



Water Conflicts: A Cooperation Based on Mutual Interests in the Middle East

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Vision For The Middle East



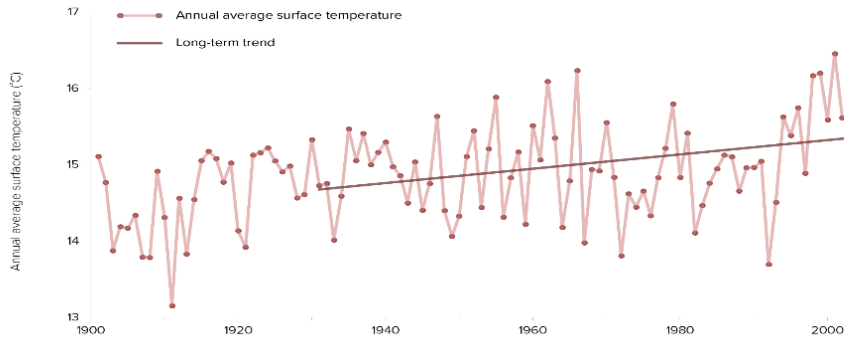
- Someday the conflicts in the Middle East will be over and post conflict reconstruction will begin.
- We absolutely need a vision for the day after to avoid violence again.
- Such a vision has to promote mutual inter-dependence and harness resources in the Middle East in the best interest of all the people,
- Despite where they live and which religions or sects they belong to.

Water Outlook in the Middle East

Rising temperatures and decreasing rainfall

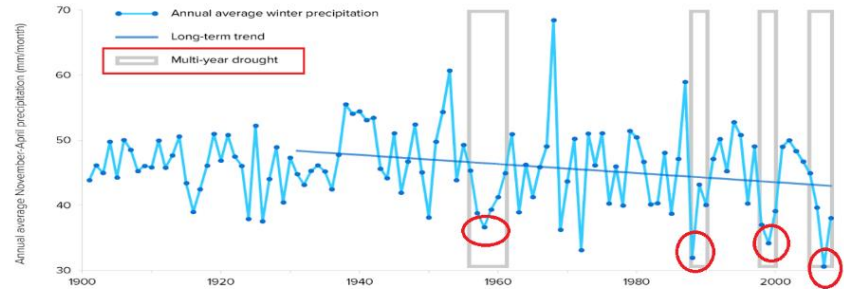
Temperature (1901 - 2009)

Temperature has shown a long-term increasing trend in the Fertile Crescent. Every year from 1994 through 2009 was warmer than the century-long average for the region.



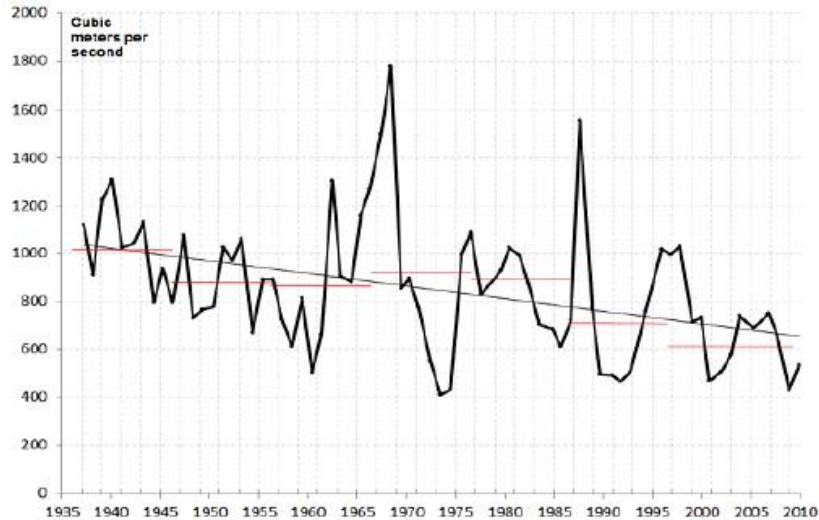
Rainfall (1901 - 2008)

Precipitation patterns are changing in the Fertile Crescent. Rainfall from November through April, when most of it occurs, has decreased 13% since 1931. The gray boxes represent multi-year droughts, which are defined as three or more consecutive years when precipitation is below the century-long average.

