

Environmental Security in the Arab World

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Introduction:

The concept of environmental security has emerged during the last decade to reflect awareness of the threats posed by ever-expanding environmental problems. During this era, two major traditions in the definition of environmental security emerged. According to the first tradition, environmental security refers to that area in which environmental concerns and security strategies interact. According to this definition, environmental issues are no longer pure technical issues to be handled by technocrats alone. They are part of the overall concept of national security, as they could pose more threats to that security than the traditional military sources. This definition assumes the presence of a major link between environmental issues and national security concerns. Some of the advocates of this definition refer to three main types of linkages, (i) the impact of environmental problems on the likelihood of inter-state conflicts and wars, (ii) the impact of environmental problems on human survival in its broadest sense,; and (iii) the impact of wars on environmental degradation. Among those advocating this conceptualization of environmental security are Winnedfeld and Morris (1994), and Moller (quoted in Gunter, 2003). This tradition tends to "securitize" the concept and places it within the context of the traditional security strategy.

The second tradition views environmental security as "securing the environment, which is taking a series of steps to ensure that the ecosystem will be preserved. It focuses on conceptualizing environment and security within the context of sustainable development rather than conflict and conflict resolution. The assumption is that a secure ecosystem is fundamental to individual and community health and survival. In this tradition the concept of environmental security and the protection of the environment are used interchangeably. Environmental security is viewed as a part of the overall concept of "human" security" rather than traditional one. Among the main proponents of this tradition one can identify Thakur (2000), and Najam (2002). Thakur argues that "understanding

environmental security in security terms rather than environmental ones diverts attention from the more immediate and real insecurity problems of environmental degradation and narrows policy options by focusing on symptoms rather than causes." This tradition tends to de-politicize the concept and approaches it from a technical perspective.

Generally, whereas the first tradition dominates the "Northern" discourse on environmental security, most "southern analysts and policy makers subscribe to the second tradition. This is understandable given the fear in the South that environmental issues could be used to justify intervention in the domestic affairs of southern countries.

In the Arab world, attention to the issue of environmental issues began in the early 1980s as a part of a trend towards broadening the concept of security. This was an outcome of the interplay between the global trend toward attending to the environmental threats and the acute environmental problems, which began to hit the Arab world. By the early 1990s, one can identify a new trend in the Arab world linking issues of the environment with security. By this time, one can detect Arabic literature on environmental security. For example, in 1992, King Saud University, based Saudi Arabia published a book entitled Environmental Security, written by Sadek, and in 1997 Al-Madani, a Bahraini scholar published a book in which he used the concept of environmental security. These books adhered to the second tradition of defining environmental security. The concept of security was used to refer to technical strategies to "protect" the environment.

This paper will review how the Arabs approach and deal with the concept of environmental security. It will assess the extent to which the concept has been integrated into the Arab discourse and literature, outline the main environmental issues in the Arab world, and assess the Arab performance in dealing with them. The main arguments of this paper are that the question of the environment in the Arab world cannot be assessed in a purely Arab context. It has to be assessed in a Middle Eastern framework as well, as some of the most crucial environmental issues in the Middle East are quite linked to the

wider Middle Eastern framework, especially in relationship to water issues. In this context, the question of the environment is highly politicized. The question of the environment is quite linked to security issues. This link has been articulated in interaction between Middle Eastern conflicts and the deterioration of the environment in the region, and the merging conflicts over environmental issues. When the Middle Eastern multi-lateral negotiations were launched in 1991, a special working group was earmarked for the environment. The deliberations of this group showed the extent to which environmental issues are politicized. However, the Arab environmental paradigm has been characterized by its emphasis on the de-politicization of the question of the environment. The Arabs have tended to approach this issue from a purely technical perspective even through when the issues are highly political. This reflects the Arab sense of vulnerability if the issues of the environment were approached from a political-security perspective, especially in relationship to the question of water. This will lead us to review the linkages between environment and security in the Arab world and the Middle East.

