EOH Coastal & Environmental Services

Expertise in the Water Sector

EOH COASTAL & ENVIRONMENTAL SERVICES (CES) specialises in impact assessments and environmental management.

We were established in 1990 when we were involved as lead environmental consultants for a large mineral mining Environmental Impact Assessment (EIA) on South Africa's eastern coast. Since then we have diversified our activities into a range of sectors by expanding our capacity and areas of expertise.

Many of our environmental and social impact assessments have involved assessing project-related impacts on some aspect of the water environment, whether it is the quantity and quality of surface and groundwater resources or the impacts on potable water supplies and aquatic ecosystems. These assessments were the subject of specialist studies.

Our studies on the water environment include specialist input into numerous EIA's, especially on the quantity and quality of surface water resources, and we have also completed EIAs on dams and water supply schemes.

Other projects have focused on the assessment of the environmental and social impacts of water resources and water supply developments, such as dams, pipelines, and water and wastewater treatment facilities. In in recent years we have undertaken a number of projects specifically related to hydroelectric power projects (HPPs).

For more information see **www.cesnet.co.za**

Specialist studies as part of larger assessments

EOH CES specialists have conducted studies on various aspects of the water environment as part of larger environmental and social assessments, including:

Surface and Groundwater Assessment for:

- The FQM Trident mine site, Zambia.
- A 2 860ha sugar cane irrigation / cattle ranch project ESIA, Mozambique, for EcoFarm Mozambique Lda.
- Zirco's heavy mineral mine, Northern Cape Province, South Africa.

Aquatic Ecology and Surface Water Quality Baseline Surveys for:

- The Tete Iron Ore Mine ESIA, Mozambique, for Capitol Resources.
- Syrah Resources' graphite mine in Northern Mozambique. The Bisie Tin Mine ESHIA, Democratic Republic of Congo, for Alphamin Resources Corporation.
- Triton Minerals' Nicanda Hills graphite mine, Mozambique.
- The Ancuabe Graphite Mine, Mozambique, for Graphit Kropfmühl (GK).

Analysis of water quality data to derive guidelines for freshwater aquatic ecosystems. Kenmare's Moma heavy mineral mine, Mozambique.

Determination of environmental water requirements for the Musanghezi and Chisola rivers on the FQM Trident mine site, Zambia.

Wetland assessment for Mooi-Mgeni Transfer Scheme, Phase 2 pipeline route for the Trans-Caledon Tunnel Authority.

EIA's specific to the water sector

We have acted as lead Environmental Assessment Practitioner for the following EIA's and Basic Assessments:

Water supply schemes:

- Ndlambe Local Municipality Water Supply Scheme (production boreholes, pipelines and balancing and service reservoirs) Eastern Cape Province, South Africa.
- Mooi-Mgeni Transfer Scheme, Phase 2, a large diameter pipeline and appurtenant works (river intake, pumping station, valve chambers, break-pressure tank and river outlet) from Springgrove Dam to the Mpofane River, in the residential Kwazulu-Natal midlands of South Africa, for the Trans-Caledon Tunnel Authority.
- Biological and archaeological baseline assessment for the construction of Polihali Dam, for the Lesotho Highlands Development Authority.

- Sidwadweni Water Supply Scheme, including bulk pipelines, village reticulation systems, and RC service reservoirs, in the rural Eastern Cape Province, South Africa, for Amatole Water.
- Basic Environmental Assessment for bulk water supply infrastructure (pumping stations, pipelines and service reservoir) for Amatole Water's Albany Coast System
- Phase 2 of the Debe Water Supply Scheme (water treatment works upgrade, pipelines and security) Eastern Cape Province, South Africa, for Nkonkobe Local Municipality.
- Construction of Gcuwa Dam for Eastern Cape Development Corporation.
- Lusikisiki Water Supply Scheme in the Eastern Cape.

Wastewater Treatment Works:

- Upgrade of Port Elizabeth's Fishwater Flats Wastewater Treatment Works, Eastern Cape Province, South Africa to increase treatment capacity and improve effluent quality.
- Healdtown College wastewater treatment works, Eastern Cape Province, South Africa.
- Basic Environmental Assessment for the Tarkastad Local Municipality wastewater treatment works upgrade, Eastern Cape of South Africa. CES is also the ECO for the construction work.

Environmental Control Officer Services:

- Aurecon Port Alfred Water Treatment Works which forms part of the Ndlambe Bulk Water Scheme.
- Expansion of Port Alfred water treatment works.

In addition we have completed a large number of water use licence applications for submission to the South Africa Department of Water & Sanitation.

Hydroelectric Power Projects (HPP)

Environmental and Social compliance review to WBG Operational Policies and IFC Performance Standards for the 600-900MW Kafue Gorge Lower HPP, Zambia. Assessment included determination of environmental water requirements of the lower river, and modelling and field tests (using releases from the upper dam) to determine the impacts of peaking power releases.

Environmental and Social Compliance Review to IFC Performance Standards, International Hydropower Association Sustainability Guidelines and World Commission on Dams recommendations on the 40MW Kabompo Gorge HPP in the North- Western Province of Zambia.

Environmental and Social Compliance Review to IFC Performance Standards for the 15MW Pungwe 'B' HPP, Pungwe River, Honde Valley N-E Zimbabwe.

Rectification Application in terms of South African NEMA Section 24G and basic assessment for a micro-HPP on the Boschendal wine estate, Western Cape.

Environmental Impact Assessment for a 40MW run-of-river HPP on the Orange River, which uses the elevation difference over the Augrabies Falls as the driving head. The project is extremely sensitive because of its proximity to a national park.

EOH Coastal & Environmental Services

OFFERING ENVIRONMENTAL & SOCIAL ADVISORY SERVICES ACROSS AFRICA

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