

Hydrodiplomacy efforts and status of cooperation: Applying UN Convention for conflict resolution on transboundary water resources in MENA Region – case study of Lebanon

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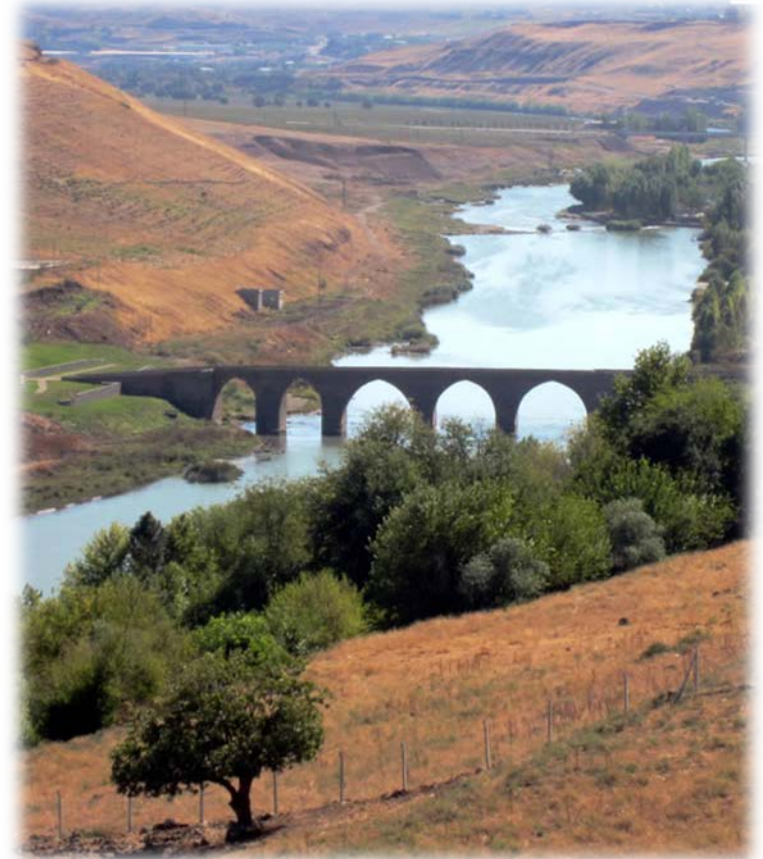
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Serail**

Sharing water in the MENA Region

- The social and economical development of nations greatly depends on water availability in terms of quantity and quality.
- A major portion of water resources in the MENA Region is in a shared river or groundwater basin
- MENA governments are thus facing an increased dependence on shared water resources.
- There is an increased vulnerability since water resources are shared not only between Arab countries but also with non-Arab countries (TURKEY, ISRAEL, ETHIOPIA).



Sharing water in the MENA Region

- The conflicts on transboundary basins are likely to intensify if collaborative approaches are not taken
- Water-diplomacy is thus a major issue on the diplomatic agenda of the MENA governments
- Legal instruments on shared water based on common understandings of what is fair and equitable are crucial in order to support better basin planning (IWRP-IWRM) and preservation of the resource.



Shared water resources management in the MENA Region

- Three approaches in the management of international watercourses :

Financial
compensation

Security concept
Hydrohegemony

Regional cooperation:

Rely on regional cooperation framework with the aim of ensuring their domestic water needs and food security and enhance an economic development policy while preserving the international basin ecosystems.

“**Hydrodiplomacy**” is based on the application of this new concept of regional cooperation that creates dynamics of transboundary basin economic development.

Hydrodiplomatic negotiation

- Hydrodiplomacy: New concept for political and social developments
- Hydrodiplomacy could be classified the most important branches of Environmental Diplomacy.

- Enhances benefits on different levels:

1. Environmental benefits
2. Political stability
3. Direct economical benefits
4. Indirect economical benefits
 - **The final objective will consist of the creation of a “Transboundary Basin Organization” or an “International Commission of River Basin”**



