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# PEACE AND POLLUTION: AN EXAMINATION OF PALESTINIAN- ISRAELI TRANS-BOUNDARY HAZARDOUS WASTE MANAGEMENT 20 YEARS AFTER THE OSLO PEACE ACCORDS

ILAN ALLESON, JAMIE LEVIN, SHMUEL BRENNER AND  
MOHAMMAD SAID AL HMAIDI

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## Abstract

*As part of the Oslo Accords, Israel and the Palestinian Authority agreed to jointly manage issues of environmental concern according to internationally recognised standards. The purpose of this paper is to qualitatively evaluate the outcomes of the Palestinian–Israeli Oslo environmental peace agreements regarding trans-boundary hazardous waste management. Hazardous waste is an area of particular importance given the potential for inefficient management to impact on public health and shared ecological resources. Although the environmental negotiations that took place within the framework of the Oslo Accords can be seen as a significant milestone for environmental cooperation, many objectives were never achieved. Ultimately, both parties were left with suboptimal trans-boundary management, in practice, because broader political disputes derailed cooperation in many technical spheres. This outcome can be attributed to four main factors: Israeli security concerns, territorial disputes, logistical ambiguities and Palestinian institutional constraints. The outcomes of the environmental agreements challenge neo-functional approaches to peacebuilding at the inter-state level. Given the risks environmental concerns pose to both sides, new models are needed that disentangle the management of immediately shared environmental challenges from the ongoing conflict.*

**Keywords:** trans-boundary environmental management, conflict areas, hazardous waste, environmental security, Oslo peace process

## Introduction

The environmental negotiations that took place between Israel and the Palestinian Authority (PA) within the framework of the Oslo peace process were a significant milestone for regional cooperation and public health, particularly in light of the growing body of work suggesting that environmental degradation can exacerbate conflict (Homer-Dixon 1991; 1999; Brock 1991; Holst 1989; Varisco 2010). The inclusion of an environmental component in the negotiation process raised previously neglected matters to a prominent level in both the Israeli and Palestinian public arenas, providing both stimulus and legitimacy for governmental and civic collaboration on shared environmental and health concerns (e.g. Alleson and Schoenfeld 2007; Smith and Abu

Diab 1998; Tal 2002; Zohar et al. 2010). Nevertheless, fundamental aspects of the environmental agreements were never implemented, and since the collapse of the Oslo peace process, progress in joint environmental management at the governmental level has ground to a halt.

This paper, marking 20 years since the *Declaration of Principles* (DOP) and the inauguration of the Oslo Accords on the White House lawn on September 1993, aims to qualitatively evaluate the outcomes of the Palestinian–Israeli Oslo environmental peace agreements focusing on trans-boundary hazardous waste management. While Israel and the PA deliberated the management of several environmental domains (such as water, nature reserves, air quality and others), we focus specifically on the agreements surrounding trans-boundary hazardous waste management and the outcomes of those agreements. Given the intertwined geography of the Palestinian Territories and Israel and the presence of shared underground aquifers and watersheds (El-Fadel et al. 2001, 50), hazardous waste pollution poses significant implications to shared ecosystems and public health. For these reasons the outcomes of the Oslo Accords surrounding hazardous waste are of key importance, as they highlight contemporary trans-boundary environmental management challenges.

Despite provisions in the Oslo Accords, efforts to regulate and jointly manage the disposal of hazardous waste have largely failed. Hazardous waste generated in Palestinian areas is not transferred to appropriate disposal sites in Israel, as intended, and no suitable alternative has been developed. Palestinian waste continues to remain poorly monitored and inadequately treated. These lacklustre results can be attributed to four main factors: Israeli security concerns, territorial disputes, logistical ambiguities within the agreements and Palestinian institutional constraints. The failure to jointly manage technical issues of mutual benefit challenges the neo-functionalist approach to peacebuilding at the inter-state level. Neo-functionalist theories emphasise the importance of technical and economic cooperation as an approach to building

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collaborative relationships among hostile groups (Haas 2004). However, cooperation surrounding comparatively non-controversial issues such as the environment did not create a platform for overcoming overarching political and territorial disputes. Un-

resolved political and territorial differences continuously emerged to undermine environmental agreements. We conclude by discussing two possible scenarios for future environmental management between the parties: (1) maintaining the securitised status quo; and (2) integrating market-based approaches. In light of the current challenges, we hypothesise that a marketisation approach warrants experimentation. Current private-led initiatives within the PA with non-hazardous waste recycling offer hope that similar models can be applied to neglected hazardous waste management. While this approach has not yet been studied in conflict zones, it offers an avenue for bypassing inter-state negotiation and therefore deserves further consideration as an auxiliary approach to decoupling environmental management from the political conflict.

Our analysis is guided by pertinent literature reviews of environmental research from the region, internal documents and treaties from the Oslo negotiation process, and the personal insights of two key decision-makers central to the environmental protocols found in the Oslo Accords: Mohammad Said Al Hmaidid and Shmuel Brenner. Hmaidid served as the director-general of the Ministry of the Environment of the PA and was the chief environmental negotiator for the PA during the Israeli–Palestinian Oslo peace

negotiations. Additionally, Hmadi is currently the General Manager of the Palestinian Recycling Company. Brenner served as the senior deputy director-general of the Israeli Ministry for Environmental Protection and chief environmental negotiator for Israel during the Israeli–Palestinian Oslo peace negotiations. Our empirical interviews focus solely on their experiences given the unique role they played as architects of the environmental facets of the Oslo Accords. Hmadi and Brenner are also co-authors of this article. Since each offers distinct experiences and narratives, we highlight their perspectives as individuals when discussing the challenges of Oslo.

## The Oslo Negotiations and Environmental Cooperation

In January 1993, in the wake of the Madrid negotiations, the first Palestinian intifada and the stalled peace negotiations in Washington, secret negotiations between Israeli academics and representatives of the Palestine Liberation Organisation (PLO) began in Oslo, aided by the Norwegian government (Shlaim 1995, 23). Recognising their potential, both Israel and the PLO soon adopted the Oslo negotiating track. A DOP was drafted and later signed on the White House lawn (DOP 1993). Alongside letters of mutual recognition between Israel and the PLO, the DOP spelled out a timeline for future negotiations between the parties. These negotiations were to lead first to an interim Palestinian self-rule stage, then to final status negotiations and, finally, an end to conflict between the parties.

Starting with the Gaza–Jericho agreement in 1994, Israel began redeploying its military away from Palestinian cities (Shlaim 1995, 28). Composed largely of PLO members, the PA was established to assume responsibility for spheres of governmental responsibility transferred from Israel, including education, culture, health, social welfare, direct taxation, tourism and, later, agriculture, statistics, energy, labour, local government, postal services, trade, industry and the environment. A complex, multi-tiered administrative system was devised in order to split and share responsibilities between the parties within the West Bank. In ‘Zone A’ the PA assumed responsibility for domestic issues and internal security with a strong police force. In ‘Zone B’ the PA assumed responsibility for public order with ‘Israel retaining “overriding responsibility for security”’, while in ‘Zone C’ Israel retained ‘full security control’. (Falah and Newman 1997, 125)

A growing awareness of mounting environmental challenges as well as the geographic proximity and interdependence of Israelis and Palestinians provided the political justification for expanding the scope of the Oslo Accords to include environmental issues. Specifically, the DOP called on both parties to

[A]dopt, apply and ensure compliance with internationally-recognized standards concerning acceptable levels of land, air, water and sea pollution, and acceptable levels of treatment and disposal of solid and liquid wastes; for the use and handling of hazardous substances, including pesticides, insecticides and herbicides, and standards for the prevention and abatement of noise, odor, pests and other nuisances. (DOP 1993, Annex III, 10.35.2)

The DOP called for the sharing of information between the parties and, in the spirit of the agreement, an Environmental Experts Committee was convened and charged with overseeing the implementation of the agreements (DOP 1993, Annex III, 10.35.4). The Protocol on Economic Relations (1994), the Agreement on Preparatory Transfer of Power and Responsibilities (1994) and the Israeli–Palestinian Interim Agreement on the West Bank and Gaza Strip (1995), all negotiated after the DOP, spelled out environmental

cooperation between the parties in greater detail. Specifically, the Protocol on Economic Relations called for regional environmental projects to prevent the ‘deterioration of the environment, [to] control pollution and [to] ensure the proper protection and rational use of natural resources’ (Protocol on Economic Relations 1994, Annex VI, 3.a). These agreements also called for ‘projects, studies and recommendations’ for waste treatment, marine pollution, soil, water and air quality, environmental management and monitoring of desertification, endangered species, nature reserves, environmental education and restricting the transfer of internationally banned chemicals based on ‘internationally accepted environmental principles and standards’ (Protocol on Economic Relations 1994, Annex VI, 3.b.1; Annex VI, 3.b.2; Annex VI, 3.b.3; Annex VI, 3.b.5; Annex VI, 3.b.6; Annex VI, 3.c; Annex VI, 3.b.4). To this end, the PA was meant to assume responsibility for environmental concerns in the entire West Bank, including the Israeli-controlled Area C, with the promise of active Israeli assistance in improving the ‘unsatisfactory situation’ (Protocol on Economic Relations 1994, Annex III, 12.A.2; Annex III, 12.A.16). Additionally, the Accords addressed hazardous waste management from a trans-boundary perspective. Pending the establishment of appropriate sites for hazardous waste treatment in the PA, both parties agreed that chemical and radioactive wastes would be transferred to authorised sites in Israel for treatment (Protocol on Economic Relations 1994, Article 12.10).

The Oslo Accords specified comprehensive environmental management protocols for the West Bank and Gaza Strip. Under these agreements, the PA was to be responsible for environmental management with Israeli assistance, particularly in managing hazardous waste produced in Palestinian Territories: waste that had an impact on both Israelis and Palestinians due to their geographic proximity. To this end, a joint Israeli–Palestinian working group was set up both to formulate a specific hazardous waste management plan and to implement and manage it in the future.

Broadly, the Oslo Accords were guided by what can be characterised as a neo-functional approach to peacebuilding. Among their varied facets, neo-functional theories emphasise the importance of technical and economic cooperation that can serve as a mechanism to indirectly bring groups closer over time (Haas 2004). Neo-functional theories posit that we should see greater likelihood of peaceful exchange in technical and economic spheres precisely because they lack the controversy of high politics (Adler and Crawford 1991). Moreover, technical cooperation is said to breed peaceful exchange through ‘positive spill-over effects,’ (Haas 2004). The Accords deliberately left the most intractable political issues until final status negotiations (i.e. Jerusalem, borders, refugees, and Israeli settlements), instead focusing on technical cooperation during a five-year interim period. To this end, the Accords specified extensive cooperation in less political technical spheres such as the environment, finance, trade, labour and tourism (Levin 2007). Additionally, the Accords called for cooperation in so-called people-to-people projects. Such provisions were primarily meant to improve the economic climate and create durable links between individuals. With a more robust economy and collaborative networks, the more difficult issues left to final status negotiations could, it was thought, more easily be navigated. As we shall discuss in greater detail, a lack of clarity regarding the details of the agreements (e.g. the logistical and financial responsibilities of each party) as well as the unfinished resolution on overarching political differences would later strain implementation efforts.

## The Peace Dividend and the Growth in Hazardous Waste

The early days of Oslo were a cause for celebration. One of the world's most stubborn and intractable conflicts seemed to be on the verge of resolution. The prospect of peace brought with it economic optimism, particularly in Israel. During the peace process, the Israeli economy entered a protracted boom period: GDP growth swelled to 6.5% in 1994 and 7.1% in 1995 (Brynen et al. 1999, 22). Inflows of foreign direct investment grew from a low in the early 1990s, of less than 0.5% of GDP, to nearly 2% of GDP by later in the decade (Nitzan and Bichler 2002, 354). At the same time, Israel was rewarded for its efforts for peace with new trade deals from the European Union, Canada and Jordan. Numerous authors have attributed Israel's rapid economic growth in the late 1990s to the optimism surrounding the Accords, dubbing it a 'peace dividend' (Ben-Porat 2005; Brynen et al. 1999).

In contrast to the Israeli 'peace dividend', the economic benefits of Oslo were less pronounced for the Palestinians. On the one hand, Oslo triggered an enormous and sustained influx of foreign aid dollars to the fledgling PA. On the other hand, following an escalation of violence in 1996, limited closures on travel and trade imposed on the Palestinian Territories by Israel in the wake of the first intifada became widespread, and

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**In contrast to the Israeli 'peace dividend', the economic benefits of Oslo were less pronounced for the Palestinians.**

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in many places permanent. Closures made Palestinian labour far less reliable for Israeli employers, causing them to seek workers elsewhere. As a result, Palestinian unemployment climbed and poverty increased

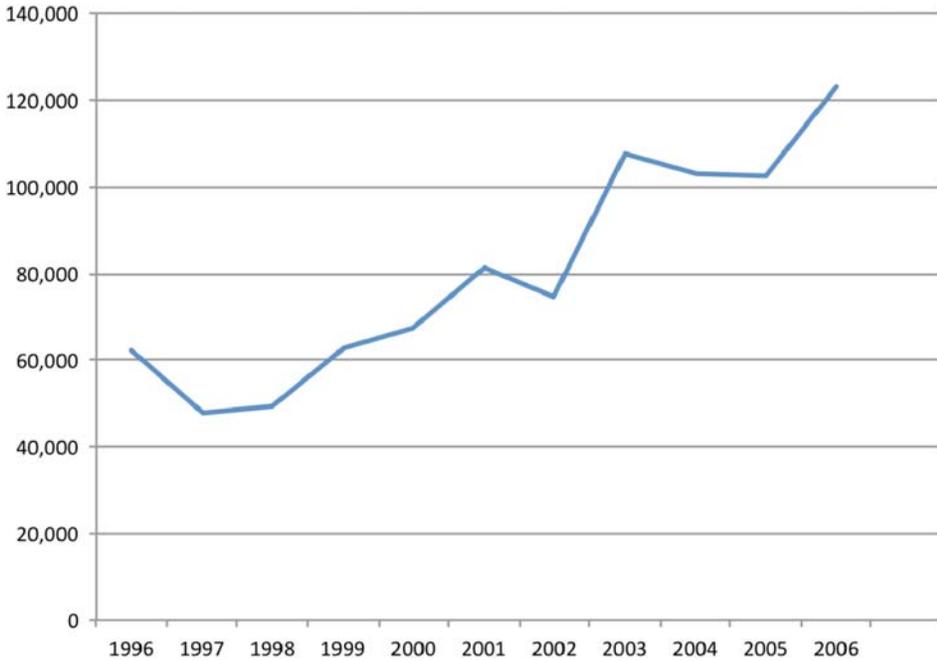
(Allier et al. 1999, 12). By the end of the 1990s Palestinian GNP had fallen approximately 30%, impacting on wages and household income dramatically (Roy 1999, 76). Partially owing to the declining economy, Palestinian public opinion about the Oslo peace process began to sour (Levin 2007).

In Israel, an expanding economy was accompanied by a concomitant expansion of the Israeli chemical sector and an increase in hazardous waste. Between 1990 and 1996 total chemical production in Israel grew at a rate of approximately 7.5% per year. Between 1993 and 1994, following the signing of the DOP, chemical production spiked at roughly 20% (Gabbay 1997, 4). As expected, the expansion of the chemical industry was accompanied by a parallel growth in hazardous waste. Records show that between 1991 and 1996 an average of 42,000 tons of waste per year was treated at Ramat Hovav, Israel's national hazardous waste disposal site, where all factories are required to transfer their hazardous chemical waste for incineration (Gabbay 1997, 36). In Israel, hazardous waste is created through the process of manufacturing fertilisers, pesticides, petrochemicals, synthetic fibres and other chemical products, including paints, soaps, toiletries, food additives and pharmaceuticals (ibid.). Since the signing of the Oslo Accords, a continuous growth in hazardous waste was noted and reflected in part through records tracking disposal at Ramat Hovav (see Figure 1).

Examining trends in quantities of Palestinian hazardous waste is more difficult, however, given the absence of a waste management system or appropriate monitoring of hazardous waste in Palestinian Territories. As the United Nations Environmental Programme (UNEP) indicates,

An essential tool in the management of hazardous waste is an inventory of national hazardous waste substances. No such inventory exists in the Occupied Palestinian Territories, and its absence makes it difficult to determine what types of waste are being generated and where they are being

**Figure 1: Israeli Hazardous Waste Transfers to Ramat Hovav 1996–2006 (Tons).**  
 Source: Israeli Ministry for Environmental Protection 2002; 2008.



disposed of ... In practice, material disposed of in solid waste dumps and landfills contains a mixture of hazardous and non-hazardous substances and wastes. (UNEP 2003, 76)

Although the amount of hazardous waste produced on the West Bank has been estimated at 2,500 tons per year by the Palestinian Environmental Quality Authority, researchers from the Applied Research Institute of Jerusalem (ARIJ) suggest that the true amount is likely to be much higher (ARIJ 2007, 129). Palestinian hazardous waste consists of mixed healthcare waste, chemical waste, small amounts of radioactive waste generated in hospital laboratories, agrochemicals waste, asbestos (still in use in parts of Gaza and to some extent in the West Bank), tannery waste, detergents and car batteries (Hmaid, personal communication, 2012). Hmaid adds,

There was never any good accounting or appropriate estimate of hazardous waste ... additionally a large percentage of the industries are not licensed or authorized. This means that available estimates would only reflect waste generated from authorized industries or factories. Those not authorized, are not even on the map. (Hmaid, personal communication, 2008)

To be sure, the disparities in quantities of waste production between the PA and Israel are clear. However, given the location of the underground mountain aquifers in the West Bank and the potential for mismanaged hazardous waste generated in the PA to pollute a critical regional water resource (El-Fadel et al. 2001, 50) as well as affect local communities, these smaller quantities should not be disregarded.

## Security Concerns, Territorial Disputes and Logistical Ambiguity

A growing body of literature has emerged over recent years indicating a significant environmental burden of illness across Israel and the Palestinian Territories (ARIJ 2007; Preuss et al. 2005). In Israel, when a bridge collapsed, plunging a number of athletes into the Yarkon River, killing four and injuring dozens, during the 1997 Maccabiah games (often referred to as the 'Jewish Olympics'), the depth and breadth of Israel's environmental health challenges surfaced internationally (Shwartz and Sulitzeanu-Kenan 2004). The 'unusual symptoms' of the injured led to the eventual conclusion that some of the deaths and injuries were linked to exposure to high concentrations of toxic pollutants in the water (Tal 2002). Across both communities researchers note increasing trends towards urbanisation, deterioration in air quality and an extreme water shortage (Garb 1998; Tal 2002; 2006; Tal and Abed-Rabbo 2010; Zwirn 2001). Given the intertwined nature of Israel and the Palestinian Territories, many environmentalists in the region see the area as a single ecosystem necessitating joint management (ARIJ 2007; Cohen 2006; Smith and Abu Diab 1998). The focus on cooperative management of hazardous waste was, therefore, a laudable goal given the lack of a hazardous waste management programme in the PA and the potential for mismanagement to exacerbate environmental health challenges pertaining to water, land and air quality. Hazardous waste exposure has been linked to a range of illnesses such as cancer, major congenital malformation (MCM), chronic obstructive pulmonary disorder (COPD) and asthma (e.g. Brown 2007; Prüss-Üstün and Corvalan 2006). Additionally, some scholars link up to 80% of cancer burdens to exposure from pollutants (Nicolopoulou-Stamati and Pitsos 2004, 1).

Notwithstanding the agreements, no waste was ever transferred for treatment from the PA to appropriate Israeli sites, alternative hazardous waste management systems within the PA were never established and waste has remained ill documented and untreated. Moreover, in recent years, reports about Israeli companies illegally dumping waste in the Palestinian Territories have proliferated in national and international media outlets, including *Haaretz* (Rinat 2011), the BBC (2005) and Aljazeera (Frykberg 2008). Brenner notes (personal communication, 2008) that dumping waste on the West Bank was never an Israeli policy.

While there are no reliable data on the amount of hazardous waste produced in the PA during this period, it is possible to assess the outcome of the Oslo Accords on the trans-boundary treatment of Palestinian hazardous waste. The findings in this research suggest that the Oslo negotiations have had little meaningful impact on the treatment of

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### **The Oslo negotiations have had little meaningful impact on the treatment of hazardous waste among Israelis and Palestinians**

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hazardous waste among Israelis and Palestinians. The lacklustre results of the trans-boundary hazardous waste management agreement can be attributed to four main factors. These include logistical ambiguities surrounding environmental management within the agreements, Israeli security concerns about the safety of cross-border transfers of hazardous waste, territorial disputes and institutional constraints within the PA. These causes will be reviewed in turn.

Brenner suggests that the failure to implement trans-boundary hazardous waste management stemmed from logistical difficulties, a lack of assured financing, and ambiguous enforcement mechanisms:

There were discussions about making a passageway for hazardous waste from the West Bank, at Bet El, where hazardous waste could be checked ...

However, the question of who would pay for these services was never clarified and ultimately stalled those efforts ... Additionally the Oslo environmental agreements were often limited to broad understandings and objectives ... During the negotiation process, teams on both sides were pressured to hurry-up and finalize an agreement with the belief that logistical details surrounding trans-boundary environmental management could later be worked out. As a result, the agreement lacked clear mechanisms for achieving and enforcing those environmental objectives ... This deficiency within the agreement contributed in part to the environmental shortcomings we experienced later on. (Brenner, personal communication, 2008)

Brenner is right to note that not all of the logistics of waste management were worked out as part of the Oslo Accords; many of these details were to be left to a joint committee. However, as Hmadi notes, Israeli security concerns ultimately stalled the successful management of hazardous waste:

There was great fear, within Israel, that we, the Palestinians, might use the transportation of hazardous waste for attacks. I'm not sure if it was legitimate to think that way, but that led to the accumulation of hazardous waste in the West Bank and neither side was able to put a system in place to transfer the hazardous waste [to Israel]. We had several meetings on the issue [with our Israeli counterparts], but there was no procedure in writing or in place for coordinating the management of [hazardous] waste. The first shipment of hazardous waste that was supposed to leave the Ramallah hospitals was denied entry into Israel. The rationale given was security concerns. (Hmadi, personal communication, 2008)

After a series of deadly attacks, Israel imposed closures on the Palestinian Territories which restricted the movement of Palestinians within the West Bank and Gaza and limited their access to Israel proper. Closures also acted to severely impede the shipment of Palestinian goods to Israel or through Israeli ports. Such actions were taken to reduce the likelihood of future attacks and justified on the grounds of security, which has long been the overriding concern of Israeli decision-makers (Alpher 1994; Slater 1991). These concerns, omnipresent amongst Israeli decision-makers throughout the Oslo negotiations, were magnified during the first wave of bombings in 1994 and 1995 after the signing of the Accords, and intensified after the collapse of peace negotiations in 2000 and the subsequent Palestinian uprising. In the end, no hazardous waste was received by Israel, despite explicit provisions for the transfer of hazardous waste to Israel found in the Oslo Accords.

While security concerns and logistical ambiguity within the agreements dogged the management of trans-boundary hazardous waste transport, disputes over sovereignty undermined the establishment of joint treatment facilities. Brenner notes,

Joint programs to treat industrial wastewater at the Erez industrial zone were overturned by Yasser Arafat because of the political baggage attached to the Erez border crossing. One project we suggested was to take the wastewater from Bet Hanoun and industrial wastewater from the Erez industrial zone, transfer it to Kibbutz Yad Mordechai for treatment, and return it to Gaza for agricultural use. Such a project would prevent the contamination of nearby watersheds as well as providing much needed water. A model was created where some of the financing would come from Israel and the rest from donor countries and we received an agreement in

principle between all the stakeholders. However, when the agreement reached the Palestinian political echelon it failed. The PA, in their negotiations with Israel, was willing to cooperate only on joint projects situated within the Green Line [the 1967 border]. Cooperating on a project linked with the Erez industrial zone, which is outside the green line, was seen as legitimating the [Israeli] settlements [in the West Bank]; something the PA would not do. (Brenner, personal communication, 2007)

Despite an awareness about the interdependent nature of Palestinian–Israeli ecosystems, prospects of cooperation with Israeli settlements on the West Bank on environmental issues were simply not on the table, for political reasons. Hmaidid elaborates:

When I agree to collaborate with a site connected to an Israeli settlement, it is as if I am giving my approval for that settlement, which is something I cannot do. First, settlements are still under negotiation. Are they legitimate or not? Should they be there or not? If I agree to cooperate or share infrastructure with a settlement, it means that implicitly I have approved the existing settlements, which I cannot do. I am not sure if any Palestinian can do that. (Hmaidid, personal communication, 2008)

Outside the political challenges encountered throughout the course of the Oslo Accords, environmental management and implementation took a secondary place among the PA's objectives where independent progress could have been possible:

The PA has not paid full attention to the issues of hazardous waste ... The PA has not taken the proper actions, they have not put procedures in place ... They have made environmental statutes and action plans, environmental laws and bylaws, but when it comes to hazardous waste, that is still very minimal ... It seems even that the current staff of the PA are not really equipped technically to determine what is a priority. (Hmaidid, personal communication, 2008)

Findings suggest that the trans-boundary hazardous waste management components of the Oslo Accords ended up under-delivering on their objectives for several reasons: the parties were unable to fully decouple their political/territorial differences from regional environmental concerns; joint frameworks for trans-boundary environmental management and financing remained ambiguous in several instances; Israeli security concerns surrounding the screening of hazardous waste transfers to Israel were not resolved; and institutional constraints in the PA further strained efforts to move from policy to practice.

The failure to jointly manage technical issues of mutual benefit challenges the neo-functional approach to peacebuilding. Collaboration around technical issues, such as joint environmental management, did not generate pacific behaviour and positive

**Collaboration around technical issues, such as joint environmental management, did not generate pacific behaviour and positive spillovers in the Israeli–Palestinian case.**

spillovers in the Israeli–Palestinian case. Indeed, as these narratives highlight, the underlying political differences surrounding territorial disputes and security concerns continuously emerged to undermine technical collaboration on trans-boundary environmental issues. The case of the Oslo Accords highlights a challenge to the neo-functional approach to peacebuilding in the Middle East at the inter-state level and thus necessitates seeking out alternative avenues for sustainable coexistence.

## Possible Scenarios for Regional Environmental Management

If anything, the challenges posed by hazardous waste to Israelis and Palestinians have multiplied since the Oslo period. With no suitable treatment site in the Palestinian Territories and no agreement on how to transfer waste to Israel, hazardous waste has continued to accumulate in the Palestinian Territories. Moreover, the collapse of the Oslo peace process in 2000 has rendered the existing environmental protocols largely moot. The willingness of Israelis and Palestinians to collaborate (even on issues of joint benefit) continues to remain at an all-time low. Given such conditions we examine two possible alternatives for future environmental stewardship among the parties. These include: (1) securitisation — maintaining the status quo; and (2) integrating market-based approaches. While our first preference is for a comprehensive environmental agreement, this does not appear to be near at hand, particularly in the shadow of the 2012 Israeli–Palestinian clashes in Gaza, and given Prime Minister Benjamin Netanyahu’s cabinet’s ambiguous political stance towards a future viable Palestinian state.

### *Securitisation: maintaining the status quo*

In light of the current impasse in Palestinian–Israeli peace negotiations, the securitisation of the environmental debate appears most likely to continue to characterize Israeli–Palestinian inter-state environmental relations. Through their government and military branches, states routinely claim control over areas deemed essential for state survival. Securitisation occurs when states aim to equate traditionally non-military matters with military threats, thereby claiming authority over these areas (Waever 1995; Buzan et al. 1998; Williams 2003). Securitisation of environmental issues has, in practice, tended to overshadow the management of shared resources. For example, even during the

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**Securitisation of environmental issues has, in practice, tended to overshadow the management of shared resources.**

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optimistic periods surrounding the Oslo negotiations Israel was reluctant to cede sovereignty over water rights to the PA. Noting that water is the life-blood of an economy in a dry climate and that most aquifers straddle Israel and the PA, Israel

preferred to keep water substantially under its own control (Savir 1999, 39). In other words, during the Oslo negotiations water was equated with Israeli survival and, as with other issues related to its survival (i.e. security issues), Israel was unwilling to compromise. For the Palestinians, water was framed as an issue of equity and their negotiation efforts focused on the fair and equitable distribution of water resources (Hmaid, personal communication, 2012). For Israel, as a securitised issue, water was simply not up for discussion or compromise (Savir, 1999, 39).

Similarly, Hmaid’s assessment of the failure to transfer Palestinian waste to Israel during the Oslo period corresponds with a securitisation approach. In his view, Israel was unwilling to accept transfers on security grounds: the fear that trucks laden with Palestinian hazardous waste could be made into bombs. In this case immediate security overrode the longer-term concerns that surround hazardous waste and Israel unilaterally imposed closures without discussion. While a securitisation approach can catalyse governments into massive action, such a framework carries with it certain baggage, some of which may not be conducive to solving shared environmental problems. For example, securitisation lends itself to ‘us vs. them’ thinking, since security threats are generally regarded as coming from outside the state (Waever 1995, 64). By extension, securitisation, almost by definition, precludes enemies from collaborating with each other.

It is unclear how an Israeli securitised approach to unilaterally managing hazardous waste produced in the Palestinian Territories could be effectively achieved, since Palestinian hazardous waste is generated by a diffuse network of organisations (e.g. garages, hospitals, small businesses, etc.). Additionally, the ongoing PA institutional constraints apparent during the Oslo Accords suggest that effective independent governmental management is still distant. Therefore, the securitisation/status-quo approach is fundamentally unsound, as it fails to provide a framework for managing current problems with hazardous waste. Furthermore, continued environmental decay threatens to exacerbate the conflict, particularly in areas where scarce resources are already under dispute. This being so, we explore an alternative approach to governmental environmental management that might be experimented with. We term this approach 'marketisation'.

### **Marketisation**

Marketisation typically works to diminish the role of government by substituting market mechanisms for government involvement (Friedman et al. 2006; Clapp and Dauvergne 2005). Typical examples of marketisation include privatisation, deregulation and decentralisation. In the first, governments sell off, end economic protection of or otherwise abandon the management of state-run enterprises. Through deregulation, governments reduce, limit or end oversight of an area. Finally, decentralisation implies reduction of, relinquishing or dispersing authority over control and decision-making in an area. In all three examples, market or non-governmental exchange mechanisms can be substituted for government management.

As we have discussed, trans-boundary hazardous waste has not been effectively administered jointly or individually. As a neglected environmental issue, hazardous waste management might be shifted to non-governmental or market-based management. Current experiences of the nascent Palestinian Recycling Company (PRC), established in 2009, indicate that private contracting for environmental services can be viable. The PRC currently provides recycling services in the West Bank for non-hazardous materials. The PRC has built a solid waste separation line and a compost preparation line in Nablus with the capacity to receive up to 350 tons daily of Nablus governorate waste. In Jenin, the PRC shares another recycling line with a similar capacity and daily processes 200 tons of municipal waste arriving at the Jenin landfill from Jenin, Tubas and Tulkarem (Hmaid, personal communication, 2012). Revenues for services can be generated from local users, public authorities, international aid organisations and the sale of reusable waste properties (Hmaid, personal communication, 2012). It is not inconceivable that this model could be extended to managing neglected hazardous waste.

While engaging with private companies to manage hazardous waste will not directly transform the current Israeli–Palestinian conflict, it does offer the prospect of protecting shared environmental resources and decoupling environmental management from the conflict, since it would bypass the need for Israeli–Palestinian political negotiation. Working within the West Bank does not require Israeli approval unless an establishment is in Area C (Hmaid, personal communication, 2012). The prospects of providing these environmental services are significant for peacebuilding given the potential for environmental degradation to exacerbate conflict (Homer-Dixon 1991; 1999; Brock 1991; Holst 1989; Varisco 2010).

However, there is no cause to be overly sanguine about a marketisation approach. First, expanding from recycling non-hazardous waste to hazardous waste will necessitate institutional and capital investment. Second, such an approach will require a measure of

coordinated government activity between Israelis and Palestinians in Area C. Third, marketisation would also require the development of adequate institutional capacity in the PA in order to effectively oversee a market-based approach (Serôa Da Mota et al. 1999, 178; Hall and Walton 1996, 68). Finally, all markets are subject to market failure. In this case, failing to regulate or harmonize environmental standards, or ineffective oversight, might mean that a market-based approach would have an inadequate effect.

## Conclusion

Given the magnitude of environmental concerns and the interdependent nature of Israeli–Palestinian ecosystems, an effective model for trans-boundary environmental management is essential. If the peace process has failed thus far to establish a joint solution to shared environmental challenges, other possibilities that decouple the environment from volatile regional politics need to be investigated (Brenner et al. 2007). The

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environmental facets of the Oslo Accords, which outlined technical cooperation at the governmental level, were ultimately inadequate to create a framework to contend with shared contemporary challenges. In contrast to other cases in which neo-functional approaches to cooperation have brought distant communities together

through positive spillover effects, technical collaboration was not enough to overcome the deep political chasms between Israelis and Palestinians. What was missing from the Accords was agreement on the overarching political/territorial differences, which continuously emerged to undermine environmental collaboration.

We find the status quo to be fundamentally unworkable. Despite numerous attempts to restart the Israeli–Palestinian peace process a comprehensive agreement seems distant. The emergence of new initiatives, such as the PRC, offers encouragement that critical environmental services can be provided where political efforts have failed. Decentralising environmental services to appropriate third-party organisations may provide a solution to thus far neglected environmental issues. Situated outside the public domain such initiatives may be less influenced by turbulent regional politics. In preserving shared ecological resources, such initiatives contribute to building sustainable communities and in so doing create conditions that are more conducive to broader peacebuilding efforts.

While a marketisation approach has not yet been documented in truly comparable contexts, it is at the very least worthy of experimentation as a mid-term environmental management strategy. In the long run it will be for the benefit of both Palestinians and Israelis to develop and implement a comprehensive regional environmental management programme that moves both communities towards more sustainable practices. In the short run, politically creative and environmentally effective approaches for harm reduction are needed.

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