TRUST AND COOPERATION RELATIONS IN ENVIRONMENTAL MANAGEMENT OF LEBANON

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Abstract

This paper investigates trust and cooperation in the context of environmental management in Lebanon. Literature already indicated increasing environmental problems in this area that suffered from repeated episodes of armed conflict. The Lebanese government has been faced by many difficulties to address these environmental challenges. While 'trust' and 'cooperation' are referred to in literature as two of these problems, these are not systematically studied in the case of Lebanon.

We assume that there is a relation between trust and cooperation. The more there is trust relations, the more there will be cooperation and vice versa. The findings are based on structured and semi-structured interviews with public and private stakeholders, survey with citizens in northern Lebanon, and collection of secondary sources.

Results show that citizens have lack of trust in the stakeholders of the public sector at national level (96.1%) and there is low level of citizens' participation in the environmental initiatives. Furthermore, stakeholders in the public and private sector indicate that cooperation between public and private sectors in addressing environmental problems is relatively weak and that trust is one of the factors that are leading to this. At the same time, however, literature and primary data indicate that some of these stakeholders involved successfully circumvent environmental regulations by using "wasta" that is their relations of trust and cooperation with public authorities.

In Lebanon, we therefore have to distinguish between trust and cooperation as a means to hinder environmental management, and trust and cooperation as a means to enhance environmental management.

Keywords: Trust, cooperation, environmental management, Lebanon

Introduction

Trust between stakeholders is a necessary condition to overcome disagreements in environmental management (Tennberg, 2007) and there is a strong link between trust and cooperation (Ferrin et al., 2007; Lundin, 2007; Edelenbos and Erik-Hans, 2007). Moreover, trust is believed to explain why participants in different situations choose to cooperate or not (Ostrom and Walker, 2003).

On-going conflicts North-Lebanon since 1975 have caused social fragmentation (Bazzi, 2007), weak institutions and increased corruption (Leenders, 2013). Legal violations and corruption in Lebanon are considered to have resulted in a low level of trust among

citizens in government and politicians (Haddad 2002). Environmental protection is reported to be weak in Lebanon generally (IoE, 2009; Sarraf, Larsen, and Owaygen, 2004), with environmental degradation the result of political and institutional weaknesses (IoE, 2007a) and armed conflicts (Maler, 1990 in Takshe el al., 2010). Repeated disruption of public governance by conflict in Lebanon has prevented proper decision-making; development of environmental legislation and regulations (Bazzi, 2009; Leenders, 2012); enforcement of existing of environmental regulations; and formulation and implementation of master plans. Furthermore, the repeated nature of conflict has hampered continuity in developing, implementing or even managing environmental programs (IoE, 2009; MOE/UNDP/ECODIT, 2011); and has discouraged cooperation among public institutions involved with environmental protection (Habib, 2012). As a result, most, if not all, the Lebanese districts, lack effective implementation of environmental management plans and initiatives (IoE, 2009). This not only negatively affects the environment, but also public health and economic development (Sarraf, Larsen, and Owaygen, 2004; World Bank, 2007).

Environmental management is defined here as the development of strategies or activities with the goal 'to maintain and improve the state of an environmental resource affected by human activities' (Pahl-Wostl, 2007, p. 561). Three broad categories of stakeholders are involved in the environmental management process in Lebanon, whether directly or indirectly: stakeholders in the public sector, stakeholders in the private sector and citizens. The environmental management process is primarily in public sector hands both at a national level (policy makers, ministries, government and its institutes) and at the local level (mainly the municipality). Nevertheless, many public institutions at both local and national levels are administratively weak and are not able to implement developmental projects or provide adequate services to the citizens (Atallah 2012). In addition, and significantly, the private sector, which is considered a secondary stakeholder, also plays an important role in environmental planning and management in Lebanon (IoE, 2007a). The private sector is defined broadly to include private companies, academic or research centers, and experts on the basis that they are being paid for their services. Private companies work as consultants for the public sector, as contractors, or as providers of specific services, such as collecting solid waste or water supply. The public and private sector are closely related and, to some extent, interwoven. These two sectors cooperate in various forms: in project implementation, through advisory work or consultation, through contracting or through service provision. Last but not least, citizens play a crucial role in the environmental management process by complying with laws and regulations, by volunteering in environmental initiatives, or by resisting new plans.

