management system which is third party verified, such as ISO 14001	✓	HCB's ESMS is certified under the internationally recognised ISO 14001:2015 as part of the Integrated Management System (IMS). The 2024 audit by APCER confirmed the adequacy of its

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		has local knowledge and language skills suited to the various dialects in the project area. This also supports the ongoing baseline update. Since 2024, the Audit, Risk, and Compliance Unit has provided oversight of the Integrated Management System (IMS), strengthening internal capacity with cross-sectoral expertise. For specialised areas such as biodiversity and some social issues, HCB engages external expert consultants as needed. External audits confirm the technical competence of HCB's internal teams to maintain the system and address non-conformities.			documentation and procedural controls.
CONFORMANCE AND COMPLIANCE					
Processes and objectives in environmental and social management plans have been and are on track to be met with:			There are no non-compliances	✗	HCB's environmental legal compliance is managed through regular audits and corrective action tracking. The 2024 AQUA audit identified four minor non-compliances: • one concerning the validity of the waste operator's licence and associated transport documentation; • one error in sanitary landfill records; and
• no major non-compliances	✓	This review has not identified any major non-compliances with applicable environmental and social legislation. The 2024 AQUA audit recorded 93 non-conformities and four minor non-compliances, with no major findings.			
• no major non-conformances	✓	Implementation of environmental plans, including the seven			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		recommendations from DINAB's EMP approval, are actively tracked through inspections and internal and external audits and reporting routines, with no major non-conformances identified.			• two issues related to outdated equipment and vehicle washing on uncontained soil, in breach of ESMS requirements. The above-mentioned non-compliances mean that this requirement is not met.
Environmental and social commitments have been or are on track to be met	✓	HCB's commitments are framed within the ESMP (which also includes the Social Responsibility Programme) and the Social Responsibility Strategy, as well as formal partnerships and MoUs with public institutions (e.g. Ministry of Interior, Rural Hospital of Songo). Key initiatives such as water infrastructure upgrades and environmental education campaigns are on track. Community-based actions including seasonal flood or water-scarcity response (e.g. livelihoods support through rapid-growing seed distribution), rural healthcare, education, and sanitation initiatives are also on track.	There are no non-conformances	✗	Non-conformances are recorded in the 2025 monthly updates to the Environmental Aspects and Impacts Identification Matrix which report unresolved environmental issues across multiple operations, including a rising trend in oil spills and soil contamination. While these are marked for resolution, completion and evidence are not documented in the shared tracking system. The BAP, developed in 2022 in response to the EMP approval letter and the requirements of the Biodiversity Conservation Law (Decree 16/2014), is still in a stage of very early implementation. This significant delay in fully implementing the plan poses an emerging risk of a major non-conformance. While no formal non-conformances are recorded in the SGI, the commitment to assisting the local
Environmental and social funding commitments have been or are on track to be met	✓	Environmental and social funding commitments are integrated into HCB's investment and budgetary frameworks and are on track to be			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		met. Environmental and Social funding is planned and tracked via: • Multi-year budgeting aligned with the Strategic Plan and shareholder expectations; • Direct support to local institutions, including social contributions, patronage and in-kind aid under MoUs and coordination with local communities (e.g. public standpipes providing treated drinking water to secure access to safe water); and • The procurement and budgeting of strategic actions such as the new relocation plan.			Government in addressing the Acampamento Africano issue (first identified in 2018) is still ongoing, but execution is the responsibility of the Government. Additionally, the 2024 AQUA audit identified 32 opportunities for improvement, underscoring the need to strengthen the implementation of the ESMS. The above-mentioned weaknesses means that this requirement is not met.
OUTCOMES					
Negative environmental and social impacts associated with hydropower facility operations are avoided, minimised and mitigated	✓	HCB's management measures aim to avoid, minimise, and mitigate key environmental and social impacts from its operations. Environmental risks such as water pollution, waste mismanagement, and ecosystem disturbance from dam operations and urban encroachment are addressed through water-quality monitoring, controlled waste disposal, rehabilitation of borrow pits, and secure handling of chemicals. Social impacts, including at-risk informal households, pressure on	Negative environmental and social impacts associated with hydropower facility operations are avoided, minimised, mitigated and compensated	✓	HCB goes beyond legal obligations by providing social support during emergencies, implementing compensation measures, and investing in local infrastructure. It maintains open dialogue with communities and formal partnerships with public institutions. Examples of compensation include seed distribution for drought-affected farmers, radio campaigns discouraging cultivation in flood-prone areas, and extended access to subsidised water and energy in Songo.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		housing and services are managed through improved service access, and infrastructure investments (e.g. roads, water-supply systems and new residences built to replace old ones with asbestos issues and/or in a state of decay). Disruptions to traditional livelihood (e.g. flood-recession agriculture and fish drying) are mitigated through early-warning systems, radio messages, and direct community engagement. HCB also implements targeted interventions to address emergency events and the risk of vandalism.			
Land disturbance associated with development of the hydropower project is rehabilitated or mitigated	✓	HCB has made sufficient efforts to rehabilitate borrow pits, manage urban expansion on unstable slopes, and prevent settlement in hazardous zones (e.g., under power lines or near the reservoir), following project-specific mitigation and rehabilitation measures outlined in the ESMP Degraded Areas Rehabilitation Programme. Coordination with land and environmental authorities aims to manage disturbed or sensitive areas.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
The operating hydropower facility or the corporate entity to which it belongs can pay for social and environmental commitments	✓	The 2023 financial report shows strong revenues and profitability, enabling sustained investment in community infrastructure, environmental monitoring, and resettlement support. HCB's environmental and social programmes are financed through approved annual and multi-year budgets. Environmental expenditures cover monitoring, laboratory operations, external audits, and inspection logistics. Social funding includes infrastructure, health, education, and emergency response. MoUs with institutions such as the Ministry of Interior and the Songo Hospital ensure consistent financial and logistical support. The support to the Government for the new residences to be provided for the illegal squatters at the "Acampamento Africano" is budgeted at 18.7 million MZN (300 000 USD), confirming HCB's ability to meet complex obligations.			

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There is no significant gap against the minimum requirements.	2 out of 6 (33%).

Cahora Bassa, 2 075 MW, Mozambique

Summary of findings and other notable issues
HCB meets minimum requirements for environmental and social management. While some advanced elements are present, areas for development include systematic integration of daily and long-term risk and opportunity tracking, monitoring of trends, and expanded use of early-warning tools. The full potential of the Integrated Management System (IMS) is not yet realised, as it is still primarily used for documentation and reporting rather than active operational guidance. Furthermore, the dispersion of environmental, social, and ESG responsibilities across different portfolios and divisions may hinder coherence and internal coordination.

Relevant evidence	
Interview	4, 5, 9, 16, 17, 37, 38 and 59
Document	1 – 65, 71, 77, 136, 139 – 141, 143, 148, 202 and 203
Photo	5, 10, 11, 13, 14, 21 – 23, 25 – 28, 37 – 57, and 60 – 67

2 Labour and Working Conditions

Scope and Principle
This section addresses labour and working conditions, including employee and contractor opportunity, equity, diversity, health and safety. The principle is that workers are treated fairly and protected.

Background	
Labour requirements during operation (full-time equivalent)	764 (112 female, 652 male, 0 expatriate) Casual workers: 590 (133 female, 457 male)
Applicable key human resources regulations	• The Mozambique Labour Law (Law 13/2023); • The Social Protection Law (2007); and • Law nº10/2024 of 7 of June- Concerning the protection and respect of the fundamental rights and freedoms of persons with permanent physical, mental, or sensory disabilities. In addition IFC PS2/WB ESS2/HSS 2 are important reference documents.
Applicable key occupational health and safety (OH&S) regulations	The main OH&S acts are the following: • The Mozambique Labour Law (Law 13/2023); • Decree No. 62/2013 of December 4 establishes the Legal Framework for Work Accidents and Occupational Diseases; • The Social Protection Law (2007); • The associated Mozambique National Basic Social Security Strategy 2016 – 2024 (2016); and • Law nº10/2024 of 7 of June- Concerning the protection and respect of the fundamental rights and freedoms of persons with permanent physical, mental, or sensory disabilities. In addition, the IFC PS2/WB ESS2/HSS 2 are important reference documents.
Identify the regulator for labour law and OH&S	• The Ministry of Labour and Social Security (Ministério do Trabalho, Emprego e Segurança Social, MITESS) has the main responsibility, but a cooperation between the State and organisations of employers and trade unions is realised through a tripartite body: the Labour Advisory Committee (Comissão Consultiva do Trabalho); • The General Labour Inspectorate is the main service with competences in the field of OH&S; and • Controls on compliance with national legislation are conducted by the Direcção Provincial do Trabalho, Emprego e Segurança Social.

Other relevant information	N/A

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
A periodically updated assessment has been undertaken of human resource and labour management requirements for the operating facility	✓	There is an overall HR annual reporting process in place. These annual reports are based on weekly safety bulletins, monthly HR reports and safety presentation to the board, follow-up of training needs assessments etc. Furthermore, there is also an Annual Training Plan based on the training-needs assessment in which HR follows up on the training needs of all HCB's staff.	Identification of ongoing or emerging labour management issues takes broad considerations into account, and both risks and opportunities	✓	There is an ongoing improvement process through which an ESG reporting system with specific indicators is implemented. This reporting process will follow up on key staff-related issues, for instance, number of workers, hiring rate, turnover rate, maternity/paternity leave etc. The indicators are selected in accordance with the Global Reporting Initiative (GRI). HCB has the vision "our goal is ZERO HARM (A nossa meta é DANO ZERO)" and has, as part of this vision, put comprehensive management procedures in place to reach that vision. These include the reporting procedures described under minimum requirements but also clear and enforced safety guidelines (safety introductions, personal protective equipment (PPE), traffic policies, alcometers at the entrance of workshop areas, substation and powerhouse etc.) to minimise risks, as well as trainings in health and safety
The assessment included project occupational health and safety issues, risks, and management measures	✓	The annual report includes hazard identification, risk assessment, incident investigation and more. For the more day to day operations, all units within HCB must prepare a MIPAR – Hazard Identification and Risk Analysis Matrix. The MIPAR identifies, in general, the risks associated with the main processes of the unit, the existing control mechanisms as well as the opportunities for improvement. Furthermore, this analysis is complemented by daily "toolbox"			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		meetings (around 15 minutes every morning) where different challenges and risks are discussed and assessed, in order to check how to do this day's work, and how to mitigate the risks.			for skills development of operation of, for instance, heavy machinery and working with electricity.
Monitoring is being undertaken to assess if management measures are effective	✓	Monitoring is being conducted as part of the reporting for the annual report, the weekly safety bulletins and the follow-up on the Annual Training Plan and more. But there is also an internal system for monitoring of and following up on labour-related issues. The issues identification and reporting is done in a spreadsheet format and then submitted to the general Phindu system (HCB's digital system for assigning and following up on general management issues) where the issue gets assigned in the management hierarchy for further actions.			
Ongoing or emerging labour management issues have been identified	✓	HCB has a structured system for identifying ongoing or emerging labour-management issues through the MIPARs, the weekly safety bulletins and procedures for consultations with workers on safety and health matters (in accordance with ISO 45001:2018) – the last consultations was carried out in August 2024.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		The daily "toolbox" meetings are helpful in identifying the emerging issues. Occasional "walkabouts" are also arranged, where board members visit different units within the company to talk to the staff members without the presence of their managers.			
MANAGEMENT					
Human resource and labour management policies, plans and processes are in place to address all labour management planning components	✓	HCB's Health and Safety Management system is in full compliance with Mozambican legislation (the last government control was conducted in 2023 without any remarks) and is, furthermore, certified against ISO 45001:2018 (certification awarded in December 2024). Furthermore, the annual audit for 2024 concluded that HCB is complying with the applicable regulatory, legal and other requirements. The scope of the system covers all levels of the organisation, service providers and all services provided by HCB and in all facilities.	Processes are in place to anticipate and respond to emerging risks and opportunities	✗	HCB has a comprehensive management system in place that responds to both emerging risks and opportunities. They have procedures for hazard identification, risk assessment and incident investigation. This is implemented through a Hazard and Risk Analysis Matrix (MIPAR) that every unit prepares. This tool identifies the risks associated with the main processes of the unit, and the system follows the "plan, do, check, act" principles. Furthermore, there are procedures in place for worker participation, consultation, training and skills assessments to assess possible opportunities in relation to specific staff groups' and individual's training needs. However, there is no compliance register in place (or at
Human resource and labour management policies, plans and processes of contractors,	✓	HCB demands from all contractors, subcontractors and intermediaries that their HE and labour management is, at a minimum, the level of HCB's.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
subcontractors and intermediaries are in place					least there is confusion around whether or not there is one, which in itself is a flaw in the management system) and no contractors have been made available for interviews to verify how their HR-related issues are managed. The process of being certified against ISO 37301 will close the gap of the compliance register, but since there is no clear indication of when this will happen, this cannot be considered on track to be resolved. This combination of the missing compliance register and the failure to interview contractor(s) means that this requirement is not met.
CONFORMANCE AND COMPLIANCE					
Processes and objectives relating to human resource and labour management have been and are on track to be met with:			There are no non-compliances	✓	There are no non-compliances, see description under minimum requirements.
• no major non-compliances	✓	There are no major non-compliances. The project's operation is aligned with Mozambican legislation (a control visit was conducted by the regional labour department in 2023 without any remarks). The annual audit for 2024 concluded that HCB is complying with the			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		applicable regulatory, legal and other requirements.			
• no major non-conformances	✓	Internal monitoring and reports, and external audits are showing that HCB is acting in accordance with their own policies and plans related to labour and working conditions, thus, there are no non-conformances.	There are no non-conformances	✓	There are no non-conformances, see description under minimum requirements.
Any labour related commitments have been or are on track to be met	✓	There are no labour-related commitments other than the ones described under conformance above.			
OUTCOMES					
There are no identified inconsistencies of labour management policies, plans and practices with internationally recognised labour rights	✓	The project's operation is aligned with Mozambican legislation that has put into force relevant international conventions: eight out of ten ILO "fundamental" conventions and three out of four of ILO "priority" governance conventions. The country is a signatory to the UN Convention on the Rights of the Child and the UN Convention on the Protection of the Rights of all Migrant Workers and Members of their Families.	Labour management policies, plans and practices are demonstrated to be consistent with internationally recognised labour rights	✓	There is no specific assessment of consistency, but HCB is certified and audited (only 6 months ago) against ISO 45001, which clearly demonstrates full consistency.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	4 out of 5 (80%)

Summary of findings and other notable issues
HCB's Health and Safety Management system is in full compliance with Mozambican legislation and has many elements that are aligned with GIIP (the company is certified and audited against ISO 45001 and in the process of becoming certified against ISO 37301) with their comprehensive systems responding to both emerging risks and opportunities. Thus, all the minimum requirements are met. Furthermore, there is an ongoing improvement process where an ESG reporting system with a large number of labour/safety-relevant indicators will be implemented. This reporting process will follow up on staff-related issues, for instance the number of workers, hiring rate, turnover rate, maternity/paternity leave etc. The main issue identified is the lack of a compliance register (or the confusion around whether there is one or not which, in itself, is a gap) and evidence on how HR-issues are handled for contractors which means that there is one advanced-level requirement which is not fully met.

Relevant evidence	
Interview	10, 11, 16 – 20 and 47 – 52
Document	4, 5, 23, 31, 66 – 74, 159 and 160
Photo	3 - 10, 12, 31, 32, 54, 55, 58 - 60, 63 and 64

3 Water Quality and Sediments

Scope and Principle
This section addresses the management of water quality, erosion and sedimentation issues associated with the operating hydropower facility. The principle is that water quality in the vicinity of the operating hydropower facility is not adversely impacted by activities of the operator, that erosion and sedimentation caused by the project are managed responsibly and do not present problems with respect to other social, environmental and economic objectives, and that commitments to address water quality, erosion and sedimentation issues are fulfilled.

Background	
Water Quality	
Description of water quality	As one of the largest rivers in sub-Saharan Africa, the Zambezi flows through several countries, which contributes to the transport of pollutants and sediments from a large catchment, characterised by intensive agriculture (particularly in Zimbabwe). The water quality in the reservoir is generally good, partly due to the low level of human activity around the reservoir.
Key water quality issues	Monitoring indicates that seasonal variation accounts for much of the temporal changes observed § water quality, primarily due to increased dilution and sediment input during the rainy season. However, the growth of aquaculture near the dam presents a medium-term risk that should be taken into consideration.
Main influences on water quality	Mining and intense agriculture in the upstream catchment and aquaculture on the reservoir.
Sedimentology	
Key sediment issues	The main source of sediment input into the reservoir is the (undammed) Luangwa River.
Sediment load (tonnes/year)	There is no measurements conducted, but the bathymetric study in 2017 indicated very low sediment input. Calculating backwards yields sedimentation of an average 62 million tonnes/year. This results in a reservoir life of many hundred years.
Catchment area at the dam	1 117 496 km^2
Other information	N/A

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Ongoing or emerging issues have been identified in the following areas:			Identification of ongoing or emerging water quality issues takes into account both risks and opportunities	✓	The monitoring of water-quality issues is very comprehensive. The high number of sampling points, well distributed on tributaries and on the reservoir itself, addresses both emerging risks and creates opportunities for counter-measures if needed. The ability to isolate point sources of pollution facilitates communications with polluters and makes it possible to address issues before they become alarming. As an example, because of the risks of high nutrient loading from point sources, the project has started monitoring of chlorophyll on the reservoir as an indicator of problems.
• water quality	✓	Issues of interest for water quality are: • the turbidity from the free-flowing Luangwa River (joining the Cahora Bassa reservoir from Zambia at the very top of the reservoir at Zumbo, where Zambia, Zimbabwe and Mozambique meet; • aquaculture on the reservoir is a significant source of point-source pollution; • mining in the catchment; and • intensive farming in parts of the catchment.			
• erosion and sedimentation	✓	There are generally few issues related to erosion and sedimentation. There is some limited erosion caused by planting crops on steep slopes within the greater town area of Songo, but this does not cause significant issues for an receptor. Sediment is contributed mainly from the Luangwa River (see above), making reservoir sedimentation a potential issue. However, this has not proven to be the case, see below.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
If management measures are required then monitoring is being undertaken to assess if management measures are effective for:					
• water quality	✓	The project monitors 32 sampling points on tributaries to the Cahora Bassa reservoir and 19 sampling points in the reservoir itself. In addition, samples are also taken in the small stream running through Songo, to monitor contamination levels. These stations are sampled twice a year; after the rainy season and during the dry season. Analyses are done at Hidroeléctrica Cahora Bassa's (HCB) own laboratory located in Songo. The project also uses external labs for validation of the work done at its own laboratory and send samples to a South African laboratory for the analyses of heavy metals. The project presently has no access to monitoring data from Zambezi River Authority (the operators of the upstream Kariba dam), but the Joint Operations Technical Committee (JOTC) which is a cooperation entity for the Zambezi catchment dams in Zambia, Zimbabwe and Mozambique, is in the process of forming an environmental sub-committee which	Identification of ongoing or emerging erosion and sedimentation issues takes into account both risks and opportunities	✗	The positive results of the bathymetric survey in 2017 means that HCB is not worried about reservoir sedimentation. The lack of regular monitoring of this issue, even if the issue is very limited, means that this requirement is not met, as emerging risks, such as potential problems developing at the delta formation where the Luangwa River flows into the Cahora Bassa reservoir, would probably not be captured.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		will facilitate open data sharing in the near future. Recently remote sensing has been added for the monitoring of some parameters, among these chlorophyll. Water contaminated by oil and other hazardous chemicals are sent to a treatment plant in Beira, on the coast. See further Section 1 for management of waste.			
• erosion and sedimentation	✓	Aware that reservoir sedimentation is well-known for limiting the life span of reservoirs around the world, the project undertook a bathymetric survey in 2017, 42 years into operation. The survey included a full-cover multibeam bathymetric survey from the dam wall to 500 metres upstream, cross-sectional transects at 500-metre intervals across the lake up to the tail near Zumbo, as well as 400 metres below the dam wall. The survey was intended to provide a baseline for ongoing regular monitoring, but the sedimentation since the commissioning of the project was proven to be so limited that the reservoir's fully effective life-span extends far beyond the project's possible economic life. Given the			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		likelihood that this assumption is correct, the lack of repeated monitoring is considered **a non-significant gap** against this requirement. Erosion on steep slopes in the concession area are monitored and reported biannually.			
MANAGEMENT					
Measures are in place to manage the following identified issues:			Processes are in place to anticipate and respond to emerging risks and opportunities relating to:		
• water quality	✓	As there are no identified water-quality issues, monitoring in accordance with the Water Quality Monitoring Plan, and regulation-driven reporting are the only management measures necessary. The project reports to the Administração Regional de Àguas do Centro (ARA-Centro), the Agência Nacional para o Controlo da Qualidade Ambiental (AQUA) and are also overseen by the Serviço Provincial do Ambiente de Tete (SPA-Tete). The project cooperates with ARA-Centro on e.g. water-quality sampling campaigns and reports quarterly.	• water quality	✓	See above under Assessment.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		Reporting to AQUA (who validates the reports) is done every 6 months.			
• erosion and sedimentation	✓	Protection of steep slopes in the project's concession area is an ongoing activity. This and other environmental monitoring and management interventions are reported to the authorities every 6 months.	• erosion and sedimentation	✗	See above under assessment.
CONFORMANCE AND COMPLIANCE					
Processes and objectives in place to manage each of the following have been and are on track to be met:			There are no non-compliances relating to:		
• water quality, with no major non-compliances	✓	The only regulatory requirement for Cahora Bassa is regular reporting to the authorities (regional and national water and environmental entities). No non-compliances have been identified. SPA attest to the fact that they have never found a non-compliance for the project, not even a license-associated complaint.	• water quality	✓	See left.
• water quality, with no major non-conformances	✓	Commitments to water-quality monitoring and management are fully conformant.			
• erosion and sedimentation, with no major non-compliances	✓	There are no regulatory requirements for erosion and sedimentation. Hence there are no non-compliances	• erosion and sedimentation	✓	See left.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		identified (see also evidence from SPA above under water quality).			
• erosion and sedimentation, with no major non-conformances	✓	Turbidity is regularly measured (see Assessment above) in accordance with the programme. The bathymetric survey of the reservoir was carried out in 2017 and resolved the internal targets of assuring longevity of the reservoir storage.			
Commitments related to the following have been or are on track to be met:			There are no non-conformances relating to:		
• water quality	✓	See above.	• water quality	✓	See above.
• erosion and sedimentation	✓	See above.	• erosion and sedimentation	✓	See above.
OUTCOMES					
Negative water quality impacts arising from activities of the operating hydropower facility are avoided, minimised and mitigated	✓	Monitoring results indicate that all potentially negative impacts are either avoided or minimised with no need for mitigation. ARA-Centro attest to a good water-quality status.	Water quality in the area affected by the operating hydropower facility is of a high quality	✓	The water in the reservoir and in the downstream is normally of good quality. Point-source pollution is affecting the quality in a few places (mainly associated with aquaculture). Given the effective dilution in the large reservoir and river flow, the general water quality is considered to be high. ARA-Centro verifies this judgement which means that this requirement is considered as met.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
			The facility has contributed or is on track to contribute to addressing water quality issues beyond those impacts caused by the operating hydropower facility	✗	The project assumes responsibility for several water-quality-related issues which are marginal to the operating power plant itself, as for instance water purification and supply of safe drinking water. However, given that the town of Songo is mainly to be considered a "company town", almost a part of the project itself, this is not considered enough to meet this requirement.
Erosion and sedimentation issues are avoided, minimised and mitigated	✓	The few issues that do exist are successfully minimised with no need for mitigation beyond supervision to preclude illegal farming on unsuitable slopes.	Erosion and sedimentation associated with operating facility do not present ongoing problems for environmental, social and economic objectives of the facility or the project-affected areas	✓	No such problems have been identified beyond the limited erosion in the area with illegal squatters. Hence this requirement is met with the note that the issues at "Acampamento Africano" should be addressed.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	8 out of 11 (73%).

