Water Security in Iraq
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Dokan Dam
Central Marshes
What is Water Security?

1. Ensured **accessibility** to the resource in time and space.
2. Ability to **utilize** the resource to achieve economic development.
3. Ability to **sustainably manage** the water resources to ensure the right quantity and quality.
4. Ensure that competing demands are **balanced** (Irrigation, water supply and sanitation, hydropower, environmental requirement etc).

5. Ensure that **water sharing agreement** with full participation of all stakeholders is in place.

6. Ensure that the **environment** is protected and pollution is prevented.
Control for better management

Maximum Storage Capacity

Haditha Dam 24%
Mosul Dam 31%
Dokan Dam 18%
Derbendikhan Dam 9%
Diyala Weir 9%
Kut Barrage 9%
Tharthar Outlet Regulator 9%
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Haditha Dam 24%
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Current Total Storage: 157 BCM
Kib 31 BCM 1975
Kerekaya 10 BCM 1987
Ataturk 50 BCM 1990
Biricik 1.2 BCM 2000
Kerkamish 0.2 BCM 1999
Tishreen 2 BCM 1999
Tabqa 12 BCM 1975
Duz 3.5 BCM 1962
Karun 14 BCM 2001
(K Series of dams)

Dam Construction since mid 1970s
Declining inflows

Mean annual discharge in the Euphrates (m3/s)
1975-2005

Trend Line  Filling of Ataturk Dam
Euphrates River Mean Monthly Discharges m3/s

Loss of 9.1 BCM/year

- 958 m3/s
- 703 m3/s

Month Ave. 1925-73
- Month Ave 1975-05
- Annual Mean 1925-73
- Annual Mean 1975-05

Euphrates 1925 – 2005
Storage Volumes

• Turkish Storages
  – 92BCM on Euphrates
  – 17BCM on Tigris (planned)

• Syrian Storages
  – 14.5BCM on Euphrates
  – 1.5BCM from Tigris (Previous agreement)
How Water Security in Iraq is being impacted?

• Intensive construction of dams.
• Wars, particularly Iraq-Iran war and the occupation of Kuwait.
• Draining of the marshes.
• Pollution and degradation of water quality.
• Fast urbanization.
• High rate of water use (twice the population growth rate).
How Water Security in Iraq is being impacted?...Cont’d

• Lack of long term water sharing agreement between riparian countries, Iraq, Syria, Turkey & Iran.
• Unsustainable approach in managing water resources in the upper reaches of Euphrates and Tigris rivers basins.
How Water Security in Iraq is being impacted?...Cont’d
How Water Security in Iraq is being impacted?...Cont’d
The way forward

- Apply strict national water management strategy based on IWRM principles
- Negotiate long term water sharing agreement.
- Adopt basin-wide & regional approaches to mitigate and adapt to climate change
How Water Security in Iraq is being impacted?...Cont’d

Thank you