

A WAY FORWARD FOR THE MIDDLE EAST LORD ALDERDICE & SUNDEEP WASLEKAR

BLUE PEACE FOR WEST ASIA HRH PRINCE HASSAN BIN TALAL

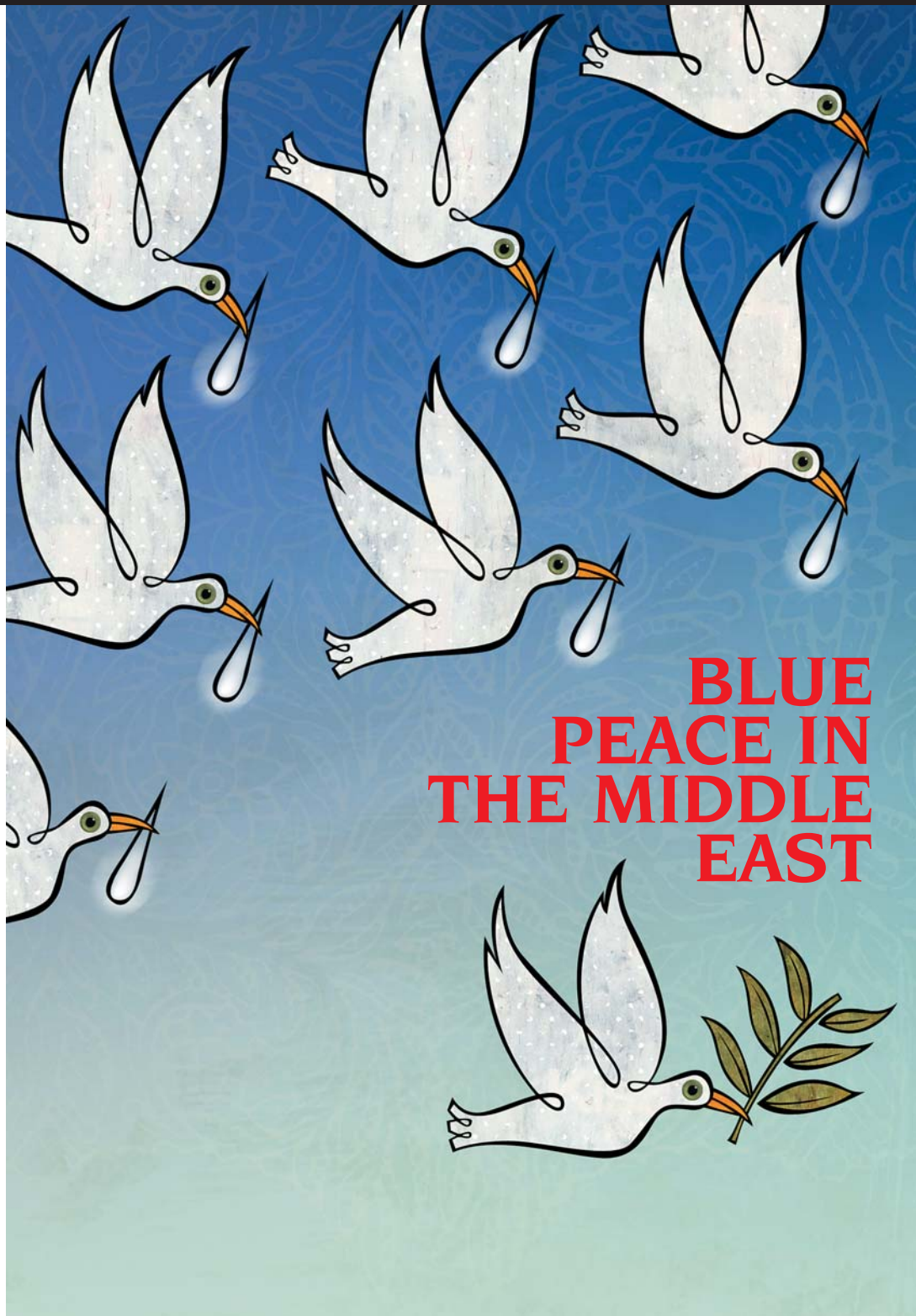
WATER: INSTRUMENT FOR PEACE AND COOPERATION MAYSOON ZOUBI

FROM WATER WARS TO BRIDGES OF COOPERATION FRÉDÉRIC LASSERRE

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Blue Peace: The way forward in the Middle East



**LORD
ALDERDICE¹
& SUNDEEP
WASLEKAR²**

*1 - Convenor of the
Liberal Democrat Peers
2 - President, Strategic
Foresight Group*

On the surface multiple deadlocks have brought despair across the Middle East. There does not seem to be any possible way out of the internal strife in Syria, growing hostility between Syria and Turkey, problems between Israel and Turkey, and the frozen relations between Israel and Palestine. Moreover, Iran's shadow looms large on all these conflicts. But sometimes hope can be found beneath the surface

When the European nations emerged from World War II with a trust deficit, they identified cooperation in coal and steel as a means to develop stakes in mutual survival and prosperity. Eventually the European Coal and Steel Community evolved into the European Union. India and Pakistan fought wars in 1965, 1971 and 1999. However, during this period they honored the Indus Water Treaty of 1960 and refrained from bombing watercourses and granaries. They are now moving toward exploring workable solutions to outstanding issues such as Jammu and Kashmir. North America and East Asia provide other examples of how cooperation in the spheres of mutual interest has helped reduce the political trust deficit. Africa, which was plagued by myriad conflicts only until the last decade, is fast moving toward regional cooperation with the Southern African Development Community, East African Community, Senegal River Basin Development Authority (OMVS) and a reinvigorated African Union.

It is not a coincidence that the Middle East, which lacks any institutions of regional cooperation and dialogue, continuously faces different kinds of violent conflicts. In the long run, the region needs a semi-

permanent and inclusive conference, similar to the Conference on Security and Cooperation in Europe (CSCE). In the immediate future, it can begin with establishing institutionalized mechanisms for cooperation in core areas of human development, particularly water and environment.

We have been part of the Blue Peace process, initiated under joint sponsorship of the governments of Switzerland and Sweden and steered by Strategic Foresight Group (SFG). A floor debate in the House of Lords in the United Kingdom a year ago found overwhelming support for the Blue Peace recommendations. They include the formation of a cooperation council for water resources for Iraq, Jordan, Lebanon, Syria and Turkey, and a high-level confidence building initiative on water between Israel and the Palestinian Authority.

A mechanism for cooperation between Iraq, Jordan, Lebanon, Syria and Turkey should make it possible for heads of government to find collaborative ways to rejuvenate the depleting water resources; reduce water use by promoting new crops and irrigation techniques; negotiate trade-offs between water and other needs; develop and disseminate modern technologies for containing evaporation and for turning waste water treatment into a profit center by extracting reusable resources; attract large investments and multilateral funds; and harmonize hydrometric standards. Only the heads of government and their trusted aides have the political authority to take such significant political decisions. They involve issues such as finance, investments, technologies, security and foreign policy, which are outside the scope of water ministers. Therefore, it is essential to move the trans-boundary water files from the offices of water ministries to those of prime ministries.


If the top political leaders meet to discuss collaborative solutions to water, they can also find informal opportunities for interaction on the sidelines to discuss land disputes. Thus, water can turn from being a cause of potential crisis to being an instrument of cooperation and peace.

The Middle East has a recent example of how cooperation can transform a region at a fast pace. In June 2010, Jordan, Lebanon, Syria and Turkey decided



WATER CAN TURN FROM BEING A CAUSE OF POTENTIAL CRISIS TO BEING AN INSTRUMENT OF COOPERATION AND PEACE.

to create a free trade area, and also invited Iraq to join it at a later date. Within six months they liberalized the visa regime, harmonized banking standards, expanded the web of telecommunication and launched several industrial joint ventures. Unfortunately, this effort was treated as an ad hoc project without any institutional infrastructure underpinning it. It collapsed in 2011 with the Syrian crisis.

It is therefore essential that any future effort emphasizes sustainable institutions and focuses on water, which is the most critical trans-boundary resource. Since water is closely linked to agriculture, energy and livelihood, active cooperation for jointly harnessing the benefits of watercourses in the Middle East can have a multiplier impact in large parts of the economy. It can eventually lead to the establishment of Blue Peace, based on a positive relationship between human society, the economy and the environment. For centuries the countries in the Middle East have attempted to use land as the basis of determining the relationships between them -- and failed. If they give water a chance, perhaps we can hope for a new beginning. 



The River Tigris at Hasankeyf, near the controversial Ilisu Dam project in southeast Turkey.
Feb. 12, 2012
PHOTO: CHAN

The al-Bassel Dam in southern Syria; water flows from here to neighboring Jordan.
Aug. 13, 2000
PHOTO: REUTERS, KHALED AL-HARIRI



Blue Peace for West Asia



HRH PRINCE
HASSAN BIN
TALAL OF
JORDAN

The United Nations has proclaimed 2013 the International Year of Water Cooperation. This reflects growing consensus in the international community on the significance of water in global policy discourse. It also indicates the need to treat water as an instrument of cooperation rather than as a cause of conflict.

The regions that have introduced cooperation in trans-boundary watercourses have experienced economic growth and peace. The experience of the Rhine River basin in Europe, the Colorado basin shared by the United States and Mexico, the Senegal basin in West Africa and the Lower Mekong basin in East Asia demonstrate that decision makers in different parts of the world, developed and developing alike, have realized that they can derive benefits from a shared river through integrated development of a basin.

I feel concerned that regional cooperation in developing water resources is conspicuously absent in West Asia, where it is most needed. The Blue Peace report by Strategic Foresight Group (SFG) reveals some alarming data. The river flows in Turkey, Syria, Iraq, Lebanon and Jordan have depleted by 50 to 90 percent from 1960 to 2010. For instance, the Yarmouk River declined from 600 million cubic meters (mcm) to about 250-300 mcm per year, while the Jordan River dropped from 1,300 mcm to 100 mcm. The flow



WE NEED BOLD THINKING TO CONCEIVE A REGIONAL COMMUNITY OF WATER, ENVIRONMENT AND ENERGY COMMITTED TO SUPRA- NATIONAL OBJECTIVES

of the Euphrates in Iraq decreased from a long-term average of 27 billion cubic meters (bcm) to 9 bcm in 2009, a drought year.

Countries in our hydro-political region have signed bilateral and trilateral agreements for cooperation. But in most cases, the concept of cooperation has been confined to organizing a few training programs and technical meetings. A fragmented architecture of agreements on trans-boundary water resources has proved to be inadequate to address the West Asian challenges. We are immersed in the politics of negotiations. We must shift to the policies of common survival.

We need bold thinking to conceive a regional community of water, environment and energy committed to supra-national objectives rather than narrow national interests. We should treat water as a regional common asset. We need an institutionalized mechanism for harnessing the potential of water




Local youths at play in the River Jordan. July 16, 2012
PHOTO: REUTERS, BAZ RATNER

resources for the benefit of human development and environment in a collaborative manner. We need to take advantage of new technologies to rejuvenate our water resources and environment. We need to develop drought-resistant crops and new methods of irrigation which can help us save water. We need to develop joint strategies to manage climate change, drought and excessive evaporation. We need to harmonize our hydrometric and climate monitoring standards so that we have a common platform of data for regional cooperation. We need Blue Peace.

It will not be possible for us to realize such a bold vision with the conventional approach of endless

negotiations on how to divide the pie. We need to reorient our thinking to expand the pie of our natural resources. In order to do so, our political leaders and civil society have to come forward. The challenge of water and environment is too significant to be left only to experts and officials.

I have therefore accepted the invitation of the government of Switzerland to chair a high-level group on regional cooperation and sustainable management of water in all its aspects. I am privileged to have former Foreign Minister of Turkey Yaşar Yakış and former Finance Minister of Lebanon Mohammed Chatah as my colleagues in this group. We will gradually expand the group to include eminent members from other countries in the region. The initiative is steered by SFG.

The high-level group will engage with stakeholders in the West Asian region and in the international community to develop concrete ideas for a regional mechanism for cooperation, which can withstand short-term political pressures to create a long-term community of common interest in our most precious natural resource. If the countries in West Africa and East Asia, facing no less difficult challenges than we do, can benefit from institutionalized cooperation in water resources, there is no reason West Asia should remain behind. The proclamation by the UN of 2013 as the International Year of Water Cooperation is a wake-up call for us. 

