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AND NATURAL RESOURCE MANAGEMENT CLUSTER

REGIONAL CASE STUDY: MIDDLE EAST

REGIONAL WATER COOPERATION AND PEACEBUILDING IN THE MIDDLE EAST

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ACRONYMS

EXACT	Executive Action Team
FoEME	Friends of the Earth Middle East
GWN	Good Water Neighbors
JWC	Joint Water Committee
MWGWR	Multilateral Working Group on Water Resources
PfP	Partnership for Peace Programme
PLO	Palestinian Liberation Organisation
PWA	Palestinian Water Authority
RIP	Regional Indicative Programme
RWDBP	Regional Water Data Banks Project
TARWAR	Total Actual Renewable Water Resources
USAID	United States Agency for International Development

EXECUTIVE SUMMARY

In the semi-arid to arid climatic conditions of the Middle East, water resources management is a contentious issue between parties sharing the same water resources. On the other hand, solving water problems has been identified as a topic of common interest to Israelis, Jordanians and Palestinians. The implementation of joint water-related projects is therefore seen as a hopeful sign and related projects have received substantial funding from the international donor community, especially the US and EU.

Theoretically, the idea that cooperation over water resources could act as a pathway for building peace is feasible. This case study seeks to deepen the understanding of *how* the peacebuilding effects of such cooperation can best be harnessed, supported and sustained. It analyses two existing initiatives promoting water cooperation between Jordanians, Israelis and Palestinians: the Good Water Neighbors project initiated by Friends of the Earth Middle East; and the Regional Water Data Banks Project, which promotes collaboration of water agencies in data management. The case analysis focuses on the design and implementation of cooperative processes, as both the form and content of cooperation are critical for peacebuilding.

Though the two initiatives take different approaches, commonalities exist in the challenges both have to face with regard to peacebuilding. Common challenges include: dealing with existing asymmetries, affecting political change, creating relationships and ownership, and dealing with different expectations. Both regional water cooperation efforts discussed here show that water is an issue that communities and experts agree cannot be solved unilaterally. The issue of water seems important enough to justify cooperation. While water can thus serve as a starting point for dialogue, this report shows that peacebuilding efforts involving Palestinians, Jordanians and Israelis soon hit a road block when it comes to actual cooperation in water resources management. This is mainly because water issues are characterised by major inequalities among the three parties and are highly politicised. Cooperation in water resources management, however, remains an important goal to pursue, as it is the only way to sustainably manage the scarce water resources in the region. Cooperation is important in order to provide water for health security and livelihood reasons, and because water disputes fuel existing conflicts.

Building on the analysis of the two cases selected for this study, as well as on broader knowledge on water cooperation, the final chapter of the report makes recommendations for funding agencies and third parties involved in regional water cooperation initiatives in the Middle East:

Ask for clear theories of change and necessitate that water cooperation initiatives claiming to promote peace spell out how they aim to contribute to peacebuilding.

Address existing asymmetries in the design and implementation of initiatives in order to ensure that cooperation provides at least mutual – if not equal benefits – and to prevent asymmetric power relations favouring one party.

Promote regional water cooperation towards peacebuilding and human security with the national governments and authorities.

Provide ongoing funding, even when conflict escalates.

Do not interpret the need to remain impartial between the parties as the need to stay silent on abuses and injustices committed by parties.

Keywords: Water, Cooperation, Peacebuilding, Middle East, Jordan, Israel, Palestinian territories

INTRODUCTION

In the semi-arid to arid climatic conditions of the Middle East, water resources management is a contentious issue between parties sharing the same water resources. Solving water problems has been identified as a topic of common interest to Israelis, Jordanians and Palestinians. In response to this, the Multilateral Working Group on Water Resources (MWGWR) was established as part of the multilateral track aimed at enhancing the Middle East peace process. Since then, governmental and non-governmental institutions have started several bilateral and regional water cooperation projects with the aim of contributing to peace in the region. Some have identified cooperation over water resources as a particularly fruitful entry point for building peace.¹ The implementation of water-related projects involving Palestinians, Israelis and Jordanians is therefore seen as a hopeful sign and related projects have received substantial funding from the international donor community, especially the US and EU, who had also acted as organisers of the MWGWR. However, while in theory cooperation over water resources could act as a pathway for building peace, it is not well understood *how* the peacebuilding effects of such cooperation can best be harnessed, supported and sustained.

This study aims to contribute answers to this lack of knowledge through a detailed assessment of two existing initiatives promoting water cooperation between Jordanians, Israelis and Palestinians: the Good Water Neighbors (GWN) project initiated by Friends of the Earth Middle East (FoEME); and the Regional Water Data Banks Project (RWDBP), which promotes collaboration of water agencies in data management. Analysis of the two cases provides insights into the challenges of putting environmental peacebuilding into practice at different levels of society. The initial focus of the study will be on the design and implementation of cooperative processes, given that both the form and content of cooperation are critical for peacebuilding impact. This analysis includes the role that external actors (including the European Commission) play in these issues, with the ultimate aim of providing recommendations on how such actors can strengthen the peacebuilding potential of water cooperation in practice.

1 K. Conca (2001). 'Environmental cooperation and international peace' in P. Diehl and N.P. Gleditsch (Eds.). *Environmental conflict: An anthology*. Oxford, UK: Westview Press.

BACKGROUND

WATER AND PEACEBUILDING

Water is a fundamental resource, indispensable to all forms of life on earth. Reliable freshwater resources are crucial to human and environmental health, as well as economic development. Almost every sector of human activity depends on water resources, from agriculture to industrial production and power generation. Furthermore, water resources are shared at the local, national and international levels, as water flows ignore state boundaries. Water management, therefore, requires actors to integrate and balance competing interests. Without a mutual solution, water users can find themselves in dispute and even violent conflict. Still, water-related disputes must be considered within the broader political, ethnic and religious context. Water is never the single – and hardly ever the major – cause of conflict.² Throughout the last 20 years, a range of research has been carried out to study the various links between water – and the environment in general – and conflict, ranging from it being a structural cause of conflict to just a target of terrorist acts.³ According to Wolf, there is a history of water-related violence on a sub-national level, but for nation-states, the potential for violent conflict over water is actually relatively low.⁴ A total of 1,831 water-related events that occurred between states in the years 1948-1999 were investigated, yet two-thirds resulted in cooperation and the vast majority of the remaining did not escalate to more than verbal arguments. Only 37 incidents reached an acute conflict level, 30 of which involved Israel and one or several of its neighbours.⁵

The fact that cooperative action overwhelms conflictive incidents and that cooperative water management institutions prove resilient even in conflict environments, has led researchers to focus on the potentials that water could hold for peacebuilding.⁶ Water – and the environment in general – can be related to peace in three main, partly overlapping ways.⁷ This case study will focus on the third.

- **Sustainable water management as a basis for lasting peace.**

The most basic relation between water and sustainable peace exists in the important role water plays for human health, food security and securing basic incomes – and thus for ensuring human security. Sustainable water management – in social, environmental and economic contexts – can thus help prevent potentially related conflicts and is a prerequisite for establishing the socio-economic foundations for peace.

- **Preventing or transforming water-related conflicts.**

Where water-related issues represent structural causes contributing to conflict, a sustainable and just solution to these issues will play a part in conflict transformation and peace accordingly. Conflict-sensitive approaches to balancing competing interests and inequalities related to water can help prevent conflicts

2 A.T. Wolf et al. (2005). 'Managing water conflict and cooperation' in The Worldwatch Institute (Ed.). *State of the World 2005: Redefining global security*. New York & London: WW Norton & Company.

3 See for example: P.H. Gleick (1993). 'Water and conflict: Fresh water resources and international security', *International Security*, Vol. 18, No. 1, pp.79-112; T. Homer-Dixon (1994). 'Environmental scarcities and violent conflict: Evidence from cases', *International Security*, Vol. 19, No. 1, pp.5-40; G. Baechler (Spring 1998). 'Why environmental transformation causes violence: A synthesis', *Environmental Change and Security Project*, Report 4, pp.24-44; A.T. Wolf (1998). 'Conflict and cooperation along international waterways', *Water Policy*, Vol. 1, No. 2, pp.251-65; P. Diehl and N.P. Gleditsch (Eds.) (2001). *Environmental conflict: An anthology*. Oxford, UK: Westview Press.

4 A.T. Wolf (1999). *Water and human security*, AVISO, No. 3. Victoria, Canada: The Global Environmental Change and Human Security Project.

5 S. Postel and A.T. Wolf (2001). 'Dehydrating conflict', *Foreign Policy*, September/October. Available at http://www.globalwaterpolicy.org/pubs/FP_Conflict.pdf.

6 A.T. Wolf et al. (2005). Op. cit.

7 K. Conca et al. (2005). 'Building peace through environmental cooperation' in The Worldwatch Institute (Ed.). Op. cit.

from arising in the future. Cooperative water management mechanisms, such as river basin organisations or water user committees, offer the most advanced approach. They can anticipate and mediate water-related conflict, provided that all stakeholders are included in decision-making processes and given the means (information, trained staff and financial support) to act as equal partners.⁸

▪ **Water-related issues as an entry point for dialogue and cooperation, and a pathway for peacebuilding.**

Sharing an ecosystem, such as river basins or other water resources, creates complex interdependencies between parties. Based on these interdependencies, environmental problems can provide incentives for cooperation and collective action across political boundaries and ethnic divides.⁹ In many instances, parties whose relations are otherwise characterised by distrust and hostility – if not open violence – have found that environmental issues, such as shared water resources, are one of the few areas in which they can sustain ongoing dialogue.¹⁰

This leads to the question of whether environmental cooperation could be harnessed for peacebuilding aims. There are several pathways along which environmental cooperation could contribute to peace.¹¹ Working together on solving common problems can help replace distrust, uncertainty and suspicion with shared knowledge and a tradition of cooperation.¹² The interdependencies created by shared water resources can further reveal mutual benefits of cooperation. In another ideal scenario, cooperation over environmental issues could lead to the internalisation of shared norms, the creation of an (eco-)regional identity and regional interests.¹³

Some of the specific characteristics of environmental issues further support the argument that environmental cooperation could translate into broader forms of long-term cooperation and solutions. The ramifications of environmental cooperation can therefore encourage local and non-governmental participation and constitute “high” and “low” politics.¹⁴ Since water management, in particular, requires horizontal coordination between different economical sectors, as well as vertical coordination efforts from local to international levels of society, water cooperation offers particular opportunities for spillover of positive impacts.¹⁵ Still, it cannot be expected that environmental cooperation per se will contribute to peace. The way in which cooperative processes are designed and implemented remains critical for their peace and conflict impacts. In this regard, considering aspects of ownership, transparency, participation and power relationships are of utmost importance.

Environmental cooperation could be introduced at different levels of society with the aim of contributing to peace. Social interest groups can take advantage of ecological interdependence across territorial borders to facilitate cooperation between academia and/or civil society actors. This can bring changes in the attitudes, values or perceptions of individuals. Over time, regular interaction at the societal level may translate into changes of behaviour and help lay the foundation for changes at the political level.¹⁶ However, such spillover effects from the individual/personal level to the social/political level do not occur automatically, but require coordinated action to bring about the structural change that is necessary for peace.¹⁷

8 For more on water-related conflicts and approaches to transform them, see A. Kramer (2004). *Water and conflict – Briefing Paper for USAID*. Berlin, Bogor and Washington, DC: Adelphi Research, Center for International Forestry Research and Woodrow Wilson International Center for Scholars. Available at <http://rportal.net/tools/water-and-fresh-water-resource-management-tools/toolkit-water-and-conflict-04-04-02.pdf/view>.

9 K. Conca (2001). Op. cit.

10 K. Conca et al. (2005). Op. cit.

11 The environmental peacemaking literature has identified different mechanisms through which the link between environmental cooperation and broader forms of peace can be established. The most elaborate theoretical framework appears to be the one first proposed by Conca in 2001 and later used as a theoretical basis for the book *Environmental Peacemaking*. See K Conca and G. D. Dabelko (Eds.) *Environmental peacemaking*. Washington, DC: Woodrow Wilson Press.

12 K. Conca (2001). Op. cit.

13 A. Carius (2003). ‘Naturschutz als Beitrag zur Friedensentwicklung’ in *Naturschutz (Aus-)Löser von Konflikten?*. Documentation of a conference by the Bundesamt für Naturschutz and the Heinrich Böll Foundation, 25th-27th November 2002 in Berlin. Bonn, Germany. p.26. Available at <http://www.bfn.de/fileadmin/MDB/documents/skript98.pdf>.

