

Water Resource Associates

A network of consultants in hydraulics, hydrology, groundwater & environmental issues

Project title: Hydrological studies in support of hydropower development in Mozambique.

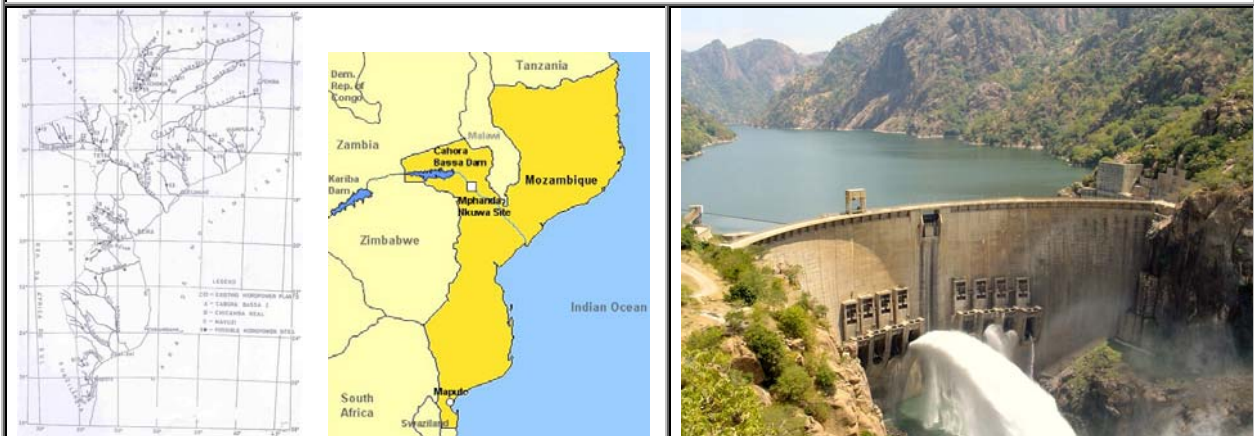
Summary: WRA were involved in a number of studies in Mozambique aimed at increasing hydro-electric power generation in the country during 2007 and 2008.

Client: Various	Financed by: Government of Mozambique
Period of assignment: 2007-2008	Location: Whole country, but concentrated on Cahorra Bassa dam
Project Value: not known	WRA services: £47,000
In co-operation with: Nippon-Koei, Norconsult, Atkins	

Background: Mozambique has an expanding domestic energy demand, and has the potential to supply hydropower to surrounding countries. WRA has been involved in a number of Cahorra Bassa dam was constructed in 1975, but never provided full potential energy output due to civil disturbance in the country, with the transmission lines to the capital Maputo and to South Africa being regularly sabotaged. Full output has only be achieved since about 2001, and the dam and associated generating plant were been acquired from the Portuguese financiers and operators in 2007 (with WRA contributing to the Due Diligence study).

There is now a plan to install a second power station on the north bank. WRA contributed hydrological inputs to this feasibility study, and to design of a subsequent EIA study of the facilities.

A second WRA contribution was to a national generation study, where we provided flow estimates for a number of potential new hydropower schemes as part of an initial identification of feasible new schemes.



Potential new hydropower sites in Mozambique (left), location of Cahorra Bassa (centre) and view of the dam from downstream (right). The central map also shows the location of the proposed Mphanda Nkuwa site, one of the potential new sites studied as part of the national power generation study.

Scope of work by Water Resource Associates Ltd.

WRA provided hydrological inputs to both the Cahorra Bassa north bank feasibility study and was responsible for all hydrological aspects of the national power generation study. One major problem with the hydrology of Mozambique is that the civil disturbances from the late 1970s to mid 1990s led to significant breaks in rainfall and river flow data collection, and there are few reliable long-term rainfall or flow records available.

Results

Proprietary knowledge of the Government of Mozambique.

Project Numbers 000182, 221 & 223,

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