Summary of findings and other notable issues
Water quality is monitored in an impressive number of sampling points on the reservoir and in rivers and streams flowing into the reservoir. The parameters covered and the frequency of monitoring are satisfactory, and the water-quality status is good in both inflow and outflow. Sedimentation in the reservoir is not regularly monitored, as a result of a detailed bathymetric study conducted in 2017 which showed very minimal sedimentation in the reservoir over the 42 years of operation. The loss of dead storage to sedimentation is considered irrelevant in comparison to other limiting factors for project (economic) life. There are no indications of downstream erosion or sediment issues resulting from the project's operations. There are no significant gaps against the minimum requirements and 8 of the 11 advanced-level requirements are met.

Relevant evidence	
Interview	4 – 6, 22, 23 and 29 – 32
Document	1 – 3, 6, 12 – 15, 26, 28, 30, 71, 75 – 80 and 156 – 159
Photo	10, 27, 28, 41 – 43 and 45

4 Community Impacts and Infrastructure Safety

Scope and Principle
This section addresses how impacts of development of the hydropower facility on project-affected communities have been addressed, in cases where these commitments are well-documented against a pre-project baseline. These impacts include economic displacement, impacts on livelihoods and living standards, public health impacts, impacts to rights, risks and opportunities of those affected by the project, infrastructure safety risks and additional benefits that can arise from a hydropower facility. The principle is that livelihoods and living standards impacted by the project have been improved relative to pre-project conditions for project-affected communities, that commitments to project-affected communities have been fulfilled, and that life, property and community assets and resources are protected from the consequences of dam failure and other infrastructure safety risks. This section does not address requirements that relate to physical displacement or to Indigenous Peoples, which are addressed in Section 5 and 7. Other interested parties and groups are addressed in Section 10. In the case of older projects, commitments to project-affected communities and project benefits refer to commitments made at the time of project development (if they were well-documented) as well as to more recent commitments.

Background
In the case of older projects, commitments to project-affected communities and project benefits refer to commitments made at the time of project development (if they were well-documented) as well as to more recent commitments.

Community Impacts and Benefits	
Description of project-affected communities and how they are affected (distinguish between physically displaced (addressed in Section 5), economically displaced and other project-affected communities and include estimated number of people and households)	Directly-affected community-level stakeholders in the Cahora Bassa project include: community members in the town of Songo; communities in the District of Cahora Bassa (to the south of the plant); communities in the District of Maravia on the north bank; communities in the District of Magoe on the banks of the reservoir; communities and businesses (fishing, aquaculture and tourism) using the reservoir or living around the reservoir shoreline; downstream communities; and HCB employees in Songo, Tete and Maputo. Directly-affected institutional-level stakeholders include: shareholders, the Mozambican state and Portuguese Redes Energéticas Nacionais, S.A. (REN), represented by the General Assembly of the company; off-takers, specifically Electricidade de Moçambique (EDM), Eskom South Africa (ESA) , and Zimbabwe Electricity Supply Authority (ZESA); Government ministries and departments, Ministério dos Recursos Minerais e Energia (MIREME), Direcção Provincial dos Recursos Minerais e Energia (DIPREME), and environmental and other regulators including Administração Regional de

	Águas do Centro (ARA-Centro); NGOs, e.g. the World Wide Fund for Nature (WWF), Centro Terra Viva (CTV) and Justiça Ambiental! (JA!); and media. Communication at HCB is managed by its Gabinete de Comunicação e Imagem (GCI) reporting directly the Board of Directors, consisting of teams addressing public relations, communications and image, and community relations/corporate social responsibility (CSR) activities. Approximately 60 households reside as illegal squatters in an area referred to as "Acampamento Africano" (African Camp), which includes derelict camp facilities from the time of Cahora Bassa's construction, and includes dwellings and very poor farmland. The origins of the households are not clear, as they include people who were displaced during construction and returned, their descendants, and people who were displaced from the area that was developed into Songo town. This issue was identified as an important socio-economic issue to be addressed in an earlier assessment of the project, utilising the Hydropower Sustainability Assessment Protocol (a predecessor of the Hydropower Sustainability Standard).
Agencies relevant to land acquisition	Ministério da Agricultura, Ambiente e Pescas (MAAP), Direcção Nacional de Terras (DNT) and Direcção Provincial de Ambiente e Desenvolvimento Territorial (DPADT
Agencies relevant to livelihood restoration and project benefits	Direcção Provincial da Agricultura (DPA), Agência de Desenvolvimento do Vale do Zambeze (ADVZ)
Infrastructure Safety and Public Health	
Type of dam	Double-curvature concrete-arch dam with central spillways
Dam height (m)	171
Probable maximum flood (m^3/s)	35 000
Design flood (expressed as estimated flood with return period)	31 700 m^3/s, return period of 10 000 years
Spillway capacity (m^3/s)	13 400
Spillway height (m.a.s.l.)	244.3
Headrace length (m)	11
Headrace width (m)	8.9
Headrace capacity (m^3/s)	2 260
Seismicity	The Cahora Bassa Dam is situated in the northern part of Mozambique and is integrated in a high earthquake hazard area, due to the influence of the "Rift" of Eastern Africa. This system is approximately 4.500 Km long, extending from Read Sea,

	on the south, to the Indian Ocean. This important geological accident is responsible for most earthquake in Eastern Africa. The values of the horizontal and vertical peak accelerations are as follows: • Base design earthquake BDE (OBE): $a_h = 0.75$ m/s^2; $a_v = 0.25$ m/s^2 • Maximum design earthquake MDE (MCE): $a_h = 1.00$ m/s^2; $a_v = 0.33$ m/s^2
Geology	At the site where was built the dam occur the Upper Precambrian formation, consisting predominantly of granite and granitic-gneiss rocks and with less expression in the level of the construction site, gabbro-dioritic and granulitic rocks. The rock mass is crossed by aplitic, porphyric and pegmatitic veins, and lamprophyric and gabbric veins. The granitic rocks are considered with good quality, with a elasticity modulus of 70 Gpa.
Dam safety regulatory authorities	Laboratório de Engenharia de Moçambique (LEM), Direcção Nacional de Gestão de Recursos Hídricos (DNGRH) and Administração Regional de Águas do Centro (ARA-Centro)
Local presence/capacity of emergency services	The project has a health post that serves employees and their families. The Songo Rural Hospital is the main public-health services provider in the area. The project also maintains a Fire Department.
Potential safety risks in this context	Unusual gate operation could impose safety risks to communities located downstream, fishermen, cultivated areas and commercial activities. Dam failure. Fire in the powerhouse, substations and transmission infrastructure.
Degree of risk of dam failure and in what way	In May 2023 the Cahora Bassa dam was classed as a risk class I, as a result of the combination of its Low Vulnerability and High Potential Damage. According with Decreto 33/2017 – Regulamento de Segurança de Barragens, any dam presenting High Potential Damage must be classified as Class I risk, the highest of a total of three risk categories. A Dam-break Analysis for the Zambezi River Cahora Bassa Dam Failure Mode Assessment was also conducted between 2019 and 2020 considering the failure of the upstream Kariba dam.
Population at risk of dam break (locations, numbers)	Significant settlements affected by a dam-break-induced flood include portions of the greater settlement associated with the city of Tete, the provincial capital of the Tete Province, especially in the city centre on the right (south-west) bank and in more vulnerable informal development areas. The populations of Caia, Bandor, Chacala, Vila de Senna, Mutarara and Moatize were also predicted to be critically affected by the flooding from Cahora Bassa. Quelimane, the provincial capital of Zambezia Province on the Indian Ocean coast, sits on the northern extent of the Zambezi Delta. The rural population in the low-lying areas around the city are predicted to be affected to some degree by the dam break scenarios, rather than the centre of the city itself. However, the potential “natural” flooding from extreme weather events is predcited to be more serious than any dam-break-induced flooding at this location. In the worst-case dam-break scenario (overtopping causing failure of dam due to 10 000-year flood and no spillway gates available), the total population affected is estimated at 2.5 million. Loss of life is estimated at around 500 000 people, and economic impacts from affected buildings, livestock, crops and infrastructure could reach USD 2.22 billion.

Dam safety standards followed	Decreto 33/2017 - Regulamento de Segurança de Barragens, as amended by Decreto 44/2023 and Diploma Ministerial 81/2024
Agencies relevant to dam safety	DNGRH, ARA-Centro, LEM, Laboratório Nacional de Engenharia Civil de Portugal (LNEC)
Other infrastructure safety issues	Electrical safety, safety on and near water
Description of key public-health issues	The Songo Rural Hospital serves the local population.
Agencies relevant to public health	Ministério da Saúde de Moçambique (MISAU)

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Community Impacts and Benefits					
Monitoring is being undertaken to assess if the following commitments have been delivered and if management measures are effective:			Identification of ongoing or emerging issues for project-affected communities takes into consideration both risks and opportunities, and interrelationships among issues	✓	Issues can be brought forward in the regular monthly meetings with the Government and community representatives, including those not necessarily related to the plant operation. Feedback from the project about ongoing activities is also provided in the meetings, when all issues and their interrelationships can be addressed.
• commitments to project-affected communities	✓	No commitments were made to project-affected communities at the time of the project's planning and construction.			
• commitments to project benefits	✓	No commitments were made in relation to project benefits at the time of the project's planning and construction.			
Ongoing or emerging issues relating to the following have been identified:			Identification of ongoing or emerging issues relating to project benefits takes into account both risks and opportunities	✓	See above.
• issues that affect project-affected communities	✓	A stakeholder mapping of the dam and transmission-line areas is in place. Project-affected communities are monitored for issues arising from the project as well as additional			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		community priorities such as the requests from the local hospital for assistance with improvements, as well as help with the management of material supplies and waste disposal.			
• delivery of project benefits	✓	Although there are no commitments made, the project delivers substantial benefits that are continuously monitored, among these are e.g. clean water and electricity at symbolic costs, health campaigns, incineration of hazardous medical waste, and the expansion of the rural hospital.			
Infrastructure Safety and Public Health					
Ongoing or emerging issues relating to the following have been identified:			Identification of ongoing or emerging safety issues takes into account a broad range of scenarios and both risks and opportunities	✓	A Dam Break Analysis for the Zambezi River Cahora Bassa Dam Failure Mode Assessment was conducted between 2019 and 2020, including consideration of a failure of the upstream Kariba dam. A Potential Failure Mode Analysis (PFMA) is conducted every 5 years by independent specialists. A total of 31 PFMs were addressed in 2017 and updated to 35 in 2023. HCB was recommended to revise the hydrological studies, to include the effects of climate change on future flood volumes and return periods.
• dam and other infrastructure safety	✓	The project has a well-structured dam-safety programme in place, and any issues can be timely identified. The specialised computer software SACODA (Safety Control of Concrete Dams) is used to manage all data related to infrastructure safety.			
• public-health issues associated with the operating hydropower facility	✓	The project has its own health post and shares constant information with the local hospital for any public-health issues.			
Routine monitoring of dam and infrastructure safety is	✓	Routine monitoring is undertaken according to a programme, with a			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
being undertaken to identify risks and assess the effectiveness of management measures		total of 1 621 data-collection points. Instrumentation information is collected and input to a handheld computer which will flag for suspect readings, and a preliminary report is created and submitted to the Board of Directors. A final report is prepared by the end of each month showing the behaviour of the structures for the past 12 months. An annual report is prepared, and the facilities are inspected by ARA-Centro and LEM once per year. In addition, an external inspection report is prepared by independent specialists every 5 years. The last inspection was conducted in 2023, and the final report was delivered for HCB's analysis in March 2025. An Action Plan will be produced to address the recommendations included in that report.			
If public-health issues require management measures then monitoring is being undertaken to assess if management measures are effective	✓	The project monitors the usage and efficiency of its own health post, and obtains information from the local hospital on a regular basis.	Identification of ongoing or emerging public-health issues takes into account public health-system capacities, access to health services, and health needs, risks and opportunities for different community groups	✓	The project interacts with the local public and meets their needs to a considerable degree. Examples include free medical supplies, residue collection and incineration as well as general maintenance support. The project built the existing maternity centre and is presently investing in a

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					new surgical-centre building for the Songo Rural Hospital.
MANAGEMENT					
Community Impacts and Benefits					
Measures are in place to deliver commitments:			Processes are in place to anticipate and respond to emerging risks and opportunities relating to project-affected communities and project benefits	✓	Issues related to project-affected communities and project benefits are brought forward in the regular monthly meetings with the Government and community representatives, including those not necessarily related to the plant operation. Feedback from the project about ongoing activities is also provided in the meetings.
• to project-affected communities	✓	There are no commitments to project-affected communities.			
• to project benefits	✓	There are no commitments related with project benefits.			
Measures are in place to manage any identified issues relating to these commitments:					
• to project-affected communities	✓	There are no commitments.			
• to project benefits	✓	There are no commitments.			
If there are any formal agreements with project-affected communities, these are publicly disclosed	✓	There are no formal agreements with project-affected communities.			
Commitments to project benefits are publicly disclosed	✓	There are no commitments.			
Infrastructure Safety and Public Health					
Dam and other infrastructure safety management plans and processes have been developed in conjunction	✓	Dam safety management plans were approved by ARA-Centro, the authority responsible for dam safety at Cahora Bassa. INGD is responsible	Processes are in place to anticipate and respond to	✓	The project analyses and submits their infrastructure safety reports to ARA-Centro and LEM on a monthly basis.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
with relevant regulatory and local authorities		for disaster management and the practical emergency response in the case of e.g. an accident or a flood.	emerging infrastructure safety risks and opportunities		Any trends are immediately detected and analysed for corrective actions.
These plans and processes provide for communication of public safety measures	✓	In case of emergency situations, the project informs INGD, as determined by the authorities. An Emergency Contact List was prepared, and there are provisions to have it updated every year or, in addition, whenever relevant changes are detected.	Public safety measures are widely communicated in a timely and accessible manner	✓	Spillway operation is planned and communicated to ARA-Centro at least 3 days in advance. A siren on the dam warns people present immediately downstream of an imminent gate operation, allowing them time to evacuate.
Emergency response plans and processes include awareness and training programmes and emergency response simulations	✓	An Internal Emergency Plan is in place, covering the downstream self-saving zone (1-hour flood wave and at least 10 km long). In addition, HCB has procured the services of a consulting company to design and implement an External Emergency Plan compliant with international good practice. The scope of the work specifies maintenance plans for warning and alert systems, including simulation exercises.			
Measures are in place to manage identified public-health issues	✓	The project and the local public hospital are in continuous communication to manage any identified public-health issues.	Processes are in place to anticipate and respond to emerging public-health risks and opportunities	✗	No formal processes to anticipate and respond to emerging health risks were identified, meaning this requirement is not met.

CONFORMANCE AND COMPLIANCE					
Community Impacts and Benefits					
Processes and objectives in place to manage the following have been and are on track to be met:			There are no non-compliances relating to:		
• delivery of commitments to project-affected communities, with no major non-compliances	✓	There are no commitments to project-affected communities.	• project-affected communities	✓	No non-compliance issues related to project-affected communities were found.
• delivery of commitments to project-affected communities, with no major non-conformances	✓	There are no commitments to project-affected communities.			
• project benefits, with no major non-compliances	✓	There are no commitments related to project benefits. Nonetheless, the project often responds to requests from the local community, well beyond any negative impacts caused by the operating hydropower facility, furnishing water and sewage treatment as well as distributing electricity at symbolic prices. The project also contributes to the local health system with free supplies, residue collection and incineration, general maintenance support, and is presently investing in a new building for a surgical centre at the Songo Rural Hospital.	• project benefits	✓	No non-compliance issues related to project benefits were found.
• project benefits, with no major non-conformances	✓	There are no commitments related to project benefits.			

Commitments have been or are on track to be met relating to:			There are no non-conformances relating to:		
• project-affected communities	✓	There are no commitments to project-affected communities.	• project-affected communities	✓	No non-conformance issues related to project-affected communities were found.
• project benefits	✓	There are no commitments related to project benefits.	• project benefits	✓	No non-conformance issues related to project benefits were found.
Infrastructure Safety and Public Health					
Processes and objectives in place to manage the following have been and are on track to be met:			There are no non-compliances relating to:		
• dam and other infrastructure safety, with no major non-compliances	✓	No non-compliances have been identified.	• dam and other infrastructure safety	✓	No non-compliance issues related to dam and other infrastructure were found.
• dam and other infrastructure safety, with no major non-conformances	✓	The Internal Emergency Response Plan includes the development of internal and external simulations, although no periodicity was established and no drills have been implemented. In accordance with the Emergency Response Plan, external simulations must be developed in conjunction with Governmental authorities, but a new External Emergency Response Plan is under development, which will include drills and the coordination with the IERP.			
• public health issues, with no major non-compliances	✓	No non-compliances have been identified.	• public health	✓	No non-compliance issues related to public health were found.
• public health issues, with no major non-conformances	✓	No non-conformances have been identified.			

Commitments have been or are on track to be met relating to:			There are no non-conformances relating to:		
• dam and other infrastructure safety	✓	The project meets all requirements.	• dam and other infrastructure safety	✓	No non-conformance issues related to dam and other infrastructure were found.
• public health	✓	No commitments were made.	• public health	✓	No non-conformance issues related to public health were found.
OUTCOMES					
Community Impacts and Benefits					
Livelihoods and living standards impacted by the project have been or are on track to be improved	✓	The project has improved the living standards of the Songo community considerably. HCB provides cheap water and sewage treatment (0.02 USD/m^3 of water consumed) and electricity (0.003 USD/kWh) for the population in Songo. Several improvements have already been made to Songo Rural Hospital, and HCB is currently supporting the construction of a new surgical centre. HCB is the main driver of the economic activity in the region, offering direct jobs, and demand for goods and services for their operations. In addition, the commercial fisheries and aquaculture operations on the reservoir have improved livelihoods for the population around the reservoir considerably. A group of people settled in a location known as “Acampamento Africano” illegally occupies an unsuitable area	The measures put in place to improve livelihoods and living standards are on track to become self-sustaining in the long-term	✓	The project participates in monthly meetings with affected communities and takes actions to improve their living standards. The project meets the local community demands beyond its obligations, furnishing water and sewage treatment as well as distributing electricity at symbolic prices. The project also contributes to the local health system with free supplies, residue collection and incineration, general maintenance support and is presently investing in a new building for a surgical centre at the Songo Rural Hospital.

		close to the reservoir and in transmission corridors. They will be offered a sustainable solution to their situation by the district Government, for their own safety and livelihood prospects. The plan for this activity is being led by the Government with support from the project.			
Economic displacement has been fairly compensated, preferably through provision of comparable goods, property or services	✓	The project was developed during the 1970's and there are no surviving records of economically-displaced people, or of any commitments to compensation etc., given to such stakeholders.			
Communities directly affected by the development of the hydropower facility and any other identified beneficiary of the facility have received or are on track to receive benefits	✓	See above.	Benefits are significant and sustained for communities affected by the project	✓	See above. The project has also formally initiated a process to develop Terms of Reference (ToR) for the contracting of an evaluation of the impacts of HCB's corporate social responsibility (CSR) programmes on the life of the communities.
Infrastructure Safety and Public Health					
Safety risks have been avoided, minimised and mitigated with no significant gaps	✓	Infrastructure safety is well managed at Cahora Bassa, with no significant gaps. The gaps assessed in regards to the EERP are considered non-significant for this particular requirement, given the project's high-quality performance of day-to-day safety-risk management.	Safety risks have been avoided, minimised and mitigated with no identified gaps	✕	Qualified personnel manage the project's infrastructure and public health areas. However, the lack of periodical internal and external emergency drills/simulations indicates that this requirement is not fully met.
			Safety issues have been addressed beyond those risks	✕	This requirement is not met as identified above.

			caused by the operating facility itself		
Negative public health impacts arising from activities of the operating hydropower facility are avoided, minimised and mitigated	✓	Negative public-health impacts arising from activities of the operating hydropower facility are avoided, minimised and mitigated with no observed gaps.	Where opportunities have been identified, measures to address public-health issues beyond those impacts caused by the operating hydropower facility have been or are on track to be achieved	✓	The project meets the local community demands beyond the impact caused by the operating hydropower facility, furnishing water and sewage treatment as well as distributing electricity at symbolic prices. The project also contributes to the local health system with free supplies, residue collection and incineration, general maintenance support and is presently investing in a new building for a surgical centre at the Songo Rural Hospital.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	18 out of 21 (86%)

Summary of findings and other notable issues
Although no commitments were made at the time of the project's planning and construction, the project delivers substantial benefits to the local population, such as clean water and electricity at symbolic costs, health campaigns, incineration of hazardous medical waste, and additional considerable support to the rural hospital. As a consequence, it has improved the living standards of the Songo community considerably. A comprehensive stakeholder map is in place and project-affected communities are monitored. The project has a well-structured dam-safety programme. An External Emergency Response plan is under development, which will include scheduled internal and external drills.

