Assessment of Water Demand Management in Wadi Hadhramaut

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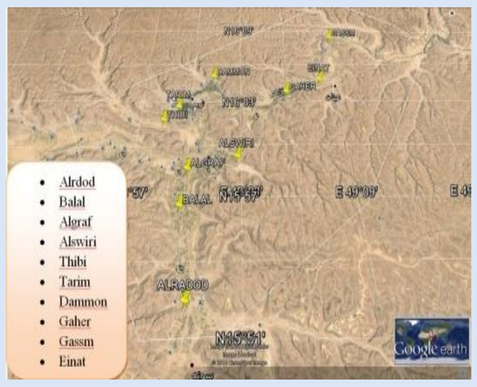
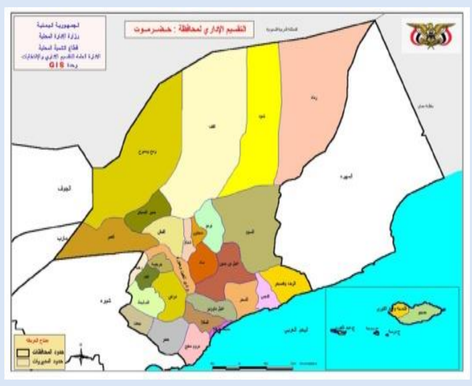
Research Problem and Objectives

This MSc Research investigated assessing of Water Demand Management in Wadi Hadhramaut Using IWRM Perspective, Case study in Tarim area .Tarim was selected as case study because it is considered the largest population, and exposed to drain a large water and groundwater pollution. There are many studies from 1952 to 2007, all of which emphasize the continuing increase in water demand for agriculture and domestic use, Poor water quality exacerbated by abstraction of brackish groundwater, decline of groundwater levels due to increasing abstraction, and Poor flood control. Main objective. To analyze the disadvantages and advantages of the current water resources management governance structures and practices, using the principles of Integrated Water Resources Management framework, in the short and long term; in order to study the suitability and profitability of enforcing the water law, introducing modern irrigation methods and groundwater recharge mechanisms in order to create a sustainable water management system in Tarim.





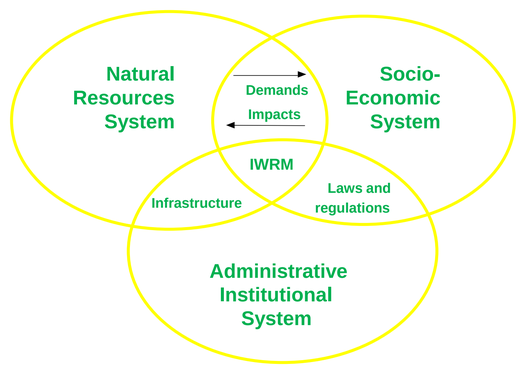
Methods

Main Work

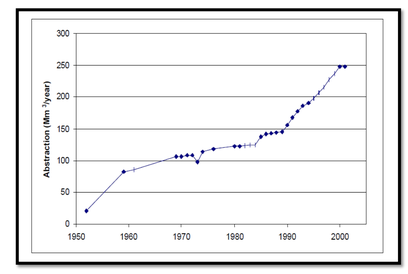
- Literature review
- Interviews
- Field visits
- Questionnaires
- Analyses

Local	Number of Domestic water use	Number of Agriculture water use	Total number of women in Domestic water use(SS* 20%=22	Total number of women in Agriculture water use 20*35%=7
Alerlod	5	2	2	1
Balal	5	2	1	-
Algraf	5	2	1	-
Alswiri	5	3	1	1
Thibi	5	2	1	1
Tarim	68	4	10	2
Dammon	10	2	3	1
Gaher	5	1	1	-
Gassm	5	2	1	1
Einat	5	1	1	-
Total	110	20	22	7

IWRM Framework



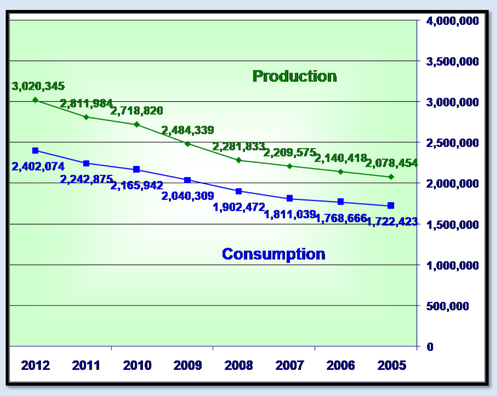
The Approach



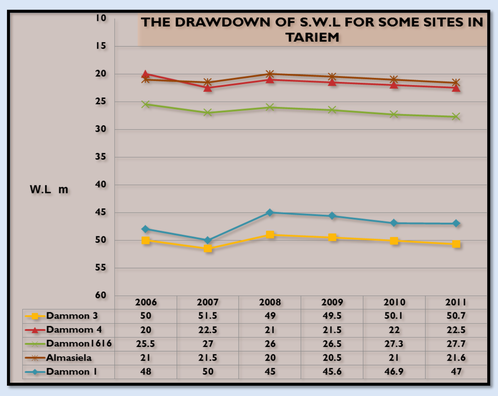
	Domestic abstraction	Irrigation abstraction	Total abstraction	Total Recharge	Water Balance
Hadramout	40Mm3	360Mm3	400Mm3	150Mm3	-250Mm3

Results

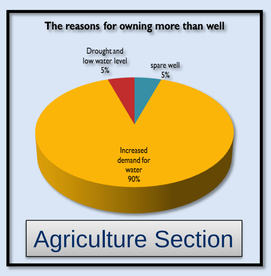
Increase water demand in domestic use

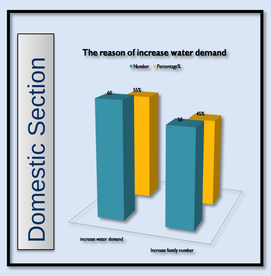


Declined water level



Causes of increased water demand





Through this assessment its show the reasons of increase water demand in agriculture and domestic uses section.

Water value inefficiency

Water value economic in agriculture is approaching to zero because of the large water attrition and the lack use efficiency, especially in large farms.

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