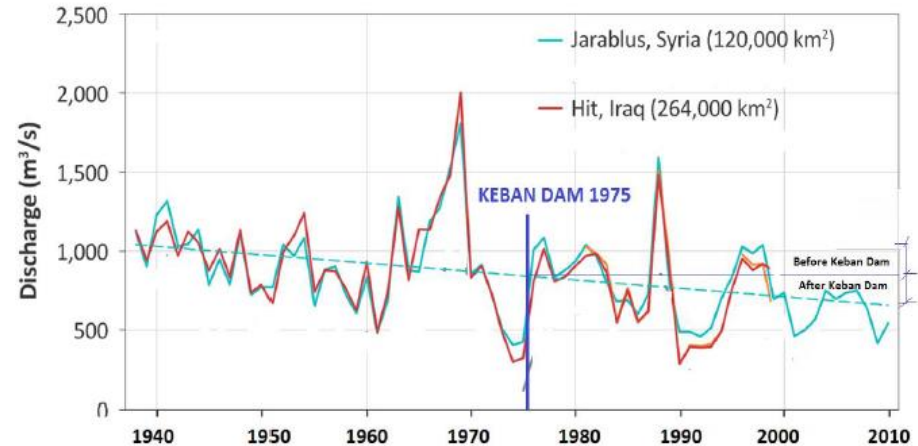


Middle East Water Outlook

Upper Euphrates and Tigris long term natural streamflow has decreased.

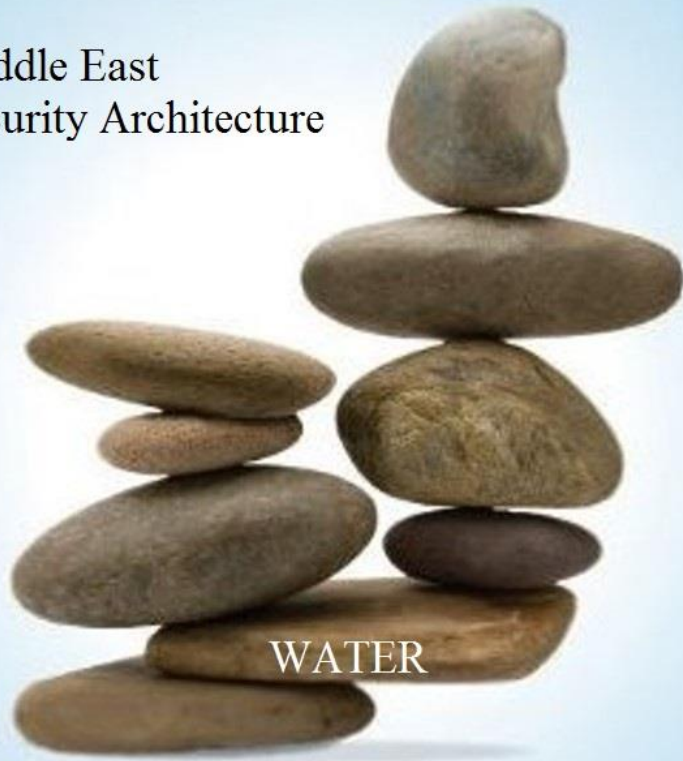


Discharge of the Euphrates River measured at Jarablus, Syria from the mid-1930s to around 2010. Red lines show the decadal averages. The long-term linear trend is also shown. Data from the United Nations Economic and Social Commission for Western Asia,



Mean annual discharge anomaly time series of the Euphrates River (1937-2010) (ESCWA 2013)

