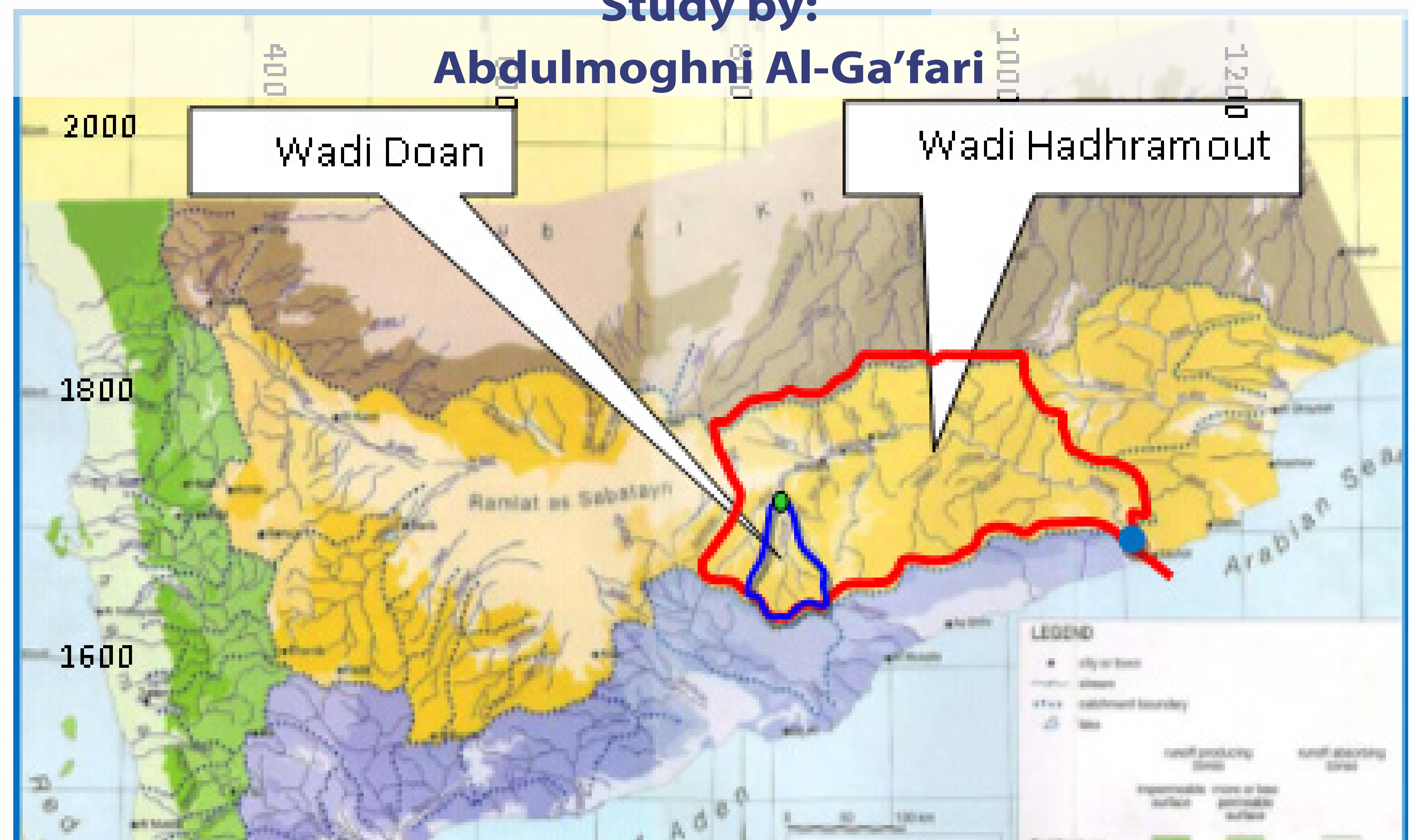




Assessment of the October 24th 2008 Flood in Wadi Doan, Hadhramout towards the Realization of IWRM

Study by:

