



TOWARD A COMMUNITY OF WATER AND ENERGY

In The Middle East

Presenters

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WATER AND ENERGY

- Water and energy are inseparable twins; the Global Water Cycle is impossible without energy input.
- Water is the medium to transform one form of energy to another; potential energy is transformed into kinetic energy and subsequently to electrical energy through water as a medium.
- Heat energy is transformed into electrical energy with water turned into steam as a medium.

WATER AND ENERGY- Cont.

- While water is an important input to generate energy, energy is an important input to generate sweet water from salty water bodies.
- Heat energy is used to desalinate water through the multi stage flash process.
- Electrical energy and/or potential energy is consumed to generate pressure in the RO desalination process.
- Energy makes water flow in canals and pipes.

THE ENVIRONMENT DIMENSION

- Man-made water falls (Dams) that generate electricity have an adverse impact on aquatic life and migration of fish. Also on connectivity of people.
- Desalination, the interactive process of energy, technology and water, generates brine whose disposal poses an environmental problem.
- All in all, water and energy are essential to enhance the human environment through their roles in social and economic development.

NATURAL RESOURCES ROLES

- Experience in Europe and elsewhere tells us that when politics is the driver for natural resources utilization, conflict and war are frequently the outcome.
- When the natural resources are the drivers of politics, cooperation over their management is more likely the outcome.
- Water extinguishes fire, a form of energy!

THE EUROPEAN EXPERIENCE

- Europe pulled the world into two destructive wars last century. Resources and territory were at the center of conflicts.
- The notion of the Community of Coal and Steel in post war Europe created an environment of cooperation among six nations.
- That cooperation triggered the European Common Market succeeded by the European Community, and subsequently the European Union. A process that took half a century.

A PARALLEL IN THE MIDDLE EAST

- The Middle East has been going through turmoil, tensions and wars for the past century.
- The region is hungry for peace, stability, and social and economic progress.
- It yearns for interaction with the world in more than oil exports and import of armament.
- Is hungry for democracy, respect for human rights and for regional cooperation and integration.

WATER AND ENERGY CONFLICTS

- The Middle East has five major international rivers and several transboundry groundwater aquifers.
- No comprehensive treaties/ agreements have been concluded among their riparian parties.
- Partial agreements exist, and those do not foreclose conflicts among all the riparian parties over water sharing and environmental protection.

WATER AND ENERGY CONFLICTS

- There are shared oil fields over which no sharing agreements exist.
- Fields underlying the territories of Iraq and Kuwait, and Iraq and Iran, are examples.
- Conflicts over oil/ energy have fueled wars in the region that pulled in other international parties including European countries.
- The region is home to valuable renewable energy sources that can trigger cooperation.

MANAGEMENT IN A CONFLICT ENVIRONMENT

- I have managed, on Jordan's behalf, the affairs of international waters (1975-1998).
- Management of water sharing with Israel had been laborious, risky, and in one instance triggered the mobilization of armed forces.
- Management of water sharing with Syria witnessed its ups and downs in accordance with the political temperature.

MANAGEMENT IN A CONFLICT ENVIRONMENT

- Iraq and Syria, at political odds against each other in 1974, almost clashed militarily with the Euphrates water appearing the straw that would break the camel's back!
- Lack of coordination among riparian parties triggered that near-war situation.
- Turkey was filling the Keban Dam and Syria was simultaneously filling the Tabqa Dam, both on the Euphrates. That caused the river in Iraq to almost dry up.

WHY WATER AND ENERGY?

- Water and Energy are two essential ingredients to fuel development and progress.
- The region is rich in conflicts but is water short, some countries more so than others. This creates a precarious situation that can add to the heat of existing conflicts.
- Water shortages are manifested in deficits in foreign trade, especially in food commodities.

WHY WATER AND ENERGY?

- In the region there are energy rich countries, countries with modest energy availability, and countries that are energy poor.
- High income economies are the countries of the Gulf Cooperation Council (except Oman) and Israel; Upper Middle income are Oman and Lebanon; Lower Middle income are Iraq, Syria, Jordan, the PA, and Egypt; and Low income is Yemen.
- High income countries can afford desalination, others cannot.

WHY WATER AND ENERGY?

- Water and energy are wealth generators. Such wealth exists in the region next to poverty. This is a recipe for trouble.
- Water shortage may have to trigger re-allocation of resources at the expense of the poor rural areas.
- There is potential for cooperation among the countries of the Middle East in both water and renewable energy.
- Regional cooperation, even bilateral, can produce positive benefits to be shared.

WHY EUROPEAN INVOLVEMENT?

- Europe's experience in the Community of Coal and Steel is a guide to success in a similar undertaking in Water and Energy in the ME.
- The Middle East is Europe's neighbor and its stability and progress is in Europe's interest.
- There is an imperative to create in the region the will to stay. Economic and social development is essential to achieve that. Water and energy are at the center of development requirements.

SPONSORS?

- IEMed and CITpax are to be both thanked and congratulated for their drive to have the initiative articulated.
- The General Secretariat of the Union for the Mediterranean is a potential partner that can keep the drive alive.
- Next steps should evolve around forming a knowledge base and implementation of projects in water and energy.

A ME Community?

Europe

- (1914-1945)
Adversity and wars, extensive suffering, casualties and victims, division between East and West.
- (1953- present)
Community of Coal and Steel, Common Market, Commission, Union.

Middle East

- (1919- present)
Division into many countries, adversity with Zionist plans, wars since 1948 , extensive suffering and victims, drag to progress and development, immigration and migration.
- Community of Water and Energy?

A ME Community?

Europe

- Former enemies cooperate economically, politically and in security and defense.
- Europe attracted immigrants from the neighboring region, legal and otherwise.
- Social impact of immigrants imposed and started to be felt.

Middle East

- Could former enemies emulate Europe's experience, abandon wars and cooperate likewise?
- Could a ME Community reinforce the will to stay?
- Social impact of neighboring region on Europe could transform to be cooperative.