Relevant evidence	
Interview	1, 8, 9, 24 and 33 – 38

Document	53 – 55, 58, 61 – 65, 82 – 129, 164, 165, 211 – 213, 215, and 218-221
Photo	2, 16, 26, 33, 48 – 55 and 66

5 Resettlement

Scope and Principle
This section addresses how the physical displacement arising from development of the hydropower facility has been addressed, in cases where resettlement occurred and commitments are well-documented against a pre-project baseline. The principle is that the dignity and human rights of those physically displaced have been respected; that these matters have been dealt with in a fair and equitable manner; that livelihoods and standards of living for resettlees and host communities have been improved; and that commitments made to resettlees and host communities have been fully fulfilled. This section does not address those that are only economically displaced, who are addressed in Section 4.

Background	
Did the project require or result in any physical displacement of people? Please state the evidence on which this determination is made.	
Yes, this section is relevant (for older projects, see note below)	N/A
No, this section is not relevant	No, in terms of the past resettlement associated with the project's construction it is not relevant, as there are no well-documented commitments made to resettlees in the 1960s and 1970s available today. Aspects relevant to the resettlement of project-affected communities are, to the extent possible, dealt with under Section 4 above.
In the case of older projects, commitments to resettlees and host communities refer to commitments made at the time of project development (if they were well-documented) as well as to more recent commitments.	

6 Biodiversity and Invasive Species

Scope and Principle
This section addresses ecosystem values, habitat and specific issues such as threatened species and fish passage in the catchment, reservoir and downstream areas, as well as potential impacts arising from pest and invasive species associated with the operating hydropower facility. The principle is that there are healthy, functional and viable aquatic and terrestrial ecosystems in the area that are sustainable over the long-term; that biodiversity impacts arising from the operating hydropower facility are managed responsibly; that ongoing or emerging biodiversity issues are identified and addressed as required; and that commitments to implement biodiversity and invasive species measures are fulfilled.

Background	
Short description of the ecological region in the project area	The project is located in the Tete province, with a hot semi-arid climate (Köppen classification BSh) with average high temperatures around 30 degrees Celsius or more all year around. The Zambezi catchment, over one million km^2, exhibits a variety of climate zones dominated by Cwa (monsoon-influenced humid subtropical climate), Aw (tropical savanna climate with dry winters) and BSh. The year alternates between two seasons, wet (Nov-Mar) and dry (Apr-Oct) that are strongly influenced by the intertropical convergence zone (ITZ). The project is located in the Zambezi valley with its characteristic mix of open and semi-closed woodland. The Cahora Bassa reservoir and its surroundings contain a complex and rich ecosystem which is still, to a large extent, well preserved. The extensive mopane and Combretum forests that surround the entire reservoir constitute an important habitat that is home to a diversity of wild fauna, including some emblematic and threat-listed species, see below. The wetlands at the upper end of the reservoir are also an important crossing point for migratory birds from North Africa and Europe. There are also some well-preserved patches of native deciduous forest, throughout the surroundings of the reservoir, mainly Mopane (Colophospermum mopane) and, at higher altitudes, Bushwillow (Combretum) forests.
Protected areas (national parks and reserves etc) and their distance from the project	There is a national park (Mágoè National Park) that covers most of the southern bank of the reservoir (around 90 km from the Cahora Bassa HPP), the rest of the reservoir area is included in a community-based management system called Tchuma-Tchatu that was established by IUCN in the 1990's. There is also an Important Bird Area (IBA), see below. There are no protected areas directly downstream of the dam, however, in a broader perspective it is important to consider the protected areas associated with the Zambezi Delta. The area of most concern for outside stakeholders is the Ramsar Site in the Zambezi Delta (the distance from the project is around 400 km downstream).

Critical habitats in the project area, including important bird areas, hotspots of endemism etc.	The reservoir area is fully part of the Important Bird Area (IBA) Cabeceira da Albufeira de Cahorra Bassa (MZ013), established in 2001, due to the presence of restricted species such as Dickinson's kestrel (*Falco dickinsoni*), Meves's glossy-starling (*Lamprotornis mevesii*) and Nyasa lovebird (*Agapornis lilianae*). This area supports a rich birdlife community, particularly at the upper end of the reservoir, where reeds, mudflats and other riverside vegetation represent an important habitat for waders, and an important crossing point for migratory birds from Europe and North Africa. Species richness remains high along the reservoir's south bank, along the entire IBA and in the Màgoé NP (mainly around the mouth of the Daque river). There is also an important area on the north bank, around the Mucangazi, Mecucoé and Vúzi rivers. The Zambezi delta, one of Mozambique's only two Ramsar sites is not in the direct vicinity of the project area, but is of key importance when considering biodiversity impacts from the project.
# threatened species in the directly affected area: terrestrial	**Flora species:** East African mahogany (*Khaya anthotheca,* VU); and African blackwood (*Dalbergia melanoxylon,* NT). **Mammal species:** Leopard (*Panthera pardus*, IUCN category VU), the Elephant (*Loxodonta africana*, IUCN category EN), the Lion (*Panthera leo*, IUCN category VU), the African Buffalo (*Syncerus caffer*, IUCN category NT) **Bird species:** Stierling's woodpecker (*Dendropics stierlingi*, NT)
# threatened species: aquatic	The reservoir has low importance in terms of rare and endemic fish-species conservation as most of the species, such as Tiger fish (*Hydrocinus vittatus*), Mozambique tilapia (*Oreochromis mossambicus*), Nchenga/Chessa (*Distochodus nchenga*), Cornish-jack (*Mormirops deliciosus*), Vundu (*Heterobranchius longifilis*) and the North African catfish (*Clarias gariepinus*) are widely present in other aquatic systems (e.g. Kariba Reservoir and Lake Malawi). **Mammal species:** • Hippo (*Hippopotamus amphibius*, IUCN category VU); • Marsh mongoose (*Herpestes palustris*); • African clawless otter (*Aonyx capensis*); and • Spotted-necked otter (*Lutra maculicollis*). **Reptile species:** • Nile crocodile (*Crocodylus niloticus*); and • Floodplain Water Snake (*Lycodonomorphus whytei obscuriventris*).

	The hatching behaviour of the crocodiles downstream of the dam (laying their eggs on the shorelines of the river) is a concern of the Instituto de Investigação Pesqueira (IIP) (Marine and Fisheries Institute), since rapid changes in downstream flows might put these at risk.
Any other species of conservation importance	• Important Mozambican endemics, such as *Afzelia quazensis* and Mozambique mimosa (*Mimosa mossambicensis*); • the precious woods of African blackwood, West African ebony (*Diospyros mespiliformis*), *Diospyros kirkii* and Brown ivory (*Berchemia discoloris*); and • Roan antelope (*Hippotragus equinus).*
Migratory pathways	The headwater area of the reservoir, where reeds, mudflats and other riverside vegetation represent an important habitat for waders, and an important crossing point for migratory birds from Europe and North Africa. The areas in and around the Mágoè National Park are important migration routes for elephants. Lately the elephants have been moving closer to the reservoir (due to the ongoing drought) and this has caused some human-animal conflicts.
Invasive species: terrestrial	9 invasive species have been identified. These are generally not currently of serious concern (even though continuous control of dispersion is identified as important in the most recent biodiversity study), given the confined nature of their distribution. They are generally associated with higher-density urban areas. Of these terrestrial invasive species, only Castor bean (Ricinus communis) has been observed close to the river, along the road. It is, therefore, a species with the potential to disperse in the surroundings of the reservoir, and watercourses that flow into it.
Invasive species: aquatic	• Kapenta (Limnothrissa miodon); • Nile tilapia (Oreochromis niloticus); and • Red-claw crayfish (Cherax quadricarinatus). The fish species are not considered problematic, for two reasons: firstly as they provide a major source of livelihood for the local community and, secondly, because the African tigerfish (*Hydrocinus vittatus*), an indigenous species to the Zambezi River System, now thrives in the reservoir, feeding on the Kapenta. The Nile tilapia causes some competition for the Mozambican tilapia (*Oreochromis mossambicus*, VU) but it is believed that these two species have now mixed. However, the Red-claw crayfish is more of a concern, and is under continuous monitoring by the IIP. Of concern (but largely under control) are also the macrophytes (e.g. Water Hyacinth (*Eichornia Crassipes*)) in the Cahora Bassa Reservoir, which increase their density in the rainy season. Attention must be paid to minimise proliferation as they can form mats which reach the dam wall area where they can damage the hydraulic circuits of the generator sets, creating considerable losses.

Key threats to biodiversity	Habitat destruction, slash-and-burn agriculture, livestock overgrazing and uncontrolled settlements. Threats to the preservation of biodiversity also include emerging economic activities (hunting, fishing, aquaculture, mining, tourism), which, although not currently a major risk, may in the future, through uncontrolled/unbalanced "growth", constitute a strong threat. However, well managed they can provide significant benefits as well.
Agencies involved in biodiversity conservation	• The Ministério da Agricultura, Ambiente e Pescas (MAAP) (The Ministry of Agriculture, Environment and Fishery), is ensuring compliance with the objectives set out in the Government's Five-Year Programme 2025-2029 and requirements associated with environmental licensing. • Serviço Provincial do Ambiente (SPA) (Provincial Environmental Services); • Various district environmental offices such as the IIP (under the MAAP) in Songo; and • National and international NGOs.
Other relevant information	N/A

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Ongoing or emerging biodiversity issues have been identified	✓	HCB has ongoing processes to assess environmental and biodiversity issues in accordance with the action programs of the ESMP (see under management below). Biodiversity assessments are not done with a specific frequency, but rather are conducted more on an ad-hoc basis in relation to whatever activities that are planned ahead (such as the ESIA for the North Bank Extension). A biodiversity assessment was conducted in 2022 whose findings were the bases of the Biodiversity Action Plan (BAP).	Identification of ongoing or emerging biodiversity issues takes into account both risks and opportunities	✗.	Biodiversity assessments are not done with a specific frequency, but there is a vision of what HCB wants to achieve with its biodiversity-related work. This is outlined in the 2022 Biodiversity assessment and the associated BAP and generally expressed in HCB's Environmental Management Policy. which guides the objectives of the assessments (when they are conducted). However, the fact that there is no, or at least very limited, evidence of ongoing monitoring and follow-up on the BAP at the time of the assessment

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
If management measures are required, then monitoring is being undertaken to assess if management measures are effective	✓	The standard environmental management procedures are monitored and follow-up in the bi-annual monitoring reports. It is not entirely clear how the BAP is being monitored and followed up at the time of the assessment (there is no specific section related to this in the bi-annual reports), however, the BAP is newly established, hence has not been covered in the recent biannual reports (from 2024). This is assessed as **a non-significant gap** against this requirements, as there is an ongoing process whereby the reporting will be included in future biannual reports.			indicates that there is no monitoring of ongoing biodiversity issues (these should have been reflected in the biannual Environmental Performance Reports), hence this requirement is not met.
MANAGEMENT					
Measures are in place to manage identified biodiversity issues	✓	An Environmental and Social Management Plan (ESMP) was developed in 2019 and its twelve action programmes identify the environmental and biodiversity issues that HCB has integrated into its Environmental Management System. This system has a systematic way of following up on environmentally-related issues that describes the incident, what caused it, mitigation actions and responsibilities.	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	HCB's biodiversity-related work is guided by its Environmental Management Policy. The biodiversity assessment and associated BAP from 2022 show that there are ambitions and processes to respond to emerging risks and opportunities. Progress and updates to this work is reported on in the bi-annual Environmental Performance Reports.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		The above-mentioned biodiversity assessment from 2022 has resulted in the BAP that will guide HCB's specific management of biodiversity-related targets.			
CONFORMANCE AND COMPLIANCE					
Processes and objectives in place to manage biodiversity issues have been and are on track to be met with:					
• no major non-compliances	✓	The company's environmental performance was assessed positively in the 2023 environmental audit. There are no major non-compliances in relation to the ESMP. HCB has no non-compliances according to the SPA.	There are no non-compliances	✓	No non-compliances have been identified.
• no major non-conformances	✓	HCB has committed itself, through its Environmental Management Policy, to "promote the sustainable use of natural resources, adopting measures to mitigate and adapt to climate change, as well as protecting biodiversity". HCB is generally acting in conformance with this commitment based on the activities of the ESMP and on track do so also with the BAP. However, there is a commitment for HCB to assure that no illegal logging and poaching takes place in a 250-metre (horizontally) buffer zone from	There are no non-conformances	✗	The near impossible commitment for HCB to assure that no illegal logging and poaching takes place in a 250-metre (horizontally) buffer zone from the reservoir is not in conformance, hence this requirement is not met.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		the reservoir. This commitment is almost impossible to enforce due to the vast areas that need to be covered around the reservoir. This is a non-conformance but not a major one since HCB is supporting activities around the reservoir to reduce poaching and illegal logging (such as the support to the Mágoè National Park).			
Biodiversity related commitments have been or are on track to be met	✓	There are no biodiversity-related commitments other than the ones mentioned under conformance above.			
OUTCOMES					
Negative biodiversity impacts arising from activities of the operating facility are avoided, minimised, mitigated, and compensated	✓	HCB is continuously following up on their environmental impacts related to all the identified programmes in the ESMP, including biodiversity (such as tree-planting activities around Songo and support to the Màgoé NP). These processes will be even further strengthened by the recently established BAP (based on the 2022 biodiversity assessment) through which HCB will follow-up on specific biodiversity-related issues.	There are healthy, functional and viable aquatic and terrestrial ecosystems in the area affected by the hydropower facility that are sustained over the long-term	✗	There are several ecosystems which are negatively affected in the area of the project that are not in a healthy state, such as the Ramsar site in the Marromeu Delta and areas around the reservoir, including the Mágoè NP, meaning this requirement is not met.
			The facility has contributed or is on track to contribute to addressing biodiversity issues beyond those impacts caused by the operating hydropower facility	✗	Even though there are indications of an ambition to contribute to biodiversity issues beyond those impacts caused by the operating facility (such as the BAP and the support to Màgoé NP), there is not

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					enough evidence at the time of the assessment to conclude that this requirement is fully met.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	2 out of 6 (33%)

Summary of findings and other notable issues
HCB is continuously following up its biodiversity-related impacts identified in the ESMP. In addition to this they have recently established a Biodiversity Action Plan (based on the 2022 biodiversity assessment) whereby they will monitor and manage additional biodiversity-related issues. Consequently, the procedures to address these issues are in place and all the minimum requirements are met. The ESMP is monitored and reported in the biannual monitoring reports and there are follow-up procedures to address identified issues related to this plan. However, at the time of the assessment it is not clear how the Biodiversity Action Plan is being monitored and followed up.

Relevant evidence	
Interview	4, 5, 7, 17, 25 – 28, 32, 39, 44, 45 and 53 – 58
Document	1, 2, 3, 21, 22, 26, 28, 71, 130 – 135, 137, 138, 159, 160, 197 – 203 and 214
Photo	1, 2, 15, 17, 19, 21, 22, 24, 26 – 30, 34, 41 – 45, 56 and 57

7 Indigenous Peoples

Scope and Principle
This section addresses the rights at risk and opportunities of Indigenous Peoples with respect to the hydropower facility, recognising that as social groups with identities distinct from dominant groups in national societies, they are often the most marginalized and vulnerable segments of the population. The principle is that the operating facility respects the dignity, human rights, aspirations, culture, lands, knowledge, practices and natural resource-based livelihoods of Indigenous Peoples in an ongoing manner throughout the project life.

Background	
Are any of the affected people Indigenous Peoples? Please state the evidence on which this determination is made.	
Yes, this section is relevant	N/A
No, this section is not relevant	No, this section is not relevant as none of the tribes living in the project-affected area meet national or international definitions of Indigenous Peoples.

8 Cultural Heritage

Scope and Principle
This section addresses cultural heritage, with specific reference to physical cultural resources, associated with the hydropower facility. The principle is that physical cultural resources are identified, their importance is understood, and measures are in place to address those identified to be of high importance. This section does not address non-physical cultural resources, which are addressed in Section 1 and/or in Sections 5 and 7 when relevant.

Background
Does the project affect any physical cultural resources? Please state the evidence on which this determination is made.

Yes, this section is relevant	N/A
No, this section is not relevant	No, this section is not relevant. The Cahora Bassa HPP does not have any ongoing impacts on physical cultural heritage.

9 Governance and Procurement

Scope and Principle
This section addresses corporate and external governance considerations for the operating hydropower facility. The principle is that the owner/operator has sound corporate business structures, policies and practices; addresses transparency, integrity and accountability issues; can manage external governance issues (e.g. institutional capacity shortfalls, political risks including transboundary issues, public sector corruption risks); and can ensure compliance.

Background	
Key information on political context and public sector risks	Mozambique's Government controls 85 % of HCB's equity and the Cahora Bassa concession, recently extended to 2047 with a 10-year renewal option, so future cash-flows depend on state decisions over licence terms and sector regulation. HCB's revenues hinge on state-owned utilities EDM (Eléctricidade de Moçambique, Mozambique's national utility, Electricity of Mozambique), ESKOM (South Africa's state-owned electricity utility) and ZESA (Zimbabwe Electricity Supply Authority); the Board instituted a new debtor-engagement model after chronic arrears, but collection risk from politically influenced customers remains high. Dividend policy is likewise exposed to public fiscal needs: in 2023 HCB remitted 4.64 billion MZN (half of all State-Owned Enterprise dividends) underlining potential pressure for higher payouts that could constrain investment capacity.
Key information on corporate ownership and governance	HCB is owned by the Mozambican State (85%), by the Portuguese company REN – Redes Energéticas Nacionais, S.A. (7,5%) by Mozambican citizens, companies and institutions (4%) and HCB corporate entity (3,5%). The total number of current shareholders is close to 17 000, following the national public offering of shares. The Company's Governing Bodies include the General Assembly, the Board of Directors, and the Supervisory Board. According to the bylaws, the management and representation of the company are entrusted to a Board of Directors, which may appoint an Executive Committee and delegate to it the powers necessary to ensure the day-to-day management of the company.
Details of the concession, if applicable	Hidroeléctrica de Cahora Bassa (HCB) S.A. (Cahora Bassa Hydropower) is the concessionary company of the Cahora Bassa hydropower project, established on June 23, 1975, through a consortium between the Portuguese State and the Mozambican State, with shareholdings of 82% and 18%, respectively, at the time. In November 2007, a major milestone occurred in the company's history: the transfer of majority shareholding, with the Mozambican State acquiring 85% and

	the Portuguese State retaining 15%. As part of this process, the terms of the Concession Agreement for the project – in force since June 23, 1975 – were revised. The concession period was extended by 25 years, with the possibility of a further 10-year renewal, subject to the cumulative fulfilment of specific conditions. With the revision of the Concession Agreement terms, the company became subject to the standard tax regime in force in Mozambique, including the obligation to pay all applicable taxes, in addition to a monthly concession fee equivalent to 10% of its gross revenue. In 2012, the Mozambican State increased its shareholding in HCB to 92.5% by acquiring an additional 7.5% from the Portuguese State. Simultaneously, the Portuguese State sold its remaining 7.5% stake to Redes Energéticas Nacionais, S.A. (REN). As part of HCB's preparations for the Public Offering of 7.5% of its shares, the HCB concession contract was extended in December 2018 for an additional 15 years, starting in January 2033. This extension may be further renewed for up to 10 years, subject to the concessionaire's request and the cumulative fulfilment of specific conditions.
Key licenses or permits	• Environmental License for Operation • Concession Contract
Other relevant information	N/A

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Ongoing or emerging political and public-sector governance issues have been identified	✓	HCB has in place a structured mechanism for identifying political and public-sector governance issues and risks, with institutional and political risk-tracking identified as a requirement in HCB Strategic Plan. Risks linked to public institutions, such as sovereign debt instability, off-taker default (especially Zimbabwe's ZESA and Mozambique's EDM), and policy shifts regarding energy tariffs, are explicitly acknowledged. Strategic implications of energy reforms, concession renegotiation and regional	There are no significant opportunities for improvement in the assessment of political and public sector governance issues and corporate governance requirements and issues	✗	HCB performs well in identifying and monitoring political and corporate governance risks, but key improvements are still needed. Risk updates across departments are not fully aligned with central governance cycles, and integration into a unified system for corporate-risk identification is incomplete. These gaps are being addressed by the newly established Gabinete de Auditoria, Risco e Compliance (GAR) Office, which is developing a central risk register and management

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		integration (particularly through the Southern African Power Pool) are also identified and monitored proactively.			platform, though it is not yet operational. The Risk and Audit Committee, approved in 2022, remains inactive. Oversight is currently provided by the GAR Office, but the absence of an independent committee limits oversight independence and institutional consolidation. As a result, this requirement is not met.
Corporate governance requirements and issues have been identified	✓	Key corporate governance issues and risks, including Board functioning, delegation of authority, oversight responsibilities and accountability, have been identified and are clearly defined across governance instruments, including the Organisational Manual and shareholder-approved structures. Governance-related risks were mapped in the HCB Risk Register, currently under update, which follows a structured format including risk category, causes, consequences, likelihood and severity, effectiveness of control measures and proposed corrective actions, supported by documented procedures and audit findings.			
Monitoring is being undertaken to assess if corporate governance measures are effective	✓	Monitoring of governance effectiveness is embedded in HCB's internal control system, including annual external audits, by Deloitte; internal audits planned under the Annual Internal Audit Plan (PAAI); periodic reviews by the Supervisory Board (*Conselho Fiscal*). Internal and			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		external audits feed into a corporate register used to track corrective measures. Internal audits follow the risk-based methodology defined in the Internal Audit Manual, including assessments and internal ratings of control effectiveness, governance accountability, and adherence to internal policies.			
MANAGEMENT					
Processes are in place to manage the following:					
• corporate, political and public sector risks	✓	HCB has a good risk management framework in place, reinforced and aligned with ISO 31000:2018 since the 2020 internal reform. The Gabinete de Auditoria, Risco e Compliance (GAR), the Audit, Risk and Compliance Office, established in 2023 and fully operational since 2024, oversees standardised methodologies for risk assessment, prioritisation and mitigation, supported by the internal Risk Management Policy, Manual and Procedure. Implementation of controls and actions is reviewed biannually by departments under GAR's coordination. A key strength is the annual identification of the top five corporate risks, based on	Processes are in place to anticipate and respond to emerging risks and opportunities	✗	HCB has made clear progress in managing governance risks, which are now integrated into strategic and operational planning. Key risks such as procurement integrity, board oversight, debt exposure to state-owned clients, and concession compliance are addressed. Institutional risks are also considered in expansion plans, including HCB's involvement in the Mphanda Nkuwa project and other renewable energy development, such as a solar-PV park which is being studied. However, remediation trackers show pending actions from 2024, and inconsistencies in document control and availability limit HCB's ability to anticipate and respond to emerging

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		potential impact on operational and strategic goals, which effectively informs internal audits, resource allocation, mitigation planning, and the Annual Activity Plan and Budget.			risks and opportunities. Record-keeping is not in line with best practices as documents frequently lack dates, signatories, responsible implementing position or department. Compliance processes remain manual and fragmented, with no centralised system in place despite commitments in strategic planning. As a result, this requirement is not fully met.
• compliance	✓	Legal and regulatory compliance is overseen by the Legal Office. A Legal Compliance Assessment Map is shared across departments, covering fiscal, environmental, labour, and sector-specific obligations. Compliance is verified annually through the PAAI, which includes audits on areas such as procurement, contract management, and environmental licensing. In addition, regulatory and licensing compliance in energy generation is monitored through engagement with national authorities and through the annual reporting cycle.			
• social and environmental responsibility	✓	HCB has a well-structured and increasingly mature approach to managing social and environmental responsibilities. The recent ESG Policy reinforces this framework through updated, organisation-wide commitments and GRI compatible performance indicators introduced in 2025. These support internal			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		monitoring and the long-term integration of ESG principles, complementing existing tools such as the ESMS and IMS, and reflect alignment with international expectations for sustainability governance.			
• procurement of goods and services	✓	Procurement at HCB is well designed and centrally managed, following the Procurement Manual and General Competencies Framework. Processes are standardised and supported by an advanced platform that manages all procurement phases and is currently being expanded to cover the full contract lifecycle. Supplier performance is monitored through a standard template applied to ongoing contracts, assessing compliance with tender specifications, including financial, technical, regulatory and ESG-related aspects.	Contractors are required to meet or have consistent policies as the developer	✓	HCB requires all contractors and subcontractors to formally commit to standards aligned with its governance framework. This is ensured through mandatory adherence to the Code of Ethics and Conduct for Suppliers, which is contractually binding and signed via a Term of Responsibility before contract execution, covering ethics, legal compliance, human rights, health and safety, environmental protection, confidentiality, fair competition, and anti-harassment. In addition, bidders are required to complete and sign a Conflict-of-Interest Declaration, stating the absence of real or potential conflict and committing to notify HCB of any changes throughout the procedure.
• grievance mechanisms	✓	HCB has informal channels for internal and external stakeholders to raise concerns, mainly through letters, emails and direct engagement during stakeholder meetings. It also provides dedicated contact points for procurement-related queries, published in tender documents.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		In addition, HCB has an operational whistleblowing channel in place, supported by internal communication and allowing concerns to be raised through a dedicated telephone line and email address. The mechanism includes explicit commitments to confidentiality and protection against retaliation and is managed by the Audit, Risk and Compliance Office (GAR), with oversight from the Board of Directors. HCB is developing a grievance mechanism to be independently managed from 2026, including an anonymous whistleblower channel, supported by a grievance communication plan. This work, while not yet finalised, is on track to be fully implemented.			
• ethical business practices	✓	HCB has a robust framework for ethical conduct, supported by clear policies and procedures. Company-wide and supplier-specific Code of Ethics and Conduct, together with Anti-Fraud and Conflict of Interest policies, define standards for integrity and impartiality. Conflict of interest declarations are required for staff in			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		sensitive roles, such as procurement, and regular ethics training is provided.			
• transparency	✓	HCB maintains internal and external transparency requirements. Internally, this includes department-level briefings and formal validation of the Activity Plan and Budget. Externally, HCB publishes key documents on its corporate website, such as the Annual Report, audited Financial Statements, and environmental and social performance updates, also shared with regulators and stakeholders. Public procurement documents are disclosed, ensuring procedural transparency. The recently adopted ESG Policy further reinforces this commitment by setting clear disclosure expectations for ESG performance.	Procurement processes include anti-corruption measures as well as sustainability and anti-corruption criteria specified in pre-qualification screening	✓	HCB has effective anti-corruption safeguards embedded in its procurement procedures, including mandatory conflict of interest declarations, supplier codes of conduct, and anti-collusion training. In addition, procurement processes have recently been amended to include anti-corruption measures and specify sustainability and anti-corruption criteria at the supplier pre-qualification stage. The Procurement Manual explicitly incorporates integrity, compliance, and eligibility requirements for supplier screening, and the Anti-Corruption Policy establishes preventive controls applicable prior to contract award. On this basis, this requirement is on track to be met.
Policies and processes are communicated internally and externally as appropriate	✓	HCB ensures internal and external communication of key policies. Internally, updates are shared through circulars, notices and briefings, and integrated into training. Externally, policies are disclosed via the website and procurement documents, including the Supplier Code of Ethics and the ESG Policy,			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		ensuring stakeholder awareness of HCB's expectations and commitments on sustainability, compliance, and integrity.			
In case of capacity shortfalls, appropriate external expertise is contracted for additional support	✓	HCB engages external expertise when specialised technical or strategic capacity is needed. Recent examples include use of external support in aligning the risk management system with ISO 31000:2018, designing mitigation responses (e.g. the 2025 payment plan for EDM), and expert input foreseen for the definition of new contractual frameworks with main energy clients after 2030. For procurement, legal and audit experts are consulted to reinforce internal controls and ensure adherence to regulatory expectations.			
CONFORMANCE AND COMPLIANCE					
The project has no major non-compliances	✓	No major legal or regulatory non-compliances have been identified. Independent audits (e.g. Deloitte) and internal assessments confirm HCB's compliance with statutory, financial, environmental, and operational obligations. Annual audits include reviews of legal, corporate, and ethical compliance.	The project has no non-compliances	✗	While HCB has adopted a formal and comprehensive Compliance Policy and related procedures that assign responsibilities, define compliance obligations, and establish internal controls and reporting lines, it has not provided a centralised, verifiable corporate compliance register covering all applicable legal and regulatory requirements, including

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		Minor issues such as delays in implementing corrective actions or documentation gaps have been noted in audit reports and the Annual Report but do not amount to material non-compliances or legal breaches. Compliance with licensing and concession obligations is regularly monitored and reported to national authorities, with no regulatory sanctions issued.			compliance status, responsible owners, and supporting evidence. No evidence was provided to demonstrate consolidated tracking, verification, escalation mechanisms, or organisation-wide assurance sufficient to support a robust advanced-level conclusion. As a result, there is a risk that non-compliances may not be consistently detected or demonstrably ruled out. Therefore, this requirement is not met.
OUTCOMES					
There are no significant unresolved corporate and external governance issues identified	✓	There are no unresolved governance issues currently affecting HCB's strategic or operational performance. Remaining areas for improvement relate to systematisation and institutional strengthening, which are being addressed through ongoing reforms. Internal audit records and identified 2025 risks—including exposure to client debt and public sector relations—are documented and incorporated into mitigation and recovery strategies. Outstanding governance concerns, such as debts from EDM and SEZA, have been addressed through formal	There are no unresolved corporate and external governance issues identified	✗	HCB has advanced governance reforms, including the creation of the GAR Office and adoption of an ESG Policy. However, key issues remain unresolved, notably the implementation of planned governance measures. These include the activation of the Risk and Audit Committee and a centralised compliance system initially foreseen in the 2018-2022 Strategic Plan. Some historical audit findings, such as cost appropriation adjustments, although considered non-material, also remain open.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		agreements, structured repayment plans, and external legal and financial support. Implementation is underway.			As a result of the above, this requirement is not met.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	2 out of 6 (33%).

Summary of findings and other notable issues
HCB has established strong governance foundations and meets minimum requirements. The company has implemented a coherent set of governance policies, including a corporate-wide Code of Ethics, Anti-Fraud and Conflict of Interest Policies, and a binding Supplier Code of Ethics and Conduct. Procurement processes incorporate anti-corruption measures and post-award ESG compliance clauses, and key governance risks are integrated into strategic planning. Among advanced requirements, HCB performs well in aligning contractor obligations with its governance standards. All suppliers are contractually bound by ethical and legal expectations, and the company reserves the right to monitor and enforce these commitments. Recent updates to the procurement framework have strengthened the integration of sustainability and anti-corruption criteria at the supplier pre-qualification stage, indicating positive progress in this area. At the Conformance and Compliance level, while a formal compliance policy framework has been adopted, centralised organisation-wide compliance assurance is not yet fully established. Opportunities for improvement persist in several areas: • Full integration of risk updates across departments into a unified corporate risk management system. • Operationalisation of the Risk and Audit Committee, which remains inactive despite formal approval in 2022. • Further operationalisation of the compliance management framework through the establishment of a centralised and verifiable corporate compliance register, covering legal and regulatory obligations, compliance status, responsible owners, and supporting evidence. • Continued consolidation and consistent application of recently updated procurement requirements to strengthen organisation-wide assurance. • Completion of the ongoing procurement process for an independently managed grievance mechanism, including fully anonymous reporting channels, as envisaged by HCB for implementation from 2026, to further strengthen trust and independence. • Delays in resolving legacy audit issues and in implementing agreed biodiversity and governance measures also suggest a need for improved tracking and execution capacity.

Relevant evidence	
Interview	12 – 17, 21, 41, 50 and 59
Document	139 – 181, 204, 223 – 229
Photo	5, 6, 11 – 13, 21 – 23, 35 – 45, 48, 49, 56, 57, 61, 62, 64, 66 and 67

10 Communications and Consultation

Scope and Principle
This section addresses ongoing engagement with project stakeholders, both within the company as well as between the company and external stakeholders (e.g. affected communities, governments, key institutions, partners, contractors, catchment residents, etc). The principle is that stakeholders are identified and engaged in the issues of interest to them, and communication and consultation processes maintain good stakeholder relations throughout the project life.

Background	
Directly affected community-level stakeholders	Community members in the town of Songo; communities in the District of Cahora Bassa (to the south of the plant); communities in the District of Maravia on the north bank; communities in the District of Magoé on the reservoir shore; communities and businesses (fishing, aquaculture and tourism) using the reservoir or living around the reservoir shoreline; downstream communities; and HCB employees in Songo, Tete, Chimoio and Maputo.
Directly affected institutional-level stakeholders	Shareholders, the Mozambique state and Portuguese Redes Energéticas Nacionais, S.A. (REN), represented by the General Assembly of the company; off-takers, specifically EDM (Electricidade de Moçambique), Eskom South Africa, and ZESA (Zimbabwe Electricity Supply Authority); Government ministries and departments, MIREME (Ministério dos Recursos Minerais e Energia) and DIPREME of Tete Province (Direcção Provincial dos Recursos Minerais e Energia), SPA (Serviços Provinciais de Ambiente) and environmental and other regulators including Administração Regional das Águas – ARA Centro; NGOs, e.g. International Union for Conservation of Nature (IUCN), the World Wide Fund for Nature (WWF), Centro Terra Viva (CTV) and Justiça Ambiental! (JA!); and media.
Other relevant information	HCB communications are managed by a unit, Gabinete de Comunicação e Imagem (GCI) reporting directly the Board of Directors, consisting of teams addressing public relations, communications and image, and community relations/corporate social responsibility (CSR) activities.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Ongoing or emerging issues relating to hydropower facility communications and consultation have been identified	✓	The project participates in the monthly coordination meetings with the communities, held by the Government, where any issues are formally communicated. Any formal communication with the communities must be made through the Government.	The stakeholder mapping takes broad considerations into account	✗	The stakeholder mapping has a very inclusive definition of affected communities, including people located along all the transmission lines, allowing the project to address broader issues in both reactive and pro-active manners. However, the fact that the stakeholder map lacks detail in some areas (e.g. missing contact information), this requirement cannot be considered to be fully met.
Requirements and approaches are determined through a periodically updated assessment process involving stakeholder mapping	✓	A first comprehensive stakeholder mapping exercise was implemented between 2018 and 2020, involving communities in the dam and transmission line areas. This stakeholder map has been updated in 2025. This stakeholder map is very inclusive, but lacking in details in some places, like missing contact numbers etc. Requests from the communities are generally expressed during the monthly coordination meetings. The project maintenance personnel also bring demands from the communities to the project, when performing their activities along the transmission lines. HCB have recently adopted a policy to have the stakeholder map updated			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		annually or sooner in the event of relevant changes in the structure of local government or civil society.			
Effectiveness is monitored	✓	During the monthly coordination meetings, the project provides follow-up on the pending issues.			
MANAGEMENT					
Communications and consultation plans and processes are in place to manage communications and engagement with stakeholders	✓	Plans and processes are in place. The project utilises the website, an electronic magazine, its own FM community radio, a telephone hotline and annual festivities to communicate with the communities. The project is also open to receiving and considering letters from the stakeholders – in this case the demands are also brought to discussion during the monthly coordination meetings.	Communication and consultation plans and processes show a high level of sensitivity to communication and consultation needs and approaches for various stakeholder groups and topics	✗	The HCB public web site is only in the Portuguese language, in spite of significant stakeholders not being Portuguese-speaking, and the web site is difficult to navigate. Therefore, this requirement is not met.
They include an appropriate grievance mechanism	✓	HCB has informal channels for internal and external stakeholders to raise concerns, mainly through letters, emails and direct engagement during stakeholder meetings. It also provides dedicated contact points for procurement-related queries, published in tender documents. HCB has developed a grievance mechanism to be independently	Processes are in place to anticipate and respond to emerging risks and opportunities	✓	The project's GCI, responding to the Board of Directors, is responsible for identifying risks and opportunities and propose necessary actions.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✔) or no (✘)		Findings and Observations	Requirement is met: yes (✔) or no (✘)		Findings and Observations
		managed, including an anonymous whistleblower channel, supported by a grievance communication plan. A Grievance Management Policy is in place since December 2025, and HCB's website clearly indicates how to access the formal communication channels.			
They outline communication and consultation needs and approaches for various stakeholder groups and topics	✓	All stakeholder groups and topics are covered, and HCB's recruitment process ensures that the team has local knowledge and language skills suited to the various dialects in the project area.			
STAKEHOLDER ENGAGEMENT					
The project operation stage involves engagement with directly-affected stakeholders	✓	Any requests from the communities are expressed during the monthly coordination meetings held by the Government. In addition, the project engages with stakeholders through their maintenance personnel, the website, an electronic magazine, its own FM community radio, a telephone hotline and two regular annual festivities.	Engagement is inclusive and participatory	✓	Participation in the project's events is open to anyone interested. The community radio programmes reach all populations within an estimated 50-km range.

Engagement is:					
• appropriately timed and scoped	✓	The "standard" engagement is done through the monthly coordination meetings led by the district Government.	Negotiations are undertaken in good faith	✓	The project has responded to several requests coming from the communities, beyond the project's formal responsibilities, showing a willingness to discuss issues in good faith.
• often two-way	✓	See above.			
• undertaken in good faith	✓	The project has responded to several requests, showing a willingness to engage with communities in good faith and no evidence was found of failure to do so.			
The business interacts with a range of directly-affected stakeholders to understand issues of interest to them	✓	Yes, through the various communication channels, especially the monthly coordination meetings.	The assessment and management process for downstream-flow regimes has involved appropriately timed and two-way engagement with directly-affected stakeholders	✓	Downstream flow regimes follow the reservoir operation manual rules, created in the past during the construction of the dam. Some directly-affected stakeholders participate in the monthly coordination meetings with HCB, organised by the Government. Other directly-affected stakeholders (such as ARA-Centro, downstream communities etc., are involved via ARA and other Government agencies.
Ongoing processes are in place for stakeholders to raise issues and get feedback	✓	See above.	Ongoing processes are in place for stakeholders to raise issues with downstream flow regimes and get feedback	✓	See above.

Ongoing processes are in place for:			Feedback on how issues raised have been taken into consideration has been thorough and timely	✓	See above.
• environmental and social issues	✓	Processes cover environmental and social issues.			
• project-affected communities	✓	Processes cover project-affected communities.	Project-affected communities have been involved in decision-making around relevant issues and options	✓	Directly-affected stakeholders participate in the monthly coordination meetings with HCB, organised by the Government.
• resettlees and host communities	✓	There are no resettlees.	Resettlees and host communities have been involved in decision-making around relevant issues and options	✓	There are no resettlees.
• Indigenous Peoples	✓	There are no indigenous peoples.			
• employees and contractors on human resources and labour management issues	✓	In addition to regular communication processes described elsewhere, HCB is in the process of implementing a grievance mechanism, independently managed from mid-2025, including anonymous whistleblower channels, supported by a grievance communication plan.			
• management of climate risks	✓	All topics are open to communication, including the management of climate risks.			
Channels of communication with Indigenous Peoples are maintained	✓	There are no indigenous peoples.	Directly affected Indigenous Peoples have been involved in decision-making around relevant issues and options	✓	There are no indigenous peoples.
These channels are:					
• appropriately timed	✓	There are no indigenous peoples			
• culturally appropriate	✓	There are no indigenous peoples			

• two-way	✓	There are no indigenous peoples			
A mutually-agreed disputes procedure is in place with Indigenous Peoples	✓	There are no indigenous peoples.			
Public disclosure:					
• the business makes significant project reports publicly available	✓	Many documents are publicly available through the project's website: the Environmental and Social Impact Assessment, the Environmental and Social Management Manual, the Environmental Management Plan, the Company's Bylaws, the Environmental Policy Plan, and the Annual Reports. The publication of the latest 2024 Annual Report on the project's website was still pending at the time of this Assessment, which constitutes **a non-significant gap** against this requirement as one could expect the previous year's Annual Report to be available in late May of the following year.	The business publicly reports on project performance in sustainability areas of high interest to its stakeholders	✓	Although there is no specific report on sustainability in place, the Annual Reports contain information on environmental and sustainability topics of high interest to stakeholders.
• the business publicly reports on project performance, in some sustainability areas	✓	Although there is no specific report on sustainability in place, the Annual Reports contain information on environmental and sustainability topics.			
• power density calculations, estimated GHG emissions,	✓	G-Res Tool report is available on HCB's website under the "News" tab	The assessment of project resilience is publicly disclosed	✓	The high-quality Climate-Resilience Assessment (CRA) implemented for

and/or the results of a site-specific assessment are publicly disclosed		and as such it may become unnoticed over time. One would expect a greater visibility for such an important document, for instance to be posted permanently under the "Sustainability" tab, so this misplacement is to be considered a non-significant gap against this requirement.			the project is available on HCB's website under the "News" tab and as such it may become unnoticed over time. One would expect a greater visibility for such an important document, for instance to be posted permanently under the "Sustainability" tab, so this misplacement is to be considered a non-significant gap against this requirement.
CONFORMANCE AND COMPLIANCE					
Processes and objectives relating to communications and consultation have been and are on track to be met with:			There are no non-compliances	✓	No non-compliances have been identified.
• no major non-compliances	✓	No non-compliances have been identified.			
• no major non-conformances	✓	No non-conformances have been identified.	There are no non-conformances	✓	No non-conformances have been identified.
Communications-related commitments have been or are on track to be met	✓	There are no commitments specifically to communications.			

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	13 out of 15 (87%)

Summary of findings and other notable issues
The project engages with the communities on a regular basis and with appropriate methods and the staff has local knowledge, including of local languages and dialects. A stakeholder mapping exercise was originally implemented between 2018 and 2020 and updated in 2025. Communications and consultation plans and processes are either in place or in process of implementation, including a grievance redress mechanism guaranteeing anonymity, managed by an independent third party. Several significant project reports are publicly available, including the G-Res Tool report and the highly-quality Climate Resilience Assessment.

Relevant evidence	
Interview	9
Document	53, 61 – 65, 139, 140, 166 – 169, 191, 193, 195, 209, 210, 216 – 217, 222 and 223.
Photo	5, 6, 61, 62 and 64

11 Hydrological Resource

Scope and Principle
This section addresses hydrological resource availability and reliability, reservoir management, and downstream flow regimes in relation to the operating hydropower facility. The principle is that power generation planning and operations take into account hydrological resource availability and reliability in the short- and long-term, that the reservoir is well managed taking into account power generation operations, environmental and social management requirements, and multi-purpose uses where relevant, and that issues with respect to downstream flow regimes are identified and addressed.

Background	
Hydrology and flows	
Average flow at dam (m^3/s)	1 943
Minimum monthly average flow (m^3/s)	1 095
Maximum monthly average flow (m^3/s)	3 705

Lowest observed flow (m^3/s)	382 (monthly average flow)
Highest observed flow (m^3/s)	13 808 (monthly average flow)
Design flow (m^3/s)	450 per turbine = 2 250 at the design head of 103.5 m
Affected river reaches (start/end and how affected)	646 km from the Cahora Bassa Dam to the outflow into the Mozambique Channel plus the 270 km upstream of the dam covered by the reservoir = 916 km.
Proposed downstream flow regimes for environmental or social objectives	None set.
Reservoir	
Reservoir length (km)	270 km
Minimum operating level MOL (m.a.s.l.)	295
Normal operating level (m.a.s.l.)	320
Full supply level FSL (m.a.s.l.)	326
Reservoir area at FSL (km^2)	2 665
Reservoir area at MOL (km^2)	838
Volume at FSL (million m^3)	Approximately 65 000
Volume at MOL (million m^3)	14 715
Average retention time in days	387
Number of days for filling	730
Other relevant information	N/A

Minimum Requirements		Advanced Requirements	
Requirement is met: yes (✓) or no (✗)	Findings and Observations	Requirement is met: yes (✓) or no (✗)	Findings and Observations
ASSESSMENT			

<table>
<tr><td colspan="3">Minimum Requirements</td><td colspan="3">Advanced Requirements</td></tr>
<tr><td colspan="2">Requirement is met: yes (✓) or no (✗)</td><td>Findings and Observations</td><td colspan="2">Requirement is met: yes (✓) or no (✗)</td><td>Findings and Observations</td></tr>
<tr><td colspan="3">Ongoing or emerging issues in the following areas have been identified:</td><td rowspan="3">Issues that may impact on water availability or reliability have been comprehensively identified</td><td rowspan="3">✓</td><td rowspan="3">The availability of long-term flow records combined with the climate-resilience assessment (see Section 12 for details) and the ongoing updating of the hydrological studies for the Cahora Bassa North Bank extension and the Mphanda Nkuwa HPP as well as the project's hydrological model all combine to meet this requirement.</td></tr>
<tr><td>• hydrological resource availability and reliability</td><td>✓</td><td>Irregularities in inflows due to periodic droughts, most often related to El Niño phenomena.
The potential for additional dams (with storage and associated evaporation losses) in the upstream catchment are also identified as an issue to monitor.</td></tr>
<tr><td>• reservoir management</td><td>✓</td><td>The main issues relate to the balancing of the project's generation with the available inflows, as well as the potential issues related to non-project activities on and around the reservoir – fishing, aquaculture, farming etc., see also Section 3 above.</td></tr>
<tr><td>• downstream flow regimes</td><td>✓</td><td>The three main issues are flood control, short- to medium-term water-level fluctuations affecting the riverbank agriculture and the maintenance of ecologically favourable flow variations to the Maromeu Ramsar site in the Zambezi Delta.</td><td>Scenarios, uncertainties and risks for water availability and reliability are routinely and extensively evaluated over the short- and long-term</td><td>✓</td><td>See above.</td></tr>
<tr><td colspan="3">If management measures are required then monitoring is being undertaken to assess if management measures are effective:</td><td colspan="3"></td></tr>
</table>

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• reservoir management	✓	The hydrological department within HCB monitor the reservoir inflows and levels closely. In addition the various external activities on the reservoir of interest to the project are also carefully monitored, for details see Section 3 above.			
• downstream flow regimes	✓	Downstream-flow regimes to not necessitate monitoring as there are no necessary specific measures. However, monitoring is carried out through the generation records and presented in the project's hydrological bulletin.			
Monitoring is being undertaken of hydrological resource availability and reliability	✓	See above. Data relevant for inflow monitoring is also shared via the Joint Operations Technical Committee (JOTC) for the upstream dams. This is of importance to the long-term forecasting of the resource availability, especially as the upstream reservoir at Kariba has the capacity to store very large amounts of water for several years.	Identification of ongoing or emerging reservoir management issues takes into account both risks and opportunities	✓	In regard to water availability, the risks and opportunities relate directly to the project's ability to generate energy. These issues are well understood. See also Section 3 above for reservoir-management issues relating to water quality etc.
Inputs to this monitoring include:			Issues identification relating to downstream flow regimes takes into account both risks and opportunities	✗	Risks are well understood and monitored, but opportunities are not being actively sought out as the focus is so strongly on energy

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					generation. This means that this requirement is not met.
• field measurements	✓	Field measurements are collected from a number of different sources. The JOTC provides field observations from the upstream dams (notably Kariba, Itezhi-Tezhi and Kafue Gorge), ARA-Centro operates some gauging stations in the catchment, the most important one being that on the undammed Luangwa River, just upstream of the confluence with the Zambezi. There are also 5 meteorological stations located around the reservoir.	An assessment has been undertaken that includes identification of the flow ranges and variability to achieve different environmental, social and economic objectives based on field studies as well as relevant scientific and other information	✓	Many studies addressing these aspects have been conducted over the last two decades, mainly by external parties. The complexity involved in balancing, and near impossibility of satisfying, all three main objectives have, however, led to no significant changes in the adopted management approach to downstream flows.
• appropriate statistical indicators	✓	The short- and long-term analysis incorporated into the Thetys hydrological model utilises appropriate statistical indicators.			
• issues which may impact on water availability or reliability	✓	Apart from ongoing monitoring of upstream dam data and inflows, the project also utilises long-term (seasonal) rainfall forecast from the national meteorological institute, for the Zambezi catchment. This forecasting, mainly focussing on El Niño/La Niña phenomena, is also duplicated by the Zambezi River			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		Authority, the operators of the upstream Kariba Dam. They use meteorological institutes in their countries of Zambia and Zimbabwe, providing a useful redundancy in the forecasts. The Climate-Resilience Assessment (see Section 12 below) addresses the longer time horizon.			
• a hydrological model	✓	Thetys is a model which provides short-term forecast for 15-day period and long-term forecasts for a up to a year, in monthly steps.			
MANAGEMENT					
Measures are in place to guide generation operations that are based on:					
• analysis of the hydrological resource availability	✓	This is managed with the hydrological model, field monitoring and the long-term precipitation forecasts (see above).	Planning of generation operations has a long-term perspective	✓	The main aspect of generation operations and reservoir management is the availability of water for energy generations. HCB have recently responded to the second severe drought period in the last decade by reconsidering its reservoir rule curve. The curve used to only address dam-safety-related aspects with a rule curve for drawdown before the wet season. The lack of attention to critical aspects of prolonged droughts has now been addressed by adding management restrictions on

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					generation during long periods of lower than long-term average inflows.
• a range of technical considerations	✓	Planned and unplanned maintenance, as well as the variable turbine efficiencies and specific generation at different heads are all considered in generation planning.	Planning of generation operations fully optimises and maximises efficiency of water use	✓	See above.
• an understanding of power system opportunities and constraints	✓	HCB understand the market opportunities and constraints well. An indication of this is the ongoing refurbishment and extension of substation at Matambo, in order to make the future addition of the North Bank power plant (an additional 3 x 415 MW units for a total of 1 245 MW of installed capacity), possible. The opportunity to deliver more peaking power and to co-generate with the potential future Mphanda Nkuwa HPP, located downstream of Cahora Bassa, are two of the reasons for considering the North Bank extension.	Planning of generation operations has the flexibility to adapt to anticipate and adapt to future changes	✓	See above. Adaptability is limited by the practical natural constraints of available inflows. However, HCB are pursuing the development of its North Bank extension (see left), which would improve the project's flexibility.
Measures are in place to manage identified reservoir management issues	✓	See above under Assessment.	Processes are in place to anticipate and respond to emerging risks and opportunities for reservoir management	✓	See above.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Measures are in place to address identified downstream flow issues	✓	See above under Assessment.	Processes are in place to anticipate and respond to emerging risks and opportunities for downstream flow regimes	✓	According to ARA-Centro, HCB announce any changes in releases from the project in a timely manner, such that the authorities can warn people of any impending risks (see also Section 4 above on emergency response and management).
Where formal commitments have been made to downstream flow regimes, these are publicly disclosed	✓	There are no formal commitments to downstream flows.	Commitments are made in relation to downstream flow regimes that include the flow objectives; the magnitude, range and variability of the flow regimes; the locations at which flows will be verified; and ongoing monitoring	✗	The downstream-flow regime does not meet this requirement.
CONFORMANCE AND COMPLIANCE					
Processes and objectives in place to manage each of the following have been and are on track to be met:			There are no non-compliances relating to:		
• reservoir management, with no major non-compliances	✓	HCB do not have any regulatory requirements in regard to reservoir management, meaning no major non-compliances can be identified.	• reservoir management	✓	No non-compliances have been identified.
• reservoir management, with no major non-conformances	✓	No major ongoing non-conformances have been identified, but see also Management above.			
• downstream flow regimes, with no major non-compliances	✓	HCB do not have any regulatory requirements in regard to downstream-flow regime or	• downstream flow regimes	✓	No non-compliances have been identified.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		releases, meaning no major non-compliances can be identified.			
• downstream flow regimes, with no major non-conformances	✓	There are no specific downstream-flow commitments, hence no major non-conformances can be identified.			
Commitments relating to the following have been or are on track to be met:			There are no non-conformances relating to:		
• reservoir management	✓	See above.	• reservoir management	✓	No ongoing non-conformances have been identified, see above.
• downstream flow regimes	✓	See above.	• downstream flow regimes	✓	No non-conformances have been identified.
OUTCOMES					
Downstream flow regimes take into account environmental, social and economic objectives	✓	Any deviation from the present demand-driven operating regime with no or very few short-term variations would mean a greater variability on the downstream-flow releases, something that is desirable for certain aspects and undesirable for others. The economic argument against such an option is strong in the way of a reduced flexibility and potentially also lost generation. The social argument against a change is even stronger than the economic one – all stakeholders except those primarily concerned	Downstream flow regimes and commitments are an optimal fit amongst environmental, social and economic objectives within practical constraints of the present circumstances	✓	The present downstream-flow regime is considered an optimal fit within the considerable practical constraints present, as it is the one assessed as having the fewest losers among all stakeholders with their widely contrasting priorities.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		with the environmental component of a changed downstream-flow regime support a flow with as few variations as possible, short-term and long-term. This is mainly explained by the flood-protection aspect and the fact that even moderate flood flows would have relatively serious consequences in the downstream sections, especially at Tete City and the broad floodplains close to the Indian Ocean. Conversely, the environmental argument for a changed downstream-flow regime with significant regular (artificial if necessary) flood releases of 5 000 m^3/s (or even higher in some studies) would, with a fair amount of certainty revitalise the Marromeu Delta, one of Mozambique's only two Ramsar-listed sites. On balance, the economic and social arguments supersede the environmental, a conclusion that is strongly supported by the relevant authority (ARA-Centro).			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
Where relevant, they also take agreed transboundary objectives into account	✓	There are no downstream countries to address for Cahora Bassa. Transboundary cooperation on the management objectives of the Zambezi River's water resource is extensive through multi-national organisations such as the Southern African Development Community (SADC); the Zambezi Commission (ZAMCOM); and the JOTC. The first and the second address all 8 basin states, the last only Mozambique, Zambia and Zimbabwe.			

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	14 out of 16 (88%)

Summary of findings and other notable issues
The hydrological resource is well known and carefully monitored, utilising both field measurements, information from the upstream Zambezi dams as well as a hydrological model and long-term meteorological forecasting mainly focussing on El Niño/La Niña phenomena. Reservoir management is strongly focussed on ensuring water availability for energy generation and the project has recently updated and improved its rule curve and management measures to address recurrent long-term droughts in the catchment. Downstream flows are not regulated and the balance between environmental, social and economic priorities is clearly leaning in favour of social and economic objectives, leaving the environmental (mainly flood-flow pulses to the Zambezi delta on the Indian Ocean) largely unsatisfied. Power-system opportunities (potentially addressing present limitations) have led the owners HCB to again consider the development of a North Bank extension to the Cahora Bassa HPP, a project that had been dormant for more than a decade. This Section has no significant gaps against minimum requirements and meets 14 out of the 16 advanced-level requirements.

Relevant evidence	
Interview	1 – 5, 22, 23, 25 – 27, 29 – 36, 42 and 43
Document	26, 75 – 81, 88, 130 – 135, 183 – 191 and 206 – 208
Photo	1, 2, 7 – 9, 13, 15 – 17, 19 – 30, 33, 34, 45, 48 and 49

12 Climate Change Mitigation and Resilience

Scope and Principle
This section addresses the estimation and management of the project's greenhouse gas (GHG) emissions, analysis and management of the risks of climate change for the project, and the project's role in climate change adaptation. The principle is that the project's GHG emissions are consistent with low carbon power generation, the project is resilient to the effects of climate change, and the project contributes to wider adaptation to climate change.

Background	
Climate Change Mitigation	
Capacity (MW) (or additional capacity in case of expansion/ rehabilitation projects)	2 075
Average reservoir area (representing area of flooded land, net of pre-impoundment water body) (km^2) (or additional reservoir area if any, for expansion/rehabilitation projects)	• Maximum level (at 328 m.a.s.l.): 2 818 km2 • Full Supply level (at 326 m.a.s.l.): 2 665 km2 • Average level (at 322 m.a.s.l.): 2 373 km2 • Minimum level (at 312 m.a.s.l.): 1 716 km2
Power density (W/m^2)	0.78 as calculated with FSL. The number increases slightly to 0.87 when using the average reservoir level.
Emissions intensity (gCO_2e/kWh)	106 gCO_2e/kWh (confidence interval between 94 and 119)

National and regional policies, plans and commitments relevant to mitigation	• The "National Adaptation and Mitigation Strategy for Climate-Change, 2013-2025" with three main objectives: – to make Mozambique resilient; – to identify and implement emission-reduction opportunities; and – to create national capacity to implement the Strategy; • Update of the First Nationally Determined Contribution to the United Nations Framework Convention on Climate Change – MOZAMBIQUE Period: 2020-2025 (NDCs) from 2021, with targets related to mitigation such as: "Improving access to renewable energy – hydro, solar and wind"; • Decree No. 23/2018 approving the Regulation for the Implementation of Projects to Reduce Emissions from Deforestation and Forest Degradation, Conservation and Increase of Carbon Reserves (REDD+ Regulation), the National REDD+ Strategy is not related directly to HCB, but the Strategy includes targets for conservation and reducing forest degradation and illegal logging, which relates indirectly to HCB via their engagement in for instance the Mágoè National Park (see also topic 6 biodiversity and invasive species); and • The "Integrated Master Plan Mozambique Power System Development" focussing on satisfying national electrical-energy needs with a Generation Development Plan (2024-2042) with a mix of Hydro (e.g. Mphanda Nkuwa and Cahora Bassa North Bank extension), Coal, Gas, Solar and Wind. Over 50% of that mix is represented by Hydro, Solar and Wind.
Climate Change Resilience	
Hydrological data available for the project site and the basin, and observed climate trends	A long and detailed record (over 50 years) is available for the Cahora Bassa hydropower plant. There is also available hydrological data for the upstream parts of the catchment area. The really long-term (ca 100 years) variations observed for Zambezi runoff show three distinct periods - an "average" period from the early years of the 20th century until around 1943; a high-flow period between 1943 and 1980; and a low-flow period after 1980, which is still relevant at the time of this assessment.
Regional and basin-level climate models relevant to the project location, if any	Numerous modelling exercises have been conducted during the last decade to assess climate-change impacts on the Zambezi Basin. The most recent modelling initiative was done during the Climate Resilience Assessment (CRA) that was conducted by AFRY in 2022-2023. Climate projections were obtained from the latest generation of coarse-resolution Global Climate Models (CMIP6) and from detailed regional climate models (CORDEX-Africa). About 100 climate-model projections were considered for two greenhouse gas emission scenarios (moderate and high emissions), which enabled the authors to assess the uncertainty in future climate projections. The modelling system (combined hydrological and reservoir model) simulates river inflow from all major tributaries as well as impacts of the two largest upstream reservoirs (Kariba and Itezhi-tezhi) on Zambezi runoff at Cahora Bassa. The simulations were run for historic climate conditions (baseline) and projected future climate conditions. From the simulation results, performance indicators were computed for power generation and flood safety of Cahora Bassa operations under climatic conditions for the near future (2021-2050) and far future (2071-2100). The results show

	no major shifts in inflow in the near future, but a considerable reduction in inflow and power generation in the far future due to a slight decrease in rainfall and considerable warming, leading to increased evaporation from the large reservoirs in the catchment.
Any climate change predictions for the project location, and degree of consistency	The overall results of the CORDEX and CMIP6 agree well and show no pronounced change in precipitation but with considerable warming until the end of the 21st century, especially for the high emission scenario (up to a 5°C change in mean annual air temperature vs the reference period).
National policies, plans and commitments relevant to adaptation and resilience	• "The "Integrated Master Plan Mozambique Power System Development" (see above); • The "National Adaptation and Mitigation Strategy for Climate-Change, 2013-2025" (see above) for which the target of resiliency is clearly spelt out in e.g. the statement (page 9): "establish the action guidelines to create resilience through climate risk reduction in communities and the national economy, and promoting low-carbon development and the green economy through its integration in the sectoral and local planning process". • The NDCs with adaptation related targets such as: – Increasing storage capacity at all levels (Promoting construction of surface and sub-surface water storage infrastructure); – Construction of multi-purpose water supply systems including desalination for arid and semi-arid areas using clean energy sources; • "The Climate Change and Gender Action Plan for the Republic of Mozambique" specifically deals with the gender aspects of climate change and resilience.
Other relevant information	The National Directorate of Climate Change has the responsibility to oversee Mozambique's performance in relation to its NDCs and an Inter-Institutional Group on Climate Change has been established (Resolution No. 15/2023 creating the Technical-Scientific Commission on Climate Change (CTCMC)) composed of representatives from the public and private sectors and civil society relevant to the implementation of adaptation and climate-risk reduction and mitigation and low-carbon development actions. Their responsibility is to: • Represent the sector in the national climate change coordination body ensuring harmonization of national climate change actions and their sectoral integration; • Report on the implementation of climate change actions in the sectors/areas they represent including challenges and needs encountered; and • To technically approve the instruments, reports and other documents formulated in the context of climate change.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
ASSESSMENT					
Climate Change Mitigation					
If power density is below 5 W/m^2, net GHG emissions (gCO_2e) of electricity generation are calculated, independently verified and periodically updated	✓	The power density of the project is 0.78 W/m2 (calculated with the reservoir area at FSL). HCB, therefore, initiated a G-Res Tool assessment in 2020. The results show that the emission intensity is 106 gCO_2e/kWh and that the project therefore does not meet the requirement for "low emitter" of <100 gCO_2e/kWh. However, it should be noted that the confidence interval of the result was between 94 and 119. Furthermore, and an important aspect in the Southern African context, although the GHG footprint of Cahora Bassa is high relative to the average of hydropower projects worldwide (18.5 gCO_2e/kWh), it remains significantly below those of non-renewable alternatives (490 for fossil gas and 820 for coal). In addition, the planned Cahora Bassa North (CBN) expansion with the addition of another 1 245 MW of capacity will increase the generated power from Cahora Bassa, which	If a site-specific assessment is required, it incorporates a broad range of scenarios, uncertainties and risks	✗	The site-specific assessment is just about to start (initial planning of the sampling campaign is ongoing at the time of this assessment), therefore, this requirement cannot be considered conclusively met at the time of this assessment.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		will in turn reduce the estimated emission intensity. HCB is considering doing an update to the G-Res Tool assessment to include the CBN project. If the existing G-Res Tool assessment result is adjusted for the lowest estimate for additional energy generated with the CBN addition (no additional reservoir area), the resulting base result would be 92 gCO_2e/kWh. The above, noting the confidence interval's inclusion of a value <100, is assessed as **a non-significant gap** against this requirement.			
If power density is below 5 W/m^2 and estimated emissions are above 100 gCO_2e/kWh, a site-specific assessment of GHG emissions is undertaken and periodically updated	✓	HCB has initiated a site-specific assessment of reservoir GHG emissions, and there is an agreement with the company Bluemethane to carry out the work (agreement signed in 2024 with planned first sampling campaign in August 2025). This assessment will, over time, provide more information on the actual GHG emissions from the reservoir and identify high-emitting methane sources where methane mitigation can be considered (e.g. operational activities that can help mitigate			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		emissions from reservoir, or methane-capturing technologies). This will also provide existing predictive models, such as the G-Res Tool, with more accurate data to improve prediction accuracy and reliability.			
Climate Change Resilience					
An assessment of the project's resilience to climate change is undertaken and periodically updated	✓	A comprehensive CRA was conducted in 2022 and included a Climate Risk Management Plan that recommends further actions and assessments to increase the resilience of the project.	Assessment of resilience incorporates sensitivity analysis, project specific hydrological modelling using recognised climate models	✓	The CRA incorporated a comprehensive sensitivity analysis. As an example, the hydrological and reservoir modelling system has been run for multiple hydrological conditions: 38 runs to simulate reservoir operation and another 38 runs for flood frequency analysis of inflows for the two climate scenarios (19 each for RCP 4.5 and RCP 8.5). About 100 climate-model projections were considered for the two greenhouse gas emission scenarios (see minimum requirements), Furthermore, 1 023 model runs for sensitivity analysis of climate-change signals (33
The assessment:					
• incorporates an assessment of plausible climate change at the project site	✓	The CIMP6 and CORDEX-Africa models have been used to run two greenhouse gas scenarios (moderate and high emissions) with resulting climate scenarios for the near future (2021-2059) and far future (2071-2100).			
• identifies a range of climatological and hydrological conditions at the project site	✓	A wide range of climate-model projections were considered for the two greenhouse-gas emission scenarios. The hydrological and reservoir modelling system simulates river inflow from all major tributaries as			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		well as the impact of upstream reservoirs (Kariba and Itezhi-tezhi) on Zambezi runoff at Cahora Bassa. The simulations were run for historic climate conditions (baseline) and projected future climate conditions.			warming levels and 31 rainfall scenarios).
• applies these conditions in a documented risk assessment or stress test	✓	A specific CRA with an associated stress test has been conducted by external experts and in accordance with the International Hydropower Association's (IHA) Climate Resilience Guide.			
The risk assessment or stress test encompasses:			The project's opportunities to provide adaptation services are considered on an ongoing basis	✓	HCB is continuously looking at opportunities of expanding its operations to provide more power generation alternatives, several of these are results of recommendations from the CRA. Examples of these are: • the reinitiation of the CBN expansion project to allow for mid-merit/peaking power production; • the construction of a 400-MW solar power plant; and • refurbishments of the sub-stations to increase their
• dam safety	✓	The flood-frequency analysis of simulated inflows under climate-change scenarios shows that under current climate conditions, as well as in the future, the 10 000-year flood is considerably larger than the spillway capacity, which constitutes a serious concern for flood safety. Even under a drying climate, extreme flood inflows will remain a high risk due to increased rainfall variability. This is something that HCB is already working on addressing with the implementation of the CBN expansion which would add			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		another 4 400 m^3/s of spillway capacity, allowing for the 10 000-year flood to be passed safely. Dam safety under a changing climate future is assessed, meaning this requirement is met.			resilience to higher temperatures.
• other infrastructural resilience	✓	The CRA encompasses for example risks to turbines (increased erosion rate and sediment yield leading to higher maintenance costs due to abrasion), substations and transformers (higher temperatures can cause damage or failure due to heat impact) as well as transmission lines (increased tropical storms causing interruption on transmission lines).			
• environmental and social risks	✓	Environmental and social risks have been considered such as: • the risk of reaching the flood-warning level for Tete (slight increase in near future, decrease in far future); and • planned flooding to partially restore the sediment balance in the Zambezi delta (low risk in near future, increased risk of competing demands with power generation in far future).			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
• power generation availability	✓	As part of the climate stress test, the generation performance was evaluated under various different climate scenarios as projected by the CORDEX Regional Climate Model ensemble. No relevant change is projected for the near future, but considerable decrease in inflow and power generation is projected for the far future.			
MANAGEMENT					
Climate Change Mitigation					
If GHG emissions estimates assume design and management measures, these measures are in place	✓	These measures are in place, see details under assessment above.	Management measures are in place to respond to risks and opportunities including offsetting emissions	✗	The fact that HCB has acted on basically every climate-related issue identified in the 2018 HSAP assessment shows that there are appropriate management procedures in place to respond to risks and opportunities. However, there is no specific measure related to the offsetting of emissions at the time of the assessment and the Bluemethane study is only at the start of implementation (see below). Hence this requirement is not fully met at the time of this assessment.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					This is the same issue as that identified under Assessment above.
			Plans are in place to monitor parameters used in GHG emissions estimates or to monitor GHG stocks	✓	The site-specific assessment is just about to start (agreement signed in 2024 with planned sampling campaign in August 2025), furthermore, HCB is monitoring all their GHG emissions and reports on these as part of its ESG reporting.
Climate Change Resilience					
Measures are in place to avoid or reduce identified climate risks	✓	The Climate Risk Management Plan (that was approved by HCB in the 2023 annual reporting year) addresses areas for the continued improvement of the project's resilience to climate change.	Measures take account of a broad range of risks and interrelationships	✓	The CRA is comprehensive and covers many risks and interrelationships such as dam safety, livelihoods, biodiversity, downstream flows etc.
			Processes are in place to respond to unanticipated climate change	✓	The numerous simulation performed (see above) show that consideration has been taken even to highly unlikely climate-change scenarios.
			Plans are in place to provide adaptation services if necessary	✓	HCB has demonstrated that they are acting on the recommendations of the