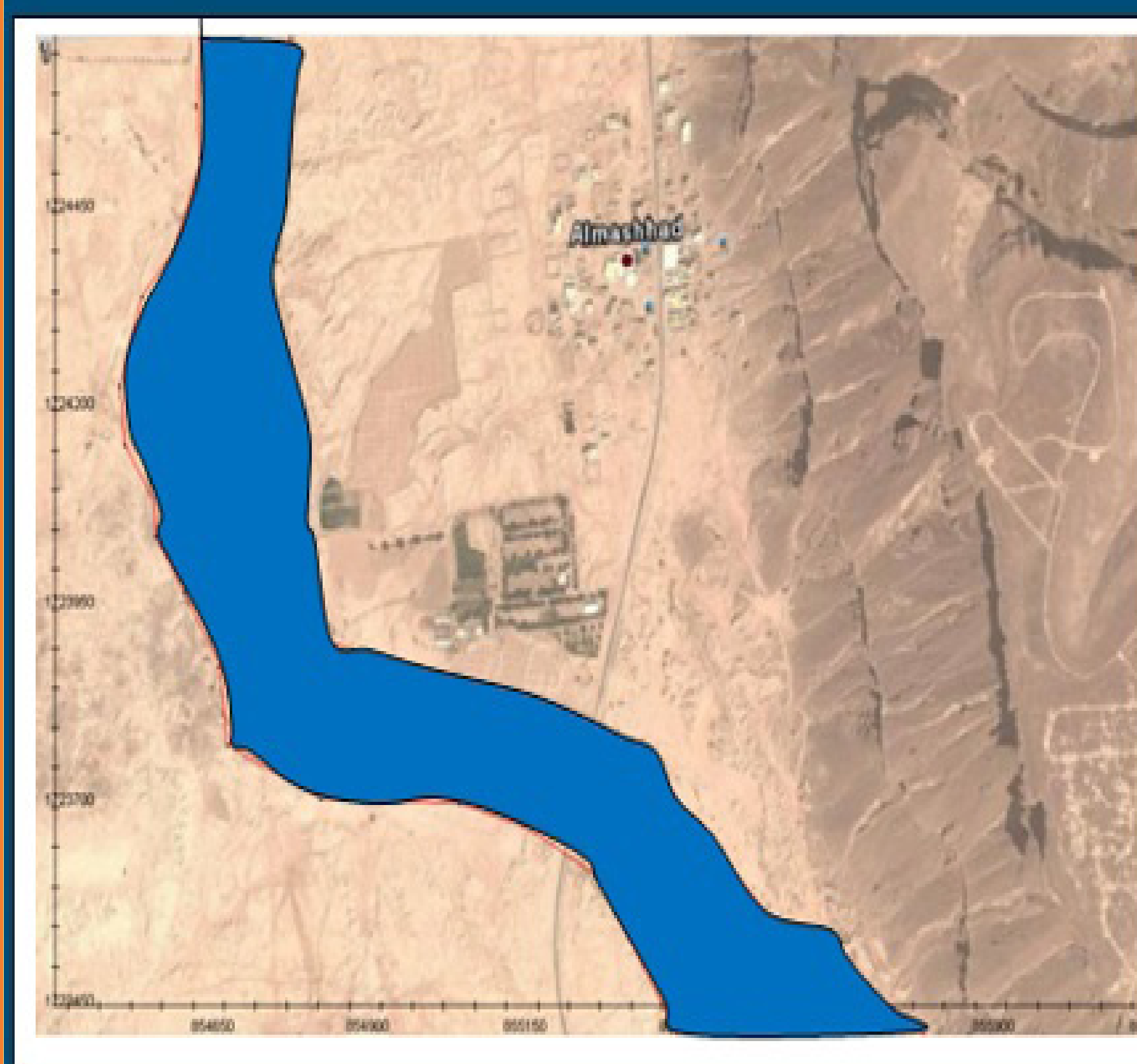
Abdalmoghni Al-Ga'fari



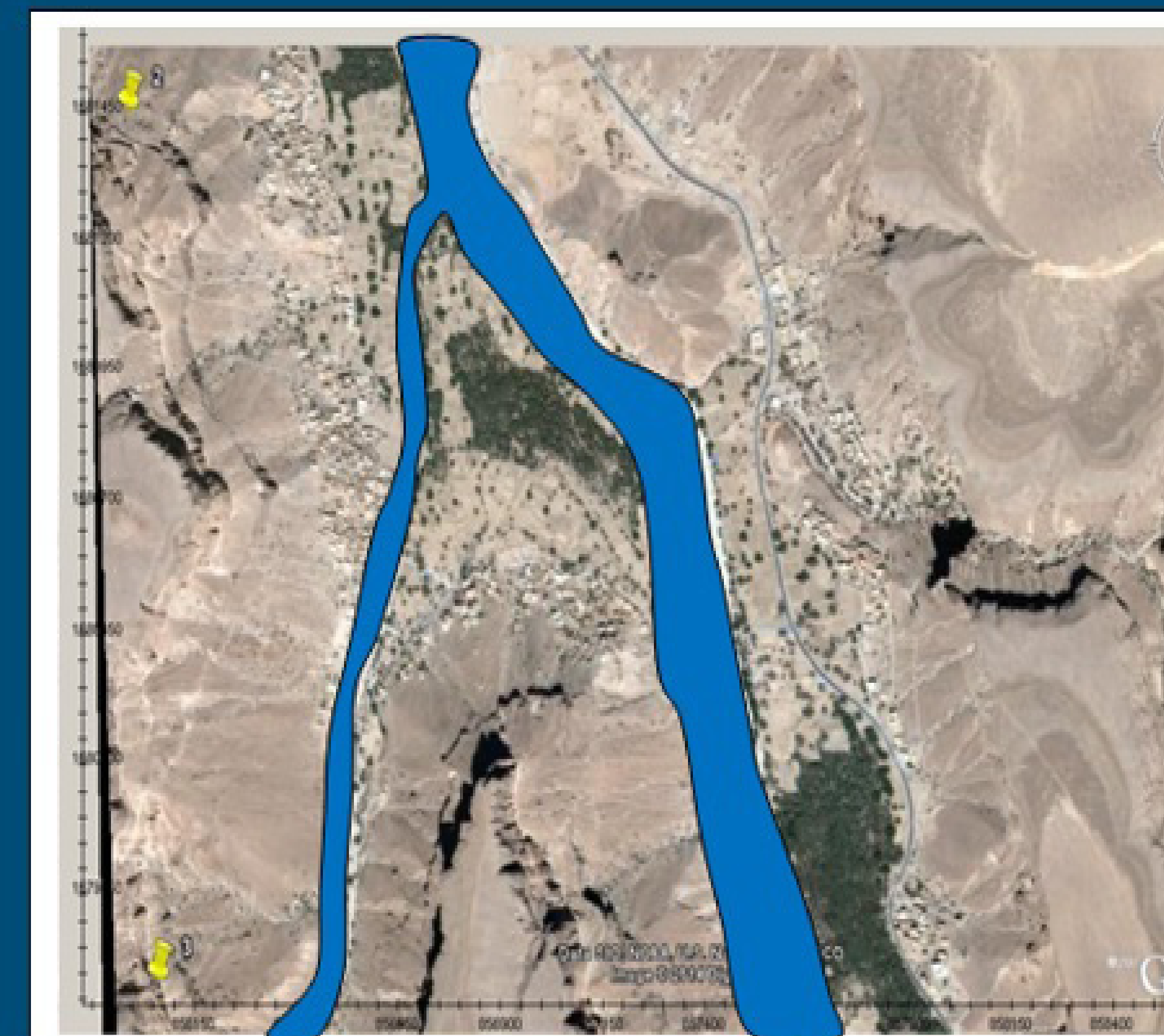
Hydrological Investigation and Field Survey



Floodplain Delineation



Floodplain for 50 year flood event at **downstream**



Floodplain for 50 year flood event at **midstream**

WHAT & WHY

The research aims to assess the natural reasons and manmade (socio economic) activities which caused the October 24th flood in the study area. It also works to determine the flood magnitude at the outlet of study area and the flood return periods (frequencies); find the different kinds of suitable structural measures and identify the nonstructural and socioeconomic considerations within the context of IWRM approach to be undertaken to mitigate and such flood impacts.

RESULTS

- The runoff estimation analysis states that the maximum annual runoff in the study area equals 164,645,630 m³, the average annual runoff equals 21,958,899 m³, and the minimum annual runoff equals 944,049 m³.
- To manage such low and mid frequency flash floods in the Wadi within the context of IWRM and to realize sustainable water resources for irrigating the agricultural areas and for enhancing groundwater recharge, several structural measures can be undertaken such as rehabilitation; and construction of new suitable structures at the outlets of sub catchment areas, and protection walls and terraces along the agricultural land banks.
- To manage and reduce the risks of such high frequency floods, some nonstructural considerations can be also carried out such as growing trees and natural pasture in the upstream areas of the Wadi; removing all obstacles from runoff streams and canals; managing such floods in integral approach within the context of IWRM; carrying out the structural and non-structural measures within a participatory approach; and implementing the land use and agricultural programs.

MORE INFO

Water and Environment Center (WEC)
P.O.Box 13886 Sana'a University -
Sana'a, Yemen
www.wec.edu.ye