(I)

A Profile of the Arab World

The Arab world comprises twenty two countries mostly located in North Africa and West Asia and extending from the Atlantic Ocean to the West till the Arabian (Persian) Gulf to the East and from the Mediterranean and the southern Anatolia in the North till the Victoria Lake in the hear of Africa. The total area of the Arab countries is 14.1 million km². It also has a total population of almost 282 millions according to the 2002 estimates, a number which is expected to increase to 390 millions in 2015. Whereas the world population has increased during the 1975-2000 era by 1.6%, the Arabs increased during the same period by almost 2.7%. In 1975, almost 41.5% of the Arabs live in urban centers (compared to 37.9% at the global level). This percentage increased to 53.9% in 2001 (compared to 47.7% at the global level). Population below the age of 15 years represent almost 37.5% of Arab population) compared to 29.9% at the global level.

The Arab world is located in the Great Desert belt extending across northern Africa across the Red Sea till the Arabian Desert, an area which is characterized by its dry climate. Out of the total area of the Arab world, 14.5% is usable for agriculture with 4.2% currently in use. This includes areas that use rain-fed irrigation for cereals, irrigated areas, and natural grazing areas. In some cases, such as most of the Arabian Gulf states, the desert represents almost 98% of the total area. In Egypt, and despite of the River Nile, desert represents almost 94% of the total area of that country. All Arab countries are coastal ones. They view the Atlantic Ocean (Mauritania and Morocco), the Mediterranean (North African countries, Syria and Lebanon), the Red Sea (Egypt, Jordan, Saudi Arabia, and Yemen), the Indian Ocean (Somalia, Djibouti, and the Comoro Islands), and the Arabian Gulf (Iraq, and the Gulf Cooperation Gulf States). As this has facilitated regional maritime transportation across the region, it also created problems of maritime pollution. The sources of the main rivers extending through the Arab world, the Nile, Tigris, and the Euphrates are located outside the Arab world, which is the source of main conflicts between upstream and downstream countries.

Despite their oil wealth, and with the exception of Bahrain, Qatar, Kuwait, and the United Arab Emirates (which comprise only 2% of the total population of Arab countries) most Arab countries belong to medium and low human development categories in the Human Development Index of the United Nations. Ranging between the ranks for 61 and 73 (Libya and Saudi Arabia respectively) till 153 and 154 (Djibouti and Mauritania respectively). According to the 2002 statistics, the total GNP of Arab countries is US\$706.5 billions which is almost equal to the Canadian GNP (US\$695 billions). The GNP per capita is almost US\$1267 compared to the global GNP per capita of US\$5133. Whereas Arab GNP grew by an average of .3% between 1975 and 2001, global GNP grew by .7% annually during the same period (Human Development Report, 2003). These statistics show that the Arab world lags behind the global averages of development and that by virtue of its location it confronts major environmental problems. Its resources may not be sufficient to deal with these problems effectively.

(II)

Arab Literature on Environmental Security

Arab attention to the question of the environment emerged in the early 1980s. By this time Arab policy makers began to articulate concerns about the quality of the environment and various books were published introducing the concept of environment and environmental protection. However, the concern about environment was not linked to the overall concept of national security. The concept of environmental security only appeared in the Arab public discourse by the early 1990s. By this time one can identify policy statements and academic writings referring explicitly to the linkages between environmental concerns and security strategies. Most of the Arab discourse on environment and environmental security is articulated through academicians and leaders of NGOs. Policy makers hardly refer to the issues of environment and environmental security. The academic and public writings on these issues deal mainly with the following themes:

(i) The environment in general: These writings are sort of introductory texts to the study of the environment. They do not specifically refer to the Arab world or to environmental security. However, being the first books to be published in Arabic in this field, they alerted a generation of Arab policy makers and scholars to the centrality of attending to environmental issues. The first book was published in 1976 by Al-Sharnouby entitled Al-Insan and Al-Bee'a (Man and the Environment), followed by Naomi (1986), Abel-Masked (1997), Al-Sahrnouby (1999), Al-Zouka (2000), and Mousa (2000).

(ii) The relationship between environment and education: In terms of chronological sequence, this was the second area that appeared in the Arab literature on the environment. By the late 1980s, a group of Arab scholars attempted to present high school curricula to alert young generations to the importance of the environment. The assumption was educating about the environment is the best long-term strategy to

protect it. The first book was published by Al-Sharrah in Kuwait in 1986 entitled Environmental Education, which was followed in 1988 by another book by Al-Demerdash in Cairo in 1988. Whereas the first book presented a curriculum for secondary school education, the second focused on high education. At least four more books were published later. These were authored by Al-Sabarini and Al-Hamad (1994), Metaw'e (1995), Al-Jabban (1997), and Al-Lakkany and Mohammad (1998). This is in addition to various dissertations submitted to faculties of education and institutes of environmental studies focusing on the question of educating about the environment.