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
					CRMP to provide adaptation services (see above).
CONFORMANCE AND COMPLIANCE					
Climate Change Mitigation					
Processes and objectives relating to mitigation have been and are on track to be met with:			There are no non-compliances	✓	The assessment did not identify any non-compliances.
• no major non-compliances	✓	The Mozambican legislation does not stipulate specific requirements related to climate-change mitigation (even though there are NDC targets that HCB is contributing to, confirmed by the National Directorate of Climate Change), thus, there are no major non-compliances identified.			
• no major non-conformances	✓	There is an internal action plan (in alignment with recommendations from the government) to reduce the company's emission rates. As an example of this, HCB is doing an inventory to replace old air-conditioning units and are following up on the emissions from the reservoir. Furthermore, the implementation of the ESG indicators will follow up on and propose actions for reduction related to the emission rates of HCB's day to day operations. The	There are no non-conformances	✓	The assessment did not identify any non-conformances.

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
		company is acting in conformance with these commitments.			
Mitigation-related commitments have been or are on track to be met	✓	There are no mitigation-related commitments other than the ones described under conformance above.			
Climate Change Resilience					
Processes and objectives relating to resilience have been and are on track to be met with:					
• no major non-compliances	✓	The Mozambican legislation does not stipulate specific requirements related to climate change adaptation and resilience, however, the national directorate for Climate Change has confirmed that HCB is acting in compliance with their requirements and targets (improving resilience, contributing to adaptation services etc.), thus, there are no non-compliances.	There are no non-compliances	✓	The assessment did not identify any non-compliances.
• no major non-conformances	✓	HCB has committed itself to the Climate Risk Management Plan and is already implementing a number of the recommendations stipulated in that plan.	There are no non-conformances	✓	The assessment did not identify any non-conformances.
Resilience-related commitments have been or are on track to be met	✓	There are no resilience-related commitments other than the ones mentioned under conformance above.			

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
OUTCOMES					
Climate Change Mitigation					
The project's GHG emissions are demonstrated to be consistent with low carbon power generation	✓	The confidence interval for the project's calculated (G-Res Tool) GHG emissions are demonstrated to be partly consistent (interval stretching both below and above the 100 gCO_2e/kWh limit) with low-carbon power generation. HCB has also acted upon the recommendations by the G-Res Tool assessment to initiate a site-specific assessment (for more details, see under Assessment above). Furthermore, the actions initiated based on the recommendations of the CRA will reduce the total project's emissions intensity, hence the 106 gCO_2e/kWh result from the G-Res Tool study is considered **a non-significant gap** against this requirement, see also Assessment above.	Project net emissions are minimised or project operations facilitate system emissions reductions	✓	At the time of this assessment, the site-specific study has just started and there is no indication of what the results of that study will be. However, the fact that HCB has initiated that study shows a clear intent to work towards minimising the net emissions of the project and to understand the real in-situ reservoir emissions. This is, furthermore, strengthened by the emissions monitoring and resulting attempts to reduce operational GHG emissions that HCB is doing as part of their day-to-day operations.
Climate Change Resilience					
Findings of the climate change assessment indicate that the project	✓	At the time of this assessment, the site-specific study has just started	The project is resilient under a broad range of scenarios	✗	HCB has proven to take the resilience issue seriously, and is acting upon the recommendations of the CRA

Minimum Requirements			Advanced Requirements		
Requirement is met: yes (✓) or no (✗)		Findings and Observations	Requirement is met: yes (✓) or no (✗)		Findings and Observations
is resilient to climate change		and there is no indication of what the results of that study will be. However, the fact that HCB has initiated that study shows a clear intent to work towards minimising the net emissions of the project. This is furthermore strengthened by the emission monitoring and resulting attempts to reduce GHG emissions that HCB is doing as part of their day-to-day operations.			to increase the project's resilience. However, this requirement cannot be considered as fully met at the time of the assessment, since one potential future scenario is that one or several of the key measures will not be implemented.
			The project will contribute to climate change adaptation at a local, regional or national levels	✓	The present-day project is already contributing to climate-change adaptation at a local, national and regional level. In addition, the actions that HCB has started to implement (e.g. the North Bank extension, the solar-PV study), show the intention and will to improve HCB's climate-change adaptation services even farther in the future.

List of significant gaps against **Minimum Requirements**	Number of **Advanced Requirements** met
There are no significant gaps against the minimum-level requirements.	12 out of 15 (80%)

Summary of findings and other notable issues

HCB has taken substantial steps toward improving their Climate Change Mitigation and Resilience performance in comparison to the 2018 Hydropower Sustainability Assessment Protocol assessment, which is clearly reflected by the fact that there are no gaps at the minimum-requirement level. The project has ticked all the boxes when it comes to Good International Industry Practice related to Climate Change, and the project's alignment with the national strategies and NDCs has been confirmed by the National Directorate of Climate Change. At the advance-requirement level there are still some uncertainties regarding the project's ability to prove "low-emitter" status, ability to off-set existing emissions and ability to reduce some of the existing risks in order to become fully resilient.

Relevant evidence	
Interview	1 – 4, 8, 29, 30, 33 – 36 and 46
Document	21, 28, 71, 159, 160, 191 – 196, 203 and 205
Photo	N/A

Appendix 1 – Interviews

Ref	Interviewee/s	Position	Organisation	Date	Location
1	José Matola	Hydrology, Dam safety Environmental Manager	HCB	08/05/2025	Songo
2	Manuel Mahunguana	Head of Hydrology Department	HCB	08/05/2025	Songo
3	Hélder Francisco	Hydrologist	HCB	08/05/2025	Songo
4	Edite Nhantumbo	Head of Environmental and Laboratory Department	HCB	09/05/2025, 11/05/2025, 13/05/2025, 25/05/2025	Songo Songo and online
5	Binte Insa	Environmentalist	HCB	09/05/2025	Songo
6	Baltazar Tomo	Laboratory Co-ordinator	HCB	09/05/2025	Songo
7	Manuel Patricio	Environmentalist	HCB	09/05/2025	Songo
8	Ezequiel Carvalho	Head of Dam Safety Department	HCB	08/05/2025	Songo

Ref	Interviewee/s	Position	Organisation	Date	Location
9	Pedro Conhaque	Community Liason Coordinator	HCB	9/05/2025, 10/05/2025 11/05/2025	Songo
10	Cremildo Massangaie	Training Center Officer	HCB	12/05/2025	Songo
11	Leonel Manusse	Head of HR Department	HCB	12/05/2025	Songo
12	Vanusa Cosmos	Head of Department of Contract Management	HCB	09/05/2025	Songo
13	Albino Ubisse	Head of Department of Procurement	HCB	09/05/2025	Songo
14	Suleimane Combo	Commercial Manager	HCB	12/05/2025	Maputo
15	Hamilton Bila	Planning Manager	HCB	13/05/2025	Online
16	Gerson Morais	Internal Audit, Risk and Compliance Manager	HCB	13/05/2025, 15/05/2025	Online, Songo
17	Nico Savaio	ESG & IMS Co-ordinator	HCB	10/05/2025	Songo
18	Glória Vicente	Clinic Co-ordinator	HCB	08/05/2025	Songo
19	Joaquim Luciano	Head of Workshop	HCB	12/05/2025	Songo
20	Justício Zefanias	Worker´s trade union Representative	HCB	12/05/2025	Songo
21	Alper Mugalela	Legal – Compliance Officer	HCB	19/05/2025	Songo
22	Aida Mabjaia	Board Member	HCB	10/05/2025	Songo
23	Ermínio Chiau	Board Member	HCB	10/05/2025	Songo
24	Elisa Gundana	Directora do Hospital Rural de Songo	Hospital Rural de Songo	09/05/2025	Tete
25	Constantino Adão	Chefe do Departamento de Ambiente	SPA_Serviços Provincial de Ambiente-Tete	12/05/2025	Tete
26	Joana Jaime Serrote	Chefe do Departamento de Conservação	SPA_Serviços Provincial de Ambiente-Tete	12/05/2025	Tete

Ref	Interviewee/s	Position	Organisation	Date	Location
27	Zebedeu Gouveia	Administrador Marítimo	Direcção Provincial de Agricultura e Pescas	12/05/2025	Tete
28	Júlia Muito	Administradora do Parque Nacional de Màgoé	Parque Nacional de Màgoé	09/05/2025	Màgoé
29	Moisés Macambaco	Hidrologist	ARA Centro	09/05/2025	Online
30	Núbia Tauacal	Hidrologist	ARA Centro	09/05/2025	Online
31	António Elija	Chemical Analyst	ARA Centro	09/05/2025	Online
32	Noémia Godinho	Environmentalist	ARA Centro	09/05/2025	Online
33	Gilda Fevereiro	Técnico do INGD	INGD	12/05/2025	Tete
34	Hortêncio Aly	Técnico do INGD	INGD	12/05/2025	Tete
35	Edmundo Masseco	Técnico do INGD	INGD	12/05/2025	Tete
36	Amancio Cunhete	Técnico do INGD	INGD	12/05/2025	Tete
37	Josina Mafunga	Chefe do Posto Administrativo de Songo	Posto Administrativo do Songo	09/05/2025	Songo
38	Domingos Gouveia	Líder do 1º Escalão Posto Administrativo do Songo	Posto Administrativo do Songo	09/05/2025	Songo
39	Claque Maunde	Delegado do IOM	Instituto Oceanográfico de Moçambique-Songo	12/05/2025	Songo
40	Francisco Mulatinho	Chefe do Departamento de Estatística e documentação Informática	Instituto Oceanográfico de Moçambique-Songo	12/05/2025	Songo
41	Carlos Yum	Representante do MIREME | MIREME's Representative	Ministério de Recursos Minerais e Energia (MIREME)	20/05/2025	Online
42	Carlos Yum	Director Geral	Gabinete de Mpanda Nkuwa	09/05/2025	Online
43	Sérgio Elísio	Director Técnico	Gabinete de Mpanda Nkuwa	09/05/2025	Online
44	Maria Matediane	IUCN Officer	IUCN	22/05/2025	Online
45	Agostinho Bento	IUCN Officer	IUCN	22/05/2025	Online

Ref	Interviewee/s	Position	Organisation	Date	Location
46	Carla Marina Mussengue	Técnica de Departamento de Adaptação e Gestão de Riscos Climáticos	Direcção Nacional de Mudanças Climáticas	26/07/2025	Online
47	Ricardo Júnior	Transmission Line Technician	HCB	11/05/2025	Songo
48	Justicio Victorino Zefanias	Secretário do Comite Sindical	HCB Trade Union	12/05/2025	Songo
49	Jéssico Egas Fernando	Secretario da Organizacao do Comité	HCB Trade Union	12/05/2025	Songo
50	Adelino Manuel	Risk Officer	HCB	19/05/2025	Online
51	Nilton de Sousa	Warehouse Coordinator	HCB	12/05/2025	Songo
52	Joaquim Luciano	Workshop Manager	HCB	12/05/2025	Songo
53	Leonardo Abilio Antonio	project manager	Parque Nacional de Mágoe	09/05/2025	Màgoé
54	Arsenio Pentear	Infrastructure Manager	Parque Nacional de Mágoe	09/05/2025	Màgoé
55	Elsa Manuel Antonio Weruzano	Legal officer	Parque Nacional de Mágoe	09/05/2025	Màgoé
56	Selma Louis Cassvada	Resp. Patrimônio	Parque Nacional de Mágoe	09/05/2025	Màgoé
57	Emenencia Clussale	Resp. Planificacao	Parque Nacional de Mágoe	09/05/2025	Màgoé
58	Vincento Chuiele	Ranger	Parque Nacional de Mágoe	09/05/2025	Màgoé
59	Francisco Xavier dos Santos	Presidente	União Desportiva do Songo (UD Songo)	09/05/2025	Songo

Appendix 2 – Documents

Ref	Author	Year	Title	E=Eng; P=Port
1	Hidroeléctrica de Cahora Bassa	2020	Cahora Bassa South Bank Project-OPERATIONAL ENVIRONMENTAL MANAGEMENT PLAN (EMP)	E
2	Hidroeléctrica de Cahora Bassa	2020	PLANO DE GESTÃO AMBIENTAL DE OPERAÇÃO DA HCB	P
3	Hidroeléctrica de Cahora Bassa	2025	PLANO DE ACÇÃO PARA O CUMPRIMENTO DO PLANO DE GESTÃO AMBIENTAL DE OPERAÇÃO DA HCB E DAS RECOMENDAÇÕES DA CARTA DA APROVAÇÃO DO PGA	P
4	APCER	2024	ISO Certificates	E
5	APCER	2024	Certificados ISO 9001, 14001 e 45001	P
6	Governo de Moçambique	2004	Decreto 18/2004 de 2 de Junho-Regulamento sobre Padrões de Qualidade Ambiental e de emissão de Efluentes	P
7	Hidroeléctrica de Cahora Bassa	2016	Procedimento de Gestão de Resíduos	P
8	Hidroeléctrica de Cahora Bassa	2016	Procedimento de Gestão de Produtos químicos	P
9	Hidroeléctrica de Cahora Bassa	2020	Procedimento de Gestão do Parque de Obsoletos	P
10	Hidroeléctrica de Cahora Bassa	2013	Instrução de Trabalho para Derrame de Óleos	P
11	Hidroeléctrica de Cahora Bassa	2013	Instrução de Trabalho para Derrame de Ácido	P
12	Hidroeléctrica de Cahora Bassa	2022	Relatório de Desempenho Ambiental-I semestre de 2022	P
13	Hidroeléctrica de Cahora Bassa	2022	Relatório de Desempenho Ambiental-II semestre de 2022	P
14	Hidroeléctrica de Cahora Bassa	2024	Relatório de Desempenho Ambiental-I semestre de 2024	P
15	Hidroeléctrica de Cahora Bassa	2024	Relatório de Desempenho Ambiental-II semestre de 2024	P
16	Hidroeléctrica de Cahora Bassa	2025	Pedido de Manifestação de Interesse: PARA A CONTRATAÇÃO DE SERVIÇOS DE CONSULTORIA PARA A ACTUALIZAÇÃO DA LICENÇA AMBIENTAL DE OPERAÇÃO DE CAHORA BASSA SUL E AQUSIÇÃO DE LICENÇA AMBIENTAL DA INCINERADORA DE RESÍDUOS BIOMÉDICOS	P
17	Hidroeléctrica de Cahora Bassa	2019	Deliberação 205/HCB-SA/2019-Revitalização de Pontos Focais do Ambiente	P
18	Hidroeléctrica de Cahora Bassa	2024	Acompanhamento das Não-Conformidades Ambientais-2024	P

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19	Hidroeléctrica de Cahora Bassa	2025	Acompanhamento das Não-Conformidades Ambientais-2025	P
20	APCER	2024	Extracto de Relatório da Auditoria APCER- Constatações Ambientais	P
21	Hidroeléctrica de Cahora Bassa	2024	Fotos de plantio de árvores	
22	Hidroeléctrica de Cahora Bassa	2023	Gestão ambiental em projectos-Acta de Reunião projecto de Estradas	P
23	Hidroeléctrica de Cahora Bassa	2024	Manual de Sistema de Gestão Ambiental e Social	P
24	Ministério da Terra e Ambiente	2020	Licença Ambiental de Operação	P
25	Hidroeléctrica de Cahora Bassa	2025	Mapa de Inventário de Resíduos	P
26	Hidroeléctrica de Cahora Bassa	2023	Mapa de Monitorização da Albufeira	P
27	Hidroeléctrica de Cahora Bassa	2025	Plano annual de Inspecções Ambientais 2025	P
28	Hidroeléctrica de Cahora Bassa	2025	Plano de Actividades do Departamento de Ambiente e laboratório	P
29	Hidroeléctrica de Cahora Bassa	2025	Plano de discussão de matriz de impactos ambientais 2025_Medida Correctiva RA Apcer	P
30	Hidroeléctrica de Cahora Bassa	2022	Protocolo de Submissão do Relatório de Desempenho Ambiental_II Semestre 2022	P
31	APCER	2024	Relatório da Auditoria do SGI-APCER	P
32	AQUA	2024	Relatório de Auditoria Ambiental de Conformidade Legal MTA 2024	P
33	Hidroeléctrica de Cahora Bassa	2025	Seguimento de Inspecção Ambiental Armazém especial Songo - Abril 2025_Phindu	P
34	Hidroeléctrica de Cahora Bassa	2025	Relatório de Controlo de Gestão DHB-Fevereiro	P
35	Hidroeléctrica de Cahora Bassa	2025	Relatório de Controlo de Gestão DHB-Março	P
36	Hidroeléctrica de Cahora Bassa	2020	Relatório dados das Comunidades-Cahora Bassa	P
37	Hidroeléctrica de Cahora Bassa	2020	Relatório dados das Comunidades-Mágoe	P
38	Hidroeléctrica de Cahora Bassa	2020	Relatório dados das Comunidades-Changara	P
39	Hidroeléctrica de Cahora Bassa	2020	Relatório dados das Comunidades-Guro	P
40	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Bárue	P

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41	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Vanduzi	P
42	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Sussundenga	P
43	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Mussorize	P
44	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Machaze	P
45	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Massengena	P
46	Hidroeléctrica de Cahora Bassa	2019	Relatório dados das Comunidades-Chicualacuala	P
47	Hidroeléctrica de Cahora Bassa	2025	Base de dados-Peditórios e Resposta	P
48	Hidroeléctrica de Cahora Bassa	2022	Carta de adjucação -Consultoria e Fiscalização das Obras de reabilitação do Hospital Rural de Songo	P
49	Mwathu Consulting and Services	2022	Consulturia sobre a Desocupação das Encostas e Áreas Sensíveis na Vila do Songo-Relatório Final	P
50	Hidroeléctrica de Cahora Bassa	2022	Iniciativas PE 2018-2022_GCA_01_09_20 - Actualizado JORNADAS	P
51	Hidroeléctrica de Cahora Bassa	2024	Termo de referência-SERVIC_OS DE CONSULTORIA PARA AVALIACÃO DOS PROJECTOS DE Responsabilidade Social	P
52	Hidroeléctrica de Cahora Bassa	2024	Relatório da Participação da HCB nas_ XIª e XIIª Sessões Ordinárias do Posto Administartivo do Songo-1	P
53	Hidroeléctrica de Cahora Bassa	2024	Matriz de Partes interessadas	P
54	Hidroeléctrica de Cahora Bassa	2022	Memorando de Entendimento entre a HCB_vs_Hospital Rural do Songo	P
55	Hidroeléctrica de Cahora Bassa	2010	Memorando de Entendimento entre a HCB e o Ministério do Interior (PRM)	P
56	Hidroeléctrica de Cahora Bassa	2024	Exemplo de fluxo: Pedido ate a resposta - Relatório Detalhado da Distribuição PHINDU_2024_38970	P
57	Hidroeléctrica de Cahora Bassa	2025	TDR- Elaboração do Plano de Reassentamento da População que reside nas encostas e áreas de protecção adjacentes a barragem e subestação do Songo	P
58	Secretaria do Posto Administrativo do Songo	2024	Peddo de Atorização para Participação do Respon´sável da Área Social a participar nas Sessões Ordinárias do Posto Administrativo do Songo	P

