



**ETIC**

مبادرة الفرات ودجلة للتعاون  
**Firat-Dicle Isbirligi Girişimi**  
Euphrates Tigris Initiative for Cooperation

ADVANCING THE BLUE REVOLUTION INITIATIVE (ABRI)

# Impact of Riparian Collaboration in the Tigris-Euphrates Region

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*Seminar*  
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*Beirut*

## Euphrates Tigris Region

Comprises 6 countries of which Iraq, Syria and Turkey are the prime riparian states.

Iran controls the southern Tigris tributaries while Saudi Arabia and Kuwait groundwater forms part of the catchment area

**Surface area of the ET Region**

**Is 784, 000 Km<sup>2</sup> approximately 300,000 square miles**





## FOUNDING ETIC

As a new approach for sustainable cooperation on regional development,

**ETIC was formally established by members from Iraq, Syria, Turkey and the USA in May 20, 2005 to address social, economic and technical development needs of the people in the Euphrates-Tigris region**



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TURKEY



SYRIA



IRAQ

# ETIC

FOR IMPROVING THE QUALITY OF LIFE IN THE EUPHRATES TIGRIS REGION





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### Vision

The quality of life for people in all communities, including rural and urban areas is improved and harmony among the countries and nature in the Euphrates and Tigris Region is achieved



### Overall Goal

Cooperation for economic, technical and social sustainable development within the Euphrates-Tigris region is realized



### Objectives (2015)

- To promote confidence building and trust among riparian officials
- To identify riparian development needs and concerns
- To implement joint training and capacity building programs for key riparian stakeholders
- To develop, promote and support implementation of collaborative activities

## SOME ETIC ACTIVITIES



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Seminar in 5th World Water Forum  
Istanbul, Turkey March 16-22, 2009



## WORKSHOP ON KNOWLEDGE TECHNOLOGY

The goal of the workshop was to explore collaboratively the conditions in the ET region on the environment, the use of GIS, mathematical modeling and website technology related to water with a view to identify a framework for improvement



H.E. Dr. Abdul Latif Rashid, Minister of Water Resources of Iraq and H.E. Mr. Nader Al-Bunni of Syria addressed the ETIC group.

## ETIC Partnership Session World Water Forum

Mexico, March 2006 with the top-ranking riparian water officials

Advancing the Blue Revolution Initiative (ABRI)



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**التخطيط التشاركي وتنمية المعرفة في منطقة دجلة والفرات**  
فعالية مشتركة لمبادرة الفرات ودجلة للتعاون مع مبادرة الثورة الزرفاء المتقدمة

**Fırat-Dicle Bölgesi'nde Ortaklaşa Planlama ve Bilgi Açılımı**  
ETIC ve ABRI Ortak Eylemi  
Collaborative Planning and Knowledge Development in the Tigris Euphrates Region  
Joint activity between ETIC and ABRI

**ONGOING ACTIVITY**  
**2009 - 2010**

# CLIMATE CHANGE IS FERTILE CRESCENT LAND TURNING INTO ASHES ?



**July 9, 2009, Adilla Finchaan, checks her land in Latifiyah, 20 miles south of Baghdad**



**BAGHDAD DURING DUST STORM 2009**



**DUST GUSTING NEAR Baghdad 2009**

**This is why we compile reliable data**



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# CLIMATE CHANGE IS THE EUPHRATES RIVER DRYING ?



**SOUTHERN TURKEY**



**EASTERN SYRIA**



**MARSHES IN IRAQ**

**THIS IS WHY WE COMPILE RELIABLE DATA**



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# CLIMATE CHANGE

## WOULD IT INCREASE OR DECREASE RAINFALL ?

- **RELIABLE CLIMATE CHANGE MODEL IN A REGION IS A CHALLENGE**
- **MANY RESEARCHERS STATED THAT AVERAGE RAINFALL IN THE ET REGION IS DECREASING AT THE RATE OF 10%**
- **OTHERS STATED THAT moisture-bearing winds would be channeled inland more often and diverted by the Zagros Mountains, bringing an increase of over 50% in annual Rainfall to the Euphrates-Tigris REGION**

- **THIS IS WHY WE COMPILE RELIABLE DATA**



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## Tasks



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- Advancement and Outreach,
- Data Inventory,
- Data Harmonization,
- Capacity Building and
- Clearinghouse.