(iii) The relationship between environment and development: A number of Arabic books attempted to establish the linkages between environmental and developmental issues. The main thrust of these books is proving that environmental degradation negatively influences development. In 1990, the United Arab Emirates University published the proceedings of a symposium on the economic and environmental dimensions of development in the Gulf Cooperation Council countries (United Arab Emirates, 1990). This was followed by a book by Al-Kandary (1992) published by Kuwait University entitled Environment and Development, and Al-Gallad (1998), Embaby (1998), Kishk (1998), and Al-Sheikh (2002). These writings alerted the Arabs to the developmental costs of neglecting environmental issues.

(iv) The relationship between environment and mass media: Mass media analysts have also attempted to assess the relevance of their profession to the effective handling of environmental issues. They focused on proving that mass media could play a major role in creating a public awareness of environmental issues and how to deal with them. A literature was developed until the title of environmental mass communication, by which is meant informing the public about the environment. The most important of these writings are those by Al-Killini and Madkour (2000), and Saleh (2003), both of which were published in Egypt.

(v) The social dimension of the environment: This is the least researched and articulated issue in environmental discourse in the Arab world. A group of Egyptian sociologists conducted a series of

field studies on the social and anthropological issues of the relationship between environment and the society (El-Gohary and Shokry, 1996). However, this aspect was not followed up by other scholars or articulated by policy makers which means that awareness of the social dimensions of environmental issues is still in its early stages in the Arab world and that the emphasis is mainly on the economic ones.

(vi) The relationship between environment and Islam: As a part of the rise of Islamism in the Arab world, Arab scholars paid special attention to the establishment of "the Islamic" view of the question of environment. This trend was not restricted to the field of environment. In fact it extended to comprise all academic disciplines, including those related to the natural sciences. The main argument is that Islam has articulated a view on environmental issues and that attending to this view is a part of the Muslim's approach to life. None of the writings on the Islamic view on the environment had claimed that this view is necessarily different from those articulated by others. But the emphasis was on finding roots to environmental thinking in Islam. The first of these books was published by Abdel-Azim in 1996 in Cairo. These books triggered a series of writings on the same theme by Al-Sheikh(1999), Al-Shirazi (2000), Zahran (2000), and Murad (2003), all of them have attempted to prove that Islam had developed an environmental paradigm.

(vii) Specific environmental issues in the Arab world, Perhaps, the two most widely studied environmental issues in the Arab world are those related to water shortages and pollution , and desertification. The problem of water shortage is so acute in the Arab world that some analysts use the concept of "water security, such as Algerian scholar Al-Makhadmy (1999). The most important of these writings are those by Farrag (1986), Mekhemr and Hegazy (1996), Al-Akkal (1996), Nahar (1997), and Bakr (1999). Less attention is given to the second issue of desertification. We have identified two books only dealing with this issue published by Balba' and Nassim (1994), and by Hassan (n.d).

(viii) Environmental Security: Perhaps the only book published in Arabic addressing the concept of environmental security is the one

written by Ragab Sadek (2000) and published by King Saud University. The book addresses the question environmental security from a purely technical perspective. It focuses on the technical issues of environmental protection, even though it introduces the concept of "General environmental security." The author, being a specialist in microbial environmental pollution, did not identify the linkages between environment and national security. He referred to issues such as water security, security against microbial weapons, maritime pollution and electrical magnetic pollution.

The concept of environmental security was indirectly approached in some other publications. Al-Qasmi and Al-Ba'aini referred to the concept of environmental security in their book entitled *Securing and Protecting the Environment* (1997) and Al-Banna (2000), an Egyptian scholar, published a book in which he attempted to establish the indirect link between environment and security through the intervening variable of development. The argument is that environment impinges on security through its impact on the developmental process.