Locals cross the Euphrates at Fallujah, Iraq. Nov. 22, 2007
PHOTO: REUTERS, MOHANNED FAISAL

CONFERENCE



INTERNATIONAL MEDIA CONFERENCE: BLUE PEACE IN THE MIDDLE EAST

İstanbul, Turkey
March 18-19, 2013

Co-hosted by
TURKISH REVIEW
STRATEGIC FORESIGHT GROUP

in partnership with
SWEDISH INTERNATIONAL DEVELOPMENT COOPERATION AGENCY

in cooperation with
SWISS AGENCY FOR DEVELOPMENT AND COOPERATION

BAHÇEŞEHİR UNIVERSITY

*Conference Venue: Zaman Group Headquarters
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+90 212 454 1454,*

*Hotel for International Participants: Renaissance Polat Marriott
Sahil Yolu Cad., No. 2, Yeşilyurt, İstanbul, 34149,
+90 212 414 18 66*

*Provisional Program
As of March 13, 2013*

**TURKISH
REVIEW**



► March 17, 2013

Arrival of International Participants

19:00 *Informal Dinner, at Akdeniz Restaurant, Renaissance Polat Hotel*

► March 18, 2013

Day 1

09:00 *Meet in lobby of Renaissance Polat Hotel*

Session 1 Introduction and media perspectives on Blue Peace

09:30 - 12:30 Chair: Mr. Şaban Dişli, Member of Parliament, Turkey
Opening statements and introduction to the Blue Peace process

- Mr. Kerim Balci, Editor-in-Chief, Turkish Review
- Dr. Sundeep Waslekar, President, Strategic Foresight Group
- Mr. Michel Mordasini, Assistant Director-General and Head, Directorate Global Cooperation, Switzerland
- Mr. Torkel Stiernlöf, Consul-General of Sweden in İstanbul

10:30 - 11:00 *Coffee Break*

Discussion on Blue Peace

- Mr. Abbas al-Lawati, Middle East Desk, Gulf News
- Dr. Ayman Nour, Editor, All4Syria
- Mr. Samir Barhoum, Editor-in-Chief, Jordan Times
- Mr. Stran Abdullah, Editor, Kurdistan New Newspaper
- Dr Haytham Mouzahem, Program Writer, Al-mayadeen TV
- Mr. David Judson, former Editor, Hürriyet Daily News
- Ms. Ayşe Karabat, Editor, Al Jazeera Türk

12:30 - 14:00 *Networking lunch for participants (parallel working lunch of High Level Group)*

14:00-14:30 *Official photographs*

Session 2 Experiences from Europe on collaborative management of trans-boundary water resources

14:30 - 16:00 Chair: Dr. Ahmet Saatçi, President, Turkish Water Institute

Statements

- Expert from State Waterworks Authority (DSİ), Turkey
- Mr. Philip Weller, Executive Secretary, Danube River Basin, Austria
- Prof. Dr Manfred Spreafico, former President, Rhine Hydrological Commission, Switzerland
- Prof. Dogan Altınbilek, former Director-General of DSİ, Turkey and Vice President, World Water Council, Turkey
- Prof. Dr İlder Turan, İstanbul Bilgi University

Regional comments

- Dr. Selim Catafago, President of Board of Litani Water Authority, Lebanon
- Mrs. Safia Al Suhail, Member of Parliament, Iraq

16:00 - 16:30 *Coffee Break*

Session 3 Experiences from Africa and Asia on collaborative management of trans-boundary water resources

16:30 - 18:30 Chair: Dr. Bakhtiar Amin, former Human Rights Minister, Iraq

Statements

- Ambassador Tariq Karim, High Commissioner of Bangladesh to India
- Dr. Cecilia Tortajada, President of the Third World Centre for Water Management and former Visiting Professor, Lee Kuan Yew School of Public Policy, Singapore
- Dr. Mohammad Abu Zeid, President, Arab Water Council, Egypt and former Minister of Water Resources and Irrigation, Egypt
- Ms. Mai El-Shafie, Senior Columnist, Nile Media Network, Egypt

Regional Comments

- Mr. Mohammad Kabbani, Member of Parliament, Chairman of Parliamentary Committee of Public Works, Transportation, Energy and Water, Lebanon
- Dr. Abdullah Droubi, former Director, Water Department, Arab Centre for the Studies of Arid Zones and Dry Lands, Syria
- Dr. Walid Saleh, Head, MENA Regional Program, The United Nations University, Institute for Water, Environment, & Health (UNU-INWEH), UAE
- Dr. Bülent Keneş, Editor-in-Chief, Today's Zaman

Grand Inaugural Session

19:30 - 22:30

Chair: Dr. Yaşar Yakış, former Minister of Foreign Affairs

Welcome Remarks

- Mr. Kerim Balci, Editor-in-Chief, Turkish Review
- Mr. Ekrem Dumanlı, Head of Zaman Group

Introduction to Blue Peace

- Dr. Sundeep Waslekar, President, Strategic Foresight Group

Keynote Address

- HRH Princess Sumaya bint El Hassan of Jordan

Short Statements

- Dr. Mohamad Chatah, former Finance Minister, Lebanon
- Rt. Hon. Lord Alderdice, Convenor of the Liberal Democrat Parliamentary Party, House of Lords, UK
- Mr. Michel Mordasini, Assistant Director-General, Head of the Directorate Global Cooperation, Switzerland

Chairman's Remarks by Dr. Yaşar Yakış

Throughout the gala event ebru artist Garip Ay's work will be on display. He will also provide demonstrations of the art of creating pictures using oil paints on water

► March 19, 2013

Day 2

09:30

Meet in lobby of Renaissance Polat Hotel

Session 4 Regional perspectives on learning from other regions and

10:00 - 13:00 lessons for the Middle East

Chair: Dr. Bassem Shabb, Member of Parliament, Lebanon

Statements

- Prof. Talib Murad, Kurdistan Regional Government Adviser for Food Security and Agriculture, Iraq
- Ms. Zeina Majdalani, Economic Expert, Office of the Prime Minister, Lebanon
- Mr. Hiwa Osman, Senior Columnist, Al Alam
- Mr. Abdul Hafedh al-Hrout, Editor, Petra News

- Mr. Michael Young, Opinion Editor, Daily Star
- Ms. Reem Sharaf, Senior Columnist, Al Rai Newspaper
- Prof. Mensur Akgün, Director, Global Political Trends Center, Turkey
- Ms. Ceyda Karan, Editor, Sky Turk

11:00 - 11:30

Coffee break

13:00 - 14:00

Lunch for all participants

Session 5

Creating a Middle East media network for Blue Peace, follow up actions and conclusions

14:00 - 15:30

Chair: Dr. Maysoon Zoubi, former Secretary-General, Ministry of Water and Irrigation, Jordan

Presentation

- Ms. Tugba Evrim Maden, ORSAM Water Bulletin, Turkey

Statements

- Mr. Hamoud Almahmoud, Editor-in-Chief, Haykal Media
- Mr. Issa Goraieb, Editor, L'Orient Le Jour
- Mr. Mowafaq Shraideha, Presenter, Jordan Radio and Television, Jordan
- Mr. Abdelaziz Alkhamis, Editor-in-Chief, Al Arab Newspaper
- Dr. Khaled Ghazi, Editor, Arab Press Agency Concluding Statements
- Mr. Cengiz Çandar, Columnist, Hürriyet Daily News
- Mr. Abdulhamit Bilici, General Manager, Cihan News Agency

Concluding Statements

- Mr. Kerim Balci, Editor-in-Chief of Turkish Review
- Mr. Torkel Stiernlöf, Consul-General of Sweden in İstanbul
- Mr. Mario Carera, Senior Political Advisor, Human Security Division, Federal Department of Foreign Affairs, Switzerland
- Ms. Ilmas Futehally, Executive Director, Strategic Foresight Group

16:00

Depart for field trip to İkitelli Water Treatment Facility

19:30

Dinner at Bahçeşehir University for international and invited guests

İkitelli Drinking Water Treatment Plant

The İkitelli Drinking Water Treatment Plant (DWTP) comprises the Fatih Sultan Mehmet Han and 2nd Beyazid Han Treatment Plants. Established on a plot of 270,000 square meters, the total capacity of the plant is 800,000 cubic meters / day, meeting the water requirements of nearly 5 million people. Raw water is supplied to the plant from the Terkos and Sazlıdere dams.

İkitelli DWTP contains 12 main units:

- * inlet structure
- * aeration unit
- * ozonation
- * rapid / slow mixing tanks
- * settling (clarifier) basin
- * rapid sand filter
- * chlorine contact tank / clean water tank
- * pumping station
- * sludge thickening tank
- * sludge dehydration unit

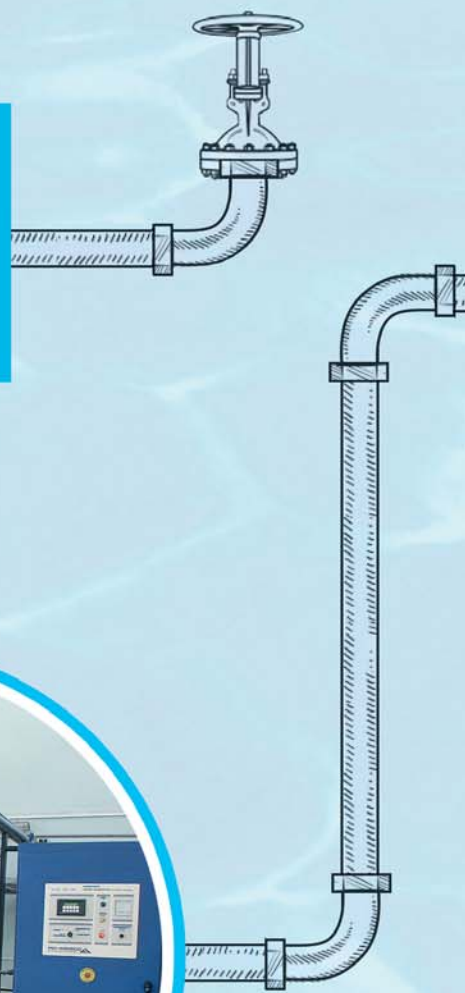


AERATION UNIT

The purpose of aeration is to bring water and air into close contact to remove dissolved gases (e.g. carbon dioxide, hydrogen sulfide) and to oxidize iron and manganese to a certain extent.

OZONATION

Ozone is used for pre-disinfection and oxidation of water. Oxidation converts contaminants to a form which are easily removed from water. Disinfection is achieved through the destruction of algae.



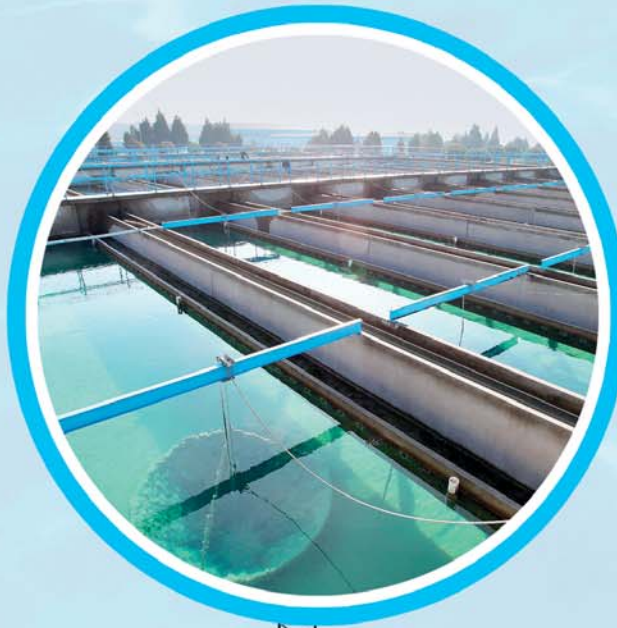
RAPID AND SLOW MIXING

After water is ozonated, it flows to rapid and slow mix tanks to which chemicals are added to combine (coagulation) fine particles and colloids into masses (flocculation).



