Armed Conflict and Human Behavior: A case study of the Environmental Management Process in North Lebanon

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Abstract

This paper examines the variation in the effects of individuals’ vulnerability and trust on human behavior within five geographical areas (Akkar, Menieh, Tripoli, Koura, Batroun) along the northern coastline of Lebanon in the context of recurring armed conflict. Lebanon has been subject to regular episodes of armed conflict since 1975, with severe impacts on the social, economic, and political levels as well as on the environment. We argue that the episodes of armed conflict have increased individuals’ vulnerability and negatively affected citizens’ trust among themselves and between them and the stakeholders in the public sector at the national level involved in the environmental management process. The findings are based on 499 questionnaire surveys among citizens in the study area, 24 structured interviews with heads or representatives of heads of the villages and cities in the study area, and secondary literature including previous studies and official documents. The findings show spatial variation of citizens’ vulnerability to environmental damage caused by armed conflict. Citizens of Akkar, Menieh, and Tripoli show higher levels of vulnerability compared with citizens of Batroun and Koura. In addition, distrust between citizens themselves and between them and public sector stakeholders was one of the results of recurring armed conflict. Lack of trust between citizens and stakeholders of public sector is particularly relevant in environmental management in Lebanon.

Key words: Armed conflict, human behavior, trust, vulnerability, north Lebanon.

Introduction

In spite of the end of the Cold War, and the development of various anti-war movements, wars are still threatening communities, and especially in developing countries such as Afghanistan, Sudan, Ethiopia, Bosnia, Iraq, Syria, Egypt, and Lebanon, which continue to experience turmoil and instability due to various internal and external factors including politics, religion, ethnicity, economy, deficiencies in land tenancy, power, ideology, access to natural resources, and historic hostilities (Shambaugh et al., 2001; OECD, 2008; El Masri et al., 2001).

It is widely acknowledged in the literature that environmental degradation can be both a result of armed conflict as well as a trigger for armed conflict within and/or between states when coupled with other stress factors such as violence, poverty, unemployment, high levels of inequality, and weak governance (Renner, 2006; Barnett, 2007). Environmental degradation can threaten human security by increasing poverty, aggravating social problems, and amplifying the potential for scarcity, displacement, and disempowerment; thus increasing vulnerabilities (Shambaugh et al., 2001; Khagram, 2003; Huseynov, 2011). As such, the
environment is directly associated with humans’ lives and their well-being, particularly of the most impoverished, vulnerable, and least empowered (Khagram, 2003).

Lebanon, and particularly the coastal area in the north, has witnessed multiple episodes of armed conflict for more than thirty years. The various outbreaks of armed conflict have had significant impacts on the natural environment, both directly and indirectly. Direct impacts include marine pollution from oil spills, land degradation, air and land pollution from infrastructure destruction, and pressure on natural resources from population displacement and from the absence of environmental governance. Besides the direct impacts, armed conflict has resulted in indirect environmental impacts that have had significant influence on economic sectors that depend on natural resources, most notably the agriculture, fisheries, and tourism sectors (Issa et al., 2013). In addition to armed conflict, other factors such as urbanization and the lack of management and uncontrolled activities in various sectors, including industry, tourism, agriculture, and transport, are exerting environmental pressure on Lebanon, particularly in its coastal areas (IMAC, 2009). The north of Lebanon is considered to be the poorest and most deprived area of the country, being home to 46% of the population defined as extremely poor and 38% of the total poor (Das and Davidson, 2011). This region is marginalized and has been historically neglected by the Lebanese government which tends to concentrate on Beirut and its suburbs (Volk, 2009).

The objective of this paper is to study the relationships between: (1) armed conflict and individuals’ vulnerability to environmental damage caused in that context; (2) armed conflict and citizens’ perceptions of trust relationships among citizens themselves (i.e. citizen–citizen trust) and between citizens and national-level public sector stakeholders (citizen–public sector trust); and (3) individuals’ vulnerability and citizens’ perceptions of trust relationships. We argue that the recurring armed conflict is one of the reasons for an increase in individuals’ vulnerability to environmental damage, and that this, in turn, has negatively affected citizens’ trust among themselves and between them and the national public sector stakeholders involved in the environmental management process. In other words, that armed conflict is one of the reasons behind the change in individuals’ behavior within their communities and with their environment.