What are the main characteristics of the Arab literature on the environment and environmental security? In answering this question we will use Sunderlin's (2003) classification of the various paradigms on the environment. He distinguished between three main paradigms: class, managerial, and individualist. The Arab literature on environment and environmental security can be classified under the managerial paradigm. Such literature views environmental issues as mainly resulting from the processes of industrialization and modernization, and the lack of proper state control and governance, rather than from the capitalist mode of production as the proponents of the class paradigm argue, or from the aggregate individual values and preferences as the advocates of the individualist paradigm believe. It deals with these issues at the organizational level of analysis, as it focuses mainly upon relationships among various state organizations. The state is viewed as the major reference point in dealing with the problem. The essential tools for addressing environmental concerns is improved state management and control, and better coordination between various state organizations. Further, Arabic literature on environment is of technocratic nature in many respects. It focuses mainly on the technical issues related to the environment and does not frame them within its conceptualization of national security. This literature is mostly non-

ideological. It is hardly supportive of any ideological trend. In fact, environmentalists in the Arab world belong to different ideological traditions. In short, the Arab paradigm on the environment is mainly non-ideological, and apolitical although it approaches the issue from a state perspective. The emphasis is on the organizational aspects of the state rather than the political ones.

A minority group of Arab intellectuals articulates a discourse on environment quite close to the main arguments of the class paradigm. They tend to view environmental issues in political terms and put the responsibility of environmental problems in developing countries on the shoulders of the developed countries. They refer to the emergence of a "new global environmental system characterized by the dominance of a "new environmental imperialism." This system is main source of most of the environmental problems of developing countries such as nuclear waste disposal in developing countries, ozone depletion and global warming. This trend is best represented by the Bahraini scholar Ismael Al-Madani in his book Our Environmental Wealth is in Danger issued in 1997.

(III)

Main Environmental Threats to Arab Security

As outlined earlier, the two major environmental threats perceived in the Arab world are those related water scarcity and desertification and land degradation. (i)Water Scarcity: The issue of water scarcity is the most serious threat to Arab security, as virtually all Arab countries are well below the line of "water poverty." The International Bank has classified 22 countries as below the water poverty line (in which per capita water availability cubic meters/year) is below 1000. Fifteen of these countries are Arab ones. Per capita water cubic meters/year in Qatar, Kuwait, Libya, and Bahrain is 91 95, 111, and 112, cubic meters/person/year respectively. In the cases of Saudi Arabia, Jordan, Yemen, Tunisia, Algeria, and Oman the figures are 241, 318, 340, 434, 517, and 874 respectively(6). If this is the case today, one can imagine the water famines, the Arabs will have to confront in ten years with the present levels of population increase. Due to poor agricultural technologies, agriculture remains the major user of water sources in most Arab countries. A low level of efficiency is noted in the utilization of water in all sectors that use water. This has generated a range of problems such as water logging salinity, low productivity and infertility

of soil and the deterioration of the quality of ground water.. Further water governance remains fragmented among various institutions, which generates problems of the rationalization of water use. The problem is further aggravated by the high rate of population increase, the geographical location of Arab countries in the Great Desert belt, (iii) the lack of national programs to rationalize water consumption; and (iv) Almost 60% of water resources in the Arab world originate from outside the region which gives rise to tensions in using jointly-shared water. This is acutely clear in the cases of the Nile, the Euphrates and Tigris. These cases are a source of potential conflicts and will be reviewed later. (ii) Desertification and Land degradation: Desert constitutes most of the total area of the Arab world. Almost 11% of Arab lands are suitable for agriculture (rainfall up to 400mm). Almost 89% of the Arab land receives a rainfall of less than 100mm. Most of this area is desert or desertified sand suitable only for grazing. Most of the Arab lands are threatened by desertification due to anthropogenic activities leading to desertification including overgrazing. Overgrazing is responsible for almost quarter of the desertification that is taking place. Almost one fifth of the total area is threatened by desertification due to forest/shrub clearing operations, compared to 2% and 1% of the total area lost annually due to salination and urban expansion respectively (UNEP, 2003). There have been various regional initiatives to combat desertification such as the Sub-Regional Action Programme (SRAP) for West Asia and the Arab Maghreb Union.