SETTLING (CLARIFIER) BASINS

Flocs formed during slow mixing are removed in settling basins with upflow sludge blankets. Water is equally distributed to the basins from the bottom. As water flows to the top, flocs are removed by the sludge blanket. Clear water reaching the top of the blanket flows to rapid sand filters for further treatment.



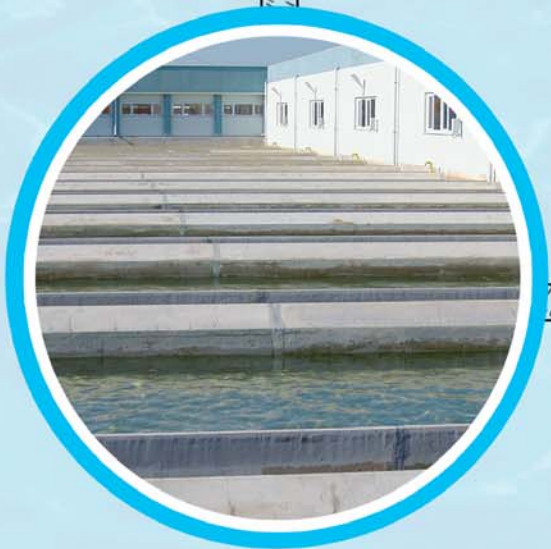
RAPID SAND FILTERS

Rapid sand filters remove suspended particles that cannot be removed in the prior process steps. By passing the water through a medium of sand (90 centimeters) and gravel (20 centimeters), impurities are retained in the filter and the clean water flows through.



CHLORINE CONTACT TANK

In the last step of water treatment, water is disinfected with chlorine to remove all microorganisms. Clean water is then stored in water tanks prior to distribution.



SLUDGE DEHYDRATION

The plant has other units like sludge thickening ponds and sludge dehydration units. The sludge cake formed (40-50 tons/day) is transferred to a municipal landfill site.



PUMPING STATION

Water in clean water tanks is either pumped to the city or transferred by gravity.



WATER REACHES HOUSEHOLDS

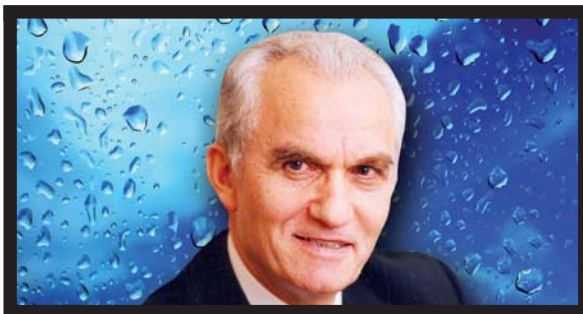
İkitelli DWTP provides drinking water for up to 5 million people / day.



T

International Media Conference: Blue Peace in the Middle East

Turkey has the means to contribute to peace and stability in the Middle East in the form of water-related issues. However it has failed so far to demonstrate these means. It has adopted a fair and just position on water issues, but more must be done for this position to be understood and appreciated by others. Hence this conference, where the content of the Blue Peace project will be discussed in the hope of raising public awareness



YAŞAR YAKIŞ

Former Turkish Foreign Minister

We are extremely grateful to the Turkish Review for having taken the initiative to organize this meeting. Regarding the content of the meeting, we are grateful to Sundeep Waslekar, chairman of the prestigious and internationally active India-based think tank Strategic Foresight Group (SFG). SFG is behind a very creative idea: Blue Peace. The project does not depoliticize the issue of water, but starts by leveling the ground. This will be done through cooperation at the technical level among Middle Eastern countries in areas such as water management techniques, exchange of best practice, calibration of water measurement tools, etc. If mutual trust can be developed as a result of this cooperation, and if the representatives of regional countries succeed

in tuning in to the same wavelength, they may move beyond the sphere of shared water projects to cooperation in more sensitive issues. Hence the International Media Conference on Blue Peace. The content of the Blue Peace project will be discussed during this conference, in the hope of raising public awareness both in Turkey and international circles.

Here I wish to discuss the issues regarding the two biggest trans-boundary watercourses in the Middle East, namely the Euphrates and the Tigris, because they constitute the background of many other issues between the three riparian countries of these two rivers. Furthermore they constitute, to a great extent, the background of the Blue Peace project in the Middle East.

The idea of using water as a means to contribute to regional peace and stability has always been my dream. When I was a university student in the mid-1950s, our professors used to tell us that water scarcity in the Middle East could reach such a level that “water wars” might break out in 15 or 20 years’ time; that is to say, by the late 1970s. Thankfully this proved not to be the case. But could they break out in the future? If you are determined to wage war on your neighboring countries there can be no better pretext than water,



because water is essential for life. However, if you want to achieve peace with neighboring countries, there can be no better means than water to achieve this goal.

The Middle East is already bogged down with complicated internal and international problems.

In such an environment any small spark could lead to unnecessary tension between the countries of the region. No matter how this tension emerges, ultimately a settlement will again need to be reached at the negotiating table. It is far better to solve such disputes before any tension arises.

My involvement in the subject of trans-boundary watercourses goes back to the 1980s. I was counselor of the Turkish Embassy in Damascus. I remember that when there were cuts in the water supply in the city, our Syrian friends were ready to put the blame on Turks. Very few people paid attention to the fact that water for Damascus had nothing to do with waters coming from Turkey. The Euphrates River that originates in Turkey was more than 500 kilometers from Damascus. Water for the city of Damascus was supplied not from Turkey, but from the Barada River in Lebanon. This goes to show how public opinion may

IF YOU WANT TO ACHIEVE PEACE WITH NEIGHBORING COUNTRIES, THERE CAN BE NO BETTER MEANS THAN WATER

be manipulated by information that has nothing to do with reality.

At later stages I chaired several Trilateral Technical Committee meetings on trans-boundary water issues between Turkey, Syria and Iraq. What I noticed during these meetings was that the water issue

was over-politicized. At some stages I got the impression that water itself had become a secondary issue of our technical meeting, and the major issue had become how well one country could blame another.

The riparian countries of the Euphrates and Tigris are in general poor in water resources. Per capita share of water in the three riparian countries varies: In Iraq it is about 1,800 cubic meters/year (that is to say per person per year), in Turkey about 1,400 cubic meters/year, and in Syria 1,100 cubic meters/year. In the non-riparian countries of the Euphrates, such as Jordan, Israel and Palestine, these figures are even lower. And it is going down steadily each year as the population of these countries increases. The same figures in water-rich countries such as Canada and Norway vary between 8,000 and 10,000 cubic meters a year.

These figures indicate that the three riparian countries of the Euphrates Tigris are six to seven times

The River Euphrates, Turkey.

Aug. 7, 2008
PHOTO: ZAMAN



more water poor than the water rich countries of the world. Water is thus an extremely scarce resource in the region and has to be utilized with great care.

Bearing in mind this stark contrast, during the meetings of the Trilateral Technical Committee Turkey submitted a proposal that was in line with the international norms valid in this field. Despite the fact Turkey had not signed the UN Convention on the Law of the Non-navigational Uses of International Watercourses, the basic principles on which Turkey was basing its position were also confirmed in this international convention, later adopted in 1997. The convention, which is regarded as the “holy book” of this particular field, has not yet been ratified by a sufficient number of countries for its entry into force. Articles 5 and 7 of the said convention contain the basic principles that govern the utilization of trans-boundary watercourses. These principles are as follows:

- (a) The first principle is that water has to be utilized in an “equitable” manner. In other words the convention does not provide that the utilization of water will be based on the principle of equality. Equitable in this context means that the water has to be utilized in a manner commensurate with the need of the people that will utilize it.
- (b) The second principle is “reasonable” utilization. Reasonable utilization can be understood as not wasting this scarce resource.
- (c) The third principle is “optimal” utilization of water. Optimal utilization means that the water should be utilized in such a manner that it yields the highest possible benefit.
- (d) The fourth principle is that the upstream countries, in utilizing an international watercourse, should not cause “significant harm” to the downstream countries. The concept of the “significant” harm may require some further clarification. In the process of the preparatory works for the Convention on the Law of the Non-navigational Uses of International Watercourses, the opinion that prevailed in the International Law Commission of the United Nations, which was in charge of drafting the text, was that if the

WATER IS AN EXTREMELY SCARCE RESOURCE IN THE MIDDLE EAST REGION AND HAS TO BE UTILIZED WITH GREAT CARE

watercourse is used one way or another by the upstream country, it was almost impossible not to cause some degree of harm to the downstream countries. Asking the upstream country not to cause any harm at all would be tantamount to claiming that the upstream countries had no right at all to utilize a trans-boundary watercourse and that this right could only be exercised by downstream countries. Bearing this in mind, the International Law Commission admitted that a certain degree of harm was unavoidable, but it decided that this harm should not be “appreciable” harm. Therefore the initial text was drafted to the effect that the “watercourse States shall take all appropriate measures to prevent the causing of appreciable harm to other watercourse States.” However, as the work of the commission evolved, it was determined that the concept of “appreciable harm” did not offer sufficient protection to the

rights of the upstream countries, and with a view to strengthening their right, the final wording is as follows: “The watercourse States shall take all appropriate measures to prevent the causing of appreciable harm to other watercourse States.”

The proposal that Turkey submitted in the Trilateral Technical Committee is in full conformity with all four of these principles. It aims at “equitable, reasonable and optimal utilization” of the waters of the Euphrates and Tigris and all appropriate measures needed not to cause “significant” harm to downstream countries. Turkey’s proposal was contained in “three-stage plan”:

- (a) Determine the water potential of the Euphrates-Tigris basin in the three riparian countries.
- (b) Determine the irrigable agricultural land potential in the three riparian countries.
- (c) Allocate the available water to the available agricultural land in an equitable and reasonable manner for the sake of obtaining optimal benefit from the utilization of the water.

In the technical committees that I chaired, the downstream countries, rather than an “equitable” share, insisted on sharing the water on the basis of

“equality,” regardless of the size of the populations that benefit from these rivers, and regardless of whether the water could be utilized as economically in the other riparian countries. This attitude is exactly the opposite of “equitable” sharing.

The three countries have never reached a stage at which they have been able to exchange their views on what could be the criteria of equitable and reasonable utilization of water. If Mr. Waslekar’s Blue Peace is translated into action, we may expect regional countries to talk about such subjects more concretely.

At present, the contacts that are being conducted between countries sharing river basins could be characterized as “megaphone diplomacy.” That is to say, countries spell out their official position unilaterally and loudly, but they are not interested in what the other side has to say on the same subject.

This the reason I am all the more happy to see the representatives of so many countries at this meeting, because at international meetings Turkey is from time to time accused of harming the interests of downstream countries. If Turkey explains properly its position on this subject in international meetings, other states will be able to better understand the fairness of Turkey’s stand.

Now I will turn to another trans-boundary watercourse, the Maritsa River, which flows from Bulgaria to Greece, and from there to Turkey. In this river Turkey is a downstream country. It will be a little out of context to raise problems related to a trans-boundary watercourse that has nothing to do with the subject of this meeting. But the reason I mention Maritsa is that the third countries that raise their voice to point out that Turkey is not abiding by its obligations as an upstream country in the Euphrates River turn a deaf ear to what Turkey says as a downstream country with regards to the Maritsa River. Bulgaria and Greece are the upstream countries in this case, therefore they have similar obligations to Turkey’s regarding the Euphrates or Tigris, but there are additional reasons Bulgaria and Greece have to do more than Turkey is asked to do for the Euphrates and Tigris:

According to the EU Water Framework Directive (Article 13/3) Bulgaria and Greece have a binding obligation, as member states of the EU, to cooperate with Turkey. Despite this clear obligation, Turkey has been unable to establish a meaningful


cooperation with these two upstream countries for drawing up a common river basin management plan for the Maritsa River.

Meanwhile cooperation on the Euphrates and Tigris is a requirement for Turkey as a result of good neighborly relations with Syria and Iraq -- not a contractual obligation. Despite this, Turkey abides by these obligations. Under the EU rules Greece and Bulgaria must cooperate with Turkey on the Maritsa River, yet these two countries remain indifferent to Turkey’s call for cooperation. It is an irony that Bulgarian and Greek members of the European Parliament vote in favor of the paragraphs that



invite Turkey to abide by its obligations, while they pay little attention to their respective countries’ violation of EU rules by not cooperating with Turkey on the Maritsa River.