The main objective of this article is to study the trust and cooperation relations between citizens, and stakeholders from both the public and private sectors, who are involved in environmental management in Lebanon. There are two assumptions in this article. The first is that lack of trust of citizens in the public or private sector (in general) leads to lack of citizens' participation in environmental initiatives or in the complying of citizens with the environmental laws. By initiatives we mean simple activities such as volunteering in collecting garbage from the streets or the seashore. The second is that lack of trust between the stakeholders in the public and private sector results in a lower level of cooperation in environmental management initiatives. This hampers the progress of planned projects, and sometimes results in the termination of some projects (IoE, 2007a). The research also aims to identify the reasons behind the lack of trust and cooperation.

A survey was completed by 499 citizens of the north Lebanon and a total of 49 key informant interviews were conducted with stakeholders from the public and private sector involved in the environmental management process in Lebanon. The paper is organized as follows. The next section (2) outlines general theories of trust and it relation to cooperation. The methodology is explained in Section (3). Section (4) presents and discusses the results

which were identified by citizens, and stakeholders in the public and private sector. The final section of this paper draws conclusions and recommendations.

Theoretical background

Definition of trust

Trust is a complex concept and it has been defined differently by various scholars (Luhmann, 1979; Rousseau et al., 1998; Currall and Judge, 1995; Kiyonari et al., 2006). This study adopted as a conceptual definition of trust that could be applied for various actors mainly the citizens, stakeholders in the public and private sectors: 'To trust another person /organization to produce a beneficial event X [add:] or to provide a service, an individual/organization must have confidence that the other individual/organization has ability and intention to produce it' (adjusted from Deutsch, 1960, p. 125). Although this definition may seem to be outdated, we found it valid and applicable to stakeholders involved in the environmental management process in Lebanon.

The research is positioned within Social Exchange Theory (Axelrod, 1984; Deutsch, 1958). According to this theory, citizens are willing to comply with rules and regulations, to adjust their behavior, if and when they have confidence in private or public sector organizations to be able to produce a beneficial event or to provide beneficial services. According to this research one of the means to have confidence is to have more trust relations. Similarly, actors in the private sector are willing to invest in cooperation with organizations in the public sector, or with actors in the political domain, when they expect this relation will be beneficial on the short, medium or long term.

Trust and cooperation

Trust, at various levels, enhances cooperation (Ferrin, Bligh and Kohles, 2007; Lundin, 2007; Edelenbos and Erik-Hans, 2007; Abbas et al., 2013b; Cvetkovich and Winter, 2003). One of the reasons for that is that parties recognize and feel bound by certain values such as fairness, cooperation, and reciprocity; this will encourage these parties to have more cooperation among each other (Koeszegi, 2004). A party who has earned another's trust will feel bound to that trust and will work to honor it and as a result will behave cooperatively rather than competitively toward the other (Ferrin, Bligh and Kohles, 2007).

This research argues that, in order to improve environmental management in Lebanon, it is vital to work on having stronger trust relations between the stakeholders involved; thus leading to more cooperation and reciprocity. Moreover, as observed by Ferrin et al., development of mutual trust perceptions can be based on cooperative behavior. These behaviors are said to play a significant intervening role by transmitting one party's trust perceptions to another (Ferrin, Bligh and Kohles, 2008). According to Ferrin et al., there is clear evidence that cooperation 'is a critical intervening variable in the development of mutual trust perceptions between individuals and groups' (2008, p.171).

'Wasta' concept and its relