

Environmental movement in Lebanon

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Received: 12 March 2007 / Accepted: 15 September 2007 / Published online: 8 November 2007
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Abstract The paper reviews and assesses the evolution of the environmental movement in both the public and the private sector in Lebanon. It studies the public sector involvement in the environmental movement by reviewing the commitments made by the government to the local, regional and international communities. The paper presents a summary of all the decisions, decrees, and laws pertaining to environmental protection that the Lebanese government has instituted over time, as well as all the conventions and agreements that the country has ratified and/or signed. Compared to the Arab world in the Middle East and North Africa, Lebanon is relatively more active and integrated in the world community. Using the total number of established environmental organizations and the level of reported activities aimed at spreading environmental awareness and educating people as indicators of private sector involvement in the environmental movement, the paper concludes that the post war era is characterized by a significant increase in the number of established organizations. It also concludes that there is a co-movement between economic and environmental variables.

Keywords Arab world · Developing country · Environmental movement · Environmental Non Profit Organizations (ENGOS) · International conventions · Laws · Middle East and North Africa · Regional conventions

Abbreviations

ENGOS Environmental Non Governmental Organizations
NGOs Non Governmental Organizations
MENA Middle East and North Africa
GDP Gross domestic product

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1 Introduction

The global environmental movement dates back to the late sixties and early seventies. It has now, with varying degrees of success, reached the developing and the less developed world. While the concerns differ across the countries, there is global acknowledgement that environmental issues deserve attention and commitment. Lebanon, caught at a crossroad between the developing and the developed world, represents a good example of a country that has begun considering healthy environment as part of a healthy economy. In fact, the government has acknowledged that “environmental protection requires a collaborative and concerted effort from all” (Ministry of Environment 2001, p. 181). Despite being a late entrant into the environmental movement, Lebanon can claim several success stories on the issue of environmental activism and its effect on the marketplace outcomes. Legislations banning quarries and diesel-operated vans from circulation, and designating various areas preserved have been introduced as responses to environmental movement. The number of environmental non governmental organizations (ENGOS) at the local and regional level has increased significantly. Lebanon has more than one hundred and thirty registered ENGOS. The level of awareness and involvement of the community and the media have been increasing over time, as evidenced by the level of reported activities aimed at spreading environmental awareness and educating people. The media’s role has been instrumental in creating and/or raising public awareness and promoting grassroots activities.

This paper reviews and explains the evolution of the environmental movement in both the public sector and the private civic society in Lebanon.

2 Government efforts

This section studies the public sector involvement in the environmental movement by reviewing the commitments made by the government to the local, regional and international communities. It presents a summary of all the international environmental conventions and agreements that Lebanon has ratified and/or signed. It also presents a summary of all the decisions, decrees, and laws pertaining to local environmental protection that the Lebanese government has instituted.

2.1 International and regional commitments

As a member of the world community, Lebanon has been a partner in signing international agreements pertaining to the protection of the environment for over 50 years. The Agreement for the Establishment of General Fisheries Council for the Mediterranean was the first international agreement the country signed in 1949 in Rome, requiring international cooperation in development and utilization of the resources of the Mediterranean Sea. Lebanon was the only Arab country participating and signing this international agreement. In fact, there were many conventions where Lebanon was the only Arab signatory: 1958 Geneva Convention on the Continental Shelf, 1958 Geneva Convention on the High Seas, 1963 Vienna Convention on Civil Liability for Nuclear Damage, to list a few. The significance of these international partnerships lies in their moral implications. For instance, in case of the 1963 Vienna Convention Lebanon was not even a threat

because of its economic and industrial make-up: it does not produce nor does it use nuclear power.

Table 1 presents the list of all the international environmental conventions, treaties and protocols signed or ratified by Lebanon. Over 40% of these conventions were signed before the war started (pre 1975); slightly less than that were signed during the war period (1975–1991), and the balance in post war period (post 1991). A careful reading of the titles of the international conventions indicates that most of them deal with water pollution. Thirteen out of the total 28 International agreements relate to the protection of the Mediterranean Sea. Some attempts in the area of biological diversity, climate change, desertification and protection of the ozone layer have been observed since 1985.

To put these numbers in perspective and be able to assess the international involvement, the performance of Lebanon is compared to that of the other countries in the Arab world. Table 2 presents the total number of international and regional environmental conventions signed by Arab countries in the Middle East and North Africa (MENA). The numbers indicate that Lebanon has signed more international agreements that deal with environmental issues than any other country in the MENA region. This may be due to the fact that the bulk of the agreements concern the Mediterranean Sea as seen above. However, note that there are eight other Arab countries that border the Mediterranean Sea including Egypt, Libya, Tunisia, Algeria and Morocco in North Africa and Palestine and Syria in the Middle East.

Table 2 indicates that within the region Lebanon is ranked second highest country signatory to regional environmental conventions. A careful look at the data indicates that North African Arab countries are less integrated in the world community in environmental matters than the Middle Eastern countries. Lebanon, Jordan and Syria top the list with 28, 24 and 20 signatures, respectively; whereas, Libya, Algeria and Morocco are listed at the bottom with 1, 3, and 5 signatures, respectively. Nevertheless, the North African countries have the largest number of protected areas in the region; Algeria tops the list with 45 designated protected areas, followed by Tunisia, Egypt and Morocco with 38, 37 and 31 designated area, respectively. Lebanon ranks fourth with 26 protected areas. Note that relative to its area and population, one can argue that Lebanon tops the list again.

2.2 Local

The first executive order that dealt with the local environment was issued in 1925 (Executive Order 144) and declared the sea including the deep sea, the sea side, and the shore a public property. The second initiative followed in 1970 almost 45 years later with an executive order to specify the general rules to establish and invest in touristic enterprises (Executive Order 15598). In 1981 a state ministry of environment was created aiming to control all forms of pollution: use of pesticides, deforestation and forest fires, solid waste disposal, protection of fauna and flora, and urbanization. However, there was no global environmental law. Specific issues were addressed in sector laws and regulations. These laws included the protection of natural sites, forestry, archaeological and touristic sites, drinking water, sewage, marine pollution, air pollution, industry, hunting, fishing, urban development, mining, food control, housing and toxic waste disposal.

A full fledged Ministry of Environment in Lebanon was established in 1993, marking a significant step forward in the management of environmental affairs. A total of 85 ministerial decrees, executive orders and laws are currently in effect, with only two dating prior to the establishment of the Ministry of Environment. Table 3 lists all the decrees

Table 1 The international conventions, treaties and protocols signed or ratified by Lebanon

Year	Convention, treaty, or protocol	Place
1949	Agreement for the Establishment of a General Fisheries Council for the Mediterranean	Rome
1954	International Convention for the Prevention of Pollution of the Sea by Oil	London
1958	Convention on the Continental Shelf	Geneva
1958	Convention on Fishing and Conservation of the Living Resources of the High Seas	Geneva
1958	Convention on the High Seas	Geneva
1960	Convention on the Protection of Workers against Ionizing Radiations	Geneva
1963	Vienna Convention on Civil liability for Nuclear Damage	Vienna
1969	International Convention on Civil Liability for Oil Pollution Damage	Brussels
1969	International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties	Brussels
1971	Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Seabed and the Ocean floor and in the Subsoil	London–Moscow–Washington
1972	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter	London–Mexico City–Moscow–Washington
1973	International Convention for the Prevention of Pollution from Ships	London
1976	Protocol for the Prevention and Elimination of Pollution of the Mediterranean Sea by Dumping from Ships and Aircraft	Barcelona
1976	Convention for the Protection of the Mediterranean Sea against Pollution	Barcelona
1976	Protocol Concerning Co-operation in Combating Pollution of the Mediterranean Sea by Oil and Other Harmful Substances in Cases of Emergency	Barcelona
1976	Convention on the Prohibition of Military or any other hostile use of Environmental Modification Techniques	Geneva
1980	Protocol for the Protection of the Mediterranean Sea against Pollution from Land-based Sources	Athens
1982	Protocol Concerning Mediterranean Specially Protected Areas	Athens
1985	Vienna Convention for the Protection of the Ozone Layer	Vienna
1987	Montreal Protocol on Substances that deplete the Ozone Layer	Montreal
1989	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	Basel
1990	Amendment to the Montreal Protocol on Substances that deplete the Ozone Layer	London
1992	Amendment to the Montreal Protocol on Substances that deplete the Ozone Layer	Copenhagen

Table 1 continued

Year	Convention, treaty, or protocol	Place
1992	Convention on Biological Diversity	Rio de Janeiro
1992	United Nations Framework Convention on Climate Change	Rio de Janeiro
1994	United Nations Convention to Combat Desertification	Paris
1999	Convention on Wetlands of International Importance especially as Waterfowl Habitat	Ramsar
2001	Stockholm Convention on Persistent Organic Pollutants for Adoption by the Conference of Plenipotentiaries	Stockholm

