



CES ENVIRONMENTAL CONSULTING IN MOZAMBIQUE

CES was established in 1990 when we were involved as lead consultants for a large mineral mining environmental impact assessment in South Africa.

CES started working in Mozambique in 1995, on a large mineral mining EIA in Zambezia Province, and have been involved in projects in Mozambique every year since then.

We are well acquainted with the EIA process and regulations in Mozambique. CES opened an office in Maputo in early 2012 to consolidate our presence in Mozambique. We are a certified environmental assessment consultant with the Mozambique environmental agency, MTA (License Number 17/2022). CES is also registered with DINAB (License Number 0099EC/2023) as a resettlement planning consultant.

We are able to offer a wide range of environmental and social advisory services in Mozambique, including:

- ✓ Environmental, Social and Health Impact Assessments (ESHIA's);
- ✓ Environmental and Social Impact Assessments (ESIAs);
- ✓ Environmental and Social Management Plans (ESMPs);
- ✓ Environmental Risk Assessments;
- ✓ Environmental Auditing;
- ✓ Environmental Monitoring;
- ✓ Cultural Heritage Assessments;
- ✓ Health Impact Assessments;
- ✓ Social Impact Assessments (SIAs);
- ✓ Socio-Economic Baseline Studies (SEBS);
- ✓ Resettlement Plans (RPs);
- ✓ Biodiversity (fauna, flora, aquatic & estuarine), Screening Reports, Impact Assessments, Management Plans & Monitoring Programmes; and
- ✓ Climate Change Risk Assessments, Carbon Credit Calculations & Carbon Emissions Calculations



Our principal area of expertise is in assessing the impacts of development on the natural, social and economic environments and in so doing we have made a positive contribution towards environmental management and sustainable development in Mozambique and many other African countries.

CES staff are all exceptionally well qualified, with many being recognised experts in their particular disciplines. Several of our staff hold PhD degrees, and most have post-graduate qualifications in the environmental and social sciences.

For more information see www.cesnet.co.za



A SELECTION OF ENVIRONMENTAL WORK UNDERTAKEN BY CES FOR VARIOUS CLIENTS IN MOZAMBIQUE

Kenmare Moma titanium mineral sands mining projects, Nampula Province (2000 - current)

We have provided E&S advisory services to Kenmare Resources since conducting the first ESIA and Resettlement Plan (RP) for their heavy mineral mine at Moma in 2000. We prepared additional ESIA's for the main 250km powerline between Nampula and the mine, the Phase II expansion and the scoping studies for the Phase III expansion. The latter includes three new deposits along a 70km length of coastline.

In 2010 CES was contracted to assist the mine to meet their commitment to comply with the IFC Performance Standards (2006). This assignment involved a comprehensive E&S gap analysis and extensive technical guidance on development of an IFC-compliant Environmental and Social Management System for the mine. Full compliance was achieved in 2011 and CES has

completed a gap analysis against the updated 2012 IFC Performance Standards.

We have also been actively involved in the development and execution of annual monitoring programmes for the facility including wetland biomonitoring, terrestrial biodiversity monitoring, air quality monitoring, review of water quality monitoring data and regular marine ecological & fisheries monitoring.

The rehabilitation strategy and plan for the mine were also developed by CES who have also been involved in auditing the success of rehabilitation efforts prior to return of the mined areas to the local communities. CES was appointed in 2017 to undertake the ESIA reporting and resettlement planning for the Pilivilli deposit that forms part of the larger Phase III expansion. This project received authorization in 2019 and the project was commissioned in 2020. Subsequently, CES completed an addendum to the original ESHIA for the incorporation of an additional



mining area. CES is currently in the process of completing two large ESHIAs and two RPs for Kenmare's Nataka Deposit.

Suni Resources Balama & Montepuez graphite mining projects, Cabo Delgado Provinces (2016-2019)

Suni Resources S.A., a Mozambican subsidiary of the Battery Minerals Group, intended to develop a graphite mine in the district of Balama in Cabo Delgado Province, northern Mozambique. ESHIA was undertaken by CES for the Balama Central Project which is located approximately 6km south- east of the town Balama and 56km south-west of the town of Montepuez.

Triton Minerals Nicanda Hills and Ancuabe graphite mining projects, Cabo Delgado Provinces (2014-2018)

CES conducted an Environmental, Social and Health Impact Assessment (ESHIA) to International Finance Corporation (IFC) Performance Standards for the Grafex graphite mine located near Ancuabe, Cabo Delgado. The ESHIA provided information about the proposed mine and its associated infrastructure, the legal framework in which this occurred, a summary of the baseline studies that had been completed to assess the project, and an outline of the ways in which stakeholders were involved in the ESHIA process (public participation). It also provided an assessment of impacts on the natural and social environment and presented recommendations to mitigate these effects and risks. Further detail on those recommendations were presented in an Environmental and Social Management Programme (EMPr) that was a separate report volume.

In addition, a preconstruction monitoring programme was set up and implemented by CES and relevant sub-consultants. The program included surface and ground water quality monitoring, air quality monitoring, vegetation and faunal monitoring and weather monitoring. Grafex staff were trained onsite to continue the monitoring during construction and operation.