Both quantitative and qualitative methods are used to investigate these relationships. Data have been collected through 24 structured interviews with presidents, or their representatives, of the municipalities in the study area, 499 questionnaire surveys completed by citizens in the study area, and from secondary literature. In the next section, we present a brief literature review on vulnerability and trust concepts. Then, the study area is described and the methods used explained. Following this, we discuss the findings and then draw conclusions.

**Theoretical Background**

**Vulnerability**

Vulnerability is a highly debated concept within Risk, Hazards, and Disaster research and has been widely addressed in the literature (Bankoff et al., 2004; Wisner et al., 2004; Schröter et al., 2005; Adger, 2006; Birkmann, 2006). The term vulnerability is difficult to define because it is combines various factors (Füssel, 2006). Vulnerability symbolizes the physical, economic, political, or social susceptibility of a certain population to damage that is caused by a natural or man-made disaster. It is usually associated with conditions that make livelihood activities significantly fragile for a certain population. Vulnerability is multidimensional, dynamic, differential, and scale dependent. It varies across time, geography, space, and units of analysis (Birkmann, 2006). In this study, we define vulnerability as the ‘susceptibility of the communities [of the coastal area of Lebanon] to environmental damage caused by episodes of armed conflict and their capacity to cope with threats or damage created in that context’. The key to assessing and
understanding vulnerability is to determine who are the vulnerable individuals and/or groups, to what threats they are vulnerable, and where and how the different factors interact to cause various forms of vulnerability. As such, vulnerability can be studied to highlight the influence of a range of factors on the well-being and livelihoods of people (O’Brien et al., 2009).

**Trust and Cooperation**

Trust has been studied from many perspectives, and different scholars have related various elements to trust. There are many definitions of trust (Luhmann, 1979; Rousseau et al., 1998; Currall and Judge, 1995; Kiyonari et al., 2006), etc. This study has adopted, as a conceptual definition of trust, that of Morton Deutsch: "To trust another person/organization to produce a beneficial event X an individual/organization must have confidence that the other individual/organization has ability and intention to produce it" (1960: 125). This definition was primarily chosen because it is considered applicable to both interpersonal and inter-organizational trust. The definition has been refined in that “event X” has been expanded in this research to include providing a specific service. Many scholars have discussed the link between trust and cooperation (Ferrin et al., 2007; Lundin, 2007; Abbas et al., 2013a). Trust and its various dimensions were taken as the central theme in a study on environmental cooperation (Tennberg, 2007). In general, the higher the level of trust, the more it facilitates cooperative behavior by an individual (Montgomery et al., 2008).

**Trust and Vulnerability**

A link between vulnerability and trust has been reported in the literature (Bidner and Jackson, 2011; Montgomery et al., 2008). Reducing vulnerability plays an important role in enhancing trust (Bidner and Jackson, 2012). High levels of trust can result from general social programs that reduce vulnerability (Rothstein, 2001; Kumlin and Rothstein, 2005). The presence of a strong welfare state has been associated with higher trust (Rothstein and Uslaner, 2005; Freitag and Buhlmann, 2009), and high inequality is linked to low levels of trust (Bidner and Jackson, 2011).

**Methodology**

**Study area:**

The study area comprises the coastal area of North Lebanon. This area was chosen due to the existence of the Integrated Management of East Mediterranean Coastlines (IMAC) Project which provides an important and detailed dataset for this area and establishes long-term mechanisms and management procedures that have been initiated and endorsed by various stakeholders in order to stimulate sustainable development of coastal zones in Lebanon with positive effects for standards of living and ecosystem health (IMAC, 2009).

The area includes over 100 km of coastline and covers around 37% to 40% of the entire Lebanese coastal area (IMAC, 2009). It encompasses 24 cities and villages divided into five main areas: Akkar, Menieh, Tripoli, Koura, and Batroun (Figure 1). Most of the Lebanese population lives in the coastal zone area (European Commission, 2006). The northern part is largely agricultural, whereas the southern coastal areas are characterized by urbanized areas with several major cities including Tripoli and Batroun (IMAC, 2007). The northern coastline has beaches and rocky terraces but many environmental pressures and problems exist in this area such as solid waste dumping and wastewater discharge. The northern coastline of Lebanon, as most if not all of the other areas of the country, currently lacks any significant coastal management (IMAC, 2007). The northern coastline is home to citizens with a range of backgrounds, religions, and social and
economic levels. This area can be considered as reflecting other areas in Lebanon, a country that is rich in history, and citizens from many religious groups and backgrounds.