Source: Ministry of Environment—<http://www.moe.gov.lb/Corporate/The+ministry/International+Agreements/>

Table 2 Total number of international and regional environmental conventions signed by Arab countries in the MENA region

Country	International conventions	Regional conventions	Number of protected areas
Algeria	3	1	45
Bahrain	12	4	6
Djibouti	0	0	4
Egypt	7	1	37
Iraq	13	5	8
Jordan	24	4	7
Kuwait	14	5	4
Lebanon	28	7	26
Libya	1	1	14
Mauritania	0	0	10
Morocco	5	1	31
Oman	17	4	17
Palestine	0	2	5
Qatar	13	4	3
Saudi Arabia	19	6	22
Somalia	0	0	11
Sudan	0	2	26
Syria	20	8	17
Tunisia	4	1	38
United Arab Emirates	17	4	12
West Sahara	0	0	–
Yemen	13	5	5

Source: Compiled by author from Alreem Environment website <http://www.alreem.com>

issued by the Ministry of Environment since its establishment. Note that many laws (not listed in Table 3) governing the use of the environment are issued by Executive Orders from the President and the Council of Ministers, in addition to Decrees issued by other ministries such as Agriculture, Public Works and Transportation, Tourism, and the Ministry of Interior.

Law 216/93 established the Ministry of Environment and defined its mandate and functions. This law has been amended twice according to Decree 5591/94 and 667/97. The

Table 3 Decrees issued by the Ministry of Environment

Decree Number	Date	Description
B/20	01-11-94	Identification of well established and specific measurements for environment protection from pollution
<i>Imports</i>		
1/5	18-8-95	Organize the import of petrocok
1/9	18-9-95	Amend the Decree related to petrocok importation
1/23	06-11-95	Prohibition of importation or use of extinguishing liquid devices
1/27	06-12-95	Amending the Decree 1/9 related to the importation of petrocok
1/37	18-01-96	Licensed importation of asbestos
1/41	25-3-96	Amending Decree 1/37 subjecting the import of asbestos to prior approval from the Ministry of Environment
1/91	24-10-96	Organizing waste importation (chemical, industrial...)
1/22	17-12-96	Amending the Decree 1/91 related to waste importation. It prohibited the import of all plastic waste according to the list provided by the Ministry of Environment
<i>Quarries</i>		
2/93	20-5-93	Organize the activities of quarries, mining and asphalt factories
B/15	21-9-94	Prohibited and stopped the work of all unlicensed quarries and sand mining
B/22	14-11-94	An authorization for a certain private quarry
<i>Manufacturing</i>		
1/22	06-11-95	Imposition of certain environmental standards on industries and factories
1/40	20-3-96	Amending Decree 1/22 applying environmental standards on the industries
1/5	25-1-01	Establish environmental standards for licensing gas stations
1/16	05-4-01	Establish environmental standards for licensing farms
1/75	02-9-01	Establish environmental standards for licensing dye factories
¼	12-1-01	Establish environmental standards for slaughter houses
1/3	25-1-01	Standards for treatment of slaughter house wastes
1/29	31-5-01	Standards for dairy manufacturing industries
1/5	04-01-01	Standards for storage areas for fruits and vegetables
1/60	29-9-01	Standards for construction stones
1/61	20-9-01	Standards for plastic manufacturing firms
<i>Construction</i>		
1/90	19-01-00	Standards for residential buildings that are adjacent to Rivers Protected by Ministry of Environment
<i>Air</i>		
1/93	11-5-93	Prohibit burning of tires
1/52	29-7-96	Defines the characteristics and specifies ceilings for mitigating air, water and soil pollution
1/8	01-3-01	Changes the decree 1/52 and defines the characteristics and establishes the norms for limiting air and water pollution generated by certain firms and water treatment facilities
1/191	08-10-97	Directional memo on the manufacturing of cement in Lebanon and the environmental pollution generated from it