Conflicts

requirements collected
from each point of view



Designing a program
through **dialogue**

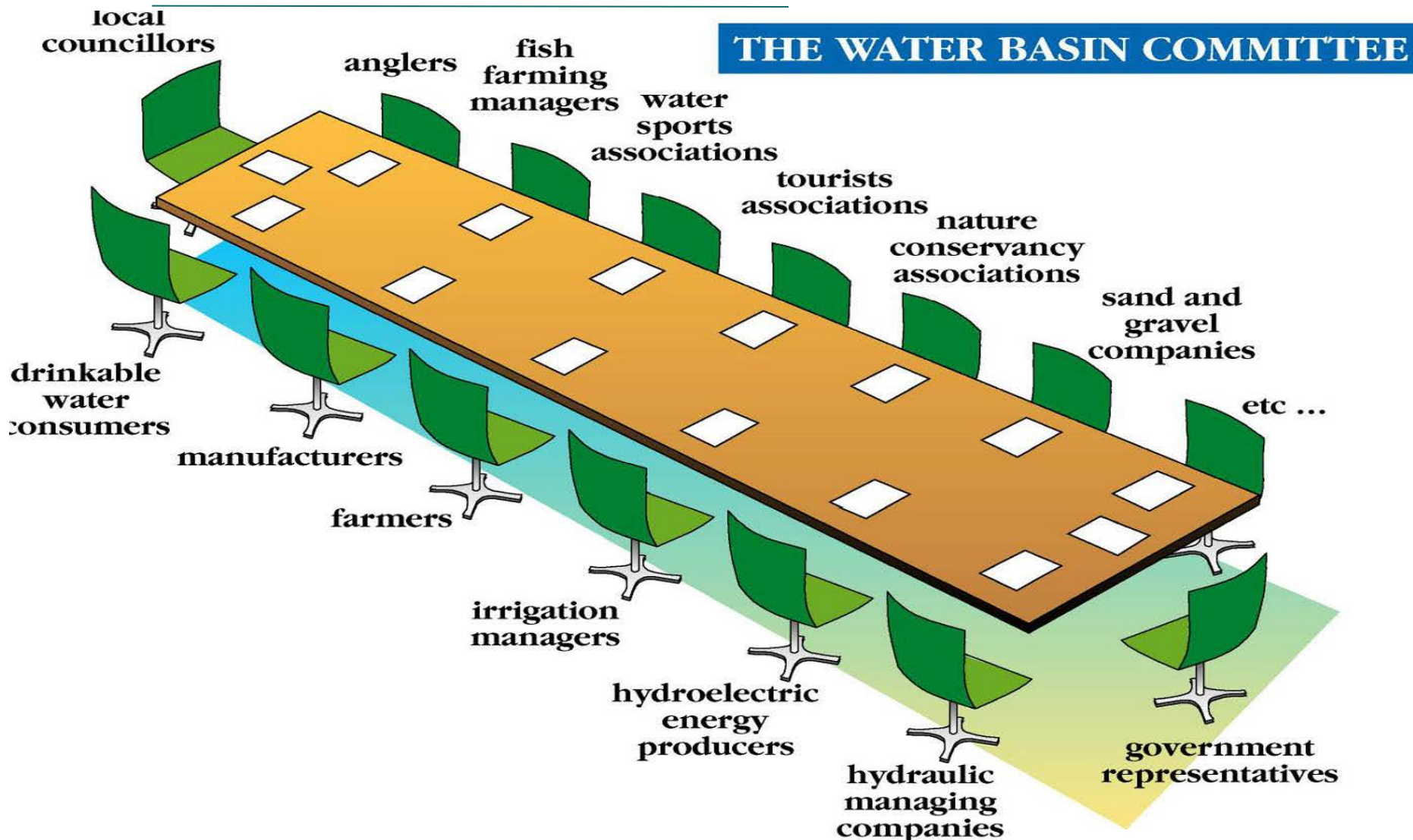


Reaching **agreement**

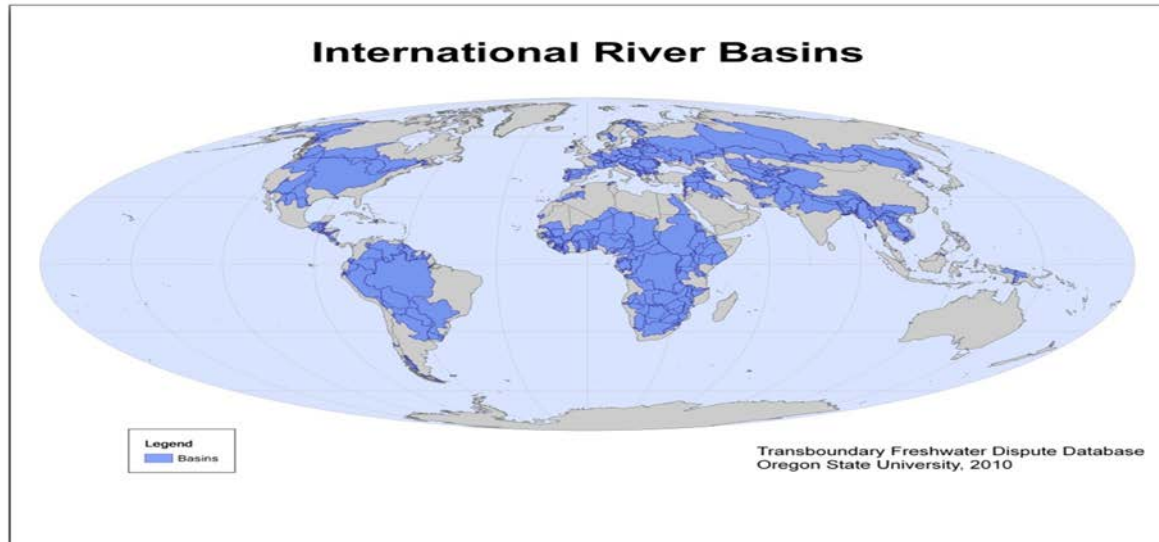
with an ambitious program



A River Basin Management is integrating various stakeholders



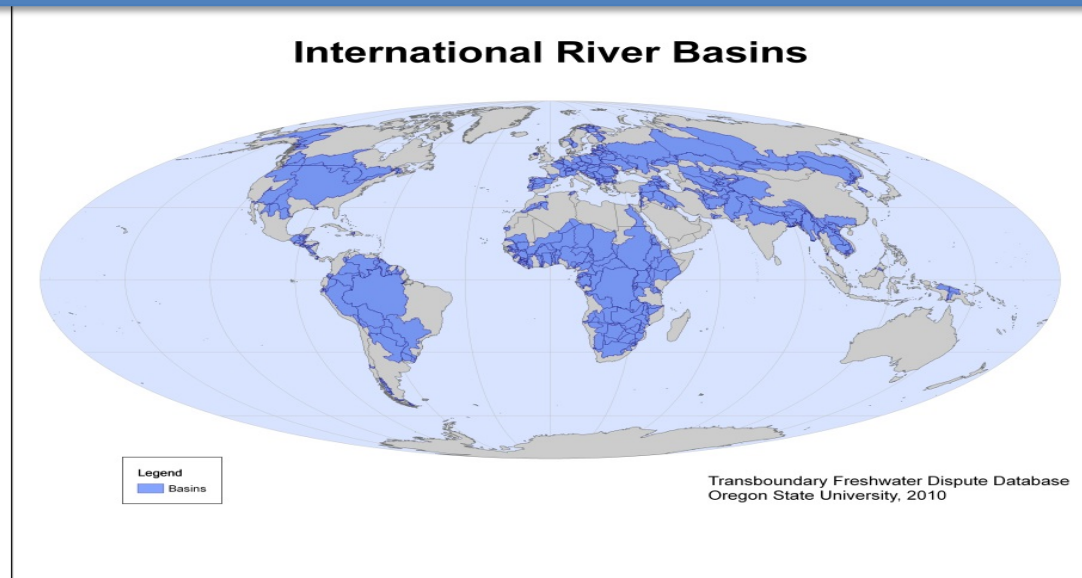
International River Basins



Many agreements were signed,
in the past centuries,
between riparian countries
of transboundary rivers, to ensure:

- free navigation,
- the share of river flows,
- the prevention of floods,
- the building of hydropower dams.

International River Basins



But,

today, there are still too few agreements, conventions or treaties, dealing with:

- **pollution control,**
- **aquifers management,**

and, a fortiori,

- **the integrated management of shared river basins.**

- The basic role of this institution is to transcend the watercourse States administrative divisions and constitutes a mechanism that will allow ensuring an adequate environment for the establishment of IWRM



Integrated Water
Resources Management

- The new concept of integrated management should mobilize a total water mass “New Water Mass” including:

→ Conventional waters
(fresh water)



→ Non Conventional waters
(Sea water spring,
REU of waste water,
desalination, grey water)



The Transboundary Basin Organization

- Hydrodiplomatic Negotiation Targeting MENA countries should implement:
 - Rationalization of agricultural practices and domestic water use:

Drinking water sector

200 l/day/person including unaccounted-for water (networks leaking) that should not exceed a rate of 25%.

Irrigation sector

- Optimal $\leq 7000 \text{ m}^3/\text{ha}$.
- Improvement of irrigation and fertilization methods
 - Implement Water Users Association
- Reuse treated wastewater for this sector