Turning back to the Middle East; I hope that meetings like this conference will the pave way to closer interaction between the countries of the region. Exchanging best practice will open the way to more cooperation.

I congratulate once more the Turkish Review and SFG for their initiative, and wish every success to this meeting. 

**The River Euphrates
near Gaziantep,
Turkey.**

July 23, 2009

PHOTO: CIHAN,
SERKAN CAMBAZ



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The what and why of Blue Peace

The prevention of water disputes is assuming a growing importance. Historically, water was perhaps the least among the potential causes for conflict between and within countries. Land has been the main reason for wars ever since the first known state was established in Egypt almost 5,000 years ago.

Meanwhile over the course of the last century, ideology and energy have also emerged as new causes of international conflict



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The 21st century is different in terms of unprecedented growth of population, industry and technology, and therefore also in demand on natural resources, including water. By 2050, the world may have triple the population of 1950 and nine-fold that of 1750. Between 1950 and 2050 we will have lifted more than 5 billion people out of poverty. These developments will not come without a cost. The biggest price we will pay will be in terms of growing demand for water. At the same time, the supply of fresh water is expected to diminish due to the negative consequences of industrialization, pollution, climate change, desertification and urbanization.

This new threat will be most evident in what may be termed the “mega arc of hydro-insecurity”; spreading from Vietnam in the East, running through China, Bangladesh, India, Nepal, Pakistan, Iran, Iraq, Syria, Jordan, Israel and Egypt, then going all the way to Kenya in East Africa. The Middle East lies at the center of this arc. According to some estimates, the supply of fresh water could be depleted by between 20 to 40 percent in some of the countries in this arc; this will result in a drop in production of rice, wheat, maize and other food grains by 20 to 40 percent in the next half-century. As a result, countries that are self-sufficient in food production today will begin to import food grains by 2030 or 2040. The additional pressure on the international food market could be in excess of 300 million metric tons per year by 2030. This may cause unmanageable inflation of food prices, leading to riots and social upheaval. Moreover, a drop in the availability of fresh water and food will mean loss of livelihood for millions of poor people in rural areas, forcing them to migrate elsewhere and leading to social destabilization. These developments carry the risk of producing havoc, a sense of insecurity, election of autocratic leaders and conflict within and between countries.



THE OLD APPROACH OF PREVENTING WATER CONFLICT BY NEGOTIATING A FORMULA FOR ALLOCATION OF FRESH WATER FLOWS WILL NOT WORK

While specifics may change from one geography to another along the arc, one factor is clear and common. The old approach of preventing water conflict by negotiating a formula for allocation of fresh water flows will not work. The amounts that we agree on today will simply not be there in 10 years' time. For instance, Israel and the Palestinian territories agreed on a certain formula for the sharing of water resources in the course of the Oslo Accords in 1993. Since then, the Mountain Aquifer has been depleted by 7 percent. If they wait for another decade to reach an amicable solution the aquifer may be depleted by 10 percent compared to the Oslo figures, rendering the old formula invalid.

The Jordan River and some of its tributaries have lost more than half of their flow compared to 50 years ago. At the current rate, these rivers may not exist 50 years from now. The Barada River, which feeds the

Syrian capital of Damascus, has become an occasional river. According to some climate experts, the mighty Tigris and Euphrates may also lose some of their flow in the next few decades. India, China and some of the neighboring countries in South Asia are expected to see depletion of river waters by 300 billion cubic meters in the next two to three decades, an amount that can feed the entire Middle East, though it may appear small in the Asian context.

As agreements based on quantitative or proportionate allocation of water resources tend -- with some exceptions -- to be short-lived, a new approach is needed. What is required is joint, sustainable, comprehensive, integrated management of water resources by countries in any given region. In brief, the issue is not how to share the pie, rather the issue is how to preserve, nurture, and expand the pie and how to share benefits from its sustenance for the social and economic development of people in the region. This can be done at the basin level, through the concept of integrated river basin management (IRBM), which is now well established in the water discourse. Better still, it should be done at a regional level.

The imperative for a regional approach comes from the fact that the unit of decision making is still

The Xiaolangdi Dam on the Yellow River, Luoyang, Henan province.

July 6, 2012
PHOTO: REUTERS,
CARLF ZHANG



the state, and whatever a state decides about one basin can have impact on demand and supply conditions of other basins. For instance, Syria's situation in the Barada basin determines overall availability of water in the country. It can also impact other basins. If the Barada is managed properly in the long term, Syria need not divert water from the Euphrates. However, if the Barada runs dry, Syria has to think in terms of channeling water from Euphrates to Damascus, Homs and other cities in the southwest. Since Syria shares the Euphrates with Turkey and Iraq, its demand on the Euphrates' waters has implications for its relationship with both states. If, theoretically, Barada has abundant water, Syria's demand on the Euphrates will decrease and it



China's Yangtze River and the lakes it feeds, such as Honghu Lake, shown here, have been increasingly prone to drought in recent years.

May 29, 2011

PHOTO: REUTERS,
DAVID GRAY

will be a lot more flexible in releasing water received from Turkey to Iraq.

China is experiencing a crisis with its Yellow River in the north, forcing it to divert water from the Yangtze River, which lies wholly within its jurisdiction. In future, there is speculation that China may consider diverting water from the Yarlung Tsangpo River, causing concern in the downstream countries of India and Bangladesh. If the Yellow River has a long life, China will not need to divert water from other rivers. Such an approach may not work if difficult terrains make all basins independent of each other. But overall, sustainable management of all fresh water resources by countries in any region in an integrated fashion has become essential.

Strategic Foresight Group (SFG) describes the prevention of future water conflicts through sustainable, comprehensive and integrated management of water resources by countries in any region as the "Blue Peace" approach. Unlike conventional concepts of peace, which are often armistice or arms control agreements, the Blue Peace approach proposes a proactive process of cooperation in water, which is the most crucial element in the socio-economic development of the poor. If countries in a given region are actively engaged in cooperation for harnessing benefits from water resources and preserving fresh water, rather than merely allocating shares of water resources, they will have no incentive to go to war. The Blue Peace process is innovative in placing emphasis on the engagement of the mainstream decision maker, such as the head of state, in addressing water security issues, rather than leaving water merely to the relevant ministries. In each hydro-political region, it proposes an appropriate architecture of institutional cooperation. Once political resources are mobilized through a sustained institutional architecture at the regional level, it is possible to negotiate trade-offs between water and other dimensions of development and security; collaboratively develop and disseminate new technologies; and enable efficient utilization of water resources across the region.

India and Pakistan have waged war since the signing of the Indus Water Treaty in 1960, since there is no active cooperation for harnessing water resources. In future, if stakes have to be created in countries with hostile historical pasts, they will have to look at water and the environment as cornerstones of their joint social and economic development.

In the 21st century, water and environment will be critical components of the new economy characterized by food products, renewable energy, nanotechnology, and industries driven by research and knowledge. If countries can agree to promote water and the environment sector together, they will have no option but to preserve their relationship, simply as a result of the stakes involved.


Cooperation in fresh water goes beyond dams and canals, as per the Blue Peace approach. The marriage of water with the knowledge industry is an important subtext of Blue Peace. Experiments being carried out in different parts of the world demonstrate that new

irrigation techniques and computerized monitoring of water flow to plants can reduce water requirement by more than half of current rates. It is possible to treat waste water using nanotechnology and restore it to the level of drinking water. Changes in urban planning can lead to conservation of water resources. Thus, availability of water will have more to do with nanotechnology, biomimicry, urban planning, efficient production of food grains and industrial materials and less to do with the formula for determining how much water an upper riparian country should allow to flow to lower riparian countries. The countries that miss this point are those that are failing to see a revolution in the making. Any society that closes its eyes to a revolution taking place around it does so at a significant risk.

The wisdom demonstrated by countries in Europe and southern Africa in developing regional plans for cooperation in water as a strategic resources over the last few decades are relevant for those in the Middle East and Asia. In fact, they need it even more, as they have to choose between two paths, located as they are in the mega arc of hydro-insecurity. One is the path of Blue Peace; opening eyes to the forthcoming revolution in water and environment, driven by revolution in genomics, robotics, artificial intelligence and other sectors. This path will require institutional structures. SFG has proposed a Cooperation Council for Sustainable Water Resources in the Middle East. It has also proposed the Himalayan River Commission for the countries in the eastern Himalayas. SFG has also suggested a Higher Strategic Council in the Nile Basin, lifting the level of cooperation from the current technical-level engagement in the form of the Nile Basin Initiative. Such cooperation councils can facilitate introduction of common standards for the quantification of data, develop regional climate change models, introduce and disseminate new technologies and plan joint projects for harnessing the benefits from shared as well as unshared water resources in the given region. Cooperation councils can also optimize the use of advanced technologies to enable water treatment, mitigation of water loss, monitoring remote sensing and environmental protection. Any two countries that follow the path of Blue Peace will have no incentive to follow the path of military confrontation despite dwindling water resources in the next several decades.



The other path is the conventional path of endlessly negotiating comparative rights of upper and lower riparian countries, giving only marginal attention to the knowledge and technological revolution taking place in the water and environment sectors, treating water as a matter of national security and regarding water data as a matter of national secrecy. This is the path of orthodoxy, intransigence, and protection of old bureaucratic turf, while misusing the concepts of national interest and patriotism.

Clearly, one is the path of statesmanship and the other is the path of stupidity. It is for decision makers in the countries in the mega arc of hydro-insecurity to decide whether they want to lead their countries in the direction of peace and progress or drive their societies to a collective suicide, caused by deficit of fresh water and the resulting deficit of food, health and political stability. However, in reality, such an end is actually caused by a deficit of wisdom. 

**The Barada River,
near Damascus.**

April 13, 2009
PHOTO: REUTERS,
KHALED AL-HARIRI

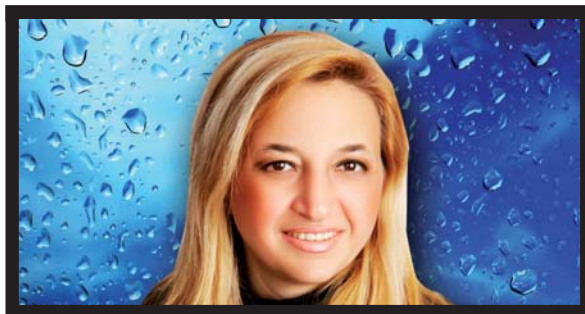


Water: an instrument for peace and cooperation

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Water is a source of both conflict and cooperation. Trans-boundary water management carries with it unique challenges -- as competition for water intensifies within countries, the resulting pressures can traverse political borders. As water quality degrades or the quantity available has to meet rising demands over time,

competition among water users intensifies. This is nowhere more destabilizing than in river basins that cross political boundaries



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Nonetheless, experience shows that in many situations, rather than causing open conflict, the need for water sharing can generate unexpected cooperation. Despite the complexity of the problems, records show that water disputes can be handled diplomatically. The last 50 years have seen only 37 acute disputes involving violence, compared to the 150 treaties that have been signed. According to the Food and Agricultural Organization of the United Nations (FAO) more than 3,600 treaties related to international water resources have been drawn up since 805 CE.

Legal agreements on water sharing have been negotiated and maintained even as conflicts have

persisted over other issues. Cambodia, Laos, Thailand and Vietnam have been able to cooperate since 1957 within the framework of the Mekong River Commission (MRC), and technical exchanges continued throughout the Vietnam War. Since 1955, Israel and Jordan have held regular talks on the sharing of the Jordan River, even as they were until recently in a legal state of war. The Indus River Commission survived two wars between India and Pakistan. A framework for the Nile River basin, home to 160 million people and shared among 10 countries, was agreed in February 1999 in order to fight poverty and spur economic development in the region by promoting equitable use of and benefit from common water resources. The nine Niger River basin countries have agreed on a framework for a similar partnership.