Table 3 continued

Decree Number	Date	Description
<i>Biological diversification</i>		
B/2	21-5-93	Prohibits the use and the import of bird voice recorders
1/102	28-4-93	Divides games into three types: those that can be hunted all year long; those that can be hunted during designated season; and those that cannot be hunted
7/B	10-01-94	Organize hunting seasons and places
8/B	10-01-94	Prohibited hunting all over the Lebanese territory from 1-1-95 till 31-12-97. The decree is jointly issued with Ministry of Agriculture
1/10	18-5-95	Prohibited hunting of certain games and birds. Treats all migrating birds and resident birds as protected except for those designated as hunting birds and wild pigs. Specifies the hunting season from September 15 till December 31 except for Mondays and Tuesdays
<i>Land and natural reserves management</i>		
1/15	05-10-95	Prohibition of any work or change in Fakra bridge area, Kesrouan
1/14	06-10-95	Establishment of natural reserves of Karm Chbat
1/97	02-7-98	Declare Nahr El Kalb a protected natural site
1/129	01-9-98	Declare Al Damour River as protected natural site
1/130	01-9-98	Declare Beirut River a natural site
1/131	01-9-98	Declare Al Awali river a natural site
1/132	01-9-98	Declare as protected natural sites: 1. Forests between Ain El Hour, Daraya, Debiye, Berjin; 2. Sheikh Osman forest; 3. Deir al Mokhalis and surroundings; 4. Ain w Zein Hospital and surroundings; 5. Dalboun forest; 6. Al Mal valley; 7. Kfra wells; and 8. Ainbal valley sites
1/187	17-11-98	Declare Al Makmel Mountain—Black Summit a protected natural site
1/189	19-11-98	Declare Al Assi River a protected natural site
1/188	19-11-98	Declare Al Arka River a protected natural site

Sources: Compiled by author from Ministry of Environment website <http://www.moe.gov.lb> and Chlala (2004)

amendments have strengthened the ministry and have redefined its mission and mandate along four general policy principles: regionally balanced development; protection of the environment through preventative measures; adoption of the polluter pays principle and the integration of environmental policies into other sectoral development policies (Ministry of Environment 2001). A comprehensive environmental protection law, Law 444, reflecting the policy principles highlighted above, was introduced in July 2002. Law 444 set the fundamental principles that govern the use and the management of the environment. A total of 68 articles cover all aspects of the environmental protection and fill out the gaps introduced by previous decrees.

The Ministry of Environment has been instrumental in creating awareness and mobilizing resources for the promotion of environmental quality. One of the major accomplishments of the Ministry in the past decade include assigning “protected” status to eight natural reserves and 16 protected natural sites, including forests and rivers. Data presented in Table 3 indicate that this Ministry has expended disproportionately more effort in establishing protected areas and reserves than any other activity. It has also collaborated with the Ministry of Agriculture and declared 17 forests as protected areas and with the Ministry of Tourism and declared 14 villages as historical monuments and natural landscapes.

Another major accomplishment of the Ministry of Environment has been the establishment of licensing standards for 12 classified manufacturing facilities including gas stations, tanneries, farms and slaughter houses, as well as plastics and dairy products.

Given its limited resources, it has, in the last 10 years participated in at least 30 projects. Between 1996 and 2000, the Ministry has leveraged its own budget resources by attracting grants from donors at the rate of US \$ 1.5 for every dollar spent from its own budget. It continues to fund small projects that promote environmental education and awareness.

3 Non governmental efforts

This section studies the private sector involvement in the environmental movement by tracking the total number of ENGOs established over time in addition to the total number of environmental activities aimed at promoting environmental awareness.

One of the responses to civil war was the establishment of NGOs or civic groups in different parts of the country. These groups focused on social issues such as provision of first aid training, helping communities cope with water and food shortages, moving the injured to the hospitals. All in all, they attempted to maintain a minimum level of social order in a country characterized by chaos.

The post war period was characterized by a significant increase in the number of NGOs, especially the ENGOs. ENGOs have been influential in creating awareness and demanding regulation to enhance the well being of the Lebanese people. While at least 24 ENGOs were established during the war period, a minimum of 85 new ENGOs were registered in post war period. Table 4 presents the evolution of ENGO establishment over time. Currently there are 138 registered ENGOs in Lebanon, most of them operating at the local grassroots level. Some of the ENGOs have been able to raise funds and implement environmental projects at the local and national level.