Environmental preservation

- Apply the “Pollutor-payer” concept
- Implement technical control system to prevent river degradation
- Establishment of wastewater treatment plants

The Transboundary Basin Organization

- Main goals :

Apply the concept of **“equitable sharing” and reasonable utilization** of water

Obtain the necessary funds to develop the basin water mgmt and infrastructure.

Decision making and efficient solutions to recurrent problems

Efficient **information systems** between the watercourse states with accesible database

Research programs concerning resources, socio economic and cultural aspects of basin

National and regional forums on water to **share knowledge**

EQUITABLE SHARING AND REASONABLE UTILIZATION

- The implementation mechanism will be applied to all the domains (technical, socio-economic) with a large participation of the concerned parties.

OBTAIN NECESSARY FUNDS

- In order to develop the basin's water management and infrastructure

DECISION MAKING AND EFFICIENT SOLUTIONS

- For important and recurrent problems such as: floods, drought, food scarcity, lands degradation, accidental pollution...etc.
- The solutions shall be approved by all the involved parties.

DEVELOP INFORMATION SYSTEMS

- Efficient systems between the watercourse states with an accessible database
- Aiming at access to the results of the hydrological measurement, the analysis of the basin water quality, the hydroelectric production with a preliminary annual program for every country.

DEVELOP RESEARCH PROGRAMS

- Concerning resources, socio-economic and cultural aspects of basins

SHARING KNOWLEDGE

- Organization of national and regional forums on water in order to share knowledge and to present research programs on the basin.

DIFFERENT TYPES OF BASIN ORGANIZATIONS:

!