There are other environmental hazards in the Arab world, such degradation of the marine environment, biodiversity, decline of the quality of the atmosphere, and climate change. Coastal zones in the Arab world are under stress as a result of demographic shifts from rural to urban areas, landfilling, and dumping untreated waste. The marine environment is increasingly threatened by land-based sources of pollution, and by the heavy ship traffic in the region. Out of the world's exported oil, 60% is transported through the Straits of Hormuz. The charged water could cause irreversible damage to marine ecosystems. Further, the unique biodiversity of the Arab world is at serious risk from increased human activities. The main issues are the degradation and/or destruction of habits and loss of species. This is mainly the result of population growth, agricultural and urban expansion into ecologically important areas, poverty and unsustainable use of biota, and industrial pollution. Finally, urban air pollution is emerging as a serious threat facing most of the cities in the region. Cities are experiencing air

pollution with gases and particulates and lead at levels often-exceeding global standards.

The main sources of air pollution in the region are energy and industrial production and vehicular emissions. The last factor account for almost 90% of air pollution in urban centers which is mainly due to poor maintenance, aged cars, low quality fuel, and poor traffic management. Stationary sources, such as outdated power generation stations, are also a major source . Finally, the region is also experiencing climate change as a result of burning of fossil fuel.(UNEP, 2003).

(IV)

Arab Strategies to Deal with Environmental Threats

There is an increasing awareness in the Arab world at the governmental and non-governmental levels of the acuteness of the environmental problems that the Arabs are facing. To deal with these problems, most Arab countries have established national institutions (ministries, or public corporations) to major in issues related to the environment(1), issued national strategies for the protection of the environment(2), developed NGOs to support the work of the governmental institutions (3), issued various journals to deal with the environmental issues (4), and established academic institutions to major into the study of environmental issues (5). Arab countries have also signed and ratified over 64 international and regional governmental conventions and agreements on the protection of the environment. Among the most important are the three Rio conventions with sustainable development focus, the United Nations Convention to Combat Desertification, the Convention on Biological Diversity, the UN Framework Convention on Climate Change, and the Montreal Ozone convention. Implementation of some of these conventions has been rather modest for many countries due to lack of adequate resources. The Montreal Ozone convention has achieved the most successful level of implementation in the Arab world.

At the Arab regional level, there has been a concerted effort within the framework of the League of Arab States (LAS) to co-ordinate Arab environmental strategies. LAS has established a Department of Environment and Sustainable Development responsible for coordinating Arab environmental projects. A Council for Arab Ministers Responsible for the Environment(CAMRE) was also established in 1989. CAMRE meets annually to review common environmental issues. It elects an Executive Bureau of seven members elected for a term of two years and has an elected chairman and the It presented to the World Summit on Sustainable Development (WESS) in Johannesburg (September 2002), an Assessment Report on the progress made towards achieving sustainable development. CAMRE also launched the Arab Initiative on Sustainable Development to be implemented in the region in cooperation with UN agencies such as UNEP. In its session held in Benghazi, Libya in December 2003 it adopted "The Arab Environmental Work Programme of CAMRE for 2004 and 2005." The

Programme dealt with programmes such as desertification and increasing the green land, industry and the environment, education and environmental mass communication, capacity -building in the area of environmental legislation, follow up of international environmental treaties, and completion of statistical data bases on the environment.

At the level of NGOs the Arab Network for Environment and Development (RAED) was formed in 1990. It comprises NGOs in Arab countries majoring in environmental issues. In 1995, RAED was granted an observer status in the meetings of CAMRE, and it participates in its meetings and secretariat. It also sponsors various activities at the Arab, Mediterranean, and regional levels for the protection of the environment(7).

These strategies have been helpful in creating a public awareness of the environmental hazards in the Arab world, and in delaying their functional consequences. However, environmental problems in the Arab world still pose a major security threat. According to Prof. Tolba, the top Arab specialist in the environment, “environmental problems have begun to impact upon the health of present generation, and threaten the future ones, (8).

This is an outcome of the prevalent paradigm in the Arab world that environmental issues are residual ones, which results in limited financial allocations to deal with them. It is a result of inefficient government bureaucracies, inadequate legislation, and most importantly of the tendency to view environmental issues as purely technical ones that do not pose immediate security threats.

