

Water Resource Associates

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

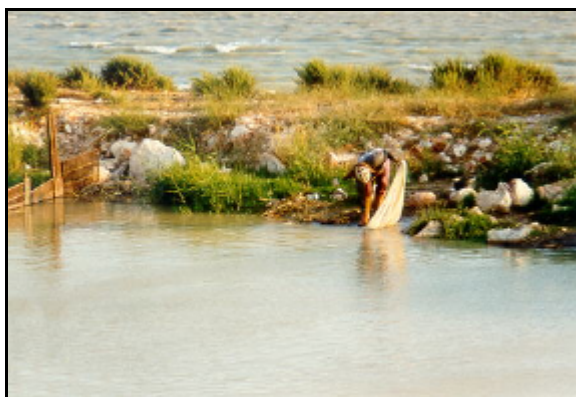
Project title: Study of Goksu Delta

Summary: As part of a project studying the Goksu Delta in Turkey a water balance model of lagoons in the Delta was established.

Client: DHKD (The Society for the Protection of Nature)	Financed by: European Union
Period of assignment: 1997	Location: Goksu Delta, Turkey
Project Value: €300,000	WRA services: Specialist Consultancy
In co-operation with:	

Background

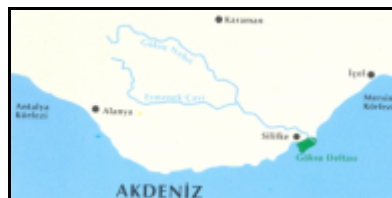
Until the development of artificial irrigation in the Goksu delta on Turkey's Mediterranean coast, there were only a few lagoons with very salty water which dried out completely in the summer. Since the development of irrigation the return water from the irrigation system has created a series of lagoons which are important for migratory birds and fishing. The overall aim of the project was to assess the long-term viability of the lagoons.



Fishing in Goksu Delta



Project Location and Specially Protected Area



Scope of work by Water Resource Associates Ltd

WRA provided a short term specialist hydrological input. Using data collected by project staff and DSI (the organisation which had developed the irrigation system) a model of the lagoons was developed. The data were sparse, at best monthly (rainfall and evaporation) and in some cases every two months (quality data in the lagoons) for a five year period. There was little information on flow between lagoons so the model was calibrated using data on levels of salinity.

Results

Despite the paucity of the data, and the need to make assumptions about the mixing of sea and irrigation water in the lagoons, the model provided a number of useful conclusions:

- The spring flow contribution was negligible.
- The lagoons would not exist without the irrigation water.
- There was little benefit to be gained from diverting extra water to the lagoons.
- There was no immediate threat to water supply to the lagoons though they were becoming eutrophied.

Project Number 000004

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