- **Administrative Commissions, with or without permanent secretariat**, in which mainly participate representatives of the « ministries » concerned to coordinate their various projects on the same river or aquifer, to exchange information or data, formalized or not, on emergency situations in particular, to define common rules (navigation, etc.), and whenever necessary, to allocate the available resources between the categories of uses, the countries or regions, especially in periods of crisis or when regulation structures do exist, etc.,
- **Arbitration « Authorities »**, to which the interested « parties » refer for decision-making on the conflicts which arise; this is the case of the **Joint International Commission** (IJC) between the USA and Canada, for example.

DIFFERENT TYPES OF BASIN ORGANIZATIONS:

II

- Organizations taking charge of contracting large structuring or combined installations; this is the case for navigation, flood control, the building of reservoirs, especially for irrigation, hydropower production, etc.
These organizations, often created as public or private « companies » have usually the concession of community facilities for which they are responsible for their construction and long-term management, generally for providing services, raw water or by levying specific taxes.
- « Agencies », which are in charge of carrying out tasks for medium-term planning and for collecting taxes on abstractions and discharges to finance or support the investments necessary for achieving the set objectives. In some cases, they can also be responsible for water policing, studies, data production or collection, etc.

DIFFERENT TYPES OF BASIN ORGANIZATIONS:

III

- « **Basin Committees or Councils** », which gather, at the side of administrations, representatives of local authorities, economic sectors using water, the civil society, etc. They can be advisory or decisional, especially regarding planning, the definition of taxes, the allocation of available resources, etc.
- « **Associations, unions or consortiums** », of local authorities, users or NGOs, which are often spontaneously organized to solve a common problem or to have some influence in water management.
- « **Projects** », which are usually temporary for specifically implementing and action plan with specific financing.



UN 1997 Convention on the non-navigational use of International Watercourse.



**United Nation Economic Commission for Europe
European Union Water Framework Directives**



Union For the Mediterranean Water Strategy (Not Ratified)



Legal framework for shared waters in the Arab Region

International legal instruments: the UN convention

- Enables interstates cooperation:
 - equitable and reasonable use of the resources, prevention of significant harm
- Triggers common basin plans through a process of dialogue
 - prior notifications of planned measures, ensure ecosystem conservation
- Reaching agreements with ambitious programs:
 - Implementing PPP projects on basin level, dams, hydro-electricity ...



HYDRODIPLOMACY

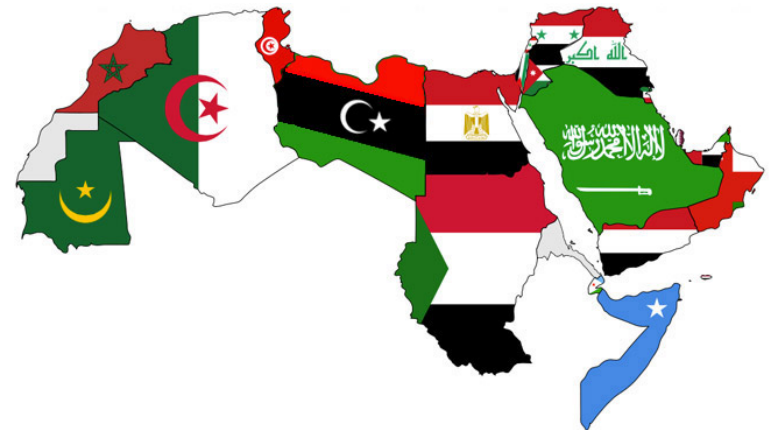
In The MENA REGION

- **ORONTES**
- **NAHR EL KABIR**
- **JORDAN RIVER BASIN**
- **NILE**
- **TIGRIS AND EUPHRATES**



Hydrodiplomacy in the MENA Region

- ❖ Water is the most vital strategic natural resources :
 - Great economic and development potential
 - Place hydrodiplomacy and negotiations on sharing water in the mainstream diplomacy
 - Integral part of security and peace agendas.
 - Sustainable development of the MENA combining prosperity with security and peace.
- ❖ Water in the diplomatic history of the Middle East is either :
 - A course of tensions and conflicts between people and countries.
 - A central issue of diplomatic negotiation and treaties in the region.