(V)

Linkages between Environment and Security in the Arab World

If one examines the Arab environmental paradigm and the environmental issues in the Arab region, one can detect a high level of asymmetry between them. Whereas the Arab subscribe to a managerial-technical paradigm, the environmental issues have strong political dimensions. These dimensions are reflected in the two-way relationship between environmental issues and political conflicts. Environmental issues have been the sources of conflicts especially between the Arabs and the non-Arabs of the Middle East, and Africa. This is clearly reflected in water issues especially those related to the Nile, Euphrates, and Tigris. The Nile flows through eight countries until it reaches its destination in Egypt. This country is quite dependent on the Nile resources for the survival of its 70 million

people. According to a 1959 agreement with Sudan, the Egyptians are entitled to 55 billion cubic meters of Nile water a year, while Sudan gets 18.5 billion. However, with the ever increasing population increase, this quota is increasingly falling below the needs of the Egyptians as demand for water in Egypt increased to 68 billion cubic meters in 1998. In the meantime, upstream countries are beginning to engage in agricultural projects utilizing water, which will mean a reduction of the Egyptian quota. They claim that they were not part of the Egyptian-Sudanese agreement are not bound by the treaties signed on their behalf by Britain and Italy during the colonial eras. Recently, Tanzania has announced it will build a 150 km long pipeline to divert Nile water originating from its land. Ethiopia is also beginning to launch similar projects. The Egyptians suspect that foreign influences are playing a role in persuading the riparian states to launch these projects in order to pressure Egypt. At one point of time, Anwar Sadat threatened to go to war against Ethiopia if it tampered with the Nile water.

The same potentially conflictual relationship characterizes relations between the Syrians, the Iraqis, and the Turks over the use of the water resources of the Euphrates and Tigris, which originate from Turkey. Turkey argued that these rivers are not international rivers, and that it has the right to use their water resources with no obligations towards Syria and Iraq. It argued that Turkey has not claimed that it shares with Iraq its oil, and Iraq has is not entitled to share the water resources of the two rivers with Turkey. Turkey has built a huge complex of dams (The Great Anatolia Project) which reduced the annual average flow of the Euphrates within Syria from 32 billion cubic meters to 20 billion. Syria depends on the Euphrates from almost 80% of its water needs and is already plagued by shortage of water, with an annual water availability of almost 1000 cubic meters per capita. The water that passes to Syria from Turkey is also laden with agro-chemicals and pesticides which poses serious health threats. At one point of time, Turkey threatened to impound the Euphrates water if Syria did not strain the Kurdish militia operating from its territory. At present, Turkey and Syria have been able to contain the emerging conflict over the distribution of the water resources of the Euphrates. This is essentially because Syria does not have many options to deal with Turkey. But one can imagine a possible flare up of conflict if present political alignments in the region changed. Turkey has also suggested in 1987 to build the "Peace Pipeline Project" through which it will sell water to Middle Eastern countries through pipelines. The Arab countries were reluctant to accept the Turkish suggestion on grounds it will provide Turkey with leverage over their survival. The idea seems to

have been accepted by Israel. The problems of the Euphrates and Tigris have also influenced Syrian-Iraqi relations. In 1974, both countries were on the brink of war when Syria established the “Revolution dam” on the Euphrates which reduced the flow of the Euphrates to Iraq by 25%. The Saudi mediation averted war. In 1990, Syria and Iraq signed an agreement to share the water resources of the Euphrates (42% for Syria and 58% for Iraq),

The Jordan River is a source of conflict between Jordan and Israel. The Jordan basin (the Jordan and Yarmuk rivers) is Jordan’s sole source of running surface water. Jordan tried to build storage systems on the Yarmuk, but these were destroyed by the Israelis in 1967. Israel also objected to Jordan’s building of a dam at Markarin on the Yarmuk near the Syrian border in the 1970s, and Al-Wahda dam on the upper Yarmuk in 1990 on ground that both project will affect its water shares. The 1994 Jordanian-Israeli peace treaty dealt with the water issue in a way that gave Israel a larger share of the water resources of the Yarmuk River. (Gann, 2001).

Wars and conflicts also have contributed to the destruction of the environment the Arab world. The prime targets of such impact were the Arabian Gulf region and Palestine. The 1991 Iraqi invasion of Kuwait, the 1991-2003 UN blockade against Iraq, and the 2003 Anglo-American invasion of Iraq have resulted in major environmental damages in the Gulf region. The attack on Iraqi industrial facilities led to the loss of electrical production firms which had an negative impact on water supply, sanitation and refrigeration. The loss of electricity disrupted systems fro pumping saline water from irrigated lands in the southern floodplain, leading to widespread water logging and salinization. Bombing of chemical and industrial plants led to the release of numerous toxic chemical compounds into the atmosphere, soil, and local waterways. The livestock and agriculture in Iraq were devastated by disease and epidemics due to lack of vaccines caused by the destruction of production plants, and by the lack of pesticides and fertilizers as a result of the bombing of chemical plants (UNEP, 2003b). The American forces also used depleted uranium ordnance which had seriously affected the Iraqis and the Kuwaitis as well. It is estimated that around 290 metric tons of depleted uranium were fired by the Western forces during the war. Further, seventy-six Kuwaiti wells were uncapped by Iraq forces and allowed to flow freely into land. . Another 99 wells were deliberately damaged. Approximately 60 million barrels were released. Over 246 pools were formed, covering an estimated area of 49km². Estimates of total quantity of oil accumulated in the pools ranged from 25 to 50 million barrels. More than 600m Kuwaiti oil wells were set on fire by retreating

Iraqi troops, burning between 2.5 and 6 million barrels of oil per day from the end of February till the beginning of April 1991. The environmental damage in Kuwait was estimated at US\$40 billion.

The Un-imposed blockade has also constrained the ability of Iraq to deal with these environmental hazards, which led to the decline of the quality of environment in Iraq. The 2003 Anglo-American invasion of Iraq has witnessed the extensive use of depleted uranium munitions against civilian targets. Today, the Iraq environment is in shambles as a result of almost 12 years of wars and blockades.

Likewise, the Israeli-Palestinian conflict had major negative impacts on the Palestinian environment. Especially after the Second Intifada of September 2000. The environment was used as a tool to crush the Intifada, as the Israeli army destroyed trees, filled in wells, and damaged water infrastructure. The Israelis have also disposed of hazardous waste in Palestinian controlled area, and destroyed greenhouses and crops. Water tankers are frequently attacked and most of the water is controlled by the Israelis to be used inside Israel and for the settlers, which had resulted in major water shortage (Twite, 2003). The building of the “settlements” and the Separation Wall has destroyed thousands of agricultural lands and made it impossible for many Palestinians to reach their farms. In this conflict, crackdown on the environment is considered a “security tool.”

The political character the environmental issues in the Arab world was reflected in the deliberations of the Middle Eastern working Group on the Environment which was formed within the multi-lateral track resulting from the Madrid peace conference of October 1991. This Group was chaired by Japan and held a number of sessions. The deliberations of the Group witnessed major disagreements on the relationship between environmental and political issues and the strategies to be pursued to deal with the environmental hazards. The Israelis suggested to give priority to environmental questions and to establish a regional framework for cooperation in the form of joint teams to deal with the environmental issues. It also suggested giving priority to the uses of air pollution, climate change, and pollution of the Mediterranean. The Egyptians advocated linking the progress of regional cooperation on the question of the environment to the settlement of the Arab-Israeli conflict arguing cooperation on the question of the environment should a part of an overall regional cooperation. It also suggested engaging the United Nations Environment Program in regional projects for cooperation. They gave priority to issues such as desertification, marine environment, air pollution, and natural disasters, and demanded that

the point of beginning in establishing a regional system for cooperation was to determine the parties that caused the environmental damage and holding them responsible for it. This is because Israel, it was claimed, has caused tremendous damage to the Palestinian environment by building settlements on agricultural lands and removing trees. They also wanted to ban anti-environment military activities, and to commit all the regional powers to get rid of radioactive materials within their territories in an indirect reference to the Israeli nuclear program (Goma'a, 1994). The Israelis and the Egyptians agreed on one point, that is, the need to engage outside powers in building a regional system for cooperation in the field of the environment. However, whereas the Israelis preferred an engagement by Japan, the USA, and the European Union, the Egyptians wanted also the UN to be involved. Also, whereas the Egyptians preferred to begin by dealing with grand issues such as nuclear and chemical weapons and their impact on the environment, the Israelis preferred to deal with purely technical issues. It is obvious that the Egyptians advocated the politicization of the environmental issues. This is not because they adhere to a politicization paradigm, but mainly because they wanted to use the card of environmental cooperation to accelerate the peace process. The Egyptians wanted to safeguard against creating a precedent of regional cooperation and normalization without progress on the political issues. Further, despite its technical character, the Israeli approach had major political objectives, that is, to establish an Arab-Israeli regime for cooperation, a regime which will have political implications.

With the collapse of the peace process in 1996, the meetings of the Environment Working Group were suspended. Understandably, such collapse led to a further worsening of the regional environment especially in the occupied territories especially after the Second Intifada of September 2000. Recently, a joint Jordanian-Israeli research center was established under American sponsorship to major in the study of the ecosystem of the Dead Sea area. It remains to be seen if this experience will survive the political upheavals of the Middle East.

Conclusion:

During the last decade there has been an upsurge in Arab interest in and concern about environmental issues. This was reflected in a general trend to establish institutions, formulate strategies, issue academic and policy –oriented books and literature, and develop NGOs which major in the field of environment. There has been a trend to coordinate environmental policies among Arab countries within the framework of CAMRE and to coordinate policies with the UNEP. The Arab environmental paradigm is characterized by its emphasis on the managerial-technical character of environmental issues. It tends to de-politicize these issues and deal with them outside the main thrust of the national security strategy. Perhaps the only exception is the Arab approach to the environmental issues in the Middle Eastern framework. The Arabs also tend to view environmental issues as residual issues compared with issues related to statehood, sovereignty, and territory. This results in limited resource allocations to environmental issues and the tendency to rely on foreign support.

In the meantime, environmental issues in the Arab world have strong political components by virtue of their linkages with the larger Middle Eastern and African frameworks. This is reflected in the two way relationship between regional conflicts and wars as was reflected in Palestine and the Arabian Gulf region. There are conflicts over environmental issues and such issues were the main causes of conflicts and wars in the region. The linkage was also articulated in the deliberations of the Environment Working Group of the Middle Eastern talks in the 1990s. It was clear that the sides have different views of the strategies to deal with environmental

hazards and the relationship between regional environmental cooperation and the Middle East peace process.

We have alluded to the deterioration of environmental issues in the Arab world despite the upsurge of interest in these issues. The Arabs need to change their environmental paradigm in the direction of integrating environment into their overall national security strategy, that is, “securitizing” their concept of the environment. This will result in more allocations to deal with environmental issues, but it will also require more bureaucratic efficiency. Perhaps, they should think of establishing a regional environmental agency to deal with the common issues as is the case in Europe. There is no shortage of suggestions to deal with environmental issues in the Arab world. The UNEP and CAMRE and the Arab Human Development Report literature is full of proposals on how to deal with environmental issues. The heart of the problem lies in the commitment, the paradigm, and bureaucratic efficiency.

Endnotes

- (1) For example, in Egypt, Lebanon, Palestine, and Tunisia ministries for the environment were established. In Kuwait, United Arab Emirates, Saudi Arabia and Libya public corporations on the environment were created.
- (2) Such as "the Strategy and National Work Program to Combat Desertification in the United Arab Emirates": issued in 2004 and "the Environmental Strategy of Kuwait" issued in 2000.
- (3) Such as the Friends of the Environment Association in the United Arab Emirates established in 1992.
- (4) Such as Muntada Al-Bee'a, a non-periodical review issued by the Arab Network for the environment and Development in Egypt, Al-Bee'a wa Al-Tanmiya, a monthly journal issued by Technical Publications LTD in cooperation the Middle East Center for the Transfer of Appropriate Technology in Lebanon, Al-Emirate Wa Al-Bee'a, a quarterly issued by the Federal Corporation for the Environment in the United Arab Emirates, Shu'un Bee'iya, a monthly issued by the Association of the Friends of the Environment in the United Arab Emirates, Al-Bee'a, a monthly issued by the Kuwait Foundation for the Protection of the Environment, Minbar Al-Bee'a, a monthly magazine issued by the UN Program for the Environment in Bahrain, Assuit University Bulletin for Environmental Research, a quarterly issued by Assuit University in Egypt, and Baytona, a monthly issued by the Kuwaiti Public Corporation on the Environment.
- (5) Such as the Institute of Environmental Studies and Research in Cairo and Ain Shams universities in Egypt.
- (6) These are the statistics of 1995 as quoted in the Arab Human Development Report of 2002, (Cairo: UNDP, 2002), p. 41.
- (7) One may review the report of RAED submitted to CAMRE in December 2003 which outlines its projects (Council of Arab Ministers Responsible for the Environment, 2003).
- (8) Interview in Minbar Al-Bee'a, 5(3), September 1992, p. 9.

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