## Objectives

- Foster collaboration and build confidence among ET region scientists
- Develop data inventory from available sources through identifying data, cataloging and cross-referencing.
- Harmonize compiled data from Iraq, Syria and Turkey
- Establish a clearinghouse in Arabic, English and Turkish

# Dams in Iraq



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# MOSUL DAM (formerly Saddam Dam)



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**River:** Tigris **Governorate:** Ninawa **nearest town:** Mosul

- **Type:** high-zoned earth embankment
- **Crest width :** 10 m; **Length:** 3650 m; **Height:** 100 m
- **crest level:** 343.20 m a.s.l.\*
- **Year completed**
- **Max. reservoir level** 338.00 m a.s.l
- **Normal operation level (N.O.L.)** 330.00 a.s.l.
- **Max. Storage at max. reservoir level**  $13.14 \times 10^9 \text{ m}^3$
- **Normal storage at normal operation level**  $11.11 \times 10^9 \text{ m}^3$
- **Dead storage**  $2.95 \times 10^9 \text{ m}^3$

**Function:** Power Generation

- **Irrigation outlets:** -----  

No. of outlet and Diameter:	-----
Discharge for each:	-----

• **Power House**

- **Number of turbines:** 4 units,  
**Type :** Francis turbine generator each 187.5 MW  
**Capacity** 750 MW

• **Spillway:**

- Type:** 5 radial tainter gates
- Crest level** 317.50 m a.s.l.

**Maximum design discharge at max. Reservoir level:**  
13000 m<sup>3</sup>/sec.

• **Bottom Outlets:**

- No. of outlets :** Two bottom outlets with radial gates
- Discharge:** 2600 m<sup>3</sup>/sec

• a.s.l : above sea level

Survey date 2009





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## Elementary Students number in Turkey and ET region

Year	Whole Country			GAP 9 Velayet (Provinces)		
	FEMALE	MALE	FEMALE/ TOTAL (%)	FEMALE	MALE	FEMALE/ TOTAL (%)
2004-2005	4,858,578	5,440,068	47.18	620,898	772,642	44.56
2003-2004	4,891,897	5,521,682	46.98	594,747	764,605	43.75
2002-2003	4,828,218	5,503,427	46.73	570,294	757,253	42.96
2001-2002	4,880,555	5,597,061	46.58	564,123	756,756	42.71
2000-2001	4,845,590	5,635,131	46.23	530,324	735,884	41.88

Table 11/1 hospitals							
Governorate	state		Private		total		Average Number of Persons Per Bed
	No.	Bed	No.	Bed	No.	Bed	
Aleppo	16	3375	99	2224	115	5599	775
Rakka	5	160	7	151	12	811	1039
Deir-ez-zor	7	906	17	263	24	1169	921
Hasakeh	5	881	26	445	31	1326	1026
Source : Statistical Abstract 2008 Central Bureau of Statistics Syrian Arab Republic							



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## HOSPITALS & BEDS in the Syrian ET region

Survey date 2009



## Example of some Terms used in land and water studies in the ET Region

English	Turkish	Arabic
<b>A</b>		
Alluvial soils	Alüvyonlu topraklar	اراضي رسوبية و نهريّة
Available water	Mevcut toprak	ماء متيسر (متاح) للنباتات
Aggregates	Birikim	مجمعات التربة (حبيبات متجمعة)
Aeration	Havalandırma	تهوية
Arid regions	Kurak bölge	منطقة جافة
<b>B</b>		
Bulk density soil g/cm <sup>3</sup>	Toprak birim hacim öz kütlesi	الكثافة الظاهرية للتربة
Basin irrigation	Yalak sulama	الري بالأحواض
<b>C</b>		
Cation exchangeable capacity (CEC)	Katyon deęiřtirme kapasitesi	السعة التبادلية الكاتيونية للتربة
Capillarity	Kapilarite	الخاصة الشعرية للماء في التربة
Clays	Kil	طين (غضار)
Claypan	Kil tabakası	حاجز طيني ( طبقة طينية مندمجة تحت التربة)
Colloids	Koloit	غرويات التربة (قطر اقل من واحد ميكرون)
Calcareous soil	Kalkerli toprak	ارض جيرية
Covered drains	Kapalı kurutma	مصارف مغطاة
Compaction	Sıkıřtırma	تراص - ادمماج
Critical	Hassas	حرج - خطر
Crop rotation	Ürün rotasyonu	دورة زراعية
Classification criteria	Sınıflandırma kıstasları	معايير (اسس) تصنيف الاراضي



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