**Figure 1.** Map of the study site.

*Data collection and analysis:*

Both qualitative and quantitative methods, including document analysis, 24 structured interviews with the presidents or their representatives of the villages and cities, and 499 questionnaire surveys completed by citizens in the study area, were used to fulfill the objective of the study.

The first step involved a document analysis. Various kinds of documents such as accessible UN, World Bank, and UNRWA reports, as well as NGO reports, and previous studies were sought through internet searches, visits, and contacts with official institutions such as the Ministry of Environment, Ministry of Agriculture,
High Relief Committee, Ministry of Social Affairs, Al Fayhaa Union, and the Council for Development and Reconstruction. This step aimed to collect information regarding the major impacts, particularly environmental ones, of the four episodes of armed conflict on the communities of the coastal area of north Lebanon, as well as the socioeconomic conditions to be found in the cities and villages of the study area.

Structured interviews were also carried out with key informants, mainly with the presidents or their representatives of the 24 cities and villages in the study area. The aim of the interviews was to collect information about the constitution and characteristics of each city or village along with environmental, social, economic, and political factors that could affect vulnerability in these areas. In addition, data regarding damage, and particularly environmental damage, caused by the various episodes of armed conflict were collected.

In a further step, questionnaires were distributed across the five main areas and 499 completed. The number of questionnaires for each of the main five northern coastal areas was calculated based on the sample size formula \( n = \frac{N}{1+Ne^2} \) (Israel, 1992), where \( n \) is the sample size, \( N \) is the population size, and \( e \) is the desired level of precision: 10% for each region. The main dependent variables investigated in this survey were the citizens’ perceptions of trust relationships among citizens and between themselves and public sector stakeholders, and the relationship between trust and cooperation and its effect on the environmental management processes in north Lebanon. After calculating the number of questionnaires to be completed in each area, the number of questionnaires to be completed in each village or city was calculated based on their population as a proportion of the total population of each district. The participants were chosen using systematic random sampling (K was chosen randomly). Before carrying out the main survey, a pilot test was implemented after which some of the questionnaire was amended to improve accuracy and ease its completion.

The quantitative data were analyzed using IBM SPSS Statistics 20 and the qualitative data using NVivo 10 software.

Results and Discussion

Armed Conflict and Vulnerability

The results indicated spatial variation in vulnerability within the five areas of the northern coast. This can be explained by different combinations of factors encompassing physical and socio-economic aspects.

Location, nature, plus the onset, frequency, intensity, and proximity to armed conflict are important factors in determining vulnerability and are used as indicators in this research to measure physical vulnerability. When considering these factors, the results show that Akkar and Menieh areas have the highest levels of physical vulnerability, with lower levels in Tripoli, Koura, and Batroun. Various episodes of armed conflict took place in the coastal area of north Lebanon, particularly in Akkar, Menieh, and Tripoli. For example, the 2007 Nahr el Bared Clashes took place in Nahr el Bared Camp and severely affected the surrounding municipalities. The frequency and intensity of armed conflicts are also important factors. By frequency we refer to the number of armed conflict events in an affected area and by intensity to the nature of the environmental damage in the affected areas. The coastal municipalities of Akkar and Menieh districts were the most affected in terms of frequency and intensity with more episodes of armed conflict than in the other areas. The municipalities in the Batroun and Koura areas were the least affected in terms of conflict frequency and intensity.
Another reason for this finding is the dependence of the communities in Akkar and Menieh on natural resources for income generation such as agriculture and fisheries, whereas areas such as Tripoli, Batroun, and Koura that depend on other economic sectors for income production are less impacted by environmental damage resulting from armed conflict and therefore show lower levels of vulnerability. The findings are consistent with the literature on vulnerability of place as addressed by Cutter et al. (2003) who explain that environmental change – as caused by episodes of armed conflict in this case - can result in a form of economic vulnerability for areas that rely on a single economic sector for income generation, particularly those that rely on natural resources such as agriculture, fisheries, and tourism. This vulnerability is particularly evident in the areas of Akkar and Menieh where agriculture, fishing, and trade are the most important sectors. Fishermen and farmers are among the most vulnerable and poorest families in these areas, and were the most impacted as a result of armed conflicts (FAO, 2006; Mouchref, 2008). As an example, the 2006 Israel-Lebanon war resulted in fishermen along the northern coast, and in particular in these two areas, losing their only source of income as they were forbidden to go to sea during the period of conflict and further suffered from pollution caused by an oil spill (FAO, 2006; UNDP, 2007; World Bank, 2007). The clashes at Nahr el Bared in 2007 aggravated the situation. Fishermen from areas adjacent to the Nahr el Bared Camp were banned from going to the sea, experiencing major loss of income and forcing them into debt and poverty (Hanafi, 2008; Mouchref, 2008). Farmers in those areas experienced similar impacts. Here, the 2006 Israel-Lebanon war and its aftermath caused large losses due to poor access to agricultural lands, making harvesting impossible and degrading crops, and obstructed the transportation of agricultural products (FAO, 2006; Mouchref, 2008). The Nahr el Bared clashes in 2007 had a more direct and severe impact on the farmers in this area. Agricultural lands, greenhouses, and roads were damaged, farmers were not able to reach their fields, and crops deteriorated. Transportation of products to the market was also hampered by the fighting. As a consequence of both events, farmers lost the income from two successive harvests and found themselves in a downward spiral of debt and poverty (Hanafi, 2008; Mouchref, 2008).