(CES) was also contracted to conduct a Resettlement Plan (RP) for the mine footprint area of 9,000ha. This involved

household-level (census) and farmland surveys. Apart from using enumerators, CES also ensured the active participation of community members to allow the enumerators to gain an understanding of the area and where the machambas were located. Each enumerator was therefore paired with a community representative and was assigned to survey a particular area. District, provincial and national government technicians provided overall supervision.

Forestry Environmental and Social Management System (ESMS) and Audits, Niassa and Cabo Delgado Provinces (2015-current)

CES conducted annual ESMS performance audits on Green Resources forestry operations in Lichinga, Niassa Province, Nampula and their Ugandan and Tanzanian operations) on behalf of a number of European banks funding the project. This involved monitoring and reporting on company compliance to the ESMS and associated action plans, along with providing technical assistance to the company and its personnel.

Capitol Resources: Tete iron ore, steel and vanadium project ESHIA & RP (2013-2018)

CES conducted an ESHIA for the Tete iron ore project (which included a 48km haul road and power line corridor) for Capitol Resources Ltd (Member of the Baobab Group). The ESHIA was approved by MTA in 2016. Following that, CES conducted an addendum ESHIA for the project when a power plant, steel and vanadium making facility were added to the project infrastructure.

CES was also appointed to update an existing Resettlement Plan (RP) for the Tete Iron Ore Project to meet international good practice industry standards.

Eco Farm Sugar Mill, Sofala Province (2014-2016)

CES conducted an ESIA for the EcoFarm Irrigation and Organic Sugarcane Project in the District of Chemba, Sofala Province, Mozambique. The ESHIA and supporting documents were completed in 2014 and were not submitted to the Ministry or subjected to public disclosure due to the expansion of the scope of work to include a



sugar mill and power plant. CES produced an Addendum ESHIA to accommodate these changes, and the reports and supporting documents were submitted and approved by the local authorities.

Sasol Nhangoza Coastal Stream Critical Habitat Biodiversity Assessment, Inhambane Province (2015)

In 2014, an ESIA for an expansion of the Natural Gas Project in Inhambane Province, Mozambique identified a 'Critical Habitat' within the area of direct influence of the project. It was argued that the Nhangonzo coastal stream, which lies due west of Bazaruto Island, together with its catchment, which drains an area of some 4,339 ha, meets the IFC criteria for a Critical Habitat. CES was contracted to provide a Critical Habitat Assessment and second opinion of the site using the IFC performance standard guidelines.

Petroleum Geo-Services (offshore 3D seismic survey in the Zambezi Basin (2015)

CES conducted the ESIA for the proposed oil and gas offshore seismic surveys in the Zambezi basin on behalf of the client who is a European based oil and gas sector service provider.

Crookes Brothers ESMS and Resettlement Action Plan development, Zambezia Province (2015 - 2016)

CES was appointed to develop an Environmental & Social Management System (ESMS) and RP for Crookes Brothers. The operation is a grains, fruits and nut growing agricultural operation located near the town of Gurue.

Green Resources Forestry, Niassa and Cabo Delgado Provinces (2012-2016)

In 2014 CES completed the EPDA and ESHIA for the establishment of 30,000 ha of new forest plantations in Niassa Province (Lichinga) for Niassa Green Resources. In 2015 CES upgraded the Lurio Green Resources' ESIA to lenders standards for the establishment of a 126, 000 ha of new hardwood forest plantation. This upgrade included the production of a Global Resettlement Framework, Pilot RP, Site Specific templates for ESHIA and ESMP, training and various management plans including a Monitoring Plan, Cultural Resource Management Plan, Grievance Mechanism and a

Stakeholder Engagement Plan. These studies were completed to comply with Mozambican standards, as well as international standards (IFC; African Development Bank; European Investment Bank; Forest Stewardship Council Policy and Standards; Climate, Community and Biodiversity Alliance Standards; and the Clean Development Mechanism Project Standards and activities).

Syrah Resources graphite mining project, Cabo Delgado Province (2013-2015)

CES conducted an ESHIA for the proposed Syrah Resources graphite mine located outside Balama in the Montepuez District. In addition to the ESHIA, CES produced the RP and ESMP documents for submission to MITADER (now MTA). The project was approved in 2015 and is currently in full operation.

Mozambique Anchor Tourism Investment Programme (2009-2010)

The Government of Mozambique identified a number of tourism sites as part of a joint initiative with the Ministry of Tourism and the IFC. The objective of the program was to secure quality tourism investments in Mozambique through the development of eco-tourism, and tourism resort development. CES were appointed by the IFC as the lead consultant and used a strategic framework approach to identify sustainable development options on two sites identified by the Anchor Program, at Crusse / Jamali in Nampula Province and Inhassoro in the Inhambane Province. Several environmental and social studies were undertaken to identify opportunities, risks and constraints for sustainable tourism. This approach was developed to help ensure that all positive outcomes of the development process could be enhanced, and that the environmental and social constraints of the site would be considered in designing future tourism ventures at the sites.