Middle East
Security Architecture



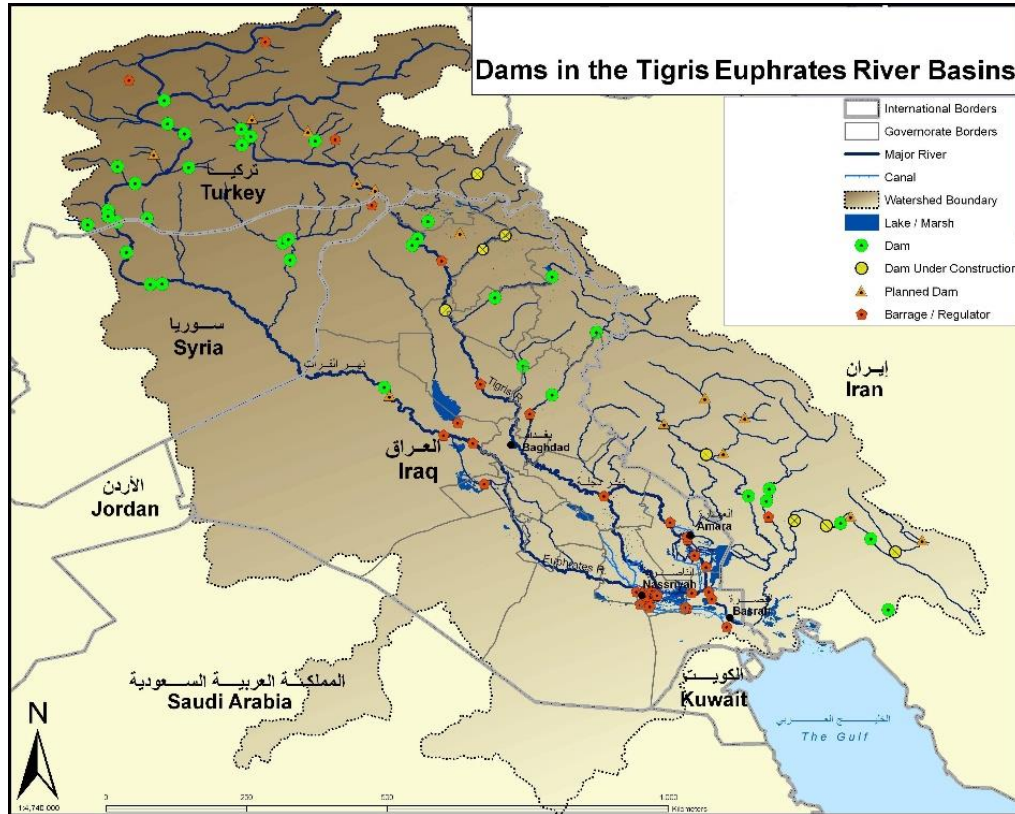
The impact of water will increase
in the Middle East

Stability and Security

Vs.

Conflicts

Water Conflicts Dynamics Turned Into



- Operation of Dams
- Irrigation of Lands
- Less Water Availability
- Food Security

What Feeds Water Conflicts?