Case of Lebanon and Syria: the Orontes and Nahr el Kebir

1948 → 1994 : **Conflict**
Loose – Win Agreement

1999 → 2002: **Cooperation**
Win – Win Agreement

Implementation of water
monitoring joint
committees

UN Convention 1997
Ratified by the Lebanese
Parliament in 1999



Lebanon and Syria : Some parts of the agreements

UN convention	Orontes agreement	Nahr el Kebir agreement
<p>Articles 5 and 6: Factors relevant to the equitable and reasonable use of watercourse.</p>	<p>If the mean runoff flow is >403Mm³ →Lebanon allocated 80 Mm³ If the mean runoff flow is <403 Mm³ → Lebanon allocated 20% of the total flow <i>Projects:</i> Derivation dam: 37 Mm³ Stockage dam: 37 Mm³ Surface area of irrigation: 7000 ha</p>	<p>Lebanon allocated 40% of the total flow Syria allocated 60% of the total flow <i>Projects:</i> Joint stocking dam: 70 Mm³ Surface area of irrigation: 10000 ha</p>
<p>Articles 8 and 9: The obligation to cooperate and to regularly exchange data and information.</p>	<p>Article 5: Monitor of the runoff , wells and pumping of sources all along the watercourse.</p>	<p>Annex 2 – Articles 1, 4, d, e, g: Installation, maintenance, measurement of meteorological data, volume and flow of water.</p>
<p>Articles 20, 21 and 23: Protection and preservation of ecosystems as well as prevention, reduction and control of pollution.</p>	<p>Article 6: Regular verification of pollution and preservation of the ecosystem.</p>	<p>Article 5: The watercourses States must protect and preserve the ecosystem.</p>
<p>Settlement of disputes</p>	<p>Article 7: Joint arbitration committee.</p>	<p>Articles 7 and 8: The joint committee of water and/ or the ministries of both states.</p>

Case of Lebanon and Syria: Orontes

- Construction of two dams (80Mm³) on the Orontes watercourse:
 - Irrigation of 7000ha, 50 Mgw hydropower
- Construction of a Dam (70Mm³) in the Kebir : Irrigation of 10000ha
- Israel bombarded the construction site in 2006 eventhough the Orontes is 300km far from the southern border
- Message for preventing the Ibl Saqi dam construction on the Hasbani watercourse (tributary of the Jordan river) ? Eventhough this project has been submitted to UN secretary Kofi Anan within the report on the Wazzani issue for conflict resolution
- This reminds us of the decision taken by the Arab League in 1964 to implement the project on the diversion of the Hasbani river in Lebanon and the Banias in Syria
- Tsahal replied with air strikes on the work site in 1965 and 1966

Case of the Jordan River Basin

- The Jordan River Basin covers parts of five States (Lebanon, Syria, Israel, Jordan, Palestine)
- The River and its tributaries constitute an important source of water to all these states
- The four Arabs co-riparian countries all suffer from serious water deficiencies.



Case of Jordan River Basin

- National Water Carrier" in Israel starting 1948 aims to irrigate the arid planes of the Negev: conflicts/negotiations
 1. Phase: Armed conflict between Israel and the Syrian Army in 1951. Relevant Decision of the Security Council ordering the discontinuation of the construction works.
 2. Phase: Generalized armed conflict between Syria and Israel in 1953. It was followed by UN and US mediations.
 3. The third phase: started 1956 with an Israeli plan avoiding the problem of engendered by the construction undertaken in the demilitarized zone.
- In response to this, the Arab countries decided in 1964:
 - To divert the Hasbani River in Lebanon and the Banias in Syria to Litani and Yarmouk basins.
 - Israel replied with an air strike on the work sites in Lebanon and Syria in 1965 and 1966 and occupied the Golan Heights putting an end to the Arab Plan.
- **International hydrodiplomacy exercised the US**
 - Israeli –Syrian negotiations of 2000 in the Geneva summit; border problem of June 1967 concerning access to Tiberiate Lake.
 - Jordan-Israeli negotiations on the Jordan River "Oslo treaty".
 - Palestinian- Israeli negotiations on water status lead to bottlenecks and hydrohegemony.

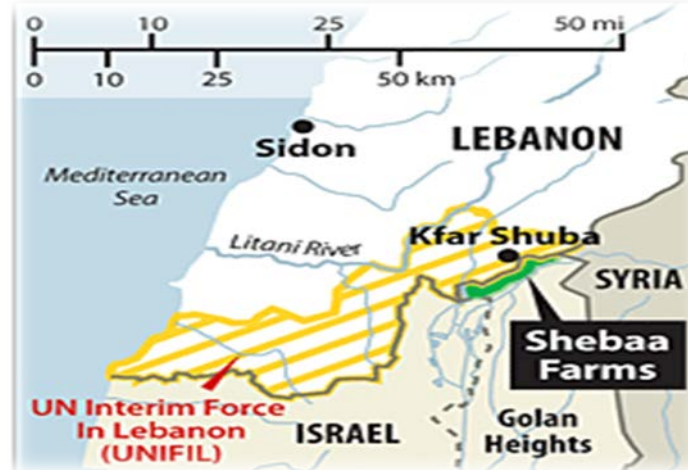
Problematic in Lebanon:

❖ Issue of the Hasbani-Wazzani

- Water stress situation (50 l/day) in Lebanon
- Several projects : 2002 pumping station of 4 MCM/year (completed) and Ibl Saqi dam (design completed and UN notification)

❖ Issue of Chebaa farms:

- Identity issue
- Water issue which affects the Dan river ,considered by Israel to be an Israeli river



Problematic in Syria:

- Golan heights occupied territories
- It contributes 22% of the water supply to Israel and feeds the Tiberias Lake which represents the main reservoir of the Israeli State.
- The 1967 border line on Tiberias Lake

Problematic in Jordan and Palestine:

- Continuous water stress situation
- Water allocation : less than 60l /day/capita in Jordan and 30l/day/capita in Palestine
- inequitable water resources sharing between Jordan –Israel and Palestine-Israel due to the Oslo Agreement.