Grown Energy bio-ethanol project, Sofala Province (2007 – 2011)

CES originally prepared two comprehensive pre-feasibility assessments for two sites selected for the proposed development of a bio-ethanol plantation and processing facility near the Zambezi River. A preferred site was selected and CES completed the EPDA, Specialist Reports and ESHIA for this site. The reports



met all national and international requirements and were well received by the Dutch Development Funding Institute, the FMO.

GS Cimentos, cement quarry and factory, Maputo Province (2010)

The GS Cimentos project comprised two parts, the first a limestone quarry in the Bela Vista / Salamanca area of the Matutuine District in Maputo Province, and the second a cement manufacturing plant, located in the Beluluane Industrial Park near Maputo. CES prepared both ESIA's, and all but two of the specialist studies.

AECOM Africa (PTY) LTD , 2Africa Subsea Cable Project (2021)

The 2Africa Submarine Cable System involves the installation of a submarine cable system that will greatly enhance connectivity across Africa and the Middle East. At 37,000 kilometres (km) in length, 2Africa will be one of the world's largest subsea cable projects and will interconnect Europe, the Middle East, and 21 landings in 16 countries across Africa. 2Africa is being implemented by a consortium of companies, which for Mozambique includes Vodacom Mozambique ('Landing Provider'). CES completed the Environmental & Social Impact Assessment in Maputo and Nacala, Mozambique, for the proposed Subsea Cable Project. CES conducted a full ESIA study (from the application to the ESIA Phase) including Public Participation Process and stakeholder engagement.

Rio Tinto baseline ecological study, Inhambane Province (2009)

CES prepared a baseline ecological study in two areas located along the coastline between Xai Xai and Inhambane, as part of an Order of Magnitude study. Studies included vegetation and biodiversity assessments, wetland ecology, fish, aquatic invertebrates (the study area has significant coastal lakes) and water quality monitoring. The information, together with other technical and geological information was used by Rio Tinto to decide on whether to move forward to pre-feasibility.

SABMiller plc and Cervejas de Mocambique Brewery in Nampula, Cabo Delgado Province (2008- 2010)

CES completed the ESIA process for the proposed construction of a brewery in Nampula, Mozambique.

Corridor Sands Limitada heavy minerals sands mine, Chibuto, Gazi Province (1998- 2002)

CES completed the Full Environmental Feasibility Study, which assessed all environmental and social impacts related to establishing a large scale integrated heavy mineral sands mine, mineral separation plant and smelter operation in the Chibuto district. CES coordinated and managed the entire EIA process, provided specialist input into a number of baseline studies, and managed and coordinated the production of the specialist volume. In addition to this, CES completed additional EIAs for this project for a power line, rail link and bulk cargo facility.

TiGen heavy minerals sands mine, Zambezia Province (1995- 1999)

This project was initiated in 1995 with a pre-feasibility environmental assessment for a proposed heavy mineral mine in the Moebase area of Zambia Province. Subsequent to this, CES managed the entire ESIA process, and undertook six of the 14 specialist studies in house. The EIA was one of the first large scale EIAs undertaken in Mozambique, and when initiated pre-dated legislative requirements. An environmental licence was issued, but BHP Billiton did not proceed with the project.

Electricidade de Moçambique E.P. (EDM), Consultancy Services for the Mozambique Temane Transmission Project: ESMS Support (2021-2022)

Electricidade de Moçambique E.P. (EDM), is developing a 400-MW Independent Power Producer project at Temane in the Inhambane Province of Mozambique. CES assisted EDM develop an integrated Environmental and Social Management System (ESMS) as a reliable and systematic approach to manage, oversee, and report on E&S performance of their growing number of projects. EDM intend to attain ISO 14001 and 45001 Standard certification for the ESMS, and the system therefore covers all Occupational Health and Safety (OHS) requirements relevant to the Project, and EDM's overall operations and activities.



Sofala Mining & Exploration Limitada, Simplified Environmental Assessment for Heavy Mineral sands prospection (2021)

Sofala Mining & Exploration intend to prospect for two Heavy Mineral sands licences. In order to undertake exploration and prospecting activities, an environmental license must be obtained to ensure compliance with the Mozambican Law. CES was contracted to undertake a Simplified Environmental Assessment (SEA study). This involved identification of communities impacted by activities, undertaking public meetings to notify them of the project and potential impacts, and assessing the social and ecological impacts of the activities on the environment. The scope of work also covers the preparation and submission of an Environmental Management Plan (EMP) for the exploration activities.

Wihanahah Investimentos Sa, Simplified Environmental Assessment for the

Wihanahah Investments SA intend to prospect for graphite within their exploration license area located north of the Balama district in Cabo Delgado province. CES was contracted to undertaking a Simplified Environmental Assessment (SEA) required to obtain an environmental license. The work involved identifying communities impacted by activities, undertaking public meetings to notify of the project and potential impacts, and assessing the social and ecological impacts of the activities on the environment.



Undertaking a survey for a Fisheries Assessment with fisherman in Nacala Porto

Motivation Books