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59	Mwathu Consulting and Services	2022	Apresentação-Estudo de Base e Avaliação para desocupação das áreas sensíveis (encostas e áreas de protecção do Sistema electroprodutor)	P
60	Hidroeléctrica de Cahora Bassa	2024	Relatório de Actividades de Relatório de Responsabilidade Social 2024	P
61	Hidroeléctrica de Cahora Bassa	2024	Relatório de Sensibilização comunitária aos Líderes Comunitários e Religiosos do Posto Administrativo do Songo	P
62	Hidroeléctrica de Cahora Bassa	2024	Relatório de Sensibilização comunitária em Tete e Manica _2	P
63	Hidroeléctrica de Cahora Bassa	2024	Relatório de Sensibilização Comunitária sobre vandalizações e furtos nas linhas de transporte de energia - Cahora Bassa e Changara (1)	P
64	Hidroeléctrica de Cahora Bassa	2024	Relatório de Sensibilização Comunitária -Guro	P
65	Hidroeléctrica de Cahora Bassa	2024	Consultoria para Avaliação do Impacto das Inciativas de Responsabilidade Social 2018-2023	P
66	Hidroeléctrica de Cahora Bassa	2019	Acordo de Empresa entre a Hidroeléctrica de Cahora Bassa e Comité Sindical da HCB	P
67	Hidroeléctrica de Cahora Bassa	2025	Bolentins semanais de Segurança Ocupacional	P
68	Hidroeléctrica de Cahora Bassa	2019	Modelo de Contrato de Trabalho - Prestação de Serviços	P
69	Hidroeléctrica de Cahora Bassa	2022	Procedimento de Gestão da Segurança e Saúde Ocupacional	P
70	Hidroeléctrica de Cahora Bassa	2025	Plano de Acção HST-2025	P
71	Hidroeléctrica de Cahora Bassa	2024	Indicadores ESG-2024	P
72	Hidroeléctrica de Cahora Bassa	2012	Regulamento do Sistema de Melhoria de Desempenho (SISMED)	P
73	Hidroeléctrica de Cahora Bassa	2010	Regulamento Interno de Formação	P
74	Hidroeléctrica de Cahora Bassa	2010	Regulamento interno de Segurança, Higiene e Saúde no Trabalho	P
75	Hidroeléctrica de Cahora Bassa	2025	Base de Dados da Qualidade da Água da Albufeira	P
76	Hidroeléctrica de Cahora Bassa	2025	Monitorização da Clorofila via Satélite-Maio 2021 a Abril 2025	P
77	Hidroeléctrica de Cahora Bassa	2025	Plano de Monitorização da Qualidade de Água 2025	P
78	Hidroeléctrica de Cahora Bassa	2021	Relatório Exaustivo Monitoramento Qualidade de Agua via satelite 2021	P

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79	Hidroeléctrica de Cahora Bassa	2019	Relatório Técnico AAF_Abril 19	P
80	Hidroeléctrica de Cahora Bassa	2021	Relatório Técnico AAF_Abril 21	P
81	Amaza Survey Services (Pty) Ltd	2023	MULTIBEAM SURVEY CAHORA BASSA SPILLING POOL, MOZAMBIQUE	E
82	TRACTEBEL ENGINEERING S.A.	2025	Five-Year Dam and Powerhouse Inspection_2018-2022	E
83	TRACTEBEL ENGINEERING S.A.	2025	FIVE-YEAR INSPECTION REPORT APPENDIX A-Drawings	E
84	TRACTEBEL ENGINEERING S.A.	2025	FIVE-YEAR INSPECTION REPORT APPENDIX B- Graphs	E
85	TRACTEBEL ENGINEERING S.A.	2025	FIVE-YEAR INSPECTION REPORT APPENDIX C- Geological Conditions	E
86	TRACTEBEL ENGINEERING S.A.	2025	FIVE-YEAR INSPECTION REPORT APPENDIX D- PFMA tables	E
87	TRACTEBEL ENGINEERING S.A.	2025	FIVE-YEAR INSPECTION REPORT APPENDIX E- Stats	E
88	Hidroeléctrica de Cahora Bassa	2008	NEBCB-Normas de Exploração da Barragem, Obras Anexas e Albufeira	P
89	Hidroeléctrica de Cahora Bassa	2008	NEBCB-Anexo I	P
90	Hidroeléctrica de Cahora Bassa	2008	NEBCB-Anexo II	P
91	Hidroeléctrica de Cahora Bassa	2008	NEBCB-Anexo III	P
92	Hidroeléctrica de Cahora Bassa	2008	NEBCB-Anexo IV	P
93	Hidroeléctrica de Cahora Bassa	2025	Plano annual de Actividades de Segurança de Barragem	P
94	Hidroeléctrica de Cahora Bassa	2025	Plano Mensal de Actividades de Segurança de Barragem	P
95	Hidroeléctrica de Cahora Bassa	2025	Planos semanais de Actividades de Segurança de Barragem	P
96	Ministério das Obras Públicas, Habitação e Recursos Hídricos	2017	Decreto 33-2017 de 19 de Julho Aprova o Regulamento se Segurança de Barragem	P

Ref	Author	Year	Title	E=Eng; P=Port
97	Ministério das Obras Públicas, Habitação e Recursos Hídricos	2023	Decreto n.º 46/2023 de 3 de Agosto Altera os artigos 26, 28, 29, 30 e 49 e o anexo 4 do Regulamento de Segurança de Barragens, aprovado por Decreto n.º 33/2017, de 19 de Julho,	P
98	Ministério das Obras Públicas, Habitação e Recursos Hídricos	2024	Diploma Ministerial n.º 81/2024 de 27 de Setembro -Normas de Projecto de Barragem, Normas de Construção de Barragem, Normas de Exploração de Barragem e Normas de Inspecção e Observação de Barragens	P
99	Hidroeléctrica de Cahora Bassa	2024	RELATÓRIO DO COMPORTAMENTO ESTRUTURAL DA BARRAGEM DE CAHORA BASSA E OBRAS ANEXAS NO ANO 2024	P
100	Hidroeléctrica de Cahora Bassa	2025	TABLEAU DE BORD DO DEPARTAMENTO DE SEGURANÇA DA BARRAGEM E ESTRUTURAS-Abril 2025	P
101	Hidroeléctrica de Cahora Bassa	2025	Avaliação Expedita do Comportamento da Barragem – 25 de Abril de 2025	P
102	Hidroeléctrica de Cahora Bassa	2025	Relatório de Actividades Realizadas na Semana nº 19 (05 a 11-Mai.-2025)	P
103	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A: Volume 1 - Introduction and Hydrology Review	E
104	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A: Volume 1 - Introduction and Hydrology Review	E
105	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A: Volume 2 - Itezhi Tezhi Dam Failure Mode Assessment	E
106	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 3 - Kafue Gorge Upper Failure Mode Assessment	E
107	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 4 - Kariba Dam Failure Mode Assessment	E
108	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 5 - Cahora Bassa Dam Failure Mode Assessment	E
109	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 5 - Cahora Bassa Dam Failure Mode Assessment	E

Ref	Author	Year	Title	E=Eng; P=Port
110	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 6 - Kafue Gorge Lower Dam Failure Mode Assessment	E
111	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 7 - Batoka Dam Failure Mode Assessment	E
112	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase A Volume 8 - Mphanda Nkuwa Dam Failure Mode Assessment	E
113	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase B Report - Preliminary Dam Break Modelling	E
114	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase C Detailed Flood Routing Study: Volume 5 - Cahora Bassa	E
115	Mott MacDonald	2018	Dam Break Analysis for the Zambezi River Phase C Detailed Flood Routing Study: Volume 8 - Mphanda Nkuwa	E
116	Mott MacDonald	2018	Appendix A -Flood Maps	E
117	Mott MacDonald	2018	Appendix B -Socio Economic Data	E
118	Mott MacDonald	2018	Appendix C -Socio Economic Maps	E
119	Mott MacDonald	2020	Dam Break Analysis for the Zambezi River Phase D: Integrated Flood Routing Modelling	E
120	Hidroeléctrica de Cahora Bassa	2024	Memorando Interno-Encontro de harmonização dos Termos de Referência para a Elaboração do Plano de Emergência Externo da Barragem de Cahora Bassa	P
121	Hidroeléctrica de Cahora Bassa	2024	Carta à INGD- Solicitação de Encontro para Finalização dos TdR para elaboração do plano de Emergência Externo	P
122	Instituto Nacional de Gestão e Redução de Risco de Desastres	2024	Carta do INGD connfirmando a participação no Encontro para Finalização dos TdR para elaboração do plano de Emergência Externo	P
123	Aqualogos e LNEC	2024	ELABORAÇÃO DO PLANO DE EMERGÊNCIA INTERNO BARRAGEM DE CAHORA BASSA HIDROELÉCTRICA DE CAHORA BASSA PLANO DE EMERGÊNCIA INTERNO (PEI)-VERSÃO FINAL	P
124	Aqualogos e LNEC	2024	PLANO DE EMERGÊNCIA INTERNO BARRAGEM CAHORA BASSA-CAPACITAÇÃO INTERNA	P
125	Aqualogos e LNEC	2024	Certificados Individuais de Capacitação no plano de Emergência Interno	P

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126	Hidroeléctrica de Cahora Bassa	2023	Five Year Inspection Action Plan	E
127	Hidroeléctrica de Cahora Bassa	2024	Lista de Contactos de Emergência -Plano de Emergência Interno	P
128	TRACTEBEL ENGINEERING S.A.	2017	Five-Year Dam Wall Inspection Cahora Bassa Hydroelectric Project	E
129	INSTITUTO NACIONAL DE GESTAO E REDUCAO DO RISCO DE DESASTRES DELEGACAO PROVINCIAL DE TETE	2024	PLANO DE CONTINGÊNCIA DA ÉPOCA SECA, CHUVOSA E CICLÓNICA, 2024/2025	P
130	AGRIPROP Ambiente / Pangeia	2022	ESTUDO DE BASE DA BIODIVERSIDADE NA ALBUFEIRA DE CAHORA BASSA E ENVOLVENTE-RELATÓRIO FINAL. **VOL1-DIAGNÓSTICO** Tomo 1	P
131	AGRIPROP Ambiente / Pangeia	2022	ESTUDO DE BASE DA BIODIVERSIDADE NA ALBUFEIRA DE CAHORA BASSA E ENVOLVENTE-RELATÓRIO FINAL. VOL1-DIAGNÓSTICO-Tomo 2 **DESENHOS**	P
132	AGRIPROP Ambiente / Pangeia	2022	ESTUDO DE BASE DA BIODIVERSIDADE NA ALBUFEIRA DE CAHORA BASSA E ENVOLVENTE-RELATÓRIO FINAL. **VOL1-DIAGNÓSTICO**-Tomo 3 **ANEXOS TÉCNICOS**	P
133	AGRIPROP Ambiente / Pangeia	2022	ESTUDO DE BASE DA BIODIVERSIDADE NA ALBUFEIRA DE CAHORA BASSA E ENVOLVENTE-RELATÓRIO FINAL. **VOL2-PLANO DE GESTÃO DA BIODIVERSIDADE**	P
134	AGRIPROP Ambiente / Pangeia	2022	ESTUDO DE BASE DA BIODIVERSIDADE NA ALBUFEIRA DE CAHORA BASSA E ENVOLVENTE-RELATÓRIO FINAL. **VOL3-PLANO DE MONITORIZAÇÃO**	P
135	Roger Bills and Jorge Mafuca	2008	A report on the fish biodiversity of Cahora Bassa dam and surrounding river catchments, central Mozambique (July, 2008).	E
136	Hidroeléctrica de Cahora Bassa	2022	Plano de Acção do Estudo da Biodiversidade	P
137	Hidroeléctrica de Cahora Bassa	2024	PROTECÇÃO DE ANIMAIS SELVAGENS EM AMBIENTES NATURAIS E NO EMPREENDIMENTO HCB	P
138	Hidroeléctrica de Cahora Bassa	2020	memorando de Entendimento entre a HCB e Parque Nacional de Mágoe	P
139	Hidroeléctrica de Cahora Bassa	2024	Relatório e Contas de 2023	P/E
140	Hidroeléctrica de Cahora Bassa	2025	Relatório e Contas de 2024	P

Ref	Author	Year	Title	E=Eng; P=Port
141	Hidroeléctrica de Cahora Bassa	2024	Apresentação do plano de Actividades e Orçamento 2024	P
142	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DGE	P
143	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DHB	P
144	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DPL	P
145	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DRH	P
146	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DSG	P
147	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - DSI	P
148	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - GAR	P
149	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - GCO	P
150	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - GPO	P
151	Hidroeléctrica de Cahora Bassa	2024	Ponto de Situação Planos de Remediacao - UDS	P
152	Hidroeléctrica de Cahora Bassa	2025	Política anti-Fraude	P
153	Hidroeléctrica de Cahora Bassa	2025	Política de Conflito de Interesse	P
154	Hidroeléctrica de Cahora Bassa	2025	Novo Código de Conduta e Ética da HCB	P
155	Hidroeléctrica de Cahora Bassa		Código de Conduta e Ética para Fornecedores – Replaced by Novo Código de Conduta e Ética da HCB	P
156	Hidroeléctrica de Cahora Bassa	2024	2024 10 24 - GAR EGI - Apresentação da Política e Indicadores ESG-CE	P
157	Hidroeléctrica de Cahora Bassa	2024	Deliberação de Aprovação da Politica e Indicadores ESG	P
158	Hidroeléctrica de Cahora Bassa	2025	Exemplo de Relatório PHIND do processo de Solicitação de dados de Indicadores ESG	P
159	Hidroeléctrica de Cahora Bassa	2024	Relatório de Indicadores ESG 2024	P
160	Hidroeléctrica de Cahora Bassa	2024	Política ESG da HCB	P
161	Hidroeléctrica de Cahora Bassa	2022	MANUAL DE GESTÃO DE RISCOS_FINAL	P
162	Hidroeléctrica de Cahora Bassa	2025	Procedimento de Gestão de Riscos	P

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163	Hidroeléctrica de Cahora Bassa	2025	2025 07 23 - Política de Gestão de Riscos	P
164	Hidroeléctrica de Cahora Bassa	2023	ORGANOGRAMA DA HCB APROVADO A 15 DE NOVEMBRO DE 2023	P
165	Hidroeléctrica de Cahora Bassa	2025	Manual da Organização-Estrutura Orgânica e Atribuições	P
166	Hidroeléctrica de Cahora Bassa	2025	Especificação técnica para Contratação de Serviços de Gestão de Denúncias	P
167	Hidroeléctrica de Cahora Bassa	2025	Plano de Comunicação do Canal de Denúncias	P
168	Hidroeléctrica de Cahora Bassa	2025	TDR DE GESTÃO DO CANAL DE DENÚNCIAS	P
169	Hidroeléctrica de Cahora Bassa	2025	2025 02 24 - Especificação técnica para Contratação de Serviços de Gestão de Denúncias	P
170	Hidroeléctrica de Cahora Bassa	2023	Apresentação do Relatório de Gestão de Riscos 2023	P
171	Hidroeléctrica de Cahora Bassa	2025	Plano Anual de Auditoria Interna 2025	P
172	Autoridade Reguladora da Concorrência	2024	GUIA- Apresentação Combate ao Conluio	P
173	Hidroeléctrica de Cahora Bassa		CONTRATO DE CONCESSÃO DA HCB - COM VISTO DO TA	P
174	Hidroeléctrica de Cahora Bassa	2024	Controlo Obrigacoes Conformidade_Ambiente_HSO	P
175	Boletim da República de Moçambique	2019	Estatutos da Hidroeléctrica de Cahora Bassa	P
176	Zimbabwe Electricity Transmission and Distribuition Company (ZTDC)	2024	Proposal to pay off HCB Debt	E
177	Electricidade de Moçambique (EDM)	2021	Acordo de Pagamento de facturas por via de Consignação de Receitas entre EDM e HCB	P
178	Hidroeléctrica de Cahora Bassa	2022	Manual de Governação Corporativa vs (Final.).	P
179	Hidroeléctrica de Cahora Bassa	2021	Manual de Procurement – Replaced by Manual de Procedimentos de *Procurement* (2025)	P
180	Hidroeléctrica de Cahora Bassa	2021	Quadro Geral de Competências da HCB	P

Ref	Author	Year	Title	E=Eng; P=Port
181	Hidroeléctrica de Cahora Bassa	2018	Plano Estratégico 2018-2022	P
182	Hidroeléctrica de Cahora Bassa	2025	1.0 Boletim 1ª Edição, VF, 01 de Março de 2025	P
183	Hidroeléctrica de Cahora Bassa	2025	Boletim de Gestão diária da Albufeira	P
184	Hidroeléctrica de Cahora Bassa	2020	Fluxograma do plano Energético	P
185	Hidroeléctrica de Cahora Bassa	2021	Instrução de Trabalho_Tethys	P
186	Hidroeléctrica de Cahora Bassa	2018	Manual de Procedimentos SimHidro_Rev01	P
187	Hidroeléctrica de Cahora Bassa	2018	MANUAL DE PROCEDIMENTOS PARA A GESTÃO DIÁRIA DA ALBUFEIRA DE CAHORA BASSA	P
188	Hidroeléctrica de Cahora Bassa	1996	Manual de utilização HIDROLOG	P
189	Zamebezi River Authority	2025	Zambezi River Authority_Daily Hydrological Bulletin (Shareable Version) - 7th May 2025	E
190	Zambia Elitricity Supply Company	2025	ZESCO Hydrological Bulletin - 7 May 2025_Ext	E
191	AFRY	2023	Climate Resilience Assessment for Cahora Bassa Report	E
192	Hidroeléctrica de Cahora Bassa	2023	CRA-Workshop Attendance List	P
193	Hidroeléctrica de Cahora Bassa	2023	HCB- Avaliação da Resiliencia Climática de Cahora Bassa_Workshop_MMM 31.08.2023_final	P
194	Hidroeléctrica de Cahora Bassa	2024	Sampling Agreement HCB and Blumethane	E
195	Hidroeléctrica de Cahora Bassa	2024	Inventario GEE_02.06.2024	P
196	EDM	2018	Integrated Master Plan Mozambique Power System Development – Final Report	E
197	MNP team	2025	Powerpoint Presentation of the Magoe National Park - general	P
198	MNP team	2025	Powerpoint Presentation of the Magoe National Park – related to the HCB MoU (specifically road improvements and solar panels for the MNP offices)	P
199	Pasani F, Tebano C, Zarlenga F	2016	A survey near Tambara along Lower Zambezi River	E
200	Carr Foundation and International Crane Foundation	2006	Assessing environmental flow requirements for the Marromeu complex of the Zambezi delta – application of the drift model	E

Ref	Author	Year	Title	E=Eng; P=Port
201	MITADER	2015 - 2019	Plano de Maneio para o Complexo de Marromeu – Terra Húmida de Importância International	P
202	Bills, Mafuca	2008	Cahora Bassa Biodiversity Report	E
203	Nippon Koei UK	2013	ESIA – Cahora Bassa North Bank Project	E
204	Hidroeléctrica de Cahora Bassa	2024	Mapa de Avaliação da Conformidade Legal	P
205	Sara Mercier-Blais & Alain Kilajian	2020	Assessment of the net GHG footprint for the Cahora Bassa reservoir (Mozambique) using the G-res Tool Methodology	E
206	Knight Piésold Consulting	2012	Hydrological Study and Hydropower Potential Assessment, appendices	E
207	Subtech	2017	Final Survey Report (Bathymetric study of the Cahora Bassa Reservoir)	E
208	Hidroeléctrica de Cahora Bassa	2024	Plano de Exploração de Albufeira de Cahora Bassa, information memo to ARA-Centro	P
209	Hidroeléctrica de Cahora Bassa	2025	Apresentação Concurso Gestão de Canal de Denúncias	P
210	Hidroeléctrica de Cahora Bassa	2025	Memorando Interno do Canal de Denúncias	P
211	Hidroeléctrica de Cahora Bassa	2022	Selected pages of the Financing Agreement between AFD and HCB relevant to Emergency Plan and Downstream Impacts.	E
212	Hidroeléctrica de Cahora Bassa	2025	Draft RFP for Selection of Consulting Services for: External Emergency Preparedness Plan for the Cahora Bassa Dam.	E
213	Hidroeléctrica de Cahora Bassa	2024	Plano de Emergencia Interno da Barragem	P
214	RAMSAR (The Convention on Wetlands)	2015	Ramsar Information Sheet, site 1391 – the Zambezi Delta	E
215	Hidroeléctrica de Cahora Bassa	2025	Extracto Del. - RCE de 08 Julho de 2025 - Plano de Emergência Interno da Barragem de Cahora Bassa	
216	Hidroeléctrica de Cahora Bassa	2025	Procedimento de Identificação e Análise de Partes Interessadas	
217	Hidroeléctrica de Cahora Bassa	2025	Matriz de Partes interessadas 2025	