Neighboring countries usually have competing water users and ecosystems that depend on different water balances to function properly ecologically. In addition to the diverse needs of each country, the legal frameworks that determine the water management regimes nationally also differ and are weaker regionally than they are within countries. Some of the key issues that arise when managing trans-boundary waters are: How can the various needs of the country's population



Turkish President Abdullah Gül (2nd R) at the launch of a construction project for a drinking water plant in Jordan. Dec. 2, 2012
PHOTO: AA, RIZA ÖZEL

be reconciled with regional requirements? How can effective access and benefit sharing from trans-boundary water resources (equitable access) be ensured? And what mechanisms can ensure that long-term agreements are sustainable?

Jordan, of course, is an extreme case of water insecurity. Nearly all of the challenges associated with water scarcity have managed to converge in this desert nation in a politically fragile region, creating a difficult and potentially dangerous situation. Regional conflict over more than half a century has driven waves of refugees to Jordan, more than doubling its population. Besides its water-scarce situation, Jordan has limited energy resources and is highly dependent on foreign energy (96 percent) which consumes a significant amount of the country's GDP. Jordan's situation is arguably more ominous than any other water-scarce nation because its lack of water is exacerbated by its status as a moderate to low income country.

The Middle East and North Africa (MENA) region's water resources include rivers, wetlands and aquifers that are being exploited to the maximum -- and even beyond. Between nations the use of trans-boundary

BETTER COOPERATION ALSO ENTAILS IDENTIFYING CLEAR YET FLEXIBLE ALLOCATIONS AND STANDARDS FOR WATER

rivers and aquifers can lead to competition, conflict or cooperation. Among such shared water resources are the Nubian Sandstone Aquifer System beneath Egypt, Libya, Chad and Sudan; the Nile basin; the Jordan basin; and the Tigris-Euphrates basin.

As water becomes scarce, each country will be encouraged to

safeguard its supplies by taking measures that others may see as provocative or potentially so, thus sparking conflict situations. A long-running example of this is the use of the waters of the River Jordan. This has been a key source of friction between Israel and Jordan. Article Six of the Israel-Jordan peace treaty of 1994 was devoted to the detail of water resources' distribution.

While there are good examples of business and government initiatives to enhance water security for communities in the water-stressed MENA region and to disseminate the lessons of good practice, it's worth noting that water issues were not factored into the unrest across the Middle East, which has instead been ascribed to a host of political and economic problems, among them inflation fanned by rising food and energy prices.

In such a troubled where region, overall water shortages are compounded by climate change,



The Mosul Dam on the River Tigris, Iraq.
Nov. 1, 2007
PHOTO: REUTERS

regulating the use of trans-boundary water and energy is important. These dynamics affect not only relationships among Arab countries, but also between these countries and non-Arab states. With 67 percent of the Arab world's population dependant on water supplies originating in non-Arab states, regional cooperation is key.

In Jordan, shared quantities and allocation regimes are stipulated in agreements between Jordan and Israel, and between Jordan and Syria. These quantities are not realized, for various reasons. Moreover, since these agreements were put in place, there have been significant advances in technology and changes in water and energy availability. There is no written agreement or joint monitoring of the Disi abstraction between Jordan and Saudi Arabia.

Achieving a reliable balance between water supply and use cannot be achieved without accurate predictions of quantities flowing into and through the country. With a take or pay contract in place for the Disi project over a period of many years, it is important to



A Palestinian farmer in the West Bank, northern Jordan valley -- frequently the scene of severe drought. Sept. 15, 2008
PHOTO: REUTERS, MOHAMAD TOROKMAN


regularly assess supply availability. The major challenge is to entice neighboring countries to start -- or restart -- dialogue. Both political milieu and the will to cooperate have to exist. The nature of the specific challenges varies from country to country when dealing individually with Israel, Syria, Palestine and Saudi Arabia, with whom Jordan has shared water resources. The issue may require intervention at the highest political levels.

What are needed are workable monitoring provisions, enforcement mechanisms, and specific water allocation provisions that address variations in water flow and changing needs. There is a consensus among experts

that international watercourse agreements need to be more concrete, setting out measures to enforce treaties made and incorporating detailed conflict resolution mechanisms in case disputes erupt. Better cooperation also entails identifying clear yet flexible water allocations and water quality standards, taking into account hydrological events, changing basin dynamics and societal values.

These cases reflect two important elements of international water resources cooperation: the need for an institution to effectively develop a process of engagement over time; and well-funded third-party support trusted by all factions. Furthermore, advocacy, awareness raising and capacity building are important to trans-boundary water management. In this way, water use conflicts can be prevented, security and livelihoods improved, habitats protected, health risks minimized and water resources used sustainably for the benefit of all.

The idea of cooperation will become operational if the cooperating countries have a political mechanism to define a common vision, identify priorities to translate the vision into reality and the institutional architecture necessary to follow up on and implement decisions taken at the political level. The creation of institutional mechanisms such as a cooperation council to enable governments to cooperate on water and environment can provide the building blocks of peace in a broader context.

In order to implement some of the above-mentioned functions, it is necessary to understand the legal frameworks in all participating countries, attempt to streamline legal architecture within countries, and introduce commonalities between countries. The cooperation council may decide on the importance of such tasks and authorize appropriate bodies to implement them. The cooperation council may also decide if such tasks are viable in the short term or if they would be better addressed in the distant future once the member countries gain experience in working together on more easily agreeable issues. 



The Chenab River and Baglihar Hydroelectric Project, Jammu and Kashmir.

Oct. 2, 2005
PHOTO: REUTERS,
AMIT GUPTA



Cooperation Council for Sustainable Management of Water Resources in the Middle East

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While examining the question of water security, time is among the most crucial factors. Prospects for solutions weaken with every passing year due to the rapid dwindling of water resources, exacerbated by a growing population. A golden opportunity was lost in the '80s when the late Turkish President Turgut Özal proposed a regional plan in the Middle East for tackling water stress. New hope bloomed in 2009, however, with a new spirit of regional cooperation



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The 2009 agreement was between Iraq, Jordan, Lebanon, Syria and Turkey and it flourished well in several spheres until mid-2011, and has since suffered due to political crises in the region. Many of the agreements and innovative ideas discussed during that period have subsequently fallen by the wayside. In a region already severely water starved, it is urgent that the potential for cooperation not be lost by sluggish decision making and poor statesmanship.

An innovative spirit of cooperation

The new spirit of cooperation seen in 2009 had two dimensions: trade and transit, and water and environment.

In June 2010 the governments of Jordan, Lebanon, Syria and Turkey decided to establish a free trade area. The quadrilateral economic cooperation framework encompassed four spheres -- energy, trade, transportation and tourism -- and was complemented by bilateral agreements. This decision was followed by an agreement in January 2011 to establish a single visa zone, to facilitate the movement of people, and one in March 2011 to harmonize banking standards and update banking regulations, to facilitate the movement of capital. These agreements together have created what Yaraub Badr, then-transportation minister of Syria, has described as a "step towards a union of the Middle East, similar to the European Union, since everything started with economic cooperation in Europe." The four member countries made it clear that the free trade area was not exclusive and was open to all friendly countries in the neighborhood, creating the possibility of extending the framework to Iraq.

A process of cooperation in water and environment sectors was begun in 2008 with the revival of the Joint Technical Committee (JTC) between Iraq, Syria and Turkey in January. It was strengthened by the second meeting of the JTC in February 2009 and a third JTC meeting along with a ministerial-level meeting



between the three countries in September 2009. The trilateral process was complemented by several prime-ministerial level meetings and various bilateral initiatives, including memoranda of understanding (MoU) between Syria and Turkey on water quality, combating drought, efficient utilization of water resources and the inauguration of the “Friendship Dam,” which was hailed as an extremely positive step. Turkey also signed a MoU with Iraq on cooperation in water and Lebanon with Syria on the Orontes River and al-Kebir River.

Another unique positive occurrence was the joint inauguration of the Disi Water Plan by the president of Turkey and the king of Jordan in December 2009, when President Abdullah Gül of Turkey declared, “regional cooperation is a must to tackle water issues and Turkey, which suffers from a water problem, is open to any kind of cooperation on water.”

By May 2011, agreements in trade, banking and transit sectors had been fully implemented. The region was poised to make history and leaders in each country were seen as creating a new legacy for their countries.

FAILURE TO COOPERATE ON WATER UNDERMINES THE POTENTIAL OF ECONOMIC DEVELOPMENT ON A NATIONAL AND REGIONAL LEVEL

However, agreements in the water sector, except the Friendship Dam on the Orontes between Syria and Turkey, have not been fully and adequately implemented and have been temporarily suspended due to the conflict

in Syria and problems with her neighbors. The fourth meeting of the tripartite JTC failed to take place as scheduled in January 2010 and has still not been held. With regards to the Syria-Turkey MoU signed in December 2009, working groups were formed by both countries and a meeting was convened on Jan. 30-31, 2011, in Raqqa, Syria. However, this meeting only witnessed presentation by two delegations on how they respectively collect data -- in fact the purpose of the MoU is to promote calibration of measurements. The working group meeting took no decision with regard to calibration or joint methodology. Another working group meeting was held on April 19-20, 2011, in Nusaybin, Turkey. This meeting primarily saw the presentation by both sides of their respective legal and institutional structures in the water sector.

Water is discharged from the Three Gorges Dam, Hubei province.

July 20, 2010
PHOTO: REUTERS



As of March 2013, no decision has been taken with regard to assessment of existing hydrological measurement stations or establishment of new stations. Also, with regards to decisions taken by the JTC in September 2009 on the tripartite exchange of data, erection of new water-flow measurement stations and modernization of existing ones, the record of implementation is not clear.

When agreements are signed but not implemented, the opportunity cost is not merely restricted to water. It extends to environment and agriculture, which are core sectors of the economy in countries where large segments of population depend on water and agriculture for their livelihood. It also

that this is possible and has been achieved. The Senegal River basin, which is shared by four countries, is a positive experience to learn from. The countries' cooperation on different aspects related to the shared river basin has led to a positive growing relationship between the countries.

A basis for cooperation

The experience of the five countries since 2009 provides the grounds for regional cooperation in water and the environment in the future. Certain exemplary actions stand out in particular.

The Iraq-Turkey MoU and two Syria-Turkey MoUs signed in 2009, mentioned above, have identified certain objectives that can be useful for the entire region. These include sharing hydrological and meteorological data; introduction of modern water treatment facilities; installing early warning flood systems; regional mapping to track climate change; prevention of water loss during conveyance; and knowledge sharing in modern irrigation technologies.

The measures identified in the three bilateral MoUs can provide important elements for a broader regional cooperation framework in the water sector. Except for a single clause regarding data sharing on trans-boundary rivers, which applies to bilateral relations (though in many regions this has not been the case), all other proposed measures are holistic in nature and beneficial for the sustainable management of water of any country in the Middle East or even beyond. As the proposed measures are substantive, without any political implications, the MoU signed by two sovereign countries is relevant irrespective of political dynamics, and can be considered on the basis of scientific, technical and economic merit for broader application. Despite the nature of the relationships between countries in the region, potential cooperation is possible in many of these areas as they do not infringe on the sovereignty of a country and in turn aid in resource management and development.

Experiences from other basins show that such a level of willingness and statesmanship has been demonstrated. The lower Mekong River basin countries were largely affected by the Vietnam War and in the mid-1970s Laos, Cambodia and Thailand experienced regime change. Despite these complications, the River Commission continued to meet and work towards sustainable management of the shared river.



Residents bathe and wash in the Senegal River, Mauritania.

June 1, 2012

PHOTO: REUTERS,
SUSANA VERA

ultimately affects the health and quality of life in the country, influencing migration and movement of people. Cooperation in water and sustainable management of shared resources is closely linked to the economy of a nation, where water and the economy cannot be separated by arbitrary decision. Nations are developing and growing at an extremely fast pace, which will affect all the resources of a country, especially water. The failure to cooperate undermines the potential of economic development on a national and regional level. On the other hand, cooperation in water can help the process of cooperation in other areas and social development of people. Experience from around the world shows us

In February 2011 Turkey decided, on its own and as a part of its accession negotiations with the EU, to commence a water quality monitoring program as per the standards set by the European Water Framework Directive (60). The Ministry of Environment created a special monitoring unit to measure and improve water quality as per the EU directive. It has announced its plans to initiate the program with the Büyük Menderes River basin. According to the draft National Implementation Plan of Turkey, the objectives of the EU directive will be achieved in all river basins in Turkey by 2027-2033.