14 G. D. Dabelko (2006). *Analyzing environmental pathways to peace*. Paper presented at the annual meeting of the International Studies Association, Town & Country Resort and Convention Center, San Diego, California, US, 22nd March 2006. Available at http://www.allacademic.com/meta/p99621_index.html.

15 More generally, the question of spillover asks why should it be that cooperation in one area will lead on to improvements in others, especially when this calls for a change in fundamental political, religious or ideological beliefs.

16 A. Carius (2006). *Environmental cooperation as an instrument of crisis prevention and peacebuilding: Conditions for success and constraints*. Berlin, Germany: Adelphi Consult. Available at http://web.fu-berlin.de/ffu/akumwelt/bc2006/papers/Carius_Peacemaking.pdf.

17 M. B. Anderson and L. Olson (2003). *Confronting war: Critical lessons for peace practitioners*. Cambridge, MA: The Collaborative for Development Action.

At the governmental level, regional water cooperation can range from sharing data and conducting joint research, to infrastructure projects to institutionalise cooperation mechanisms. The latter often take the form of joint water commissions or river basin organisations that, at best, manage the water resource cooperatively. Institutions play a large role in this by providing predictable and stable behaviour of the actors, a normative and organisational frame for long-lasting/enduring interaction – which also reduces the costs of cooperation – and for increased information exchange, which leads to transparency.¹⁸ The change of behaviour towards compliance with mutually established rules or norms usually provides opportunities for conflict transformation.¹⁹ However, to guarantee equal participation and mutual benefits from cooperative management, even when power is unevenly distributed, disadvantaged negotiation partners must be given the means (information, trained staff and financial support) to act as an equal partner. Existing power imbalances between parties might otherwise further manifest in the institutions created to solve these disparities.

Regional mechanisms for water cooperation between states have the potential to contribute to further regional integration.²⁰ While the effectiveness depends on the conditions prevailing in the region, the main challenge remains to transform environmental cooperation into broader forms of political cooperation and to initiate a social and political dialogue that moves beyond environmental aspects. Positive impacts of regional water cooperation for conflict prevention and sustained peace have been observed in the Trifinio Plan in the Lempa River Basin in Central America,²¹ as well as in regional water cooperation agreements in southern Africa.²²

WATER IN THE MIDDLE EAST

Jordan, Israel and the Palestinian territories are characterised by an arid climate, with evaporation exceeding rainfall for most of the year.²³ The single most important surface water source for the region is the Jordan River. Water development efforts on all sides of the river have today reduced the Jordan flow to only 10 percent of its natural discharge below Lake Tiberias. What little remains is of the poorest quality.²⁴ Aquifers provide an alternative freshwater source, accounting for over 50 percent of the freshwater supply for Israel and Jordan.²⁵ Aquifers also provide almost the total consumption in the Palestinian territories.²⁶ Some experts say that the water scarcity is a man-made effect²⁷ caused by rising consumption, population growth and limited resources, which are being further compromised by pollution.²⁸

The limited water resources in the Middle East must be divided between neighbours who often do not share amicable relations. This has led to disputes over water issues, especially between Israel and its neighbours. Though this study does not focus on water conflict, but rather aims to highlight how water cooperation can be harnessed for peacebuilding, it is important to understand the context in which related activities take place. The following sections therefore give a brief overview of the main water issues between Jordanians, Israelis

18 M. Spindler (2005). 'Die konflikttheorie des neoinstitutionalismus' in T. Bonacker (Eds.). *Sozialwissenschaftliche konflikttheorien - Eine einföhrung*. Wiesbaden: VS Verlag für Sozialwissenschaften. pp.152-153.

19 R. Keohane (1984). *After hegemony: Cooperation and discord in the world political economy*. Princeton, NJ: Princeton University Press. pp.88-98.

20 D. Phillips et al. (2006). *Transboundary water cooperation as a tool for conflict prevention and broader benefit-sharing*. Global Development Studies, No. 4. Stockholm: Swedish Ministry for Foreign Affairs.

21 A. Lopez (2004). *Environmental conflicts and regional cooperation in the Lempa River Basin. The role of Central America's Plan Trifinio*. EDSP Working Paper No. 2. Berlin: Environment, Development and Sustainable Peace Initiative.

22 D. Phillips et al. (2006). Op. cit.

23 S. Libiszewski (1995). *Water disputes in the Jordan Basin Region and their role in the resolution of the Arab-Israeli conflict*. ENCOP Environment and Conflicts Project, Occasional Paper No. 13. Zurich: Center for Security Studies and Conflict Research/Berne: Swiss Peace Foundation. p.34. Available at http://www.mideastweb.org/Mew_water95.pdf.

24 Friends of the Earth Middle East (2005). *Crossing the Jordan. Concept document to rehabilitate, promote prosperity and help bring peace to the Lower Jordan River Valley*. Amman, Bethlehem and Tel Aviv: EcoPeace/Friends of the Earth Middle East. Available at <http://www.foeme.org/publications.php?ind=21>.

25 S. Libiszewski (1995). Op. cit. p.13.

26 M. Zeitoun (2008). *Power and water in the Middle East: The hidden politics of the Palestinian-Israeli water conflict*. London, UK: L.B. Tauris. p.54.

27 Messerschmid cited in A. Hass, 'Water, water everywhere', Haaretz, 13th March 2008, available at <http://www.haaretz.com/hasen/spages/961667.html>.

28 S. Libiszewski (1995). Op. cit. p.25.

and Palestinians, which have been analysed in a rich body of literature.²⁹ Whether, and to what extent, water issues have played and still play a role in the Arab-Israeli conflict has also been the focus of ample research.³⁰ Libiszewski concludes that water issues have repeatedly been triggers of conflict, as well as a target of political and military action in the Jordan Basin region.³¹ While most authors agree that water has played some role in the overall conflict, its relative weight within the mix of causal factors in the conflict continues to be disputed.

WATER IN ISRAELI-PALESTINIAN AND ISRAELI-JORDANIAN RELATIONS

The political importance of water issues between Arabs and Israelis dates back to the 1920s and is rooted in the Zionist movement's development plans, which heavily depended on water for large-scale irrigation and hydropower.³² Relations have been strained since the late 1940s, when the parties first began working separately on water development plans.³³ US mediation efforts in 1955 could not achieve an agreement, which eventually led Israel to attack Syria's water diversion works in 1965. These events set off what has been described as 'a prolonged chain reaction of border violence that linked directly to the events that led to the (June 1967) war'.³⁴ After the 1967 war, water disputes between Israel and Jordan remained focussed on diverting water from the Jordan Basin. Between the Israelis and Palestinians, however, water issues have turned markedly different as Israel gained control over all Palestinian water resources in the 1967 occupation. Under military orders, a permit system was established for drilling new wells and pumping quotas were assigned. Israel permitted the drilling of only 23 new wells between 1967 and 1990, mainly to replace older ones.³⁵ Since 1967, Palestinians have further been denied access to the Jordan River.

When peace talks with regional and outside parties opened in 1991, water was one of the five issues to be discussed in the multilateral talks.³⁶ The intention of the multilateral talks was for them to work as a catalyst and to facilitate progress in the bilateral talks that Israel would conduct with each Arab delegation. The technical discussions and activities that took place within the framework of the *Multilateral Working Group on Water Resources* (MWGWR)³⁷ between 1992 and 1996 have been considered important as a means for confidence-building³⁸ that supported the peace process.³⁹

Israeli-Palestinian water relations

The agreements that resulted from the bilateral talks between Israel and the Palestine Liberation Organization (PLO)⁴⁰ cover a range of water issues, including studies and plans for joint development of water resources, and the establishment of a Palestinian Water Authority (PWA) – though one with limited powers.⁴¹ In the 1995 Interim Agreement on the West Bank and the Gaza Strip, Israel acknowledged Palestinian water rights for the first time, but actual negotiation of these rights was considered too contentious, and was therefore postponed to the permanent status negotiations. For the interim period, the agreement basically maintained water allocations

29 See for example: T. Naff and R. Matson (1984). *Water in the Middle East: Conflict or cooperation?* Boulder, Colorado: Westview Press; A. Wolf (1995a). *Hydro-politics along the Jordan River: The impact of scarce resources on the Arab-Israeli conflict*. Tokyo, Japan: United Nations University Press; S. Libiszewski (1995). Op. cit.; Allan (2001); J. Selby (2003). *Water, power and politics in the Middle East: The other Israeli-Palestinian conflict*. London, UK: I.B. Tauris; M. Zeitoun (2008). Op. cit.

30 Jägerskog provides an extended list of literature that has dealt with the question. A. Jägerskog (2003). *Why states cooperate over shared water: The water negotiations in the Jordan River Basin*. Sweden: Department of Water and Environmental Studies, Linköping University. Available at <http://liu.diva-portal.org/smash/record.jsf?pid=diva2:20723>.

31 S. Libiszewski (1995). Op. cit.

32 A.T. Wolf (1996). 'Middle East water conflicts and directions for conflict resolution', 2012 Vision Brief 31 for Food, Agriculture and the Environment. International Food Policy Research Institute. Available at <http://www.ifpri.org/2020/BRIEFS/NUMBER31.HTM>.

33 Ibid.; S. Libiszewski (1995). Op. cit.

34 J. Cooley (1984), p.16 cited by A.T. Wolf (1996). Op. cit.

35 A. Jägerskog (2003). Op. cit. p.94.

36 The multilateral talks covered five different issue areas defined on the basis that they crossed national boundaries and that their resolution is essential for long-term regional development and security: management of regional water resources; the refugees question; environmental problems; regional economic development; and arms control (J. Peters 1999, RWDBP 2002).

37 For an account of the first six sessions of the MWGWR, see A.T. Wolf (1995b). 'International water dispute resolution: The Middle East Multilateral Working Group on Water Resources', *Water International*, Vol. 20, No. 3.

38 A. Jägerskog (2003). Op. cit. p.99.

39 J. Peters (1999). 'Can the multilateral Middle East Talks be revived?', *Middle East Review of International Affairs*, Vol. 3, No. 4. Available at <http://meria.idc.ac.il/journal/1999/issue4/jv3n4a6.html>.

40 The 1993 Declaration of Principles on Interim Self-Government Arrangements, the 1994 Gaza-Jericho Agreement and the 1995 Interim Agreement on the West Bank and the Gaza Strip.

41 The power of the PWA was (and still is) limited by the fact that Israel maintained control over a number of wells in the West Bank to supply settlements and military camps. In addition, all regulations that the PWA proclaims have to go through the JWC, where Israel holds a de facto veto power. See Jägerskog (2003). Op. cit. p.100; M. Zeitoun (2008). Op. cit.; A.T. Wolf (1996). Op. cit.

for Israel.⁴² A permanent *Joint Water Committee* (JWC) was established with the agreement for coordination of water and sewage management. While the JWC has been stated by some as a good example of transboundary water cooperation, the JWC is not conflict-free and is characterised by power asymmetry that Jan Selby has coined as 'domination dressed-up as cooperation'.⁴³ The Palestinians complain that their projects are being rejected noticeably more often, whereas the Israelis argue that they have technical or scientific reasons for rejection.⁴⁴

To date, water relations are characterised by the Palestinian claim for independent control and rights to water resources, which they see in the context of nation statehood.⁴⁵ The Israeli position, on the other hand, focuses on control over water as a national security issue, with Israel fearing that the Palestinians could use water as a strategic weapon were they to gain control over transboundary water resources.⁴⁶ However, it is important to acknowledge that water has been secondary to other politically more salient issues in the negotiations between Israelis and Palestinians, such as the issue of Jerusalem or borders.⁴⁷

Israeli-Jordanian water relations

The *Israeli-Jordanian Peace Treaty* that was signed in October 1994 includes extensive water provisions, such as allocation of rights to water resources in the Jordan Basin, as well as joint projects to develop further water resources and prevent pollution.⁴⁸ The treaty also states that 'the subject of water can form the basis for the advancement of cooperation between them [the parties]'.⁴⁹ An *Israeli-Jordanian Joint Water Committee* was established to implement the agreement, yet problems have arisen, mainly due to ambiguities in the agreement's provisions.⁵⁰ Munther Haddadin criticises that several of the water provisions from Israel to Jordan have not yet been implemented as stipulated within the agreement.⁵¹ Unsolved water issues have since led to a political "mini-crisis" between the two states.⁵² In general, however, Anders Jägerskog concludes that 'the surrounding political environment effectively sets the boundaries for what has been feasible in the water sector', and not the other way around.⁵³

MANAGEMENT AND DEVELOPMENT OF WATER RESOURCES

Water resource development and management, as well as access to freshwater, is characterised by great asymmetry between Jordan, Israel and the Palestinian territories. In Israel, the total actual renewable water resources (TARWR)⁵⁴ is 250m³ per capita per year; for Jordan, this index is 160m³ per capita per year; while for the Palestinian territories, this number only reaches 41m³ per capita per year.⁵⁵ It must be noted that the figures give the de facto water availability for each party, thus reflecting not only natural conditions, but also the distribution patterns of shared resources. These numbers therefore also reflect the unequal distribution of transboundary water resources, especially among Palestinians and Israelis, with Israel consuming about 85 percent of the shared resources.⁵⁶ The following gives a very brief overview of water management in Israel, Jordan and the Palestinian territories.

