

Environmental Security in the Arab World

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(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,
- (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.
- (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.

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 accounts 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 for 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 be 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.