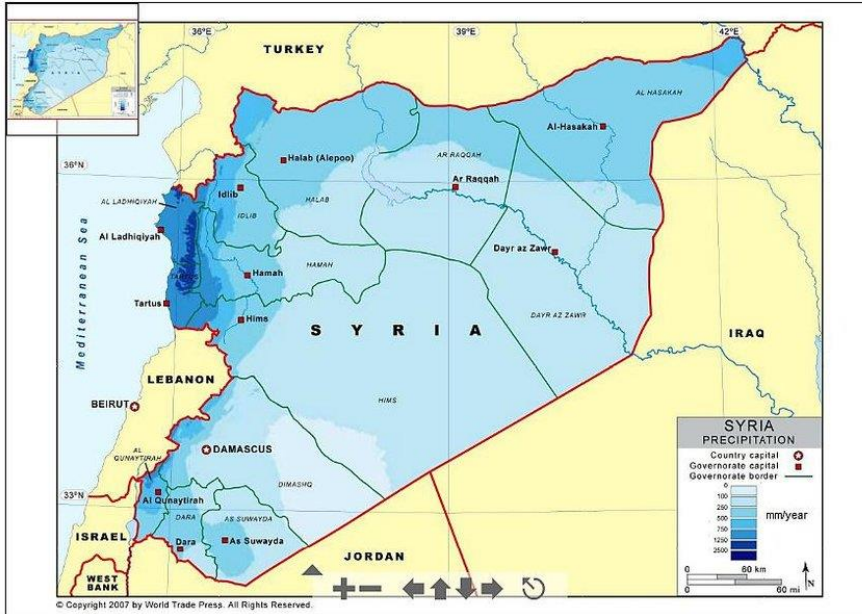


UNCERTAINTIES

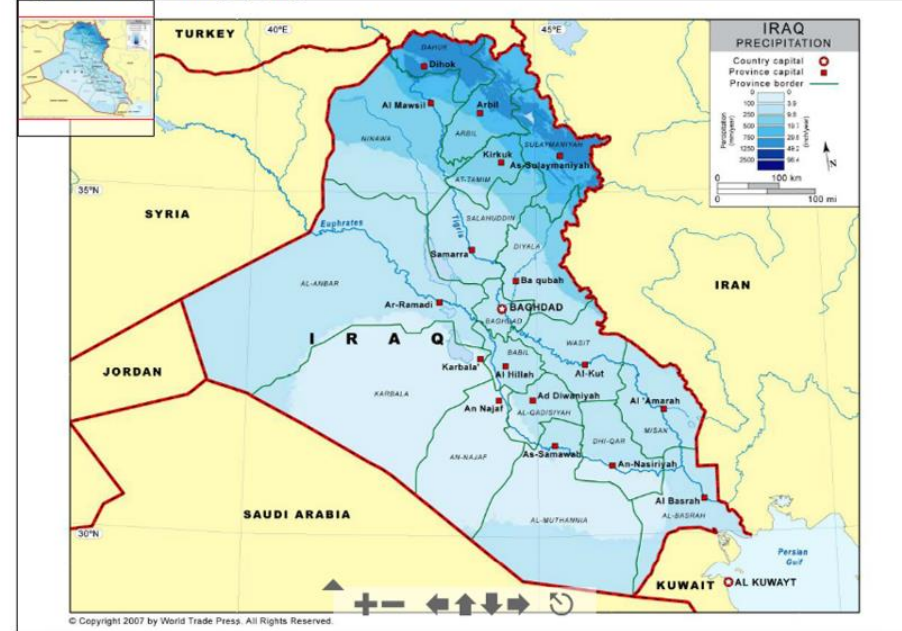
CLIMATOLOGICAL

POLITICAL

Climate Change **Uncertainties**: Precipitation



SMA_Zoom_Country_Modern_Z_Iraq_Precip



Prepared by: Tronolite

Climate Change **Uncertainties**: Precipitation in 2040-2069

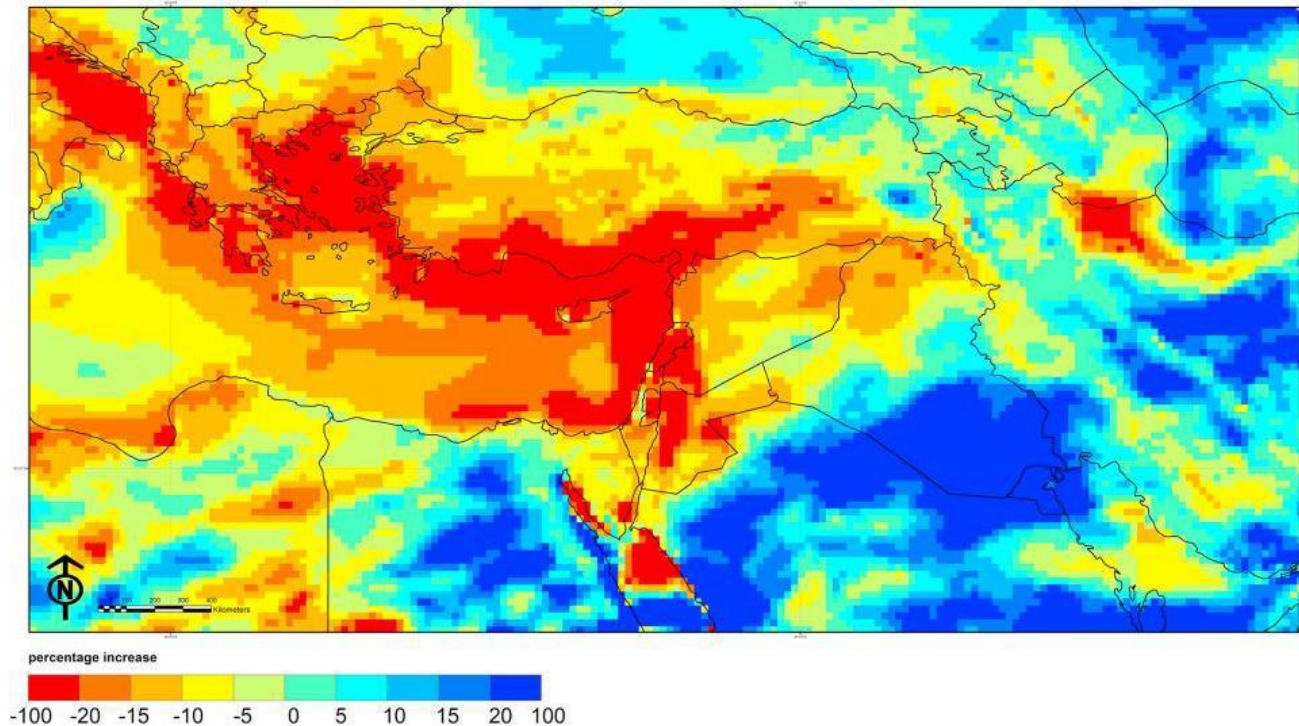
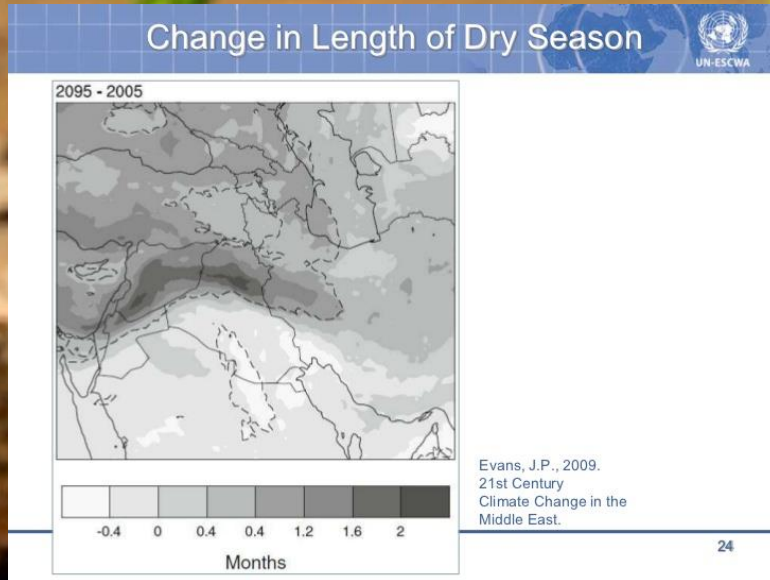


Figure 2: Percentage change in mean annual precipitation in 2040-2069 from 1961-1990 as simulated by PRECIS.

This will bring significant stress for agriculture



CLIMATOLOGICAL

Political Uncertainty

REFUGEE CRISIS



POLITICAL

Political Uncertainty: Refugees



- UN identified 13.5 million **Syrians** requiring humanitarian assistance
- How the refugees will survive when they return to home ?
- In short term ?
- In long term ?

POLITICAL

How to Feed ? Vs. Food Import Dependency!