Other factors that can contribute to vulnerability, and which were used as indicators to assess social vulnerability, are demographics, socioeconomic conditions, deficiency in access to resources including knowledge, information and technology, inadequate access to political authority and representation, the type and density of infrastructure, social wealth including social networks and connections, individuals with special needs, the homeless, and seasonal tourism (Bankoff et al., 2004). In terms of social vulnerability, the results showed that the coastal communities of Akkar and Menieh were the most vulnerable within the study area. The coastal communities of Batroun and Koura districts showed the lowest levels of social vulnerability, with Tripoli having a medium level of vulnerability. The Tripoli area is a special case because it combines a mix of various socioeconomic, political, and religious characteristics, whereas the other areas are more uniform. Akkar and Menieh are classified as some of the most deprived areas in Lebanon (Hanafi, 2008; Mouchref, 2008; Das and Davidson, 2011). They present all the typical characteristics of poor and somewhat isolated rural communities, with weak infrastructure and low quality services. Other features such as limited income sources, low levels of education, and inadequate support from the government and civil society have produced a malicious cycle of poverty and increased the level of marginalization, thus increasing vulnerability. The social and economic marginalization of Akkar, which is remote from the economic and political center of the country, is also due to the centralization that started in the late 18th century and continues to this day. As such, most economic and development projects in Lebanon have historically focused on Beirut, while areas on the peripheries have been marginalized, leading to unequal growth between the different areas of the country. This was emphasized during the interviews when most of the participants reported that they felt neglected by the Lebanese government and marginalized from the rest of the country.

The variations in vulnerability among the areas of the northern coastline highlight the uniqueness of the study area and could be positioned in the literature as ‘place vulnerability’, referring to people’s vulnerability in a specific geographic location and combining both biophysical risk and social response (Cutter, 1996; Cutter et al., 2000).
It is well known, but rarely mentioned by scholars, that a lack of trust is endemic among various actors in Lebanese society (Ker Rault 2009:4; Allen 2011). This was also evident from the survey results where citizens were asked their perceptions as to whether a lack of trust among the Lebanese was a characteristic of Lebanese society. Results indicated that participants in general agreed with this statement with 67% of participants in Akkar, 79% in Menieh, 79% in Tripoli, 83% in Koura, and 80% in Batroun agreeing, starting from north to south. When the citizens were asked in an open question why they think there is lack of citizen–citizen trust, the most frequent answer was that they built this perception on their personal experiences.

