

Plan of presentation

1. A multi-scale problem of water governance:
2. Climate change as a catalyst for reform?
3. Propositions for multi-scale & sustainable regional governance for the Shatt al-Arab river and delta:



Date palms in the Shatt al-Arab



Traveling between date-palm plantations

1. A multi-scale problem of water governance

International disputes & tensions over the river basin and the Shatt al-Arab delta

- Lack of regional Inter-state co-operation:
 - No regional water agency dealing with water management
 - Water Data Collection, Analysis & Decision-Making predominantly at a National Scale, not at the hydrological scale
- Only punctual *ad hoc* bi-lateral co-operation on the Tigris, Euphrates hydrological basin and Shatt al-Arab river and delta.
 - e.g. 4th September 2006: Iraq & Iran announce plans of co-operation in the field of agriculture and water management
 - November 2009 - Iraq declares that negotiations with Iran over water supplies are “futile”.

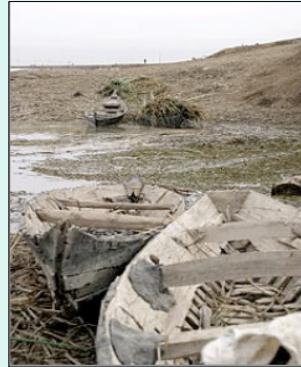
1. A multi-scale problem of water governance

National difficulties:

- National scale: bi-lateral negligence and water mining
- Iraq: Marsh drainage during Saddam Hussein rule: environmental catastrophe

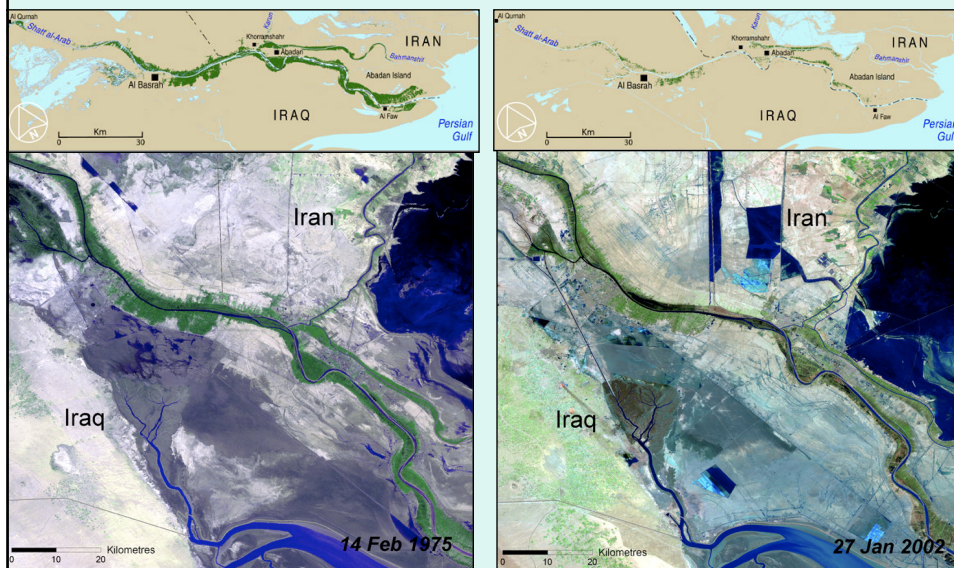


Shatt al-Arab marshes....



.... And their destruction

Shatt al Arab delta destruction



Source: UN Environment Program: http://na.unep.net/digital_atlas2/webatlas.php?id=169

1. A multi-scale problem of water governance

National difficulties:

- National scale: bi-lateral negligence and water mining
- Iraq: Marsh drainage during Saddam Hussein rule: environmental catastrophe
 - Since USA invasion of Iraq, very little action on water management front.
- Iran: active damming policy on Karun river
 - => drastic reduction in water flow for Shatt al-Arab
 - => rise of salinity levels

Near Right: One of the many dams on the Karun River in Iran



Far Right: Festering waters in Basra not washed away



1. A multi-scale problem of water governance

Local Dysfunctionalities

- Emergence of Semi-formal local stakeholders:
 - Lack of funding at provincial level, forces local officials to seek aid at national level.
 - Tribal tensions due to allocation of water.

A healthy date-palm plantation in the Shatt al-Arab



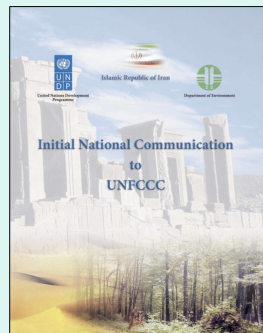
The contemporary harsh reality...

2. Climate change as a catalyst for reform?

How Helpful is the Literature on Climate Change?

Inadequate scales for Middle East Climate modeling:

- Scale for Middle East = far too imprecise for sub-regions.
- UNFCCC - uses national scale but not Hydrological-basin scale
- Lack of data for certain periods of time & localities:



2. Climate change as a catalyst for reform?

The multi-scale governance alternative: some principles

- Enhanced co-ordination at inter-state scale:
 - Creation of framework for consultation between and among riparian states.
- Improved co-ordination between national & local administrations:
 - Neither scale has monopoly of the decision-making



Suffering date-palm plantations in the Shatt al-Arab



Oil complexes near Faw

3. Propositions for multi-scale & sustainable regional governance for the Shatt al-Arab river and delta

Finding alternative sources of water and finance: building on Abu Dhabi's achievement (UAE)

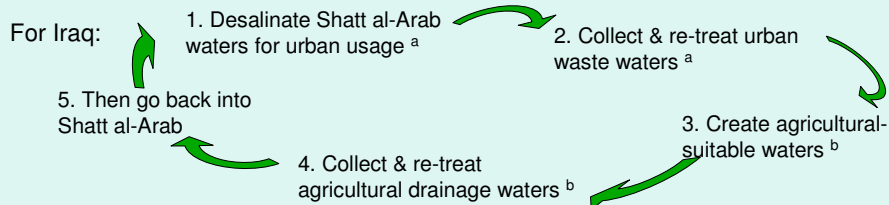
Alternative water sources: Why exactly do we need them?

Possible sources:

- Desalination of brackish waters from Shatt al-Arab and adjacent aquifers
- Expansion of the re-treatment capacities of waste water

The regional example of Abu Dhabi:

- Abu Dhabi had very limited water sources & depleted ground-waters.
- 98% of Abu Dhabi's urban waters comes from desalinated waters
- Re-treated waters used for city greening & re-forestation.



3. Propositions for multi-scale & sustainable regional governance for the Shatt al-Arab river and delta

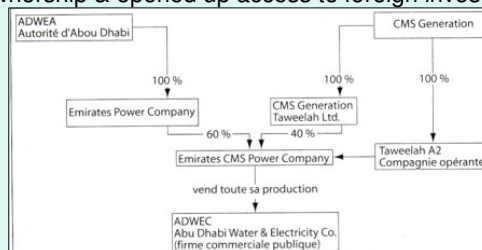
Finding alternative sources of water and finance: building on Abu Dhabi's achievement (UAE)

Alternative sources of finance:

Abu Dhabi: Public Private Partnerships (PPPs) for water & electricity co-generation:

- Privatized part of its infrastructure
- Kept 60% of joint venture ownership & opened up access to foreign investment:

Model of a 1st generation joint venture (courtesy of B. Dumortier & L. Lambert)



- Abu Dhabi obtained:
 - New expertise & increased capitals => increased supply security
 - Expansion of existing plants
 - Future possibility: Capacity of authorities to further privatize half of shares of joint venture exclusively to national small and medium investors.

Thank you

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