Food Imports and Fuel Exports in MENA compared to the World



FIGURE 1 Food imports and fuel exports in MENA compared to the world

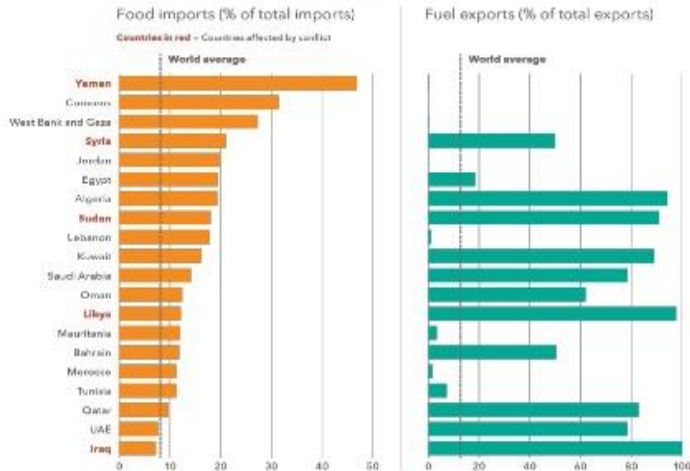


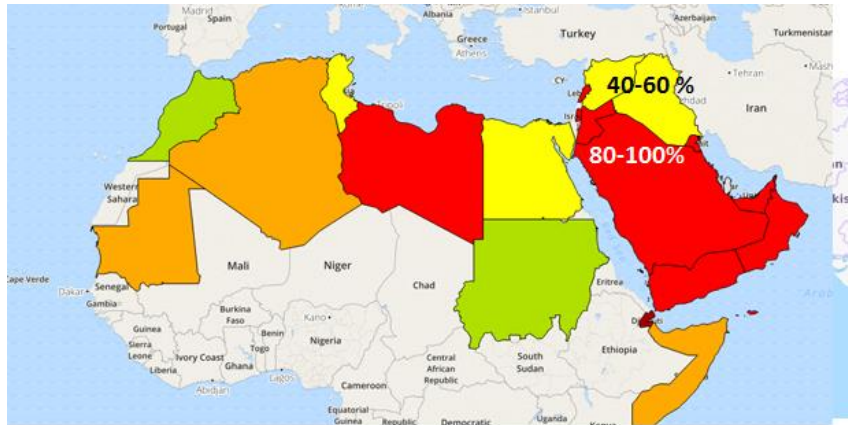
FIGURE 2 Food imports and exports (in million USD) in the Middle East and North Africa (1996-2011) (FAO, 2015)



Source: FAO

The region relies mainly on food imports to feed its rapidly growing population

Cereal Dependency ratio

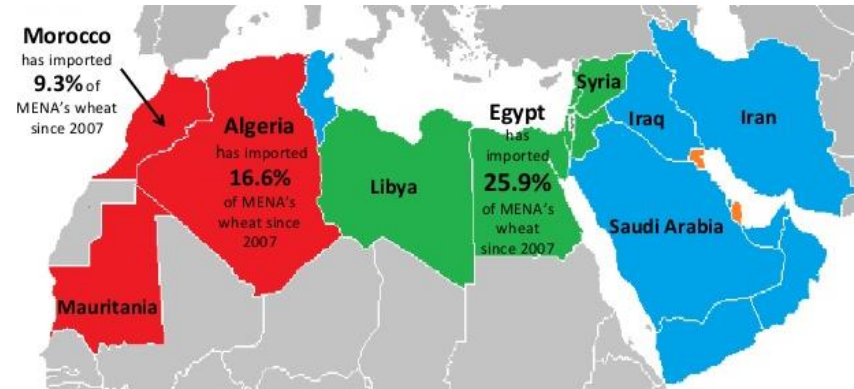


Cereal import dependency ratio

Map by ARAB SPATIAL



Wheat Dependency to Global Food Market



Different regions within MENA rely on different countries as their leading source of imported wheat. Depending on the country, these relationships have persisted since 2007

Russia (Green) France (Red) No stickiness (Blue) Australia (Orange)

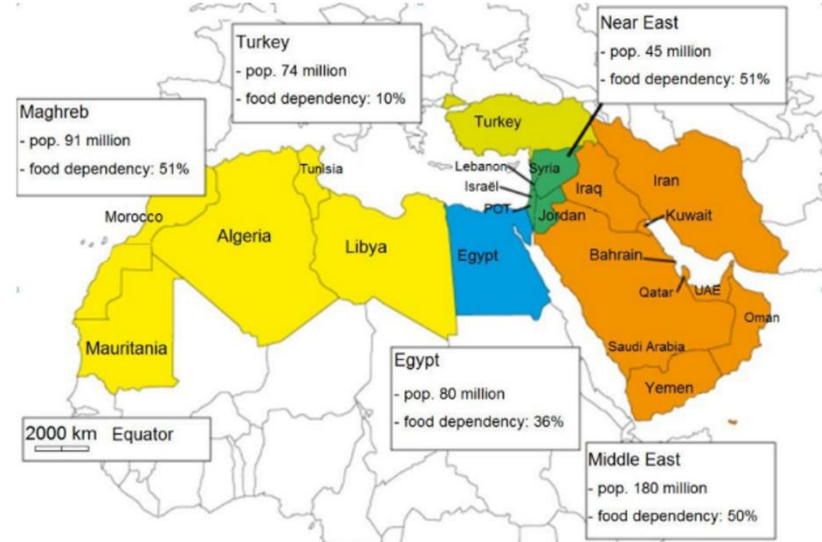
SOURCE: FAO, total tonnage of wheat exported