The activities of ENGOs, in post war Lebanon, have been directed mainly towards creating awareness of the environmental problems that the Lebanese overlooked for over a decade and a half. While these activities were not well documented, the outlook for the

Table 4 Environmental NGOs in Lebanon over time

Period	Total number of registered NGOs
Pre war period (pre-1975)	13
War period (1975–1991)	24
Post war period (post 1991)	85
Establishment date undetermined	16
Total	138

Source: Compiled by author from Ministry of Environment website <http://www.moe.gov.lb>

future seems promising as interest and awareness in environmental issues are growing. Today, there are a number of newspapers that allocate daily coverage on local and regional environmental issues. An-Nahar newspaper, for instance, posts a daily calendar of events. Daily talk shows on radio and television are being used more frequently to disseminate information on ENGO activities.

In the balance of this paper, it is assumed that environmental awareness is promoted through any organized effort that seeks remediation, or demands alleviation of or reduction in the magnitude of damages to the environment. It is also assumed that the environmental movement is the manifestation of awareness into activism and movement.

A review of post war press reveals that the most frequently listed public activity dealing with environmental issues is reforestation, a phenomenon referred to as the greening of towns and villages throughout Lebanon, followed by seminars and workshops on environmental degradation and ways of combating the problems. A local monthly publication, *Al Marjaa-Cassander*, is used as a source to compile information pertaining to the number of organized activities to promote the well being of the environment and of people. This publication, established in 1994, represents the only source of credible and consistent information on scheduled public activities on environmental issues. In fact, it represents a daily log of all publicly announced activities that took place in Lebanon over the period 1994 till 2002. The document is still published, but it no longer represents the information in the same manner as before. Hence the analysis uses data up till 2002.

To determine the level of community involvement in environment promoting activities, an index is constructed by summing the total number of organized activities in a given month. Organized activities include seminars, environmental workshops, and publication of reports pertaining to pollution, reforestation efforts, and rehabilitation of touristic sites, and cleanup days at the beaches. By summing the monthly activities, a yearly aggregate on environment promoting activities is obtained. Table 5 presents the list of activities reported between 1994 and 2002. For instance, in 1994, a total of 168 activities dealing with various aspects of the environment were recorded. Of these, around 23% dealt with reforestation ceremonies in various regions and 21% dealt with organizing workshops and seminars. These numbers have been fluctuating around an annual mean of 31% and 29%, respectively over the period studied.

It is obvious that post war Lebanon witnessed a surge in environmental movement. This is by no means an unexpected outcome. After almost 15 years of war and destruction

Table 5 Environment promoting activities

Year	Total number of activities	Reforestation	Commissioned reports	Workshops	Seminars	Rehabilitation and cleanup of touristic sites	Other
1994	168	39	66	27	9	13	14
1995	93	35	16	2	16	12	12
1996	129	36	22	9	45	3	12
1997	112	30	17	7	40	3	15
1998	111	38	14	12	17	3	27
1999	66	15	6	6	18	2	19
2000	105	53	2	10	18	8	14
2001	64	38	0	7	10	1	8
2002	16	0	0	8	8	0	0

where running for one's life was the way of life, people started to realize what they have missed. In 1994, 66 reports were commissioned to help assess the state of the environment and more than 30 workshops and seminars were held to disseminate the information to the public. Data in Table 5 show that the numbers have steadily decreased over time. In 2002, there were no more reports commissioned and only a total of 16 environment promoting activities were reported.

4 Explaining the observed trends in environmental movement

In general, communities tend to organize and form advocacy groups if the expected payoff is positive (Stigler 1971; Peltzman 1976, 1984). Expected payoff to each member of the group is different, and is a function of individual perception of the imposed risk as well as the cost of effecting change. It is plausible to assume that if a group is formed and an activity is planned and executed, then the participants expected that the activity was worth their effort. The establishment of the Ministry of Environment right after cessation of hostilities is not by chance. It came about because of the need for reconciliation of rights and responsibilities of both people and public agencies.

According to the neoclassical economists, the individual response to environmental concerns would be one that is reflected in the choices that he or she makes. The basic premise is that individuals are utility maximizers; they choose consumption, subject to a budget constraint, to enhance their well being. Environmental degradation reduces utility; hence, it warrants a response. After realization of potential or actual environmental problem, individuals adjust consumption such that some of their budget may be allocated to remedy the situation. While there are several options available for the household such as changing location, insulating the house, organizing and demanding regulations, and litigating, the response behavior depends on the opportunities available to the household as well as the costs of decisions. Such line of reasoning suggests a definite relationship between economic and environmental variables.