Ref	Author	Year	Title	E=Eng; P=Port
218	Hidroeléctrica de Cahora Bassa	2025	CONCURSO N.º HCB/DPL/ PLANO DE EMERGÊNCIA EXTERNO DA BARRAGEM DE CAHORA BASSA /048/2025 - CADERNO DE ENCARGOS	
219	Hidroeléctrica de Cahora Bassa	2025	TENDER DOCUMENT FOR: CONSULTANCY SERVICES FOR ELABORATION OF THE EXTERNAL EMERGENCY PREPAREDNESS PLAN FOR THE CAHORA BASSA DAM	
220	Hidroeléctrica de Cahora Bassa	2025	Relatório Detalhado da Distribuição PHINDU/2025/46231	P
221	Hidroeléctrica de Cahora Bassa	2025	Carta de Adjudicação – HCB/DPL/ PLANO DE EMERGÊNCIA EXTERNO DA BARRAGEM DE CAHORA BASSA /048/2025	E
222	Hidroeléctrica de Cahora Bassa	2025	Política de Gestão de Denúncias e Canal de Denúncias	P
223	Hidroeléctrica de Cahora Bassa	2025	Comunicado – Canal de Denúncias da HCB	P
224	Hidroeléctrica de Cahora Bassa	2025	Website – Canal de Denúncias da HCB	P
225	Hidroeléctrica de Cahora Bassa	2025	Manual de Procedimentos de *Procurement*	P
226	Hidroeléctrica de Cahora Bassa	2025	Procedimento para Avaliação da Conformidade Legal	P
227	Hidroeléctrica de Cahora Bassa	2025	2025 - Registo de Riscos - GAR-EGI (xls) – Procedimento e Responsáveis	P
228	Hidroeléctrica de Cahora Bassa	2025	Política de *Compliance*	P
229	Hidroeléctrica de Cahora Bassa	2025	Política Anti-Corrupção	P

Appendix 3 – Photographs

1. The Cahora Bassa reservoir seen from the dam.

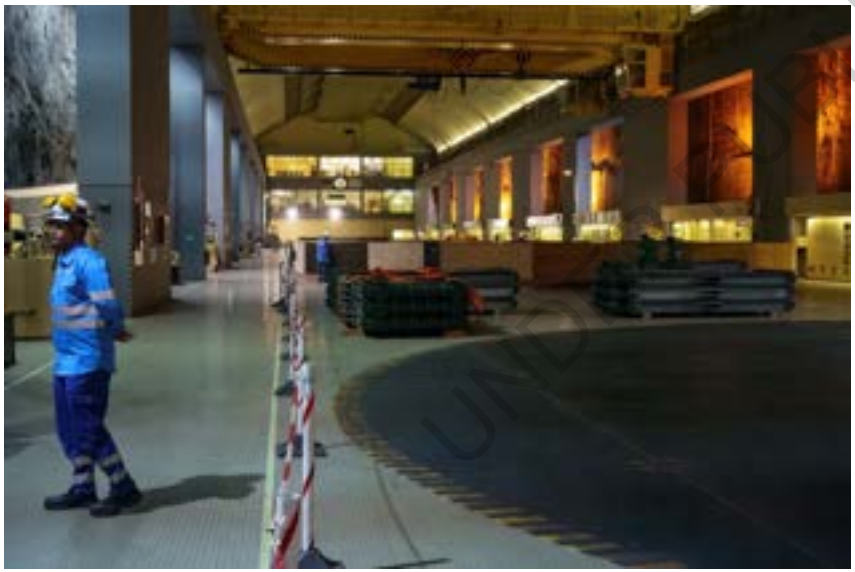
2. The Cahora Bassa dam with spillway gates.

3. Dam-monitoring device on right (south) bank.

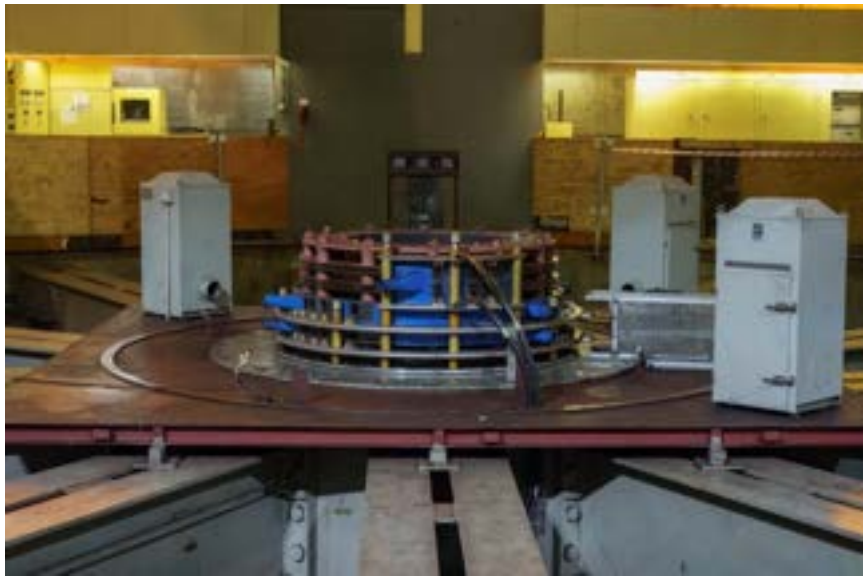
4. Ambulance stationed just outside power-house entrance.

5. HCB policies diplayed in the power house.

6. Suggestion and compliants box located in the power house.



7. The main turbine hall.

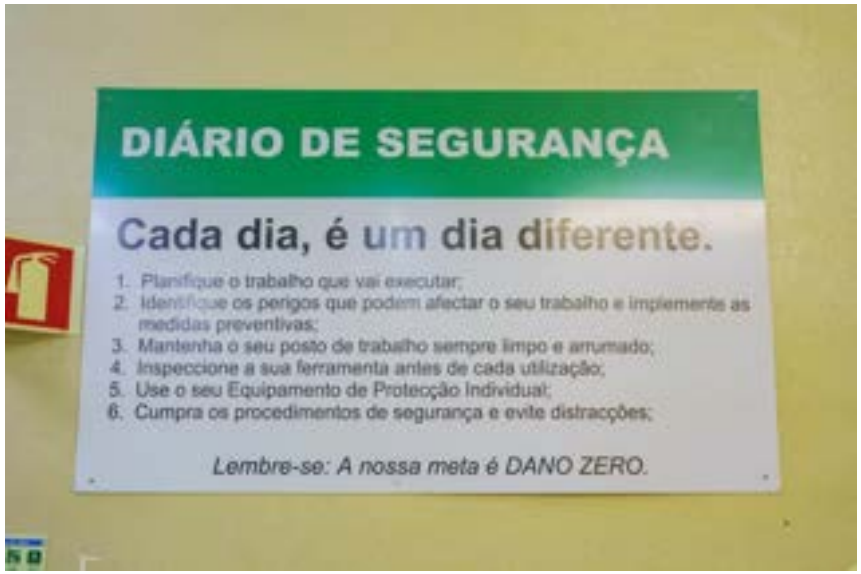


8. Ongoing refurbishment of unit 2.

9. Turbine unit 3.

10. Drums for oil storage in the powerhouse

11. HCB celebrates its 50th anniversary in operation in 2025.



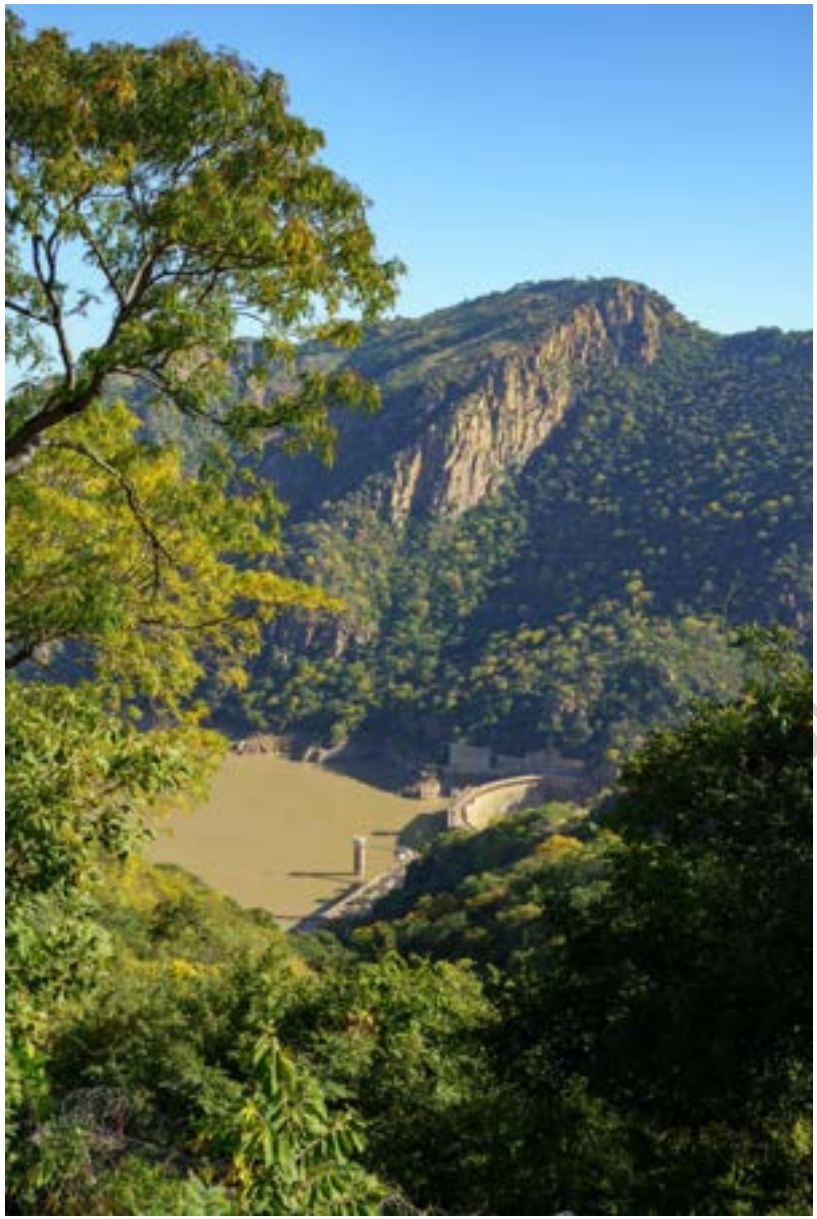
12. Safety work practices sign outside main power-house control room.

13. The extreme drought has stranded the HCB boat.

14. The HVDC Substation.

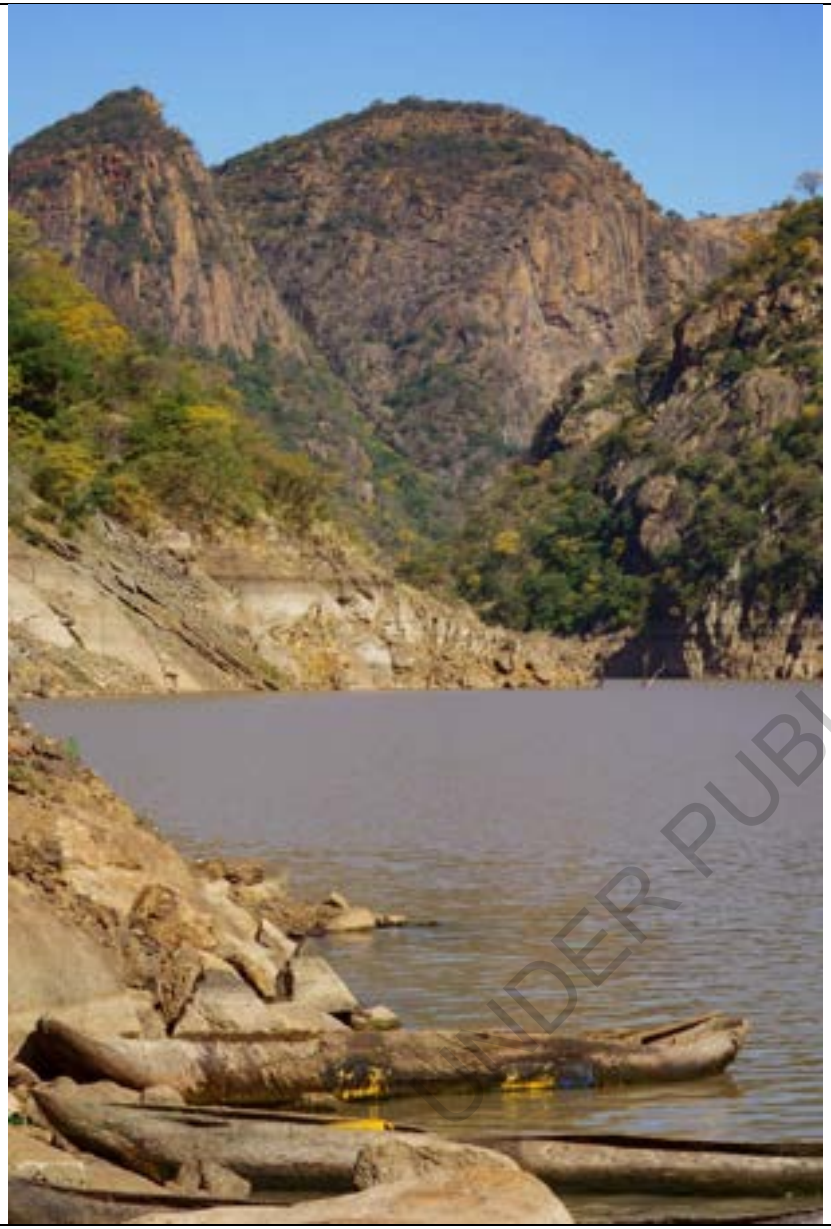
15. The left (north) bank just west of the dam.

16. Local fisherman on the reservoir.

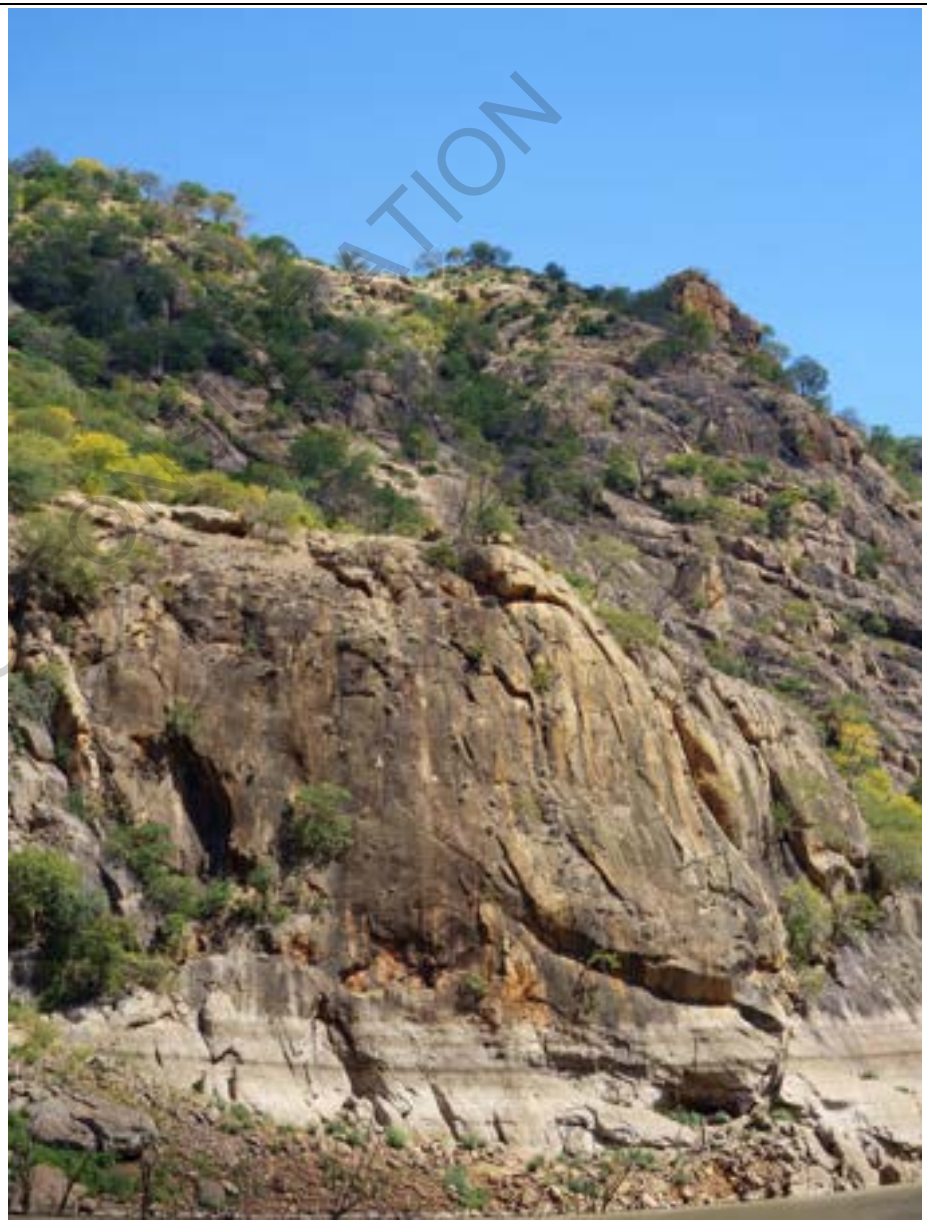


17. Cahora Bassa dam from above.

18. Outgoing power lines from the Cahora Bassa substation.



19. Local fishing boats and the gorge at Cahora Bassa.



20. The right (south) bank of the Cahora Bassa reservoir near the dam.

21. Fish-farming on Cahora Bassa reservoir.

22. Kapenta boats on the reservoir.

23. Moringa Bay Lodge and Kapenta boats.

24. The expanse of the Cahora Bassa reservoir.

25. Women fishing off an island in the reservoir.

26. Young fishermen on the Cahora Bassa reservoir.

27. Low-yielding agricultural land near the reservoir.

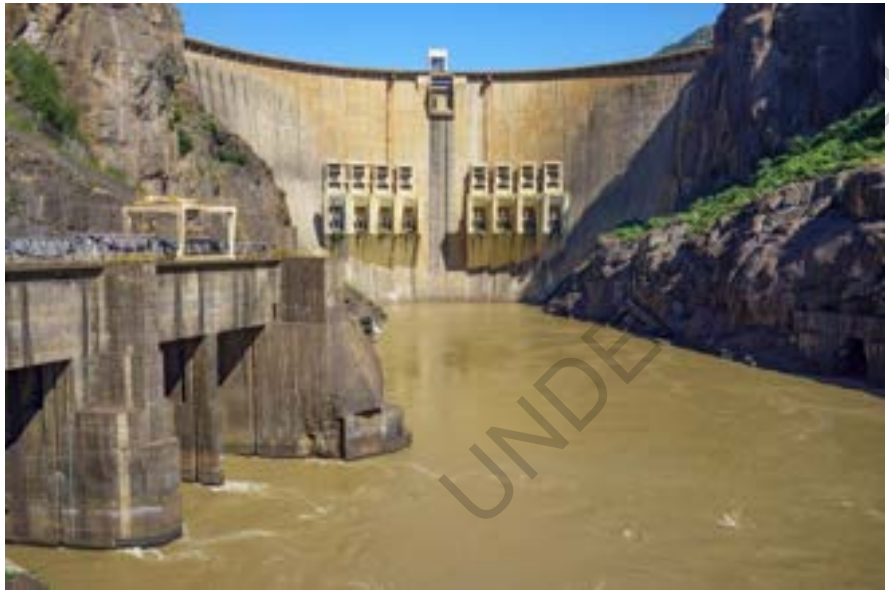
28. Low-yielding agricultural land near the reservoir.

29. The Cahora Bassa reservoir just west of the dam.

30. The Cahora Bassa dam from the reservoir.

31. Safety signage at the Cahora Bassa substation.

32. Assembly point at the substation and main HCB offices.



33. The South Bank power-station tailrace and the dam from downstream.

34. The Zambezi Gorge downstream the power plant.

35. Matambo substation (new part).

36. Matambo substation (old part, refurbished).

37. The old defunct primary school at Acampamento Africano.

38. An illegal house by a sign banning houses, Acampamento Africano.

39. Settlement at Acampamento Africano (with signage banning housing).

40. Settlement at Acampamento Africano.

41. Signage banning sand and rock extraction at Acampamento Africano.

42. Sign banning the cutting of logs in the concession area.

43. Sign banning agriculture, but with a maize field in the back.

44. Settlement at Acampamento Africano (with signage banning housing).

45. Zambezi recession agriculture at Nova Ponte, Tete, looking upstream.

46. Detail of the Sandawana artwork in Songo.

47. Detail of the artwork at Rotunda da Liberdade in Songo.

48. Kapenta boats on the shores of the reservoir.

49. Aquaculture on the reservoir.

50. Songo Rural Hospital – Main Building

51. Rongo Rural Hospital – Pediatric Unit

52. Songo Rural Hospital – Maternity Unit

53. Songo Hospital – Future Surgery Centre

54. HCB's Health Clinic in Songo - laboratory

55. HCB's Health Clinic in Songo – patient room

56. The office of the Mágoè National Park administration

57. View towards the reservoir from just below of the Mágoè National Park Office (this whole area is flooded when the reservoir is full).

58. Security sign before entering the powerhouse.

59. Emergency assembly point sign.

60. HCB's chemicals-storage warehouse.

61. HCB's Values and Strategic Objectives in the HCB Events Pavilion.

62. Internal communication to HCB staff exposed inside the power-house.

63. Colour-coded waste separation bins for environmental management.

64. HCB policies displayed in the Maputo HCB Office.

65. Construction of the new houses for HCB workers in Songo.	66. Meeting, Songo Admin. Officer and the First-level Community Leader
	
67. Public notice for ongoing construction contracted by HCB.	