Dependency to Global Food Market

Intra Regional Trade is very low (only account 5 to 10 % of total trade)

Five Main Imports Partners of the Countries

	Iran	Iraq	Syria 2010	Lebanon	Jordan
Vegetables	UAE Switzerland India Pakistan Malaysia	Canada Cin Iran Australia India	USA Ukraine Egypt Russia Argentina	Ukraine Russia Egypt Brazil USA	Romania USA Russia Argentina Ukraine
Food Products	UAE Switzerland Netherland Germany Turkey	UAE Saudi Arabia Kuwait China Jordan	Brazil Argentina Switzerland France Netherland	Switzerland France England Turkey USA	Saudi Arabia Argentina Syria Egypt Ireland
Agricultural Raw Materials	UAE Korea Germany Malaysia Russia	Russia Romania Syria China Iran	Russia Romania Germany India Egypt	Romania Russia USA Germany Italy	USA Brazil Germany Finland Romania



2050 Projection in the Near East

- *Cultivated land requirements could increase by 66 % (relative to 2008) in response to mounting food needs*



Need Moving towards to.....



**Regional Food Security approach
Cooperation Priority need to be shifted to Regional Food Security**

We Need A Conceptual Change For Regional Food Security cooperation

3 magic words to move forwards:

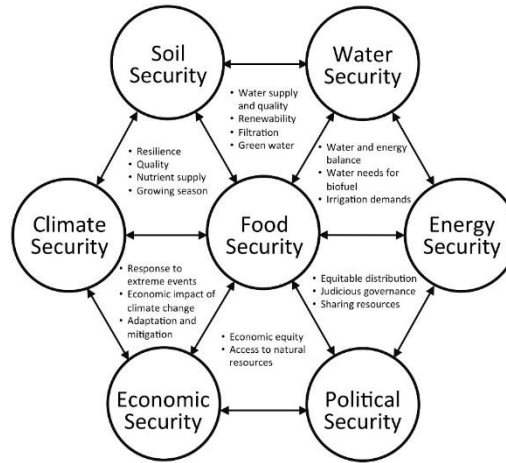
Mutually
Beneficial
Interrelations



Why ?

- Political and Climatological uncertainties can increase the risk !
- Resecuritisation of the water resources in the Middle East
- We need to reduce the tendency towards greater securitisation approach

How ?

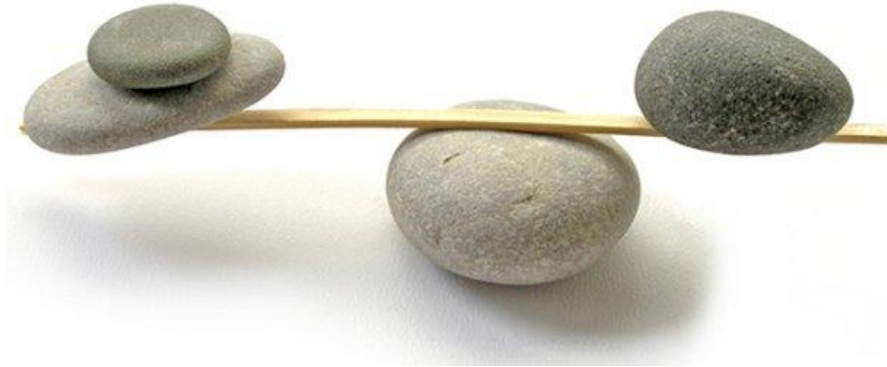


- Moving forward to food security cooperation with increasing regional production and intra regional trade