In an attempt to explain the observed trend in environmental movement, an investigation of possible correlation between economic and environmental variables is carried . Table 6 presents data on various measures of economic activity including gross domestic product (GDP), growth in GDP and inflation rate. A review of the data indicates that the Lebanese economy, over the period 1992–2002, went through all stages of business cycle. The first half of the 1990s was characterized by an economic boom, with GDP averaging 6.5% over the period 1992–1995; during this period, environment promoting activities reported a record high averaging 130 activities per year (using the average of 1994 and 1995). The economy showed signs of slowdown during 1996–1998; environmental movement has decreased slightly to an average of 117 activities per year. Economic performance hit a rock bottom between 1999 and 2000 when growth rates were almost zero; during the same time, the average number of environmental activities was 85 per year. The one to one correspondence basically suggests that as the rate of real growth decreased, the absolute number of environmental activities revealed a downward trend.

Obviously environmental awareness is present in the country as evidenced by the increase in the number of ENGOs. Economic opportunities, on the other hand, are not present as indicated by the reduction in the rate of growth in GDP. Thus, the environmental movement is slow or dormant and people settle for less than ideal environmental conditions. The expectation is that with affluence people will start to seek better environmental conditions by organizing and demanding action.

Table 6 Economic and environmental variables

Year	Nominal GDP (in millions of US \$) ^a	Rate of real growth ^b	Inflation rate ^c	Environment promoting activities ^d	NGOs ^e
1991	4,452	–	50	–	–
1992	5,546	4.5	99.87	–	6
1993	7,535	7.0	24.74	–	6
1994	9,110	8.0	8.23	168	6
1995	11,119	6.5	10.28	93	7
1996	12,992	4.0	8.88	129	6
1997	14,862	4.0	7.75	112	8
1998	16,165	3.0	4.55	111	7
1999	16,458	1.0	0.24	66	12
2000	16,399	–0.5	–0.40	105	18
2001	16,660	2.0	–0.40	64	9
2002	17,300	2.0	4.00	16	–

^{abc} Bank Audi sal-Audi Saradar Group 2005

^d Al Marjaa-Cassander 1994–2002

^e Ministry of Environment 2006

The observed relationship suggests that “economic growth is essential for environmental stewardship” (World Bank 1992) and “in the end the best—and probably the only—way to attain a decent environment in most countries is to become rich” (Beckerman 1992). However, the data at hand do not allow for such a conclusion. Obviously the positive co-movement between the two variables is there; but the direction of causation is not clearly specified.

5 Conclusion

This paper reviewed the evolution of the environmental movement in Lebanon. The review revealed that the level of awareness and involvement of both the government and the communities have been increasing over time as evidenced by the total number of laws and regulations instituted to manage environmental affairs. The paper presented a summary of all the international conventions and agreements that the country ratified and/or signed. The analysis has suggested that relative to other Arab countries, Lebanon fairs better in terms of government engagement in the global environmental movement. Data clearly indicated that the Lebanese government has signed more international conventions and agreements than any other Arab country in the MENA region.

The review has also revealed that at the local level, the establishment of the Ministry of Environment immediately after the cessation of hostilities may have been the most important green movement in environmental management and protection. The Ministry has been instrumental in creating awareness and mobilizing resources for the promotion of environmental quality. The establishment of the many new ENGOs has sent a clear message to the government that people have environmental concerns, ranging from availability of clean water to proper management of residential and medical waste to protection of the green areas, and that one of the responsibilities of the ministry would be

to help resolve the many issues that they had. The public private partnership that has been created in post war Lebanon helps explain the engagement and the success of the ministry in establishing a host of decisions concerning the management of the environment.

The paper has attempted to explain the evolution of environmental movement by arguing that it is related to the level of economic opportunities. It has attempted to find support for a presumed behavioral relationship between environmental movement and economic opportunities: the premise that environment is a normal good and has a positive relationship with income a measure of well being and development. The analysis supports a positive relationship between economic and environmental variables using data at the local level without specifying the direction of causation. While data used on environmental awareness and activism may have been understated because they included only those organized activities that were made public through the media, they represent the best available information. Many ENGO activities go unreported, especially if the resources of the organizers are limited.

In conclusion, environmental activism is a direct response to prevailing ill environmental conditions. The idea is that nations will put the environmental quality as a priority item on their national agenda upon the request of their citizens and citizens will only act if conditions are grim. The value that individuals place on environment is expected to increase with income, but only through awareness.

Acknowledgements The author acknowledges the support of University Research Council at the Lebanese American University.

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