42 A. Jägerskog (2003). Op. cit. pp.100–103.

43 J. Selby (2003). Op. cit.

44 A. Jägerskog (2003). Op. cit. p.137, 140; M. Zeitoun (2008). Op. cit.

45 A. Jägerskog (2003). Op. cit. p.112.

46 E. Weinthal and A. Marei (2002). 'One resource two visions: The prospects for Israeli-Palestinian water cooperation', *Water International*, Vol. 27, No. 4, p.460–467.

47 A. Jägerskog (2003). Op. cit.

48 A.T. Wolf (1996). Op. cit.

49 The Israeli-Jordanian Peace Treaty. Available at http://www.kinghussein.gov.jo/peace_6-15.html.

50 I. Fischhendler (2008a). 'Institutional conditions for IWRM: The Israeli case', *Ground Water*, Vol. 46, No. 1, pp.91–102.

51 M. J. Haddadin (Ed.) (2006). *Water resources in Jordan: Evolving policies for development, the environment and conflict resolution*. Washington DC: Resources for the Future.

52 The Peace Agreement stipulated the supply of an additional 50 million m³ of water to Jordan. However, the two parties could not agree on the source and financing for the water provision. In 1997, tension over the issue increased and no solution could be found during ministerial meetings. As a consequence, Crown Prince Hassan cancelled his participation at a memorial service for seven girls that had been killed by a Jordanian soldier, as well as his participation at a meeting with the Israeli Prime Minister immediately after the service. The issue could only be resolved through the mediation of the US ambassador. I. Fischhendler (2008a). Op. cit.

53 A. Jägerskog (2003). Op. cit.

54 TARWR is an index that reflects the water resources theoretically available for development from all sources within a country. It must be noted that the figures give the de facto water availability for each party, thus reflecting not only natural conditions, but also the distribution patterns of shared resources.

55 United Nations Educational, Scientific and Cultural Organization (UNESCO) (2006). *World Water Development Report II: Water, a shared responsibility*. Paris, France: UNESCO/New York, US: Berghahn Books. Available at <http://unesdoc.unesco.org/images/0014/001454/145405E.pdf>.

56 Zeitoun gives a full overview of actual Israeli control over water resources in the West Bank. M. Zeitoun (2008). Op. cit.

Israel's export-oriented agricultural sector accounts for approximately 50 percent of total water use in Israel.⁵⁷ Israeli farmers use the most effective irrigation techniques,⁵⁸ and thus manage to irrigate nearly all of Israel's irrigable land.⁵⁹ The water sector is highly developed with regard to water reuse and desalination. The domestic per capita water consumption in Israel's urban areas reaches between 240-280 litres per capita, per day.⁶⁰ In Israel's centralised and supply side-oriented water management system⁶¹ national water allocation tends to favour agricultural use,⁶² even though agriculture only contributes a small percentage to the Gross National Product (GNP) and employment rate.⁶³ Agriculture has played an important role in the Zionist ideal to "make the desert bloom," and the agricultural sector is still often exempted from justified criticism.⁶⁴

In **Jordan**, the agricultural sector consumes about 75 percent of the total water available.⁶⁵ The economy is not diverse and agriculture symbolises an important part of the national ideology. Changes in the water allocation find strong opposition even though, again, agriculture contributes little to the GNP and employment rate.⁶⁶ Potential for expanding irrigated agricultural lands exists if modern irrigation techniques are applied. Jordan's present domestic water use per capita, per day is about 85 litres. Most of the population has access to improved drinking water and sanitation.⁶⁷

In the **Palestinian territories**, the average daily domestic water consumption per capita is around 60 litres,⁶⁸ but this varies significantly between places and in some villages is far below this average. About 25 percent of the population does not have access to improved drinking water. Only 35 percent of Palestinians have access to improved sanitation, which poses health risks and further reduces the available water resources, as aquifers are polluted by wastewater.⁶⁹ Agriculture uses about half of the total water withdrawals, while domestic usage accounts for the remaining.⁷⁰ In 1995, only about one-third to one-fifth of the irrigable land in the West Bank could be irrigated due to Israel's restrictions.⁷¹ Still, the agricultural sector plays a considerable role in the employment and livelihoods of the Palestinians.⁷² Since the occupation in 1967, Palestinians have depended on Israel's permission and donations for development of their water resources and wastewater treatment. Against this background, the PWA has little room for manoeuvring in water management. While donors have given considerable funding, few water development projects have been granted permission to be implemented. Additionally, political nepotism and corruption have been identified as hindering a prospective development process for the water sector.⁷³

57 E. Feitelson, I. Fischhendler and P. Kay (2007). 'Role of a central administrator in managing water resources: The case of Israeli water commissioner', *Water Resources Research*, Vol. 43, No. 11.

58 A. Jägerskog (2003). Op. cit. p.93.

59 S. Libiszewski (1995). Op. cit. p.34.

60 C. Fröhlich (2008). 'Mehr Power für ein zartes Pflänzchen', *Das Parlament*, No. 32 ('More power for a delicate creature', *The Parliament*, No. 32). Berlin, available at <http://www.bundestag.de/dasparlament/2008/32/Thema/21943266.html>; A. Hass, 'Water, water everywhere'. Op. cit.

61 M. Zeitoun (2008). Op. cit. p.143.

62 E. Feitelson, I. Fischhendler and P. Kay (2007). Op. cit.

63 A. Jägerskog (2003). Op. cit. p.93.

64 N. Beschoner (1992). *Water and instability in the Middle East*. Adelphi Paper 273. London, UK: International Institute for Strategic Studies. p.12; Fröhlich (2008). Op. cit.; Zeitoun (2008). Op. cit. p.73.

65 World Bank (2007). *Making the most of scarcity: Accountability for better water management results in the Middle East and North Africa*. MENA development report. Washington DC: The World Bank.

66 A. Jägerskog (2003). Op. cit. p.95.

67 Access to improved water refers to the percentage of the population with reasonable access to an adequate amount of water from an improved source, such as a household connection, public standpipe, borehole, protected well, spring or rainwater collection. Access to improved sanitation facilities refers to the percentage of the population with access to at least excreta disposal facilities that can effectively prevent human, animal and insect contact with excreta. World Bank (2007). Op. cit.

68 A. Hass, 'Water, water everywhere'. Op. cit.; Fröhlich (2008). Op. cit.

69 World Bank (2007). Op. cit.

70 Ibid.

71 S. Libiszewski (1995). Op. cit. p.34.

72 A. Jägerskog (2003). Op. cit. p.94.

73 S. Klawitter and I. Barghouti (2006). *Institutional design and process of the Palestinian water sector: Principal stakeholder, their roles, interests and conflicts*. Paper presented at the Symposium on Sustainable Water Supply and Sanitation: Strengthening Capacity for Local Governance, 26th-28th September 2006, Delft, Netherlands. Available at http://www.irc.nl/content/download/27577/293627/file/Klawitter_and_Barghouti_Sustainable_Water_Supply_and_Sanitation.pdf.

MAPPING AND CASE STUDY APPROACH

MAPPING OF WATER COOPERATION INITIATIVES

Numerous initiatives have worked towards promoting regional water cooperation among Palestinians, Israelis and Jordanians. Some of them explicitly mention peacebuilding as one of their goals. The table below gives an overview on selected initiatives and their main fields of action. This selection does not try to be an exhaustive list of regional water cooperation initiatives, nor are the indicated areas of action and actors/participants exclusive. Further, it should be noted that the initiatives presented in the table are of different scale with respect to budget and duration. More details on the selected initiatives can be found in the Annex.

TABLE 1: SELECTED INITIATIVES RELATED TO REGIONAL WATER COOPERATION

Main Areas of Work Initiative	Research carried out by	Capacity-Building for	Advocacy/Awareness targeting	Dialogue/Conferences involving	Peacebuilding as explicit goal
Environmental management and planning as a tool for promoting sustainable coexistence between Israelis and Palestinians		Local experts	Youth		✓
GLOWA Jordan River	Universities, Research institutes				
Sustainable Management of Available Water Resources with Innovative Technologies (SMART)	Universities, Research institutes, Companies				
Israel/Palestine Center for Research and Information's (IPCRI) Conference on Water for Life in Antalya, Turkey				Experts, Water authorities	✓
Culture of Water	Universities, Research institutes	Local experts, Farmers, Communities		Experts	✓
'Water for Peace in the Middle East' research project	Experts		Senior policy-and decision-makers	Experts, Decision-makers	✓
CollectiveWater	Universities, Research institutes				
The Middle East Multilateral Working Group on Water Resources				National authorities	✓
The Middle East Desalination Research Center (MEDRC), Oman	Experts	Students, Professionals			✓
Public Awareness and Water Conservation Project			Youth		

TABLE 1: SELECTED INITIATIVES RELATED TO REGIONAL WATER COOPERATION (CONTINUED)

Main Areas of Work Initiative	Research carried out by	Capacity-Building for	Advocacy/Awareness targeting	Dialogue/Conferences involving	Peacebuilding as explicit goal
Track II Palestinian-Israeli Water Rights Negotiations (Geneva Initiative)				Experts, Government advisors	✓
Red Sea – Dead Sea Water Conveyance Study Program	International consultants, National authorities				✓
Regional Water Data Banks Project (RWDBP)	Water agencies, Experts	Water agencies, Experts			✓
Good Water Neighbors Project/ FoEME		Youth, Farmers	Youth, Communities, Mayors, National authorities	Youth, Mayors	✓

EU ENGAGEMENT

The achievement of lasting peace in the Middle East is one of the EU's main goals. The EU sees a need to address political, economic, humanitarian and security issues simultaneously, wherever necessary, via negotiations between the parties. Hence, the role of the EU in the Middle East Peace Process has increased over the years. The EU actively contributes via the following:⁷⁴

- EU participation in the Quartet;
- EU bilateral relations with Israel and the Palestinian territories;
- The facilitation of regional dialogue through the Euro-Mediterranean Partnership (or Barcelona Process) (see below);
- Confidence-building measures, including electoral observation activities and assistance in building up the Palestinian territories' border control capacities;
- The organisation of trilateral policy dialogues with the European Commission and the parties that participate in transport, energy and trade; and
- Assistance aimed at creating the conditions for peace, stability and prosperity in the region, in order to:
 1. Promote Palestinian economic, social, political and security sector reforms, including tackling governance issues;
 2. Provide humanitarian assistance to refugees; and
 3. Bring together civil society actors from Israel, the Palestinian territories and neighbouring countries, via the EU Partnership for Peace Programme (see below).

The Euro-Mediterranean Partnership, launched in 1995, provides the larger policy framework for EU engagement with the Middle East. This partnership brings together the 27 members of the EU and 12 southern Mediterranean states,⁷⁵ and as such remains the only multilateral forum outside the UN where all the conflict parties meet.⁷⁶ The main objectives of the Euro-Mediterranean Partnership are to build together an area of peace, security and shared prosperity. At present, this cooperation is articulated in a regional strategy document that covers the years 2007–2013 and focuses on three areas:⁷⁷

⁷⁴ 'The EU and the Middle East Peace Process: The Middle East Peace Process', European Commission Dec. 2005, available at http://ec.europa.eu/external_relations/mepp/index.htm.