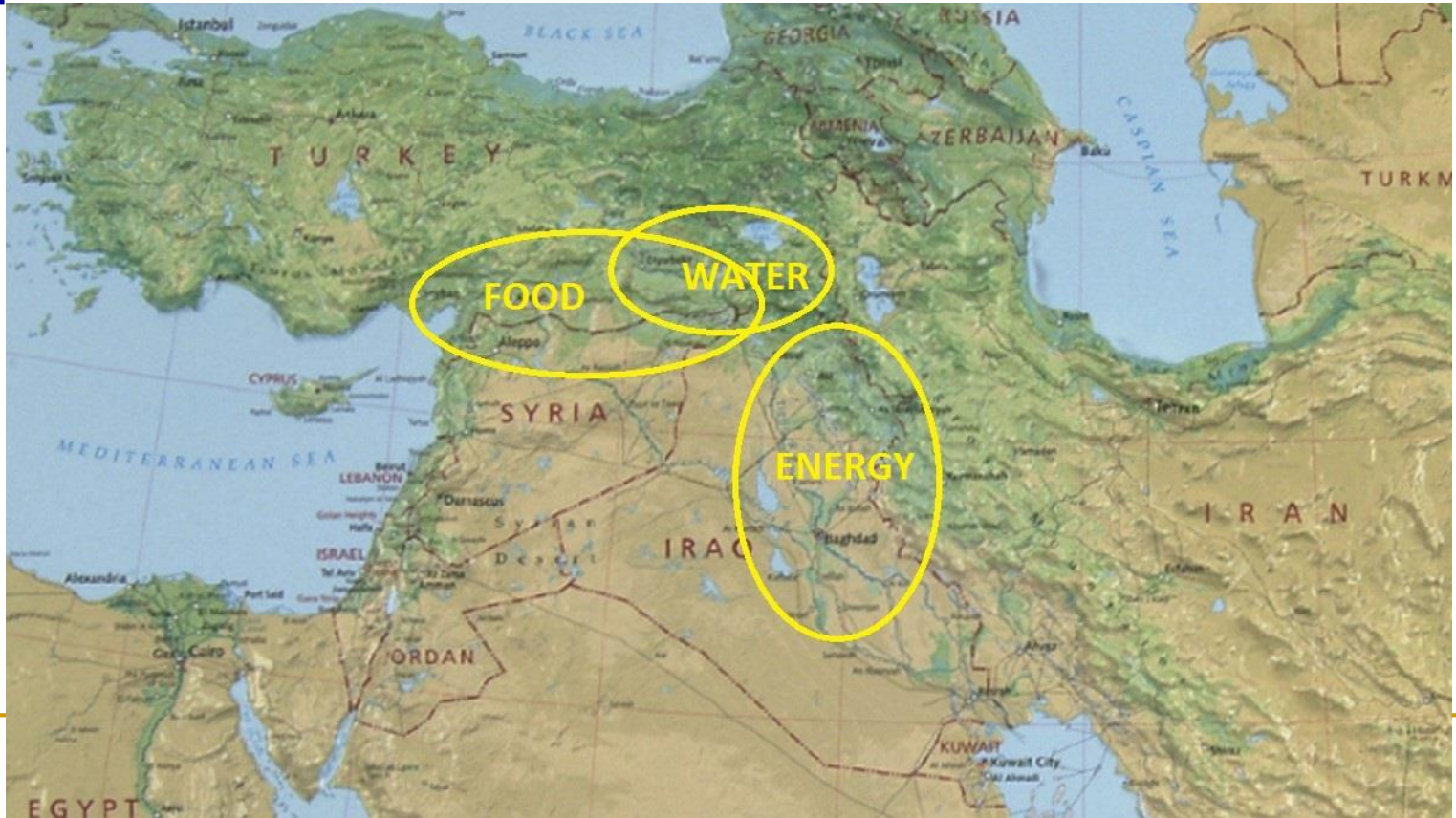


The Region has experience on mutually beneficial cooperation (2010)

- In June 2010, Jordan Lebanon, Syria and Turkey formed a Quadrilateral Free Trade Area.
- This covered cooperation in energy, trade, transit and industry.
- The experiment collapsed with the crises in Syria in 2011



The competitive advantages define the basis for cooperation



What is imperative for the countries?

- To reshape their visions towards such a mind-set once more
- To develope applicable integrated regional development projects to reduce agricultural import dependence in the region?
- New initiatives with a paradigm shift are needed to drive this process.



HYDROPOLITICS ASSOCIATION



HYDROPOLITICS ACADEMY

Thank You

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