Jordan River Basin: solution

- Based on “New Water Mass” concept conventional and non conventional water
- Concept of good governance using legislative texts

Conventional water	
Jordan River Basin	1.8 billion m ³ /yr
Non conventional water	
Canal (Red-Dead sea /Med-Dead sea)	1.0 billion m ³ /yr
Treated wastewater	0.5 billion m ³ /yr
Desalination	0.3 billion m ³ /yr
Sea water springs	0.2 billion m ³ /yr
Total	4.0 billion m³ /yr

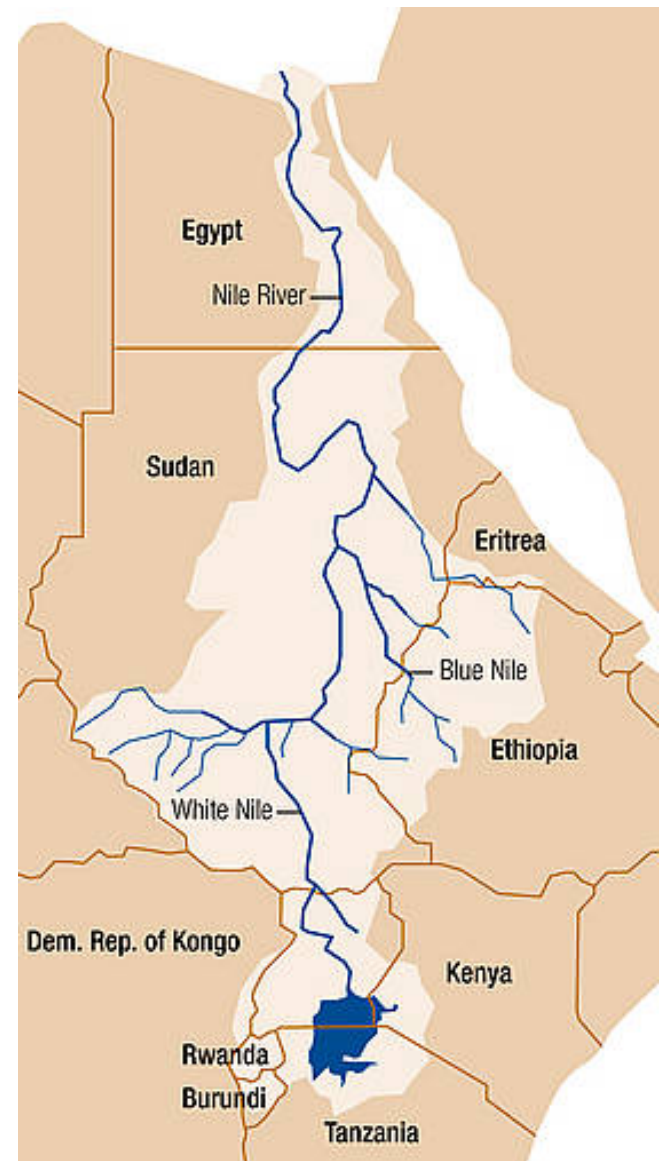
- This amount should be equally divided between the shared basins in order to return Golan Heights (Syria) and Shebaa farms (Lebanon)
- Equitable sharing of water resources within the 5 riparian countries

Case of the Nile Basin

- Egypt still confronts medium and long-term great dilemmas ,mainly increased water demand : population increase, standard of living, soil erosion ,etc...
- Solution are complicated because of the creation of the southern **Sudan state**, and the construction of new reservoirs in Ethiopia

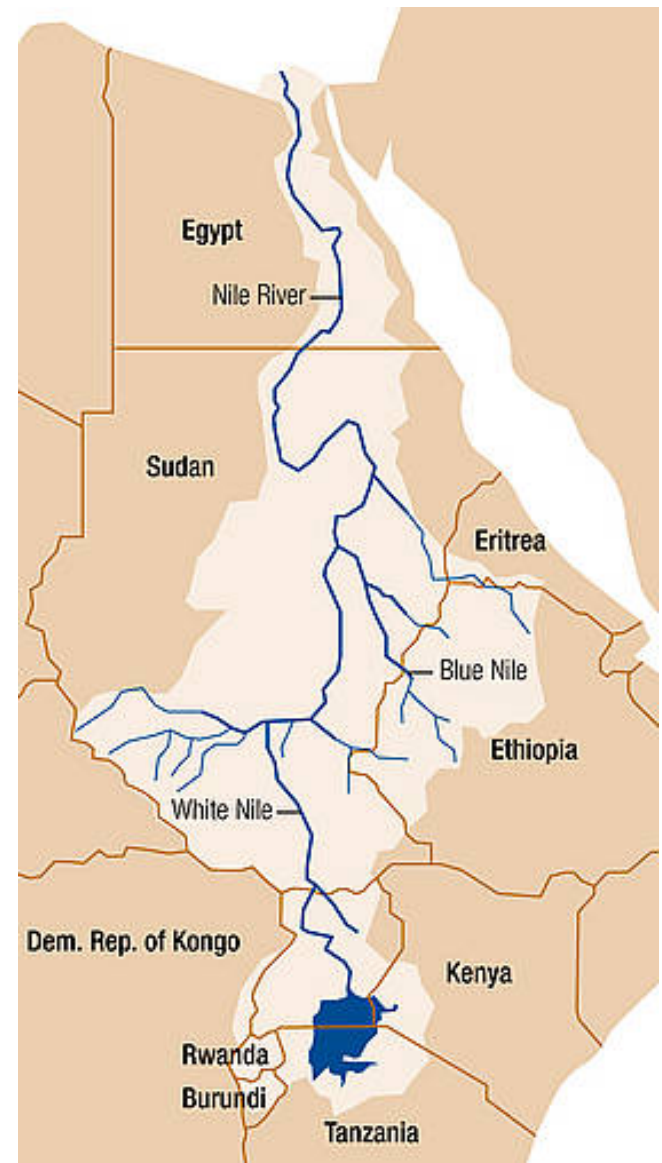
Nile Basin: The hydrodiplomacy aspects on the negotiations among the riparian countries