⁷⁵ Albania, Algeria, Egypt, Israel, Jordan, Lebanon, Libya, Mauritania, Morocco, the Palestinian territories, Syria, Tunisia and Turkey.

⁷⁶ 'The EU and the Middle East Peace Process: The Middle East Peace Process'. Op. cit.

⁷⁷ European Commission (2007). *European Neighbourhood and Partnership Instrument (ENPI) Regional Strategy Paper (2007–2013) and Regional Indicative Programme (2007–2010) for the Euro-Mediterranean Partnership*. Euromed. Available at http://ec.europa.eu/world/enp/pdf/country/enpi_euromed_rsp_en.pdf.

- A common Euro-Mediterranean area of justice, security and migration cooperation;
- A common sustainable economic area, with a focus on trade liberalisation, regional trade integration, infrastructure networks and environmental protection; and
- A common sphere for socio-cultural exchanges, with a focus on cultural and people-to-people exchanges, and raising awareness of the Partnership through the media.

The Regional Indicative Programme (RIP) 2007–2010 transposes the strategy into concrete action programmes that total €343.3 million. One of the measures included is the Partnership for Peace (PfP), which supports local and international civil society initiatives and promotes peace, tolerance and non-violence in the Middle East. The objective of the PfP's support is to contribute to rebuilding the societies' confidence level. The programme aims to promote initiatives in areas that are likely to have an impact on people's daily lives and welfare. This includes practical activities that will promote communication and understanding by demonstrating the advantages of working together for mutual benefit and achieving tangible results. Several of the projects that have been funded under this programme concern water issues. According to the RIP, there is a further 'need to promote cooperation between official bodies in Israel, West Bank-Gaza [and] Jordan on themes of interest to the peace process such as environmental, commercial and other topics, which can be dealt [with] by experts in these fields'.⁷⁸

The European Neighbourhood Policy (ENP) and the Euro-Mediterranean Partnership both emphasise environmental protection as a key factor for cooperation. The RIP acknowledges that 'environmental problems do not respect borders, and regional responses are frequently required'.⁷⁹ With regard to water, the RIP foresees support of activities related to the Mediterranean component of the EU Water Initiative, including integrated water resources management and transboundary river basin management. Other activities foreseen in the RIP aim to develop regional networks and contacts, so that local non-governmental organisations (NGOs) are better equipped to participate in and influence environmental decision-making and policy development. Since 1995, regional cooperation over water issues in the Mediterranean and the Middle East has been funded through several programmes, such as the Euro-Mediterranean Information System on know-how in the Water sector (EMWIS), Euro-Mediterranean Regional Programme for Local Water Management (MEDA Water), Short and Medium-Term Priority Environmental Action Programme (SMAP) and the EU Water Initiative.⁸⁰

The EU recognises the potential of regional cooperation and the efforts to resolve conflict in order to promote dialogue between cultures.⁸¹ Furthermore, peacebuilding and transboundary water management have been prominently addressed in past and current regional strategies of the Euro-Mediterranean Partnership. However, these issues have not yet been linked in a coordinated way and only the EU Water Initiative has initially made reference to the peacebuilding potential of water cooperation.⁸²

CASE STUDY APPROACH

As explained in the Background section of this report, water plays an important role for human security in the Palestinian territories due to its scarcity and restricted access. Furthermore, it plays a role in the existing hostilities, even though the extent of this is a matter of scientific discussion, as mentioned previously. Thus, water-related projects in the region can have several links to preventing conflicts and promoting peace (see section on Water and Peacebuilding above). The Initiative for Peacebuilding (IfP) aims, among other things, to look at the potential that regional environmental and economic cooperation has for peacebuilding. Within this framework, this case study will discuss the potentials that regional water cooperation offers for peacebuilding in the Middle East.

78 European Commission (2007). *Op. cit.* p.19.

79 *Ibid.* p.35.

80 For more details, see the programmes' respective websites: available at www.emwis.net; www.medawater-rmsu.org; www.smap.eu; www.euwi.net.

81 EuropeAid (2008). *Euro-Mediterranean partnership: Regional cooperation - An overview of programmes and projects*. Brussels, Belgium: European Commission. Available at http://ec.europa.eu/europeaid/where/neighbourhood/regional-cooperation/documents/infonotes_english_regional_cooperation_en.pdf.

82 A. Carius, D. Tanzler and M. Feil (2007). *Addressing the inter-linkages between natural resource management and conflict in the European Commission's external relations*. Rotterdam: Ecorys Research and Consulting.

Two specific initiatives have been selected for detailed analysis in this case study. Both aim to promote water cooperation among Palestinians, Israelis and Jordanians, with an overall objective of contributing to peace. They are: the Regional Water Data Banks Project (RWDBP) by the Multilateral Working Group on Water Resources (MWGWR), working in collaboration with national water agencies; and the GWN and Jordan River Peace Park initiatives by FoEME.

These initiatives have been selected according to the following criteria: a) they involve three parties, thus following a more regional approach than bilateral initiatives; b) they explicitly mention contribution to peace as one of their goals; c) both initiatives have been going on for at least seven years and therefore allow us to draw some lessons learned; d) both have repeatedly received financing from the EU; and e) they target different levels of society and water management, which will allow a comparative analysis of the different approaches (local-level cooperation vs. exchange of expert knowledge and data).

The objective of this case study is:

- To gain a deeper understanding of how these initiatives have capitalised on the existence of shared interests, in order to transfer them into opportunities to promote peace;
- To offer insight on how cooperative processes have been designed and implemented in a conflict-sensitive way; and
- To provide lessons learned about challenges and successes of water cooperation as a means to building peace.

The research for this report was initiated in autumn 2007 with internet and literature research and mapping of existing water cooperation initiatives in the Middle East. Further, participation and discussions in a Research Workshop on Transboundary Natural Resources Governance of the NATO Science for Peace and Security Programme (19th-21st November 2007 in Ein Gedi, Dead Sea, Israel) helped to select the approach for this case study and to identify main figures and active individuals to be contacted later on in the process for interviews.

Building on literature and internet analysis, field research was carried out in the Middle East on 9th-31st July 2008. Desk studies have been complemented by semi-structured interviews, discussions and field visits in Jordan, the Palestinian territories and Israel with coordinators and participants of the two initiatives, government officials, European Commission delegation staff and external experts. Additional perspectives were solicited from experts involved in the RWDBP in the US, Netherlands and Denmark through telephone interviews.

THE REGIONAL WATER DATA BANKS PROJECT

The RWDBP consists of a series of specific actions taken jointly by the core parties: the Jordanian, Israeli and Palestinian water agencies. It is one of the projects that came out of the MWGWR (see section on Water in the Middle East above) of the Middle East Peace Process. While advancing the peace process, the MWGWR's goals included creating an awareness of water issues from a regional perspective, to fostering cooperation and coordinating efforts to ameliorate water problems. These goals were tackled under the following four agenda items: 1) enhancement of water data availability; 2) improved water management practices, including conservation; 3) enhancement of water supply; and 4) concepts of regional water management and cooperation.

The RWDBP was designed to respond to the need for enhanced water data availability and was more specifically aimed to:

- Foster the adoption of common, standardised data collection and storage techniques among the parties;
- Improve the quality of the water resources data collected in the region; and
- Improve communication among the scientific communities in the region.

Once the international and regional experts had formulated an implementation plan containing 39 recommendations, the RWDBP began working in 1995.⁸³ The Executive Action Team (EXACT) was established as the steering committee of the RWDBP in order to ensure the implementation of the recommendations. EXACT consists of head representatives from the core parties (i.e. mainly of the PWA, the Jordanian Ministry of Water and Irrigation, and the Israeli Water Authority, plus a representative of the Israel Ministry of Foreign Affairs), while the US acts as the 'gavel-holder', convening and chairing the meetings.

Based on RWDBP information materials⁸⁴ and interviews, the project's theory of change towards peace can be outlined as follows:

- Water resources are a 'technically oriented issue [...] the resolution of which is essential for the promotion of long-term regional development and security';⁸⁵
- Capacity-building of experts and water authorities of the three core parties will promote establishing, upgrading and synchronising regional data banks;
- Standardised water data banks will facilitate exchange of technical water information among the three core parties and create common practice in water management;
- Joint activities will help people from the three core parties to understand each other;
- Continuing communication will establish working relationships and help coordinate efforts to ameliorate water problems;
- Common understanding, established working relationships and awareness of common problems will encourage parties to transcend the realm of competing interests and create a situation in which all parties may share benefits;
- Cooperative behaviour will allow improved water management, which is essential for long-term development and security; and
- This will finally enhance the Middle East peace process.

⁸³ Regional Water Data Banks Project (RWDBP) (2002). *Regional Water Data Banks Project: Multilateral Working Group on Water Resources, Middle East Peace Process. Project Brochure.*

⁸⁴ See: <http://www.exact-me.org>; Regional Water Data Banks Project (RWDBP) (2002). Op. cit.

⁸⁵ Regional Water Data Banks Project (RWDBP) (2002). Op. cit.

ACTIVITIES AND OUTCOMES

The RWDBP consists of several sub-projects that have materialised since 1995, which several donor countries and intergovernmental bodies have funded (mainly Canada, France, the Netherlands, UK, US and EU). Most of the activities are coordinated by agencies from the donor countries and implemented with staff from the three water agencies and sometimes additional experts. Implementing staff and coordinators gather for project meetings and workshops held within or outside the region throughout the duration of a project.

The projects' final outcomes include several internal reports that assess current data availability and data collection practice within each core party, as well as public reports summarising information on water resources in Jordan, Israel and the Palestinian territories. During the preparation of the regional reports, little data was directly exchanged among the core parties, because clearance to share data was not given from their authorities. Instead, each core party provided data to the US Geological Survey, which then drafted the final report. The projects under the RWDBP included considerable training activities for the staff of the respective water agencies. In addition, the core parties were provided with equipment and were trained on how to use it. Training topics included database development, interpretation of water quality network data, interpretation of surface-water network data and the installation and operation of hydro-meteorological and stream gauging stations. In the past few years, activities have shifted from databases towards more technical projects, such as development of decision support systems and implementing pilot plants.

EXACT meets twice a year with all donor representatives. These meetings have been funded and convened by the US. The aim of these meetings is to evaluate the projects' progress and to plan future activities. The two-day meetings usually follow the same agenda, including separate core party and donor meetings, as well as panel and bilateral meetings. Decisions on whether to initiate a project are taken by consensus. In the last few years, so called parliamentary meetings occurred every six months in between the EXACT meetings. These parliamentary meetings consist of only core party members and allow for projects to be discussed amongst themselves. According to interviews, project topics were usually suggested by the donors in the initial years of EXACT, whereas for about ten years the core parties have proposed topics themselves. All steering committee meetings excluded the media and civil society, with the intention of avoiding political interference as much as possible.

PEACEBUILDING IMPACTS

EXACT considers its greatest achievement to date as having established 'effective and continuing communication channels [...] among colleagues from the Core Parties' participating agencies'.⁸⁶ Communication and meetings take place at two levels: one, between steering committee (EXACT) representatives; and two, within the several sub-projects of the RWDBP (the operational level, consisting mainly of water agencies' staff and external experts). According to interviews, meetings at all levels helped build personal relationships, which promoted equal partnerships in discussions. EXACT meetings and workshops on the operational level allowed participants to discuss technical issues, while leaving political differences outside the room. This can also influence negotiations within the Joint Water Committees and during peace talks, since many EXACT members are also representatives in the respective delegations (they might also assume this position at a later stage in their career). In particular, Palestinian interviewees for this study largely acknowledged the training and equipment that they received through the RWDBP, but also representatives of the other two parties mentioned the benefits of knowledge exchange. On a few occasions, personal relations established through EXACT and the RWDBP facilitated informal exchange of information between water agency staff members. Interviewees involved at the operational level, however, mentioned that the projects provided little opportunity to actually work together on a given task.⁸⁷ Usually participants would go home after project meetings and work on their tasks individually. While some communication took place through email on specific questions, no lasting working relationships developed at the operational level.

Different expectations towards the data banks have been expressed in interviews from the different sides. Some interviewees said that the idea had always been to develop separate data banks, with the potential to join at a

⁸⁶ Ibid.