Since this research is studying trust relationships in Lebanon within the complex reality of armed conflicts, correlations were sought between variables, including between citizens’ perceptions of whether the lack of trust among the Lebanese is a characteristic of Lebanese society and whether this lack of trust is perceived to be a result of repeated armed conflict. The results indicated a correlation between the two statements. Citizens who agree that there is lack of citizen–citizen trust also tend to agree that the lack of trust among the Lebanese is a result of the repeated conflicts. One should note that further analysis indicated that this relationship was only significant in the following areas: Akkar (Sig. =.347**), Menieh (Sig. =.250*), and Tripoli (Sig. = .424**). One possible reason for this finding is that these areas were directly involved in various episodes of armed conflict. Conversely, these relationships were non-significant in the Koura and Batroun areas, which were not directly involved in armed conflicts. This finding can also be related to those obtained when assessing vulnerability to armed conflict. The citizens of Akkar, Menieh, and Tripoli, who show higher levels of vulnerability and deprivation than those in Batroun and Koura, also think that the lack of trust among themselves is a result of the armed conflicts. This is consistent with the literature that shows that there is a link between vulnerability and trust, and that reducing vulnerability plays an important role in enhancing trust (Bidner and Jackson, 2011; Montgomery et al., 2008). Thus, the findings show that armed conflict has negatively affected individuals’ behavior within their community by increasing vulnerability and lowering trust between individuals.

This is also reflected in the behavior of individuals, not only within their social community, but also with their environment, particularly at the level of the environmental management process in Lebanon. To further understand this issue, citizens were asked their opinions on trust relationships between themselves and national-level public authorities involved in environmental management processes in Lebanon. Of the participants, 92% in Akkar, 94% in Menieh, 92% in Tripoli, 98% in Koura, and 100% in Batroun agreed that there was a lack of trust between citizens and public authorities. The most frequent reason for the lack of citizen–public sector trust in this specific area was the lack of trust in public authorities and in policymakers in general (Abbas et al., 2013b). According to the literature, implementing public programs is impossible without trust (Tyler 2003; Gilson, 2003; Tsang et al., 2009) and there is a strong link between trust and cooperation (Ferrin et al., 2007; Lundin, 2007; Woolthuis, 1999; Putnam, 1993; Edelenbos & Erik-Hans, 2007; Abbas et al., 2013 a). In addition, the higher the level of trust, the more it facilitates an individual’s cooperative behavior (Montgomery et al., 2008). This was supported in our survey when citizens were asked about their perceptions regarding the relationship between trust and cooperation in environmental management initiatives. Results indicated that 98% of citizens in Akkar, 99% in Menieh, 97% in Tripoli, 99% in Koura, and 99% in Batroun agreed that the more trust they have in a stakeholder involved in an environmental management initiative, the more they will cooperate in the initiative.

As for citizens’ views as to whether ‘there is a reciprocal relationship between trust and cooperation’ in general, 97% of participants in Akkar, 95% in Menieh, 96% in Tripoli, 93% in Koura, and 90% in Batroun agreed with this statement. This was reflected in citizens’ integration and participation in environmental initiatives. When the participants were asked if they have ever participated in an environmental initiative, 64% of the citizens in Akkar, 65% in Menieh, 65% in Tripoli, 64% in Koura, and 58% in Batroun said they had not. When the citizens were asked in an open question, why they believed there was weak participation, the
following reasons were offered. Some stated that a lack of trust in other citizens was one of the reasons. More frequently, however, a lack of trust in decision-makers and stakeholders involved in these initiatives was offered (Abbas et al., 2013b). Further, many of the citizens mentioned the armed conflicts in Lebanon as a reason for the generally weak management processes in Lebanon and specifically for the weak environmental management. This weakness of the government and its institutes, and the lack of trust among the decision-makers, is leading to the absence of a proper decision-making process. According to the citizens surveyed, most of the environmental initiatives are individually planned rather than part of a larger strategic plan. This fact discourages the citizens from participating in the initiatives. In other words, according to the citizens ‘perception, lack of trust is believed to be one of the reasons that are leading to lack of cooperation and participation of the citizens in the environmental initiatives in Lebanon.

Conclusions

This study shows that the recurring armed conflict in Lebanon is seen as one of the reasons for an increase in individuals’ vulnerability to environmental damage and has affected citizens’ trust among themselves and between them and the national public sector stakeholders involved in the environmental management process. In other words, armed conflict is considered to be one of the reasons behind a change in individuals’ behavior within their communities and with their environment. For example, citizens are now less likely to comply with laws and regulations, or volunteer for environmental initiatives. However, other reasons might also be behind the change in individual behavior such as corruption, past experiences, high levels of inequality, marginalization of certain groups or communities, personal benefits, lack of environmental awareness, and social and political tensions.

References


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