- Severe food securities pressures imposed on Egypt by the rapidly growing populations.
- Combined effects of erosion due to sediment retention at the Assouan Dam and the increasing salinity of the Nile Valley.
- New irrigation schemes in the higher Egypt through the “Ghor Toshka” project will lead to the diversion of Lake Nasser water to the west reducing the Nile flow downstream.
- Parallel rapidly growing demands for waters from Ethiopia which expected to reach 120 millions of people by 2025.



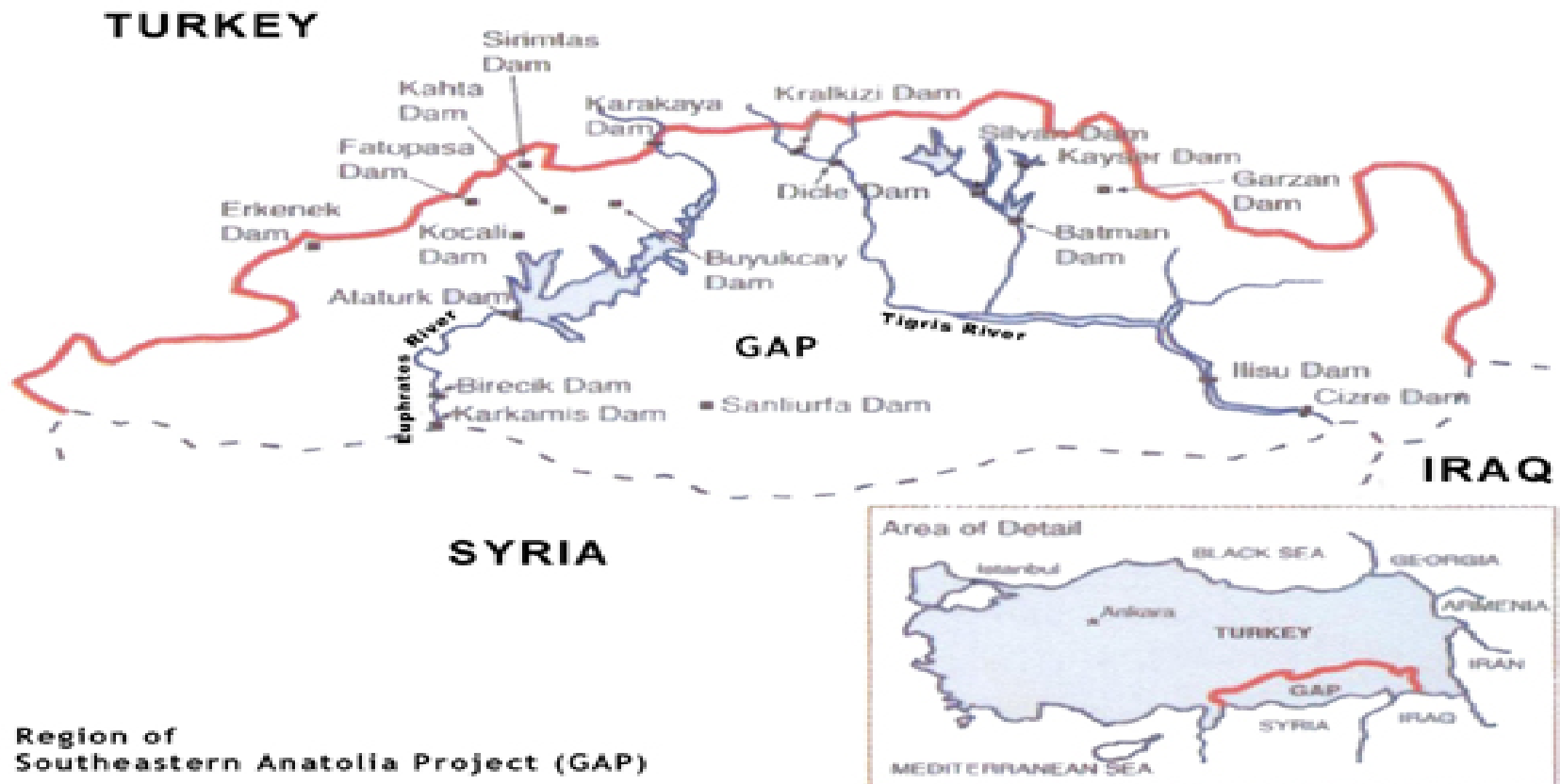
Case of the Nile Basin

- 85% of the Nile Basin water comes from Ethiopia and it actually uses only 1% of the total quantity.
- Ethiopia issues: to manage the upstream water of the Nile by the construction of the Renaissance Dam.
- It will reduce the total water input to Sudan and Egypt.
- Cumulative dry season have a direct impact on food security and lead to the reduction by 4% of the forest cover.
- Despite the creation of the Nile basin Initiative (NBI) , Egypt and both Sudan states should take an action concerning the review of the 1959 treaty with the riparian countries
- The creation of a “Nile Basin Agency” (NBA) is crucial for the formulation and application of the IWRM programs and policies.



Case of the Tigris-Euphrates

The development of the GAP project by Turkey in order to irrigate 1.7 million has created additional tensions in the Middle East region.



Region of Southeastern Anatolia Project (GAP)

Case of the Tigris-Euphrates

- **Turkey vs Syria and Irak : serious tensions on the Tigers and Euphrates River:**
 - Gap project has deferred the plans of riparian states, Irak and Syria.
 - In 1992 the filling of Ataturk dam caused a major water scarcity crisis in Irak.
 - It led to a total interruption of the Euphrates watercourse for a morth.
 - In 1975 Serious tension between Irak and Syria on the water stocked in the Tabqa Dam.

- Turkey vs Syria and Irak : Role of hydrohegemony instead of hydrodiplomacy.
- Turkish control on the upstream of the Tigers and Euphrates.
- water stockage in 22 Dams and 19 hydropower stations leads to :
 - A complete Turkish control of the water Management of these 2 basins on Irak and Syria.
 - American political and military presence in Irak didn't lead to any concession from turkey.
