



PROJEKT: Short Term Emergency Program for the Upgrading of the Treatment Facilities at Tubli WPC - Environmental Impact Assessment

LAGE: Tubli, west of Manama, Kingdom of Bahrain

AUFTRAGGEBER: Ministry of Works

ZEITRAUM: 2007 - 2013

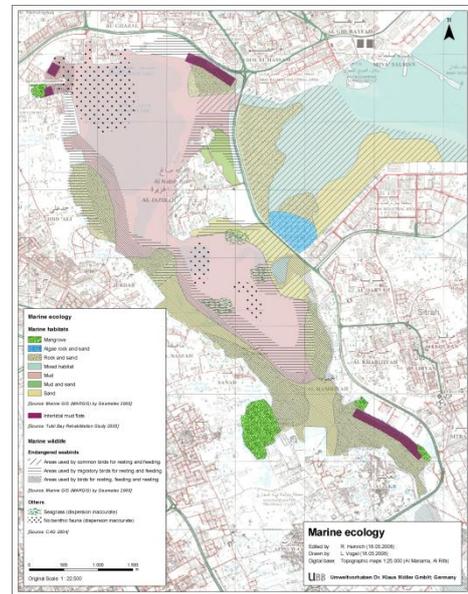


BACKGROUND:

The Water Pollution Control Centre (WPC) at Tubli/ Kingdom of Bahrain needs to be upgraded due to the increasing hydraulic and organic overloading conditions and the poor quality of the final treated effluent. Additional quantities of wastewater are expected in future.

The major objectives for the extension of the Tubli WPC are to allow full unrestricted and sustainable utilization of the final Treated Sewage Effluent for agricultural purposes and to avoid carry-over of sludge to protect Tubli Bay.

Tubli Bay as receiving water body is a highly sensible flat coastal bay with very low water exchange rates. It is an important and internationally acknowledged area for resting, nesting and feeding of migratory birds. The last mangroves of Bahrain can be found here. The remaining seagrass beds are a possible habitat for turtles and dugongs.



BASIC DATA:

- Average daily flow: 350.000 m³/d or 1.000.000 PE (planning state 2008); 400.000 m³/d (2012)
- Outflow: 100% tertiary treated effluent, fully unrestricted use for irrigation and additional outflow to sea.
- Project Duration (EIA): 10/07 - 06/08, update of EIA Report 08/12 - 08/13
Client: Kingdom of Bahrain, Ministry of Works
Main consultant: p2mberlin GmbH.



OBJECTIVE:

- Main objective of the EIA was to describe the state of Tubli Bay and to estimate the future reduced impact of the discharge from the WWTP
- Other important aspects are the impact on the neighbourhood (emission control measures) and
- Possibilities for reuse of treated wastewater and sludge

ACTIVITIES:

- Screening Forms, Scoping Report, Scoping Meeting, Final Report, Final Presentation