In the case of Turkey, implementation of the EU directive means coordination with Syria, Iraq, Lebanon, Bulgaria and other countries that share river basins with Turkey. Thus, Turkey's implementation of the EU framework directive can lead to harmonization of standards in its eastern and southern neighboring countries, which are not EU members, not to mention other neighboring countries that are present members of the EU. Iraq, Lebanon and Syria, however, do not have the same compulsions that Turkey has and may not find it in their interest to coordinate with Turkey. It will therefore be in Turkey's best interest to negotiate to seek coordination with its neighbors.

Countries in the Middle East may find it useful to develop their own program, inspired by the EU directive but shaped by their own needs, as they have many different aspects of sustainable management of water to address, including monitoring quantity, combating climate change, use of new technologies, calibration of both quantitative and qualitative data and population growth. The Southern African Vision for Water, Life and Environment was adopted by the Southern African Development Community (SADC) in 2000 to promote "sustainable and equitable utilization of water for social and environmental justice, regional integration and economic benefit for present and future generations." The Southern African Vision for Water, Life and Environment was the basis for SADC to develop its Policy Principles for Water Resources Management in 2003, which were applied to separate river basins. Each individual river basin organization and riparian countries are developing methods for integrated water management that are aligned with the overall SADC principles, and yet take into account the current needs



of each country in terms of population, future development needs and sustainable future of the river.

In reality, it will be impractical for Syria to have one set of standards for water resources shared with Turkey and Iraq and another for water resources shared with Lebanon and Jordan. It may need to open a dialogue with Jordan for common standards and common strategies, in line with the standards it may decide to follow in rest of the country.

Jordan and Lebanon have on their own accord expressed interest in upgrading their standards to match high international parameters, adjusted to local realities in their countries, and have implemented small programs to do so.

The Middle Eastern countries may find it in their interest to develop their own framework, as per their

Residents collect water from a stream in Diwaniya province, Iraq, fed by the Euphrates.

May 24, 2009
PHOTO: REUTERS,
IMAD AL-KHOZAI



needs and realities, where examples such as the Syrian-Turkish MoU on Efficient Utilization of Water Resources and Combating of Drought might provide useful ideas. Other river basins and river basin organizations have developed several different types of methods to manage and efficiently utilize their water resources, which can be learned from and adapted to the Middle Eastern context.

The need for a regional approach

It may be argued that the countries in the Middle East may enter into bilateral and trilateral agreements between riparian countries. They need not adopt a regional approach as they have done in the case of the past quadrilateral agreements on economic cooperation. Yet it cannot be ignored that Iraq, Jordan, Lebanon, Syria and Turkey are linked into a single system of water resource, as the impact of management on one basin management affects another, there are linkages between surface water and ground water, and climate change also affects them in terms of seasonal variation in precipitation. Thus an agreement on a shared basin with one country could have an impact on another river basin that may be shared with another country.

Experience shows that bilateral and trilateral agreements tend to focus exclusively or excessively on shared water resources. Meanwhile a negotiating framework based on integrated development of water, land and environment in the context of the needs of a growing economy is enduring. One such example is the Indus Water Treaty, which focuses mainly on the separation of water and does not focus on integrated joint management of the river basin. While the treaty might be seen as a positive example of cooperation despite ongoing conflict, its narrow approach fosters a sense of continuing mistrust and does not allow for sustainable management of the river itself.

Agreements based on absolute or proportionate numbers to allocate water flow between riparian countries become outdated as over the years as the availability of water declines or changes, and estimates of demand by riparian countries are revised. This happens due to, among other factors, changes in soil,

crop patterns, urbanization, demographic change, economic growth and climate change. It is extremely important that such treaties are revised over time, which can only happen if countries have a continuous open channel for dialogue and trust. The 1944 treaty between Mexico and the US on the Rio Grande-Colorado basin is a rare example of such foresight. In November 2012 the parties signed a new agreement reassessing the volume of water to be shared during drought and wet years, as well as allowing for Mexico to store excess water in a US lake to be used when needed.

As a result, bilateral and trilateral agreements on shared water resources or trans-boundary rivers are inherently inadequate to deal with the water, life and environmental needs of any country. Considering the inadequacies of bilateral or trilateral water-sharing agreements, many progressive countries complement such treaties with a regional holistic framework for standardization and cooperation in the water sector. The EU Water Framework Directive was adopted to set standards, general principles and goals across Europe with a view “to incorporate all requirements for water

management into a single system.” The principles relating to water and environment adopted by the SADC form another such example.

It is important to include the question of

modern technology and how development of technology in water will aid integrated management. Many countries have developed new technologies that deal with efficient irrigation, waste water treatment plants, reuse of grey water, remote sensing to detect leakages and use of nanotechnology and advanced computing, drawing lessons from innovative experiments such as “NEWater” in Singapore and elsewhere in the world. Climate mapping and regional atlases to predict and prevent floods and other calamities have also been developed, such as the Rhine Atlas for floods or the Climate Change and Adaption Initiative in the Mekong River basin. Data in the Mekong River has been regularly collected and shared through a network of joint hydro-meteorological stations since 1957.

If the countries of the Middle East wish to achieve optimum results in their water management, they will

BILATERAL AND TRILATERAL AGREEMENTS ON SHARED WATER RESOURCES OR TRANS-BOUNDARY RIVERS ARE INHERENTLY INADEQUATE

need to shift the focus from relative allocation of trans-boundary rivers between riparian countries to sustainable management of surface and ground water in an integrated manner. They have already witnessed the results of such an approach in the context of free trade, banking and transit in a period of merely one year. In the short run, economic and water cooperation issues could be separated. In the long run, as water is pivotal for agriculture, industrial growth, household needs, health and livelihood, it will be essential to include water cooperation in the overall regional cooperation dynamic. Member countries can negotiate basin specific agreements without involving other member countries or any outside parties but such agreements will need to be in the overall regional framework of common goals, standards and strategies, agreed upon by the members themselves.

Objectives and mechanism towards achieving cooperation

- A regional framework will need policy principles for all water resources, which can include, though should not be limited to, the following:
- sustainable management of all surface and ground water resources through efficient utilization
- recognition of the environment as a legitimate user of water, and also as a resource base
- programs that deal with quality management of the resource
- development of specific means to combat climate change and drought in a collaborative manner
- promotion of research, development and dissemination of new, energy efficient and environmentally friendly water technologies
- facilitation, negotiation and creation of joint projects at bilateral, trilateral, basin or regional levels


The realization of regional objectives and principles will require a political mechanism. The quadrilateral free trade area partners recognized this at the very inception stage in June 2010 and announced the establishment of the High-Level Strategic Cooperation Council. Similarly, the five countries focused on in this article will need to examine the merit of establishing a cooperation council for the sustainable management of water resources at the prime ministerial or ministerial level. Such a mechanism would be authorized to take decisions as per the objectives and program of action agreed by them, and to review the

implementation of the decisions from time to time.

Such a cooperation council will need national coordinators, supported by a permanent body of experts or senior ministry officials who are dedicated to ensure the implementation of decisions taken at the political level. It is important that such a body of experts and officials is constituted by nationals of all five countries working jointly in a regional framework, rather than separate teams in individual countries meeting as working groups from time to time to exchange progress reports. A body of experts and officials constituted by nationals of all member countries will ensure that decisions taken do not remain on paper.

The European Commission, Gulf Cooperation Council (GCC), Association of Southeast Asian Nations (ASEAN) Secretariat, South Asian Association for Regional Cooperation (SAARC) Secretariat and similar such regional organizations pursue implementation of the regional agenda vigorously on a dedicated basis with the help of permanent staff comprising officials/experts from member countries.

Conclusion

There are numerous instances of water resource cooperation, with countries initiating and promoting cooperation and dialogue for sustainable management, though in small isolated moments. This can be brought together and further strengthened by the creation of a mechanism to collectively address the issue of water resources, along with ensuring that national perspectives are not lost. The creation of a Cooperation Council for Water Resources in the Middle East provides them a space to build upon existing agreements, re-examine and renew outdated agreements and move forward to construct a more sustainable future. Without the creation of such a mechanism, any political will that does exist could be lost. There are numerous positive experiences from around the world that can lend ideas and concepts to the design and functioning of such a mechanism. Such cooperation and a forward momentum will require the commitment of political leaders at the highest level, and cannot be left to scientists and water experts alone. Opportunities need to be harnessed and nurtured and leaders and the society have to be mindful of the time that is passing, otherwise in 20 years' time, the region will find itself in a position with no water and little impetus for cooperation. 



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Shared waters: From water wars to bridges of cooperation

The high number of shared rivers and international basins, combined with an increasing water scarcity for growing populations, led many politicians and observers to herald the coming ‘water wars’ of the 21st century. In 1995, for example, former World Bank Vice-President Ismail Serageldin claimed that ‘the wars of the next century will be about water’ These warnings usually point to watersheds where tension is already high, such as in the arid Middle East



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Elaborate, if misnamed, “hydraulic imperative” theories cite water as a major motivation for military strategies, particularly in the ongoing conflict between Arabs and Israelis. This prediction has not yet materialized. But to what extent could the very interdependence that causes tension over shared watersheds be a source of inspiration for cooperation and the quest for a lasting agreement on common use of the resource?

Disputes fuelled by fear for sovereignty and security

Water scarcity already affects every continent. Around 1.2 billion people, or almost one-fifth of the world’s population, live in areas where water scarcity

affects socioeconomic conditions, and 500 million people are approaching this situation. It is not that water is scarcer: the same quantity of water keeps going through the physical water cycle. Water demand has expanded apace since the second half of the 20th century, primarily fueled by population growth, but figures underline the fact that water use has been growing at more than twice the rate of population increase in the last century, as irrigation, industrial and urban use expand dramatically. Although there is no global water scarcity as such, an increasing number of regions are chronically short of water.

This ongoing trend of a relative scarcity developing as demand for a finite resource keeps expanding, coupled with the fact that water knows no substitute and remains vital for agriculture and human life, fuelled the idea that water was a strategic resource over which tensions could spiral into open conflict. Several states, rightfully or not, began harboring fears that their very security could be threatened by their neighbors’ desire to tap into what they perceived as vital resources. As the most downstream state in the Nile basin, Egypt has long nourished fears that unfriendly upstream countries could hamper the river’s flow and thus cut the vital



source that kept it alive in the desert. Israel similarly felt its development would not be possible without a safe access to water resources, a safe access all the more doubtful as Arab neighbors kept repeating hostile intentions. But security is not necessarily at the heart of some states' insistence on the strategic value of water: They also view water as a key element and symbol of their sovereignty, a resource they can hardly give up control over, lest it call into question their very independence. For China or Turkey to reckon they should negotiate a global agreement limiting their ability to build dams on rivers that flow from their territory is not acceptable, because it challenges their sovereignty over their territory, water being thus considered as an intrinsic element of this territory.

Thus, unsurprisingly, several states rejected global agreements framing watershed management. In 1997, Turkey and China voted against the Convention on the Law of the Non-Navigational Uses of International Watercourses that aimed at establishing basic rules for negotiating the sharing of surface water resources. Embroiled in lasting water disputes with their neighbors, states like Israel, Egypt, Ethiopia,

Kazakhstan and Turkmenistan have not ratified as of January 2013, for fear the convention would limit their ability to exploit water resources as they think fit.

Water wars between states remain unlikely

Unilateral action, often resorted to in water disputes around the world, will add impetus to political tensions to the point of making the purely hydraulic dimension secondary to political issues. This is why the hydraulic factor in several regional conflicts can be dangerous, adding an additional factor to an acute and multidimensional conflict by giving the states powerful tools they could use in a context of conflict (diverting a river, shutting down a dam) and by kindling suspicion and hostility among states whose relations are already unstable. From this perspective it is highly improbable, in the current context, that water alone might be instrumental in starting a war. However, water disputes, in regions already affected by conflicts that make negotiations unlikely, add to the tension and thus to the risk of the outbreak of a violent conflict.

This article does not argue that water wars are a fantasy or that caution is not necessary when tackling conflicts about water: local conflicts or low-

The Nurek Hydroelectric Power Plant on the Vakhsh River, central Tajikistan.

May 29, 2008
PHOTO: REUTERS,
SHAMIL ZHUMATOV



intensity conflicts, sometimes resulting in dozens of deaths, have already occurred in recent years. However, despite water being intimately connected with their perceived security, and despite skirmishes having occurred in the past, water wars between states have not erupted yet and may not be likely in the future. The point here is not to argue they will never take place, but to underline the fact that going to war over water only to resolve this tension may not prove effective.

Water is heavy; a cubic meter weighs one metric ton. Conquering it implies transporting it, and thus assuming the costs of a war, and then those of recurrent transportation and of the military occupation of the conquered territory. Thus war does not seem

access to the above-mentioned technology, all these factors echoing what analysts refer to as the adaptation capacity; the financial, social, economic and political ability for a society to accept changes and adapt its water use structure to cope with scarcity; but it does not mean they will resort to war to avoid difficult domestic choices, although these may be relieved in the short term by inflammatory rhetoric about their neighbors' responsibility...

In the scenario of a water war, a more likely scenario would be a swift raid designed to prevent another country from proceeding with water projects, as attested to in the rhetoric from Egypt against Ethiopian dams; from Syria and Iraq against Turkish dams; or from Israel against Lebanese projects on the Wazzani in 2002: War is invoked as a tool to prevent the neighbor from going ahead with perceived threatening projects rather than a tool of conquest.

A constant in water conflicts is mistrust, fueled by unilateral decisions: whether it be between Israel and its neighbors after Israel's decision to build the National Water Carrier in 1959; Syria's decision to build the Tabqa Dam; Turkey's decision to implement the Southeastern Anatolia Project (GAP) program and the construction of several huge and controversial dams (for both irrigation and hydroelectric production); or Central Asia's five republics' inability to compromise on the use of the Amu Darya and Syr Darya. Despite talks that resumed after 2003, Syria never accepted Turkey's argument that it had a right to benefit from the flowing of the Euphrates and the Tigris in its territory, while Ankara declined negotiating a sharing agreement with Damascus and Baghdad in earnest, as it refused to consider the two rivers as international rivers.

So if water does not necessarily lead to violent conflict between states, to what extent can it prove a useful tool to promote cooperation?

Water cooperation can be achieved even in conflicting situations

Indeed, cooperation is possible regarding water disputes. Water conflicts can even find a negotiated solution when the other dimensions of a conflict have not yet been solved. In other situations, cooperation on water has triggered discussions that helped avoid the emergence of serious conflict.



**Borana nomadic people
fetch water from dam
near Arano town, Kenya.**

July 12, 2008
PHOTO: REUTERS,
ANTHONY NJUGUNA

very attractive as a solution to domestic water scarcity, particularly as technical and economic alternatives do exist, despite their limitations: improved irrigation methods (drip or sprinklers); desalination that produces water too expensive for agriculture but not for domestic or industrial use; virtual water that enables a country to abandon a water-thirsty crop and import the product on international markets. Governments may be reluctant to scuttle part of their agricultural sector, whether for socioeconomic reasons (fear of creating unemployment or unrest) or political reasons (fear of lowering their food self-reliance or of degrading their balance of payments), or may not have



The Syr Darya River,
Kazakhstan.
Nov. 27, 2011
PHOTO: REUTERS,
ILYA NAYMUSHIN

WATER MAY NOT LEAD TO VIOLENT CONFLICT BETWEEN STATES, BUT HOW CAN IT PROVE A USEFUL TOOL TO PROMOTE COOPERATION?

Between Canada and the US, momentum for a boundary waters treaty built up against a background of difficulties encountered notably in apportioning the waters of the St. Mary River and the Milk River in the west or the Chicago Diversion of Lake Michigan, after a few decades of difficult relations marked by the Oregon Territory Boundary dispute (1849) and the Alaska Panhandle border dispute (1898-1903). In 1909 Canada, represented by the UK, and the US signed the Boundary Waters Treaty, providing mechanisms for resolving disputes over waters bordering the two countries. The treaty proved effective and most water disputes have been settled through its mechanisms.

The Niger basin long appeared to be a problem-free basin. The riparian countries agreed in 1964 to set up a basin institution, the Niger Basin Authority, which managed little in a context where water volumes exceeded demand. Confronted with growing aridity, rising demand for irrigation and hydropower

production, most countries embarked on individual plans for dams and irrigation schemes that were doomed to collide with each other, until in 1998 Nigeria called for a renewal of the institution. Facing the prospect of deepening disputes, riparian countries defined a “shared vision” and declared in Paris in 2004 that water projects would be mutually examined and coordinated. Despite some declarations by officials to the effect that governments remain divided between the desire to cooperate and to secure their perceived national interest, so far dialogue has prevailed and several dam projects have been collectively debated.

In the Senegal River basin, the Senegal River Basin Development Authority (OMVS) also helped diffuse tension and channel cooperation. Violent conflict (with several dozen deaths among civilians) erupted between Mauritania and Senegal in 1989 because of land access disputes following changing water availability patterns after the Manantali Dam went into service; again in 2000, violent rhetoric resurfaced after Senegal aired projects to divert large volumes to water fossil valleys. But to this day, disputes were managed through coordination and cooperation, and the OMVS is often quoted by analysts as a rather effective basin institution in defusing disputes and coordinating projects.



Even when disputes have emerged and crystallized between states, water can nevertheless be the object of cooperative moves that can lead to significant advances. Cambodia, Laos, Thailand and South Vietnam continued to exchange information on the Mekong River throughout the Vietnam War and later during the remainder of the Cold War, despite the regional turmoil and the ideological rivalry between Vietnam and Thailand. In 1995, the Mekong River Commission was rejuvenated and has so far achieved a satisfactory level of cooperation between members. China, however, refuses to join the organization, despite harboring the upper Mekong, arguing that it does not want to negotiate its sovereign right to harness the river in its territory.

In 1955, the Johnston Plan achieved a sharing agreement in the Jordan River watershed between Israel, Lebanon, Syria and Jordan. The plan had been agreed on by technical delegations but was rejected by governments on all sides. Despite their sour relations, Jordan and Israel held secret talks over the management of the Jordan River from the 1950s, even though they were at war until 1994, when a peace treaty, which included a chapter dedicated to water issues, was formally concluded.

In the Nile basin water sharing seemed difficult to ever consider given the stubborn positions taken by both Egypt, clinging to the historical rights theory, and Ethiopia, invoking the absolute territorial sovereignty principle. Egypt argued that, since it had used the river's waters from time immemorial it had acquired a historical title to its use, something no international convention recognizes; Ethiopia underlined the fact that since 86 percent of the flow of the Nile originated from its territory, it had a right to use the water as it felt relevant within its boundaries. No direct talks could be considered before 1999, when the United Nations Development Program (UNDP), the Swedish International Development Cooperation Agency and the Canadian International Development Agency helped set up the Nile Basin Initiative, a diplomatic process aimed at strengthening cooperation over basin management. Ethiopia reckoned it had to take both Sudan and Egypt's needs into consideration in its dam planning; Egypt recognized that Ethiopia also was entitled to use some of the Nile's waters. Is the glass half empty or half full? The negotiations so far have not provided the region with a sharing agreement, but



at least the past strong rhetoric between Egypt and Ethiopia has receded and they have both softened their political positions.

The most spectacular example of cooperation on water issues is the Indus Waters Treaty of 1960 between India and Pakistan. After the first Indo-Pakistani war of 1947, the relationship between the two countries remained extremely tense. Rhetoric escalated during the 1950s regarding the apportionment of the Indus River, the basin of which was shared by the two belligerents. By 1951 technical delegations from the two sides were no longer meeting and the situation seemed intractable. As one anonymous Indian official said at the time, "India and Pakistan can go on shouting on Kashmir for all time to come, but an early settlement on the Indus waters is essential for maintenance of peace in the sub-continent."¹ Despite the reluctance to compromise given the ongoing territorial and border conflicts, both governments were anxious to find a solution, fully



Flow at the Blue Nile Falls has been significantly reduced by a dam upstream.

April 19, 2011
PHOTO: REUTERS

aware that the Indus conflict could lead to overt hostilities if unresolved and that a solution to the issue was necessary for development of the countries' agricultural sectors.

During eight years, the two sides negotiated, with the participation of World Bank officials. In 1960 an agreement was concluded in Karachi and was all the more attractive, indeed, as the World Bank promised financial help to implement the treaty provisions and the development plans from both sides. The agreement set up a commission to adjudicate any future dispute arising over the allocation of waters. The Permanent Indus Commission has survived three wars and provides an ongoing mechanism for consultation and conflict resolution through inspection, exchange of data, and visits. The commission is required to meet regularly to discuss potential disputes as well as cooperative arrangements for the development of the basin. Either party must, in theory, notify the other of plans for any engineering works that would affect the

other party, and to provide data about such works. In cases of disagreement, a neutral expert is called in for mediation and arbitration. The mechanisms have endured recurrent tensions over water use, the last episode occurring between 1999 and 2007 when India wanted to develop unilaterally the Baglihar Dam on the Chenab River, which is allocated to Pakistan according to the treaty. Eventually, India agreed to downsize its project and the dam was finished in 2008.

The Indus Water Treaty certainly did not bring a lasting peace between India and Pakistan: three wars followed its signature, in 1965, 1971 and 1999, as well as the ongoing protracted skirmishes over the Siachen Glacier, where the Line of Control was never drawn after the Simla Agreement in 1972. However, it proves that cooperation over water is possible despite conflict and even war, just like the Nile basin or Israel-Jordan examples attest to. That does not mean water can, in itself, be the engine for peace, nor that cooperation will prevail over tensions in water disputes. Water is no



more, by itself, a factor of war than it is a factor of peace; it all depends on a desire to cooperate from the countries involved.

Water cooperation is not necessarily conclusive

Water cooperation is certainly not a guarantee for a lasting solution even regarding water issues: as we have seen, despite progress, the Nile Basin Initiative has so far been unable to bring Ethiopia and Egypt close enough for an agreement to be sketched, Egypt clinging to the idea it holds veto rights over Nile waters. A general agreement had been sketched out in 2008, but was eventually rejected. Article 14 was the main cause of friction: it underlined the need for all states in the Nile basin not to cause significant harm, in line with the New York Convention of 1997: “Nile Basin states therefore agree, in a spirit of cooperation: (a) to work together to ensure that all States achieve and sustain water security (b) not to significantly affect the water security of any other Nile Basin State.” Egypt and the Sudan wanted to modify the article so as to say “not to adversely affect the water security and current uses and rights of any other Nile Basin State,” (author’s italics) a proposal that was rejected as other Nile basin countries rightfully do not reckon the existence of historical right on water.

In May 2010, five upstream states signed the Cooperative Framework Agreement (CFA) as a basis for negotiating a new basin-wide sharing agreement for Nile waters. This move was strongly opposed by Egypt and Sudan. Ethiopia, Kenya, Uganda, Rwanda and Tanzania were original signatories, with Burundi signing in February 2011. The CFA is designed to replace both the 1929 treaty and the 1959 bilateral agreement between Sudan and Egypt, and is now considered to be the main bone of contention among the riparian states: Egypt dismissed the CFA out of hand.

Subsequently, Ethiopia began construction, on the Blue Nile, of the Grand Ethiopian Renaissance Dam, which is expected to be a 63 billion cubic meter (bcm) reservoir. The dam will be Africa’s largest hydroelectric facility. Although Ethiopia has agreed not to use the reservoir for irrigation, the new dam is ill-perceived in Egypt and war rhetoric resurfaced in recent months:

There is no common agreement in sight and unilateral projects have resurfaced.

The dispute between Turkey, Syria and Iraq attests to the difficulty of finding lasting solutions. Although Turkey set forth relevant arguments regarding the legitimacy of its harnessing the Euphrates and the Tigris rivers, its insistence on not considering them as international rivers, and that bilateral agreements can be substitutes for a basin-wide one does not help the sake of cooperation. Unilateral projects from all three parties and a deeply entrenched mistrust also prevent progress. Despite numerous attempted negotiations between Turkey, Syria and Iraq, there has been little progress. The 1926 treaty between Turkey and French Syria has been largely ignored by Turkey in recent decades and is perceived by the Turkish government as irrelevant in today’s economic and political context. Bilateral agreements were achieved: In 1987, when Turkey agreed to maintain a minimum flow of 500 cubic meters a second into Syria, in 1990 when Iraq

and Syria also established a bilateral water sharing agreement; and again in 2001, when Turkey and Syria signed the protocol of coordination on respective development

EVEN WHEN DISPUTES HAVE EMERGED WATER CAN STILL BE THE OBJECT OF COOPERATIVE MOVES THAT CAN LEAD TO SIGNIFICANT ADVANCES

projects, but there is still no significant bilateral agreement between Iraq and Turkey. Besides, both Syria and Iraq demand a basin-wide sharing agreement. Syria and Iraq underline their long historical use of the Tigris and Euphrates water resources as the basis for their claimed rights to sufficient access to these waters. Turkey, however, considers that approximately 90 percent of the water in the Euphrates River and 50 percent of the water in the Tigris originates in Turkey, and that it is therefore its resource to do with as it pleases. Positions have not evolved much although talks at the technical level resumed in 2003, only to be suspended in 2010. Now with Iraq grappling with a civil war in the wake of the 2003 US invasion, and Syria also war-torn since the latest uprising began in 2011, it is certain Turkey feels no need to alter its water policies. Its upstream position, coupled with a dominant military, diplomatic and economic posture, do not plead for conciliation. However, should the downstream countries someday

recover from their political turmoil, their frustration will be left intact in the absence of a mutually agreed treaty.

In Central Asia, where the five former Soviet republics became independent in 1991, water is also a bone of contention between countries that heavily rely on the two main rivers, the Syr Darya and the Amu Darya, like Uzbekistan, Kazakhstan and Turkmenistan, and whose irrigation schemes caused the spectacular decline of the Aral Sea, and the upstream countries, Kyrgyzstan and Tajikistan, that would like to change hydroelectric dam patterns of production so as to optimize power production, a move that would reduce the volume available for irrigation in Spring and Summer... The Central Asian countries have so far proposed and considered more than eight schemes aiming at a fair division of regional water resources, but none of them have been accepted by all countries, despite the involvement of the European Union and of the US. Therefore, there are concerns that rising tensions might lead to tenuous relations. Russia's support for countries like Kyrgyzstan and Tajikistan may act as a catalyst in the deterioration of relations.


The historical background of threats and measures taken by regional countries against one another further increases mistrust and resentment. For example, when Uzbekistan cut gas exports to Kyrgyzstan in the winter of 2000, Kyrgyzstan reacted by draining a great amount of water which had been stored behind Toktogul Dam to be used for the generation of hydropower. The dam, however, supplied a significant amount of the water used by Uzbek farmers for agricultural purposes: The following spring Uzbekistan suffered from a lack of water for irrigation, beside the fact the sudden gate opening destroyed several irrigation dikes downstream from the dam. As a result, Uzbekistan established a military garrison on its border with Kyrgyzstan, deployed tanks, armored vehicles and helicopters, and launched military drills aimed at conquering the Toktogul Dam. In response, Kyrgyzstan threatened to blow up the dam, which would have led to total destruction of all the farmlands in Uzbekistan along the Fergana and Zarafshan valleys. Although the crisis ebbed over time, it was an typical instance of the high potential that water crisis in this region have for rapidly evolving into political and even military confrontation among Central Asian countries. Another unilateral gesture was the decision by Kazakhstan, in 2003, to build a dike separating the

Small Aral Sea from the Large Aral Sea in an attempt, by blocking the waters from the Syr Darya, to save this part of the former Aral Sea, but meanwhile condemning the Large Aral Sea in Uzbekistan and Turkmenistan to accelerated decline...

There is in fact an agreement linking the five republics. An agreement on cooperation in the joint management, usage and protection of transnational water resources was signed in February 1992. The document is based on the recognition of the historical community of peoples residing in the region and their equal rights and obligations to ensure the rational use and protection of water resources. It also recognizes the interdependent interests of all republics in resolving problems relating to the joint use of water resources based on common principles and a fair regulation of their consumption. However, the partners have so far remained unable to comply with the letter and spirit of the regional agreement, either because of dissent or mistrust nurtured by unilateral gestures, but also because of domestic politics, including the pressure of the cotton lobby.

Conclusion

One could however figure that the ecological catastrophe that is embodied in the disappearing Aral Sea could be a motivation for cooperation. This example underlines once again the fact that incentives for cooperation, however strong they may be, are not necessarily strong enough to balance political reluctance to negotiate. When the stakes are viewed as too risky, or when the status quo is perceived as safer in the short term than the risks associated with a negotiation, then governments sometimes opt to hold tight to their rigid stances.

Water is not doomed to be a cause of war, however; no more than it is a necessary trigger for peace or cooperation. But it may be worth noting that the vital interests of some states lie in cooperation on water sharing issues. The stakes are high enough that, in many instances, cooler heads may prevail. 

ENDNOTE

1. Niranjan D. Gulhati, *The Indus Waters Treaty: An Exercise in International Mediation*, (Bombay, Allied Publishers, 1973), 16.



High Level International Conference on Water Cooperation, Dushanbe



The High Level International Conference on Water Cooperation will be held Aug. 20-21, 2013, in Dushanbe, the capital city of Tajikistan. The government of the Republic of Tajikistan convenes the conference in accordance with UN General Assembly Resolution A/67/204 “Implementation of the International Year of Water Cooperation, 2013,” adopted on Dec. 21, 2012.

The main purpose of the conference, as may be implied from the title, is to promote dialogue and mutual understanding and to strengthen partnership and cooperation on water issues among all stakeholders at all levels.

The importance of water resources for ensuring human health and livelihood has grown rapidly over recent decades. As it has crossed the threshold of the 21st century, human civilization has changed its attitude to water, a key foundation for life. Indeed, with rapid population growth and limited water and land resources, the further development of mankind will be associated with conservation of water and improvements in the efficiency of its integrated use.

Under such conditions, the development of water cooperation is one of the key elements in helping address water problems. International experience shows that only a cooperative approach and integrated management of water resources, including their protection, can ensure their effective use.

Developing water cooperation jointly with strengthening partnerships in other areas will create a strong platform for sustainable development and “green” growth, as pointed out at the UN Conference on Sustainable Development, Rio+20.

The president of the Republic of Tajikistan is an initiator of the International Year of Fresh Water, 2003, the International Decade for Action “Water for Life,”

2005-2015, and the International Year of Water Cooperation, 2013. Accordingly, as Tajikistan we are highly interested in accelerated implementation of the UN water agenda and in its being filled with timely and practical measures to gradually solve all the problems and challenges associated with water.

As well as attending the conference, participants will also be given a great opportunity to enjoy the unique and natural beauty of sunny Tajikistan. All this beauty is based on water, and we are proud that our country is rich in water resources.

We hope that the High-Level International Conference on Water Cooperation in Dushanbe will be an important step in the development and strengthening the water cooperation through mobilizing all stakeholders’ efforts in achievement of the internationally agreed goals on water and saving this important resource for future generations.

Potential participants

High-level representatives from the member states; representatives of international and nongovernmental organizations; civil society and private sector; river basin organizations and commissions; national and regional water commissions; scientific, educational and cultural organizations; children and women’s organizations; regional and international financial organizations; UN agencies, etc.

Main events

- (a) Two high-level plenary sessions
- (b) Four roundtable discussions on:
 - *Water cooperation for achieving the Millennium Development Goals (MDGs) and Internationally Agreed Development Goals (IADGs):* equitable universal access to water; poverty alleviation; access to elementary sanitation; food and energy security, etc.
 - *Water cooperation for peace and security:* trans-boundary water cooperation; joint actions for meeting global and regional water challenges; water cooperation issues at the local, national, regional and international levels
 - *Water cooperation for sustainable development and*



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environmental sustainability: integrated water resources management (IWRM); protection of water resources; adaptation to climate change and disaster risk reduction

- *Capacity building and science development for water cooperation*: strengthening of the role of national, regional and sub-national institutions on water management issues, etc.

- (c) Side-events on different aspects of water cooperation from countries, regional and international institutes, as well as women's organizations, trans-boundary river basin organizations, and others
- (d) Thematic exhibition and presentations (films, posters, books, brochures, calendars, schemes and other materials that demonstrate cooperation among countries, societies, NGOs, water users, etc.)

Main goals

- (1) To discuss different aspects of the implementation of the International Year of Water Cooperation in the UN member states and strengthening of cooperation and dialogue to resolve current water issues and move toward achieving the MDGs and IADGs;
- (2) To highlight best practices in different countries and regions of the world in water cooperation among water users at local, national and regional levels, in improving access to safe drinking water and sanitation, and in promoting efficient use of water resources for development and environmental protection;
- (3) To prepare specific recommendations on effective implementation approaches and mechanisms towards joint use of water resources in trans-boundary basins of rivers, aquifers and lakes;
- (4) To ensure the engagement of all stakeholders, especially women, to encourage new dialogue and participatory approaches, including water users

associations, various unions, at all levels of cooperation;

- (5) To foster cooperation through a broader approach including, south-south, north-south and triangular cooperation initiatives for water resources management, in particular through capacity development, exchange of experiences, best practices and lessons learned, as well as sharing environmentally sound technologies and know-how;
- (6) To foster trans-boundary water cooperation by joining and implementing regional and international agreements, and bilateral and multilateral frameworks, as well as existing mechanisms and modalities of water diplomacy. To address water cooperation issues at the local, national and regional and international levels;
- (7) To get a better idea of the issues and challenges faced by various countries and regions through the exhibition, presentations and side events.

We look forward to seeing you in Dushanbe! 

For more information please visit: www.hlicwc.org



Strategic Foresight Group: seeing light before the sunrise



Strategic Foresight Group is a think tank engaged in crafting new policy concepts to enable decision makers to prepare for the future in uncertain times. It has worked with and in 50 countries on four continents, with a base in India.

Its analysis and recommendations have been discussed in the United Nations, the UK's House of Lords and House of Commons, India's Parliament, the European Parliament, the Alliance of Civilizations and the World Economic Forum (WEF) in Davos, and quoted in over 1,500 newspapers and media sources from almost 80 countries. Numerous heads of government, cabinet ministers and members of parliament have participated in SFG activities. SFG is engaged in three diverse spheres:

Water diplomacy

Addressing trans-boundary water security issues at a global level, and also in hydro-political regions in Asia, Africa and the Middle East. We have developed the Blue Peace approach to transform trans-boundary water as an instrument of cooperation with collaborative and sustainable strategies shared by riparian countries.

Peace, conflict, terrorism

Creating new tools for decision makers dealing with armed conflict and terrorism. We have pioneered the "cost of conflict" concept, a new framework to deconstruct terror, and hosted

dialogues between senior political leaders of Western and Islamic countries.

Foresight methodologies

Building scenarios and monitoring trends for countries, regions and sectors. We have created methods to map future trajectories of countries and regions in different parts of the world at a macro level.

At times, SFG has been a lone voice of reason in times of crisis. When Indian and Pakistani troops were at the borders in 2002 and the world media was speculating about nuclear catastrophe, SFG predicted confidently in Newsweek and on BBC World television that there would be no war that year. When the Western and Islamic countries disagreed on the role of religion in terrorism, SFG collaborated with the Alliance of Liberals and Democrats in the European Parliament and the League of Arab States in 2004-2006 to convene roundtables of senior parliamentarians, ministers and

former ministers from Western and Islamic countries to forge a consensus on strategies to deconstruct terror. As the financial crisis of 2009 exposed fault lines in globalization, SFG initiated a trends monitoring exercise, at the invitation of the

SFG'S BLUE PEACE CONCEPT AIMS TO USE WATER AS AN INSTRUMENT OF COOPERATION RATHER THAN A SOURCE OF CONFLICT

Rockefeller Foundation, to identify scope for innovation among poor communities in Asia. With growing water crises in Africa, Asia and the Middle East, SFG is involved in crafting and negotiating new policy instruments with governments in these regions.

One of the key concepts developed by SFG is Blue Peace, which aims to use water as an instrument of cooperation rather than a source of potential conflict. A number of governments in the international community support the Blue Peace policy in their development cooperation agenda. And a growing number of decision makers in Asia, Africa and the Middle East are exploring the Blue Peace Process to achieve much needed breakthroughs in their trans-boundary water relationships. 