 - Due to the war in Syria, all negotiations on these basins are freezed.
 - Turkey hydrohegemony on water constitutes an economic arm to control the strategic development of the Middle East.
 - The impact of the GAP Project on Syria was a “ catastrophie”: Syria aims to develop 865000 hectares of irrigation extensions.
 - Turkish engagement to increase the input flow plan from 500 m³/s to 800 m³/s from the Euphrates was not met.

Comparison : Nile and Tigris-Euphrates basins

- Euphrates :Turkey located upstream have obvious benefits compared to countries located downstream as opposed to the Nile
- Euphrates: No treaty implemented between the three watercourse riparian States while the division of the Nile water basin is subject to a bilateral treaty (1959) between the old Sudan state and Egypt with the exclusion of Ethiopia.
- In order to fill the gap of water shortage in the region and meet the demands of the watercourse countries, two solutions on technical and economical level can be adopted, such as:
 - Division of cumulated volumes of the two basins in an equitable way between the watercourse States
 - Development of direct and indirect benefits between the riparian states.
 - Creation of International River Basin Organizations.

The Draft Legal Framework for Shared Waters in the Arab Region

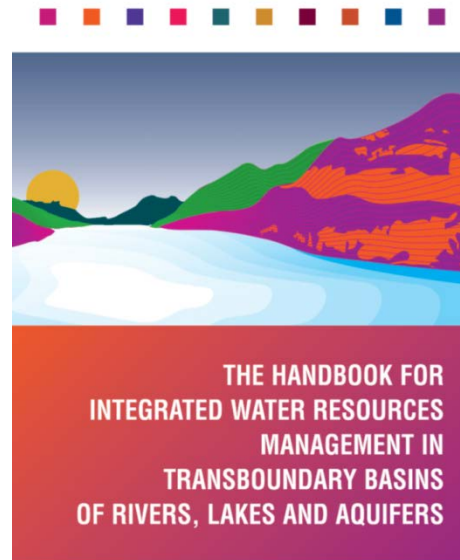
- Collaborative actions on shared waters are a MUST to create win-win situations among all riparians
- The development of the legal framework in the Arab region will serve to develop a common understanding of international principles and to unify the positions of Arab countries on their resources.
- This common approach also politically strengthens the negotiation positions of individual countries in their negotiations with non-Arab states and creates a suitable environment for a more effective regional cooperation.
- It should take into consideration the specificities of each country: upstream or downstream.



- **Before initiating any action at the basin level we need to know about the shared resource**



**The International Network of Basin Organizations (INBO),
The Global Water Partnership (GWP),
The French Development Agency (AFD),
The GEF, UNESCO and UNECE,**



Dam Of CHABROUH

Thank you