⁸⁷ Personal interviews held with consultants and academics (Tel Aviv, Amman, July 2008) and PWA staff (Ramallah, July 2008).

later stage when the political situation would allow for it. Other participants, however, expected a joint data bank and expressed their disappointment that the data had not been shared. Furthermore, Palestinians expressed that they could not equally benefit from the project activities, because they did not have their own data and were restricted from taking samples on their own territories.⁸⁸ The occupation also complicated the implementation of pilot plants in the Palestinian territories and sometimes prevented Palestinians from participating in meetings, because they could not receive travel permits. When Hamas won the election in 2006, representatives of the PWA were not invited to the EXACT meetings, although they had been members for years. Instead, a Palestinian civil society representative in the National Water Council sat in on behalf of PWA members. Palestinian interviewees perceived this as political interference, which caused members of the PWA to feel distrusted.

PEACEBUILDING CHALLENGES AND OPPORTUNITIES

INTERFERENCE OF POLITICAL/SECURITY ISSUES

Disparities in the parties' capacity to generate, interpret and legitimise data can lead to mistrust of those with better information and support systems.⁸⁹ Against this background, exchanging data can act as a powerful tool for building trust and improving water management. In order for this to happen, however, there must be the political will to share the relevant data and information. If political will is absent, additional mistrust can accumulate, as was the case for some of the RWDBP participants. Participants and donors should therefore actively advocate for the exchange of data within the RWDBP, if cooperation is to be taken seriously. If, however, data exchange is considered politically unfeasible, the aims and limitations of the projects must be made transparent from the beginning, in order to prevent frustration and negative impacts on confidence-building.

On several occasions, RWDBP participants – mainly Palestinians – could not partake in project activities because travel permits were not issued. This not only prevented them from receiving training and experience, but also made them believe that they are not seen as equal and trusted partners. In order to circumvent such problems, meetings were often held outside the region, which not only resulted in increased project costs, but also represented a lost opportunity to publicly show that regional cooperation was possible.

ADDRESSING ASYMMETRIES

The water sector is marked by major asymmetries between Jordan, Israel and the Palestinian territories, such as power structure, access to resources, as well as financial and human capacity. Such inequalities need addressing in order to allow for communal cooperation and mutual benefits. One way to address asymmetric capacities is to allocate project resources in favour of the party with the greatest needs. Though a special component of the RWDBP focused on development of a Palestinian Water Data Unit, Palestinians expressed in interviews that they could not equally benefit from RWDBP activities.

Capacity development and technology transfer can play a major role in overcoming asymmetries. EXACT's plan to increase the RWDBP's focus on training in the coming years is therefore a step in the right direction. Such initiatives, however, can only be effective if the acquired knowledge can actually be applied. The PWA has limited monitoring and managing power. Therefore, much of the capacity that has been developed is lost over time. In order to be effective, capacity-building must be complemented or coordinated with initiatives advocating for empowerment of the parties.

IDENTIFYING SHARED INTERESTS AND WIN-WIN OPPORTUNITIES

The RWDBP shows that water professionals from Jordan, Israel and the Palestinian territories acknowledge the need for collaboration to solve the water problems. Due to different needs and capabilities among the three parties, however, identifying topics of common interest poses a major challenge. Instead, it could make sense to have different focus in efforts with the different parties, while ensuring that the issues tackled are linked to each other. This could allow for win-win situations with mutual gains from collaboration, and thus more incentive for cooperation. In order to ensure that projects still promote building working relationships and confidence between water professionals, exchange and communication need to be ensured and appropriate channels identified.

⁸⁸ Personal interviews held with PWA staff (Ramallah, July 2008).

⁸⁹ A.T. Wolf et al. (2005). Op. cit.

PROMOTING INDIVIDUAL CHANGE AND RELATIONSHIP-BUILDING AT AN OPERATIONAL LEVEL

According to interviews, the only lasting working relationships of the RWDBP are those within the EXACT committee.⁹⁰ On the operational level, contacts have, in most cases, been restricted to the duration of a project, and even then cross-border communication is limited, as little collaborative work on joint tasks exists. Professionals involved in RWDBP activities expressed in interviews that they felt motivated by the fact that the project provided cross-border cooperation.⁹¹ This motivation level and the opportunity for peacebuilding should be capitalised upon and additional attention placed on establishing relationships on the operational level, such as through developing collaborative tasks that can help build confidence between participants.

PROMOTING SPILLOVER

The ultimate goal of the Multilateral Working Groups and their projects, such as the RWDBP, was to enhance the peace process. While limitations will always exist due to the political conditions in the region, actors should not lose sight of the ultimate goal. EXACT established a mechanism for continuous communication between the three water agencies, which has proven successful, as it has met regularly for the past 13 years – even during the second Intifada (2000–2005). However, cooperation in water management seems to have improved little. For example, cooperation in the Israeli-Palestinian Joint Water Committee is ineffective⁹² and the Israeli-Jordanian committee has not managed to resolve the ambiguities of the Peace Treaty.⁹³ EXACT should therefore identify opportunities to cultivate outreach activities at higher political levels.

Moreover, the lack of visibility of RWDBP efforts in the public realm is a deterrent to public buy-in. Some might argue that excluding the media and setting political issues aside at the beginning can help initiate cooperation and reduce the risk of spoilers threatening the programme's mission. Once deemed successful, however, cooperative behaviour should be promoted to decision-makers and the public. The aim of peacebuilding initiatives should be to reach out towards those who are undecided or oppose peacebuilding, which inevitably involves confronting internal opposition. Furthermore, transfer of the model to sectors other than water could be explored or activities coordinated with existing initiatives in other sectors in order to increase peacebuilding effects.

90 Personal interviews with consultants and academics involved in EXACT projects (Tel Aviv, Jerusalem, and Amman, July 2008) as well as PWA staff (Ramallah, July 2008).

91 Personal interviews with consultants and academics involved in EXACT projects (Tel Aviv, Jerusalem, and Amman, July 2008),

92 M. Zeitoun (2008). Op. cit.; Selby (2003). Op. cit.

93 I. Fischhendler (2008b). 'When ambiguity in treaty design becomes destructive: A study of transboundary water', *Global Environmental Politics*, Vol. 8, No. 1, pp.111–136.

THE GOOD WATER NEIGHBORS PROJECT

The GWN project was initiated in 2001 by FoEME. Its two primary goals are:

1. To advance cross-border cooperation by focusing attention on shared water concerns and the need to protect shared water resources; and
2. To foster peace and cooperation through long-term trust-building based on the shared interests of neighbouring communities.⁹⁴

From 2001 to 2005, 11 Israeli, Palestinian and Jordanian communities were selected to participate in the first phase of the project. In its second phase (2005–2008), the project was expanded to include 17 communities. Each community is partnered with a neighbouring community on the other side of the border/political divide with which it shares a common water source. GWN works at the local level with community members through education and awareness activities on the regional water situation, by implementing ecological projects. Through dialogue and cooperative ventures across borders, GWN works to encourage sustainable water management at the regional level. Programme participants include youth, adults, environmental professionals and municipal leaders.

Based on GWN publications and interviews with FoEME staff, GWN's theory of change towards peace could be outlined as follows:

- Hiring local staff and implementing projects on the ground in the communities creates trust between the community and the FoEME country staff and office.
- Educating people on the interdependence of environmental issues and the fact that solutions to environmental problems often concern neighbouring communities, will increase people's willingness to cooperate.
- Providing people from all sides with the opportunity to meet face-to-face, in order to discuss and work on joint water problems, aims to change peoples' attitude towards their perceived enemy.
- Partnering the communities around a shared ecosystem helps create or reinforce a sense of good neighbours and promotes a joint vision for the shared ecosystem and a peaceful future.
- Creating a local constituency with residents that seek environmental solutions and recognise the need for cross-border cooperation, helps create political will with the municipal leadership in order to implement joint solutions.
- Once communities – residents and mayors – see the potential benefits for cooperation on environment and water issues they will be open to cooperation on a much broader scale.
- FoEME's advocacy work, comprising of research, educating decision-makers and using the media as a means of creating political pressure, will complement the work in the communities.

ACTIVITIES IN THE LOWER JORDAN VALLEY

FoEME have developed a multi-level approach in their community work, targeting youth, adults and mayors. The community work is implemented by local field staff and based on an action plan suggested by FoEME. Field staff are chosen from the community by the national FoEME coordinator according to the following criteria: ability to

⁹⁴ Friends of the Earth Middle East (2005). *Good water neighbours: A model for community development programs in regions of conflict - Developing cross-border community partnerships to overcome conflict and advance human security*. Amman, Bethlehem and Tel Aviv: EcoPeace/Friends of the Earth Middle East. Available at <http://www.foeme.org/publications.php?ind=19>.

work with the community; position and acceptance in the community; and capability to develop relations with the local authority.⁹⁵ Though most activities are implemented similarly in all participating communities, each area has a particular focus depending on local conditions and the main shared water source. FoEME's advocacy work on environmental justice issues with national governments complements GWN work at the community level.

This case study focuses on four GWN communities located in the northern region of the lower Jordan Valley, two of which are located on both the Israeli and Jordanian side of the river: Tabkat Fahal and Muaz bin Jabal in Jordan, as well as the Jordan Valley Regional Council and Beit Shean in Israel.⁹⁶ While Tabkat Fahal and Beit Shean have already been involved in the first phase of the GWN project, the other two communities joined in 2005. FoEME's overall vision in this area is the rehabilitation of the Jordan River.

As an important entry point for community work, FoEME sees the implementation of projects on the ground as a way of generating support among the community and serving as an example for wise water use. Therefore, in each community, a rainwater harvesting system was built in a school and an ecological garden was planted using local plants that grow in the dry climate.

A major focus in all four communities is working with the youth. The main youth activities include education on water issues in their own and neighbouring communities through lectures and field trips. Student groups called 'Water Trustees', are set up with new participants each year. They work closely with field staff on GWN activities, such as the building of ecological gardens and rainwater harvesting systems. Furthermore, they carry out water consumption surveys, and manage river clean-up and awareness campaigns in their communities. In the current phase, adults were involved in a series of workshops, focusing on environmental problems and discussing potential solutions for priority problems. These workshops have been facilitated by a local planner with the results published in a report.⁹⁷ Moreover, residents and representatives of the municipalities and local tourism businesses have been involved in preparing 'Neighbour Paths', trails that shows the natural and cultural heritage of each one of the GWN communities. The paths aim to promote rural and eco-tourism as a means of diversifying incomes, as well as raising public awareness about their shared environment and water concerns. The third target group within the communities are the local mayors. Through the local field staff and support of the local constituency, GWN aims to ensure the mayors' support for the project and regional cooperation on water/environmental issues.

Building on activities within the communities, GWN organises regional meetings in which participants from several or all GWN communities take part. Youth, adults and mayors from the four Lower Jordan Valley communities participated in the following regional activities:

- Joint ceremony in which Israeli, Palestinian and Jordanian children presented petitions calling on their respective authorities to promote the treatment of sewage impacting their communities;
- Summer camps where children discussed joint environmental problems, carried out joint clean-up efforts or gained skills that can later be applied in the GWN community work;
- Events of biannual common awareness campaigns that dealt with the shared ecosystem;
- An annual GWN conference that brought together mayors and residents from all 17 GWN communities on topics ranging from low-cost water-saving technologies and potential methods of cooperation, to the Red Sea-Dead Sea conveyor. These conferences were often flanked by public launch events for the main GWN publications and initiatives with participation from representatives of funding agencies and national ministries;
- Tours of the neighbour path of partnering communities; and
- Farmers' workshops on water saving and organic agriculture.

95 N. Harari (2007). *Environmental peacebuilding in the Middle East – Analysis of different efforts to foster peace in the region through environmental cooperation*. Diploma Thesis. Berne/Switzerland: Center for Development and Environment, University of Berne.

96 Due to time constraints, not all GWN communities could be included in the field research. Those partnering Israeli and Jordanian communities have been selected due to their involvement in the Peace Park project that is described later in this study. To complement the interviews and information gathered, the Palestinian GWN community of Aujja was also visited during field research.

97 Friends of the Earth Middle East (2007). *Good water neighbors: Identifying common environmental problems and shared solutions*. Amman, Bethlehem and Tel Aviv: EcoPeace/Friends of the Earth Middle East. Available at http://www.foeme.org/index_images/dinamicas/publications/publ69_1.pdf.

Following the regional GWN conference in March 2005, mayors from the Jordan Valley communities stayed longer to discuss cooperative efforts to rehabilitate the Jordan River, in order to improve the livelihoods of local residents. A follow-up meeting discussed potentials of eco-tourism and the importance of the historical and cultural assets of the area, as well as a five-day tour of the Lower Jordan Valley with Israeli, Palestinian and Jordanian mayors and municipal representatives. Two meetings between the mayors of Beit Shean and Tabkat Fahal led to the signing of a Memorandum of Understanding, in which the mayors committed to 'the rehabilitation of the Ziglab-Harod streams as a cooperative effort and as a centerpiece of peacebuilding activities between the neighbouring communities'.⁹⁸

Peace Park

The idea to establish a transboundary peace park in the northern part of the Lower Jordan Valley developed from the GWN project and FoEME's general advocacy work to rehabilitate the Jordan River. The final park area is planned to combine two adjacent areas: Al Bakoora/Naharayim, at the confluence of the Jordan and Yarmouk Rivers, and the Jeser Al Majama/Gesher site, known as the historical crossing point of the Jordan River Valley. At Gesher, bridges from Roman, Ottoman and British Mandate times still span the Jordan River. Today, the Lower Jordan River is a closed military zone. Guests of the Gesher tourism site in Israel, however, are allowed to walk down to the river if accompanied by Gesher staff. A special agreement also exists at the Naharayim site. In 1927, after an agreement between the Palestine Electric Company and the Jordanian king, a hydroelectric power plant was built at the two rivers' confluence. The canal diverting water to the plant created a man-made island on the eastern bank of the Jordan River. In 1994, with the signing of the Peace Treaty by Jordan and Israel, the island was returned to Jordan, but was leased with special usage and crossing status to Israeli and international tourists – and has since been called the "Peace Island". A tour is offered from the Israeli entrance at Naharayim, where one can cross to the island, catch a glimpse of the shallow river beneath and see the remnants of the power station. On the Jordanian side, access to the proposed Peace Park area is currently possible only with special military permission.

The aim of the project is to establish a natural habitat for different native animals and plants, while attracting migrating birds, thus creating a unique eco-tourist attraction for travellers in Jordan and Israel. Nature trails to the cultural heritage sites associated with the bridges will be constructed. It is proposed that the park be developed in stages with phase 1 of the park occurring wholly in Jordan. The mayors of the Jordan and Beit Shean Valleys Regional Councils, as well as the mayor of Muaz Bin Jabal municipality, declared their intention to support the creation of a cross-border park in a Memorandum of Understanding in January 2007. A study to explore the technical, organisational and economic feasibility of the project was launched in March 2008.

It is still too early to estimate the impact of FoEME's Lower Jordan River Peace Park initiative, as the project is still in its beginning phases. The existing challenges with regard to ensuring security requirements and providing water for the planned wetland, make the park a very ambitious undertaking. The peacebuilding effectiveness will largely depend on whether the park responds to the community's basic needs and manages to balance competing interests. To ensure this, the project needs to provide for systematic participation of all stakeholders in further project development.

PEACEBUILDING IMPACTS

The GWN project successfully recruited enthusiastic field staff that are well connected to their communities, thereby empowering them to implement environmental community projects and raise awareness on water issues. Based on interviews, the GWN cross-border meetings have contributed to reducing fears and stereotypes of the "other". After the field staff carefully prepared the Water Trustees for the cross-border encounter, youths were reported to have had no problems of mixing with children from the "other side" in order to work on a given task. Adults appreciated the opportunities provided for mutual learning on water-saving techniques and learning different perspectives on environmental issues in the meetings.

⁹⁸ Cited from the Memorandum of Understanding, Protection and Rehabilitation of the Ziglab-Harod Streams, Pella, Jordan – Beit Shean, Israel. Available at http://www.foeme.org/docs/MoU_Beit_Shean_Pella.jpg

Mayors, especially from Jordan and the Palestinian territories, appreciated the work that was accomplished for the communities, such as the ecological gardens and the rain water harvesting systems for schools. They also embraced the opportunity to raise awareness on the water situation in the Palestinian territories. Israeli mayors focussed on FoEME's work to facilitate contact between the mayors, which could open the door for further cooperation. FoEME managed to identify initiatives that Jordanian and Israeli mayors agree could benefit all, such as the restoration of the Jordan River and the Peace Park. The mayors, in two Memorandums of Understandings, committed themselves to promoting these initiatives and accomplished this at national and international events.

In other GWN communities, participants have been reported to advocate for their neighbouring community on other issues. Such activities did often take place in cooperation with other civil society initiatives. For example, residents from the Israeli community of Tzur Hadassah organised a petition drive opposing the building of the separation barrier between their own and the Palestinian GWN partner community of Wadi Fukin. As of yet, no strong relationships have been established between the neighbouring communities in the northern part of the Lower Jordan Valley. Field staff members and mayors rarely communicate directly with each other, but do so mainly through the FoEME head offices because, among other things, language barriers still exist.⁹⁹

The work of GWN is also curbed by some frustrations, even if their reasons lie beyond FoEME's power. Participants from the Jordanian side, for instance, mentioned that the experience of travelling across the border made them feel uncomfortable and unwelcome, as they had to endure long visa procedures. In one case, an elected Jordanian mayor was not given an entry visa to Spain for a joint presentation on the GWN project with the mayor from Israel. Further frustrations come from the lack of improvement of the water situation. Some Jordanian representatives expressed their frustration about the fact that they could not see any improvement in the Jordan water quality, and therefore questioned whether their Israeli counterparts were effectively working towards the same goal.

PEACEBUILDING CHALLENGES AND OPPORTUNITIES

IDENTIFYING SHARED INTERESTS AND ALIGNING DIFFERENT NEEDS

The GWN project aims to build on existing shared water sources and identify common problems in order to move from mere dialogue to joint action. It is important to identify a topic of authentic interest for all participants, as experience has shown that it can be extremely hard to mobilise people for a long-term collaborative effort when they are concerned about basic needs.¹⁰⁰ When asked for their needs related to environmental peacebuilding efforts, participants and staff of the GWN in Israel, Jordan and the Palestinian territories indicated very different priorities, which included the following: the Jordanians focused on economic development and free movement of people and goods; Israel concentrated on reconciliation and improved environmental management; and the Palestinians stressed the importance of access to water and land rights, as well as the ending of occupation. Considering the diverse needs, identifying a topic that equally benefits all, or even two neighbouring communities, poses a major challenge. Here, the idea of a Peace Park between the Israeli and Jordanian communities in the Lower Jordan Valley provides some advantage, as it links issues of economic development and environmental conservation. Major importance needs to be given to ensure that projects provide shared benefits and respond to the different needs of communities. Moreover, managing high expectations presents a major challenge. The goals and possibilities of initiatives need to be transparent and clear in order to prevent frustrations of communities that desire better access to water and improved wastewater treatment.

INCREASING OWNERSHIP

Peace initiatives can increase their effectiveness if, as a result, 'people undertake independent initiatives, working in creative ways within their own communities to cross lines of division or to influence outside constituencies'.¹⁰¹ A major challenge in this regard is to empower participants and to encourage them to become actors and

99 Personal interviews with GWN field staff and mayors in Tabkat Fahal and Muaz bin Jabal, Jordan, as well as the Jordan Valley Regional Council and Beit Shean, Israel (July 2008).

100 T. Paffenholz and C. Spurk (2006). *Civil society, civic engagement and peacebuilding*. Social Development Papers: Conflict Prevention and Reconstruction, Paper No. 36. Available at http://siteresources.worldbank.org/INTCP/Resourses/WP36_web.pdf.

101 M.B. Anderson and L. Olson (2003). Op. cit.

activists, undertaking personal efforts to bring about peace. With respect to environmental peacebuilding, this empowerment should not only cover aspects of environmental knowledge, but also ownership of the process of dialogue and cooperation. Experience shows that the more responsibility participants acquire in the dialogue process, the more likely they are to follow through afterwards.¹⁰² According to interviews with GWN field staff, many of the activities are carried out according to a work plan that is proposed by the FoEME. Similar activities are put forward in all communities. Ownership could be increased, for example by involving communities and field staff in identifying and designing activities. This would also support the effect that activities respond to needs. Funding requirements of donor organisations can pose a major challenge here if they require pre-set action plans and only allow limited room for flexibility.

ESTABLISHING LASTING RELATIONSHIPS

Participants in GWN's cross-border meetings report positive changes in their attitude towards the other side, loss of fear and discovery of commonalities. With regard to peacebuilding, this personal change offers opportunities to transform relationships between adversaries, which can translate into societal change. Building trust between adverse societies and establishing sustainable relationships requires years of work. Only lasting working relationships will allow participants to reciprocally observe changes in the beliefs, attitudes and behavioural intention of the "other side" to work for the joint vision – a pre-condition for the establishment of mutual trust.¹⁰³ However, most of the cross-border events involving youth and adults are one-time events with limited communication between participants before or after the meeting. Continuous participation with the same participants, recurring meetings and maintained communication would bring about positive impacts at the individual level that do not remain a one-time experience, but transform attitudes and behaviours that can be channelled into societal change. Language barriers, travel restrictions and limited budgets constrain the establishment of sustained relationships and maintaining communication. The internet provides an economical and efficient way to communicate and maintain relationships, but it is not available to many of the GWN participants. In order to build on the existing achievements within the GWN, the use of capacities and means should be intensified within the existing GWN communities for now, rather than including more communities in the programme.

MAINSTREAMING CONFIDENCE-BUILDING AND PEACEBUILDING

Cross-border collaboration needs careful introduction, especially in areas where deep hostility exists between groups and where little contact has previously existed. Therefore, initial activities are vital to focus on gaining trust from the communities and preparing them for dialogue. In addition to technical activities, such as building rain water harvesting systems or constructing wetlands, more importance should be given to the psychological aspects and confidence building. Moreover, if the aim is to contribute to peacebuilding, this phase should not take too long, and the goal of promoting dialogue and building of relationships should not get lost in environmental activism.

PROMOTING SPILLOVER AND SOCIETAL CHANGES

Individual changes of perception and personal relationships do not add up to societal change. For this to happen, change at the individual level needs to be sustained over time, in order to have an impact on the individuals' behaviour and to gradually extend to other people. Sustained changes that have a potential to promote change on the socio-political level can become visible, especially in the actions of participants that show increased responsiveness to the concerns of the other side, or in the large number of people voicing demands for peace.¹⁰⁴ In some of the GWN communities, such actions have happened (see above) and were supported through joining forces with other peace initiatives. The potentials of cooperation with other initiatives should be made use of as much as possible. Furthermore, fostering lasting relations and promoting participants' ownership of the process, as mentioned above, can contribute to people taking action.

A shared interest, supported through collaboration during the environmental projects, offers opportunities to demonstrate the humanity of the "other" and increase project participants' awareness of the other's needs and concerns (such as limited access to freshwater and sanitation). Transformation on the socio-political level not only requires reaching a critical mass, but also key decision-makers. If participants in environmental

¹⁰² Ibid.

¹⁰³ D. Bar-Tal and Y. Teichman (2005). *Stereotypes and prejudice in conflict. Representations of Arabs in Israeli Jewish Society*. Cambridge: University Press.

¹⁰⁴ M.B. Anderson and L. Olson (2003). *Op. cit.*

projects are opinion leaders, their personal transformation can have an impact on their community/society. The GWN approach to work with mayors offers a lot of opportunity in this regard. Mayors represent the mid-level authority and therefore play an important role in promoting peace, as they are connected to both the higher political levels and the local constituency.¹⁰⁵ Thus, their clout should be used as much as possible by involving them actively in project development and encouraging them to take actions to affect the larger society and higher political levels.

¹⁰⁵ J.P. Lederach (1997). *Building peace: Sustainable reconciliation in divided societies*. Herndon, VA: USIP Press.

CONCLUSIONS

DESIGN AND IMPLEMENTATION OF COOPERATIVE PROCESSES

The two initiatives this study focused on take very different approaches to promoting regional water cooperation aimed at contributing to peacebuilding. Though the two initiatives take different approaches, commonalities exist in the challenges both have to face. In addition, the working conditions in ongoing conflicts complicate their activities. The common challenges of the two initiatives with regard to peacebuilding include the following:

- **Asymmetries:** The Jordanian, Palestinian and Israeli societies face very different lifestyles and levels of economic development. Asymmetrical power relations among the three parties determine relationships at the political level. Different levels of capacity in human and financial resources pose challenges to cooperative efforts. At the level of project implementation, the asymmetries are evident in the logistics, such as different obstacles for travelling to joint meetings.
- **Creating relationships and promoting ownership:** Both efforts have managed to establish good working relations at the highest level of their respective initiatives (i.e. within EXACT and among the three offices of FoEME). At the operational level, however, cross-border working relations remain limited and peacebuilding potentials are therefore lost. Effectiveness could be increased by strengthening ownership of the processes and the projects to be worked on.
- **Promoting spillover:** Spillover of positive peacebuilding effects can happen vertically, towards higher political levels of cooperation, or horizontally towards other fields of cooperation. Achieving this transfer from individual/personal changes to socio-political changes is one of the major challenges in peacebuilding.¹⁰⁶ The GWN project has had some successes in promoting horizontal spillover effects (e.g. with communities involved in activities opposing the separation barrier). On the vertical level, FoEME's advocacy efforts towards the national governments and authorities aim at promoting spillover. Still, there is room for improvement at the community level and the peacebuilding goal should not get overwhelmed by environmental concerns. For the RWDBP, spillover was originally intended to take place from the (more technical) multilateral to the political bilateral track of the peace process. Since these tracks stalled, the RWDBP needs to identify other channels, otherwise much of the peacebuilding potential of water cooperation will be lost.
- **Different expectations:** The asymmetries described above, as well as the parties' different priorities and needs, create diverging expectations and perceptions with regard to cooperation. Managing different expectations poses a major challenge. The goals and possibilities of initiatives need to be transparent and clear in order to prevent frustrations on all sides. Otherwise, mounting frustrations can lead to failure of peacebuilding efforts.

Many of the challenges faced by the GWN and RWDBP initiatives parallel challenges faced by many other peacebuilding efforts. Initiatives promoting environmental cooperation are often led by environmental organisations. The opportunities of mutual learning should be fully exploited through active cooperation and coordination with other peace organisations and networks.

¹⁰⁶ Compare M.B. Anderson and L. Olson (2003). Op. cit.

WATER FOR PEACEBUILDING?

Both regional water cooperation efforts discussed here show that water is an issue that communities and experts agree cannot be solved unilaterally. Little facilitation/mediation was required at workshops and it was stated that technical/environmental people were happy to work together. Spoilers did not manage to gain momentum, as the issue of water seems important enough to justify cooperation.

On the other hand, water in this region is characterised by some aspects that complicate regional cooperation, which include the following:

Water inequalities: Israelis have access to advanced water technologies and supply systems, and the society puts more focus on protection of the water environment, as compared to their neighbours. Jordanians still have underdeveloped wastewater treatment systems and view water as key to their economic development. For the Palestinians, self determination over their land is also linked to water rights and the actual water situation poses threats to human health. These diverging interests make it difficult to identify projects that can be equally beneficial for all three parties.

Water is a political issue: The above-mentioned inequalities are connected to the fact that water has become a very political issue. Any project working on water is difficult to separate from questions of water rights and justice. The fact that the Palestinians do not hold power over water resources in their territory makes cooperation in an equal partnership near impossible. The importance of water for the ideology of Zionism and Arab nationalism further leads to securitisation and politicisation on all sides.

Water management is centralised: Water resources management is highly centralised in Jordan, Israel and in the Palestinian territories. Therefore, limited room exists for sub-national approaches, which are often more closely linked to the population's perspectives and needs.

While water can serve as a starting point for dialogue, this report shows that peacebuilding efforts soon hit a road block when it comes to actual cooperation in water resources management. In the specific context of the Middle East, water does not represent a topic that is less contentious and around which cooperation is relatively easy. This is especially true for freshwater issues. However, wastewater, in the current situation, provides more options for cooperation, since it does not directly affect the critical question of water rights. Other environmental issues seem to provide more potential for initiating peacebuilding processes in this region, given that their aim is not only conservation, but also economic and health benefits. FoEME's Peace Park initiative has already made a step in this direction. While rehabilitation of the Jordan River is one of the overarching goals of the Peace Park, cooperative efforts focus less on water and more on tourism, economic development and nature conservation. Linking water with other such issues represents a promising approach to providing mutual benefits and thus incentive for cooperation.

Still, cooperation in water resources management remains an important goal to pursue, as it is the only way to sustainably manage the scarce water resources in the region. Cooperation is important in order to provide water for health security and livelihood reasons, and because water disputes fuel existing conflicts. Initiatives that aim at fostering cooperation for the sake of more sustainable water management will have to take a conflict-sensitive approach and ensure that they do no harm with regard to the existing conflict context. Developing capacities of the weaker parties should be a major focus. Given that water issues are highly politicised, initiatives should consider working on this individually, in order to prepare parties for cooperation at a later stage. Such initiatives will only be effective, though, if they are complemented by efforts aimed at empowering all parties and advocating for water rights.

In some cases, existing scarcity and increasing water pollution indicates that the parties need to act now – even if cooperation in water resources management has not fully developed and critical questions about water rights remain to be settled. In order to solve the existing problems now, practical joint water management solutions should be found to protect human and environmental health, despite the larger political concerns. Concern that such solutions could affect future negotiations on water allocations and land rights could, for instance, be met by laying down formal agreements that stipulate that these will remain unaffected.

RECOMMENDATIONS FOR DONORS AND THIRD PARTIES

Building on the analysis of the two cases selected for this study, as well as on other experience in water cooperation, the following general recommendations for funding agencies and third parties involved in regional water cooperation initiatives in the Middle East are made:

- **Need for clear theories of change and spillover:** This report shows the opportunities that water can hold for peacebuilding processes. It also clearly shows, however, that regional water cooperation does not *per se* contribute to conflict prevention and peace. Donors should therefore require that water cooperation initiatives claiming to promote peace spell out *how* they aim to contribute to peacebuilding. This includes articulating a clear theory of change and effective mechanisms promoting spillover to a political level, as well as procedures for monitoring impacts. Spillover effects can also be promoted through coordinating donor activities aimed at different actors (e.g. government, civil society).
- **Address existing asymmetries:** Any initiative that aims to promote the links between regional water cooperation and peacebuilding in the Middle East must take account of existing asymmetries with regard to human and financial capacities, as well as political power. These asymmetries need to be addressed in the design and implementation of initiatives in order to ensure that cooperation provides at least mutual – if not equal benefits – and to prevent asymmetric power relations favouring one party. Utmost care needs to be taken that the stronger party does not dominate the cooperative process and that project goals respond to the needs of weaker parties as well.
- **Promote regional water cooperation towards peacebuilding and human security:** As this report shows, a lack of political cooperation can impede technical solutions to existing water problems and can limit the effectiveness of water cooperation with regard to sustainable water management. A lack of political will for cooperation can also limit the impact of civil-society initiatives. Donors should therefore also take an active role in promoting regional water cooperation with the national governments and authorities – considering the mutual benefits it offers for economic development, human security and peace in the region.
- **Provide ongoing funding, even when conflict escalates:** Spillover effects and the structural changes that are necessary to contribute to peace take a long time to manifest. Short funding timeframes of one or two years prevent the peacebuilding effects of water cooperation initiatives from fully developing, thus undermining the success of such projects. This also implies that donors should not require new projects to be developed for their programmes, but rather build on and intensify efforts in existing initiatives. Moreover, both initiatives analysed in this report, as well as other examples of water cooperation, show that collaboration and communication channels could be maintained even when the political peace process collapsed with the outbreak of the second Intifada. While this alone does not constitute an objective, it shows the importance of maintaining funding, even in times when the conflict escalates. Only this will allow initiatives to continue their ever more important peacebuilding work.
- **Do not interpret the need to remain impartial between the parties, as the need to stay silent** on abuses and injustices parties commit. If opportunities to express concerns about inequalities and human suffering are not offered in cooperative processes, technical discussions on environmental cooperation can easily become infected by political issues.

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ANNEX

SELECTED WATER COOPERATION INITIATIVES

Name	Environmental management and planning as a tool for promoting sustainable coexistence between Israelis and Palestinians
Website	http://taeqced.org/english.html
Coordinators (country)	Towns Association for Environment Quality of Agan Beit Natufa, TAEQ (Israel) Center for Environmental Diplomacy, CED (Palestinian territories)
Duration	3 years (2007–2009)
Funding	EU Partnership for Peace programme
Area of work	Capacity-building, awareness
Level of involvement	Local experts, youth
Participants' countries	Palestinian territories, Israel
Short description	The aim of the project is to promote sustainable dialogue and cooperation between Palestinian and Israelis concerning issues of environmental protection, management and planning. Common Palestinian-Israeli Working Groups (WGs) will be organised and activated. The WGs will meet in the Regional Center for Environmental Education and Research (RCEER) of the TAEQ, Sakhnin-Israel for biannual workshops and each of the participants will execute an Instructed Personal Project (IPP) that will be conducted with the interactive participation of all the WG colleagues and experienced instructors.

Name	GLOWA Jordan River
Website	http://www.glowa-jordan-river.de/
Coordinators (country)	University of Tübingen, Department of Plant Ecology (Germany)
Duration	First phase: 2001–2005 Second phase: since September 2005 - still ongoing
Funding	Federal Ministry for Education and Research, Germany (BMBF)
Area of work	Research
Level of involvement	Research institutions, universities
Participants' countries	Palestinian territories, Israel, Jordan, Germany, Sweden
Short description	GLOWA Jordan River is an interdisciplinary project addressing the vulnerability of water resources in the Jordan River Basin under global change. An integrated approach provides scientific support for sustainable and cooperative management practices. The project addresses conventional as well as non-conventional methods of water management and their ecological and socio-economic implications. Results from GLOWA Jordan River should be transferable to other arid and Mediterranean regions with transboundary water resources. Goal The GLOWA Jordan River project provides scientific support for improved water management in a highly water-stressed region. Its mandate is based on the general goals of the GLOWA programme of the BMBF which are the provision of 'simulation tools and instruments to develop and realise strategies for sustainable water management'.

Name	Sustainable Management of Available Water Resources with Innovative Technologies (SMART)
Website	http://www.iwrm-smart.org/
Coordinators (country)	University of Karlsruhe (Germany)
Duration	From September 2006 - ongoing
Funding	Federal Ministry for Education and Research, Germany (BMBF)
Area of work	Research (including some training and a demonstration plant)
Level of involvement	Universities, research institutions (also one water utility and one Ministry)
Participants' countries	Palestinian territories, Jordan, Israel, Germany
Short description	The overall aim of this research project is the development of a transferable approach for an integrated water resources management (IWRM) in semi-arid regions with water shortage. On the basis of scientific, engineering and socio-economic analyses the IWRM shall contribute to a more efficient utilisation of scarce water resources and the implementation of more efficient solution strategies and management tools. A water resources model along with the adaptation of existing and development of new technical solutions will contribute to this. The IWRM shall initiate a self-supporting process in the area under investigation which will continue after the completion of the research project. The goal is a marked improvement of the water shortage situation which could result in an overall advancement of the region.

Name	'Water For Life' Conference in Antalya, Turkey
Website	http://www.ipcri.org/
Coordinators (country)	Israel/Palestine Center for research and Information (IPCRI)
Duration	10th-14th October 2004
Funding	International Water Resources Association (IWRA), United States Agency for International Development (USAID), UNESCO
Area of work	Conference
Level of involvement	Experts, water authorities
Participants' countries	Mainly Israel, Palestinian territories, others
Short description	<p>Conference Objectives</p> <ol style="list-style-type: none"> 1. To provide an ongoing forum for fruitful dialogue, development of mutual understanding and mutual respect between Israeli, Palestinian and other Middle Eastern and international water specialists. 2. To provide a follow-up some twelve years after the First Israeli-Palestinian International Academic Conference on Water held in Zurich, Switzerland on 10th-13th December 1992. 3. To hear up-to-date scientific and technical papers and reports on recent developments related to the water resources technology and management with particular reference to the Middle East with specific emphasis on Israeli and Palestinian issues. 4. To hold discussions, dialogues and workshops with the participation of both academic water specialists and representatives of the regional and international water authorities on specific issues dealing with improving cooperation on water resources development and of meeting the needs of the peoples of the region.

Name	Culture of Water Program
Website	http://www.peres-center.org/SectionProject.asp?cc=01090203
Coordinators (country)	Peres Center for Peace (Israel)
Duration	Started in 2002
Funding	
Area of work	Research, capacity-building, conference
Level of involvement	Universities and research institutes, farmers, communities
Participants' countries	Mainly Jordan, Israel, Palestinian territories, in addition international entities
Short description	<p>The 'Culture of Water' programme was launched in 2002 by the Peres Center. The overall objective is to investigate methods and share information regarding the most economic use of water within the Israeli, Jordanian and Palestinian agricultural sectors, thereby fostering regional cooperation.</p> <p>A Center of Excellence in Jordan was established by the Peres Center within the framework of this initiative and has mainly been focussed on advancing different methods of efficient water use in agriculture. Multiple groups comprised of Israelis, Jordanians, Palestinians, Iraqis, Japanese and others have visited and continue to visit the Center of Excellence in Jordan in order to learn about new water saving techniques. Additionally, a distance learning programme has been launched with modules in English and Arabic, serving the farming and rural communities of the Middle East.</p> <p>The 'Culture of Water' programme also included:</p> <ul style="list-style-type: none"> ▪ A Forum on Economic Cooperation between Jordan and Israel in July 2007 held in Wittenberg, Germany; ▪ A Workshop for Jordanian and Israeli professionals in March 2007 on Water Resources Management for Agricultural and Urban Use; and ▪ A conference for Jordanian, Israeli and Palestinian experts and decision-makers on water issues.

Name	'Water for Peace in the Middle East' research project
Website	http://www.peres-center.org/SectionProject.asp?cc=0109020301
Coordinators (country)	Peres Center for Peace (Israel, Palestinian territories)
Duration	Started in February 2007
Funding	Green Cross International and the French Ministry of Foreign Affairs
Area of work	Research, advocacy, conference
Level of involvement	Experts, senior policy- and decision-makers
Participants' countries	Israel, Palestinian territories
Short description	<p>In February 2007, the Peres Center launched a research project entitled 'Water for Peace in the Middle East, Defining Water Needs for Fully Exploited Resources: A Necessary Step for Israeli-Palestinian Reconciliation'. The study, which is being undertaken by Palestinian and Israeli researchers, seeks to define the water needs that should be considered in future Israeli-Palestinian negotiations. The study addresses basic domestic needs, as well as the need for social and economic development in the field of water. Within the framework of this initiative, in May 2008 a conference was held in which some 30 experts from Israel, the Palestinian territories, Europe and the US conducted a joint analysis of present water needs and availability in this region.</p>

Name	CollectiveWater - From conflict to collective action: Institutional change and management options to govern trans-boundary water courses
Website	http://collectivewater.umweltoekonomie.tu-berlin.de/collectivewater/index.html
Coordinators (country)	Technical University of Berlin, Department of Environmental Economics and Policy (Germany)
Duration	2005-2007, two years
Funding	Federal Ministry of Research and Education (BMBF)
Area of work	Research
Level of involvement	Universities, research institutes
Participants' countries	Palestinian territories, Israel, Germany
Short description	The project uses the Elbe River Basin and the Kidron Valley/Wadi Nar as case studies. In the Elbe River Basin, the project will study the effectiveness of existing trans-boundary water management institutions. In the Kidron Valley/Wadi Nar, where no transboundary river basin institutions exist, the project evaluated alternative institutional arrangements based on a cost-benefit and multi-criteria analysis of separate and collective waste water management options, and drawing upon European experiences as appropriate. Based on its findings, the project advised ongoing informal Israeli-Palestinian efforts to develop a Master Plan for the Kidron Valley/Wadi Nar.

Name	The Middle East Multilateral Working Group on Water Resources
Website	
Coordinators (country)	The US served as "gavel holder" and Japan and the EU served as co-organisers
Duration	1992-1996
Funding	Various
Area of work	Dialogue
Level of involvement	National authorities
Participants' countries	Israel, Jordan, Palestinian territories, in addition to parties from outside the region
Short description	<p>When Middle East peace talks with regional and outside parties opened in 1991, water was one of the five issues to be discussed in the multilateral talks. The intention of the multilateral talks was to work as a catalyst and to facilitate progress in the bilateral talks that Israel would conduct with each Arab delegation. The idea was that the multilateral working groups would provide forums for relatively free dialogue on the future of the region and, in the process, allow for personal ice-breaking and confidence-building to take place, thus helping to smooth the way for progress in the bilateral talks.</p> <p>From 1992, the Multilateral Working Group on Water Resources has been the venue by which problems of water supply, demand and institutions have been raised among three of the five parties to the bilateral peace negotiations: Israel, Jordan and the Palestinian territories, who participated in the Working Group; Lebanon and Syria did not.</p>

Name	The Middle East Desalination Research Center (MEDRC)
Website	http://www.medrc.org/
Coordinators (country)	Executive Council composed of one representative of each member country (Oman, US, Jordan, Israel, Japan, Netherlands, Palestinian Authority, South Korea, Qatar)
Duration	Established in 1996
Funding	Various
Area of work	Research and capacity-building
Level of involvement	Experts and students
Participants' countries	All countries of the Middle East and North Africa region
Short description	<p>The Multilateral Working Group on Water Resources established the Middle East Desalination Research Center (MEDRC) in 1996. The mission of MEDRC is to contribute to the achievement of peace and stability in the Middle East and North Africa by promoting and supporting the use of desalination to satisfy the needs of the people of this region for available, affordable, clean freshwater for human use and economic development. This is done through the advancement of desalination technology, education in the technology and training in its use, technology transfer, technical assistance and building cooperation between nations to form the joint projects and international relationships necessary to meet the needs for freshwater. The Peace Process to resolve the issues of Israel and the Palestinian National Authority included the establishment of MEDRC to assist in meeting the freshwater needs of the parties involved.</p> <p>Specific MEDRC accomplishments as of June 2008 include:</p> <ul style="list-style-type: none"> ▪ More than 200 global experts working with MEDRC in a voluntary capacity; ▪ Awarded grants for 64 multinational research projects valued at more than US\$10 million, involving 137 institutional research partners in 34 countries; ▪ Coordinated and sponsored more than 32 desalination training programmes in the Palestinian territories, Libya, Morocco, Algeria, Tunisia, Israel, Jordan, Egypt and members of the Arab Gulf Cooperation Council; ▪ Awarded MSc and PhD scholarships for qualified regional nationals to study at universities outside of the Middle East and North Africa region; and ▪ Published more than 300 research articles in academic and professional journals based on work performed in MEDRC sponsored research projects.

Name	Public Awareness and Water Conservation Project
Website	http://www.watercare.org/
Coordinators (country)	US Geological Survey (US)
Duration	1996-2005
Funding	US Department of State
Area of work	Awareness and education
Level of involvement	Youth
Participants' countries	Israel, Jordan, Palestinian territories
Short description	<p>The Multilateral Working Group on Water Resources established the Public Awareness and Water Conservation Project in 1996, which was managed by the US. The first activity completed by the regional participants was the design and preparation of a video aimed at youth that highlights the importance of water issues from a regional perspective. The second major activity, known as WaterCare, was the preparation of a student resource book, teacher's guide and complimentary webpage focused on water conservation issues that are regional in concept, scope and content. The materials were prepared jointly by educational writers from each of the regional participants and written for students between 12 and 15 years. Major topics addressed by the materials include water resources, water use, water pollution and life/health, water management for conservation and water care for the future, all from a regional perspective.</p> <p>The third major activity was the RainCatcher project. RainCatcher was a pilot project that provided students a chance to 'learn by doing'. It should increase awareness of rain harvesting as an important component in water conservation and offer a unique opportunity for regional collaboration on water conservation issues. Students from the three core parties helped design and monitor a rain harvesting system designed specifically for their school and participated in various related assignments and experiments.</p>

Name	Track II Palestinian-Israeli Water Rights Negotiations
Website	http://annapolis.quaker.org/events/palestinianisraeli.html
Coordinators (country)	Geneva Initiative (Palestinian and Israeli NGO) and Annapolis Friends Peace and Justice Center (Quaker group, US)
Duration	18th-21st August 2008
Funding	Donations
Area of work	Dialogue, advocacy
Level of involvement	Experts, government advisors
Participants' countries	Israel, Palestinian territories
Short description	<p>Palestinian and Israeli engineers, as well as representatives with close ties to the Israeli government and Palestinian National Authority, met for three days of intense discussions on the difficult water issues. Israeli and Palestinian teams had been formed in advance to develop a model agreement on water that was negotiated during the meeting with international assistance from advisors and mediators</p> <p>Geneva Initiative water experts will finalise the draft within the coming three months. The draft water agreement will then be offered to official government negotiators as a possible framework for water cooperation in the "final status agreement" that would bring peace to Israelis and Palestinians.</p>

Name	Red Sea-Dead Sea Water Conveyance Study Program
Website	http://go.worldbank.org/TDZM48OX00
Coordinators (country)	The World Bank
Duration	Two years beginning in September 2007
Funding	Multi-donor trust fund (France, Greece, Japan, the Netherlands, and US)
Area of work	Research (feasibility study)
Level of involvement	International consultants and national authorities
Participants' countries	Israel, Palestinian territories, Jordan, international consultants
Short description	<p>Israel, Jordan and the Palestinian Authority agreed to study the feasibility of transferring water from the Red Sea to the Dead Sea as a solution to stop the rapidly declining level of the Dead Sea. The parties share a vision that involves conveying water from the Red Sea to the Dead Sea to reverse environmental degradation and generate water and energy at affordable prices for the region. This vision represents a symbol of peace and cooperation in the Middle East. The Terms of Reference prepared by the beneficiary parties stipulates a comprehensive investigation of the environmental, economic, social and technical implications of this water conveyance concept. Furthermore, the study offers a major opportunity for those who live in the lower Jordan Valley to work together and strengthen relationships among neighbours, while addressing an environmental and water scarcity challenge of regional and global interest and significance. The beneficiary parties believe that the study process itself promises to contribute to further cooperation.</p> <p>The outcome of the US\$15.5 million Feasibility Study and Environmental and Social Assessment will serve as a tool for stakeholders to determine whether the construction of the Red Sea-Dead Sea Water Conveyance Project is feasible, taking into account all relevant aspects, including the technical, economic, financial, environmental and social factors.</p>

Name	Regional Water Banks Project (RWDBP)
Website	http://www.exact-me.org/
Coordinators (country)	US government agencies
Duration Budget	1995 - ongoing
Funding	Various, mainly the US, EU, Netherlands, France, Australia, Canada, Norway
Area of work	Research, capacity-building and data exchange
Level of involvement	Water agencies, experts
Participants' countries	Jordan, Israel, Palestinian territories
Short description	<p>The WDBP consists of a series of specific actions to be taken by the Israelis, Jordanians and Palestinians that are designed to foster the adoption of common, standardised data collection and storage techniques among the parties, improve the quality of the water resources data collected in the region and to improve communication among the scientific community in the region.</p> <p>The Executive Action Team (EXACT) consists of two members from each of the participating regional parties and representatives from active donor countries. EXACT meets twice a year to review progress on the 39 recommendations and Work Package A that were identified and agreed upon by the Core Parties in the original project implementation plan and to consider possible additional activities of interest to the core parties.</p>

Name	Good Water Neighbors (GWN)
Website	http://www.foeme.org/projects.php?ind=32
Coordinators (country)	EcoPeace/Friends of the Earth Middle East (FoEME) (Palestinian territories, Israel and Jordan)
Duration	2001-2005 (Phase I), 2005-2008 (Phase II)
Funding	EU, USAID, Richard and Rhoda Goldman Fund and the British Government's Global Opportunity Fund
Area of work	Education, awareness and dialogue
Level of involvement	Youth, adults, mayors
Participants' countries	Israel, Jordan, Palestinian territories
Short description	<p>The GWN project was established by EcoPeace/Friends of the Earth Middle East (FoEME) in 2001 to raise awareness of the shared water problems of Palestinians, Jordanians and Israelis. Communities partnered with a neighbouring community on the other side of the border/political divide to work on common water issues. At the local level, GWN works with community members to improve their water situation through education and awareness activities, and urban development projects. On the regional level, GWN works to encourage sustainable water management through information sharing, dialogue and cooperative ventures. Basically the project strives for achieving two main goals:</p> <ul style="list-style-type: none"> ▪ Change of perceptions towards the environment and at a later stage towards cooperation and peace; and ▪ Change in behaviour towards the aforementioned issues, which will assure the project's sustainability and endurance.

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