

Gash Delta Crash programme



Local embankment protection



Reconditioning of smaller canals

Every year, the rainy season brings to life the Gash river that ends in a delta in the desert north of Kassala, in the Sudan. During that short period, a network of irrigation canals is fed via a number of inlets on the West bank of the river. The water spills over from these canals and covers the surrounding farmland with a top layer of fertile soil. As soon as the water recedes, farmers can sow and harvest first durra and then watermelon.

There is, however, a twofold problem:

- The sheer turbulence of the water as it begins to fill up the dry riverbed and the gradual raising of the bed levels in the smaller irrigation canals as a result of silt deposit.
- Moreover, a massive breach in the river embankment at one point further jeopardized the Northern part of the irrigation system.

DEMAs was invited to investigate ways of rehabilitating and improving the water flow through the canals so that local agricultural production could increase.

There was little time available for the proposed crash programme. Fortunately, a local contractor and the local authorities were able to supply all the necessary bulldozers, scrapers and excavators. The West bank had to be reinforced at the point where the burst had occurred, and 56.8 km of river-canals had to be deepened and their embankments reinforced. Thanks to an 18 hours' working day (3 shifts) the entire programme was completed within six weeks.

The locally developed scour protection system being insufficient, various other techniques are under discussion, as any long-term solution combines erosion control and scour protection. As a first step, 1986 saw the beginning of the mapping of the entire Gash river by DEMAs on top of further dyke repair works.

Client

Ministry of Irrigation

Location

The Sudan

Year

1985

Services

- project assistance
- management training

demas
dredging consultants bv

Herbarenerf 7
2743 HA Waddinxveen
The Netherlands

Tel +31 182 546798
Fax +31 182 546802

E-mail demasn@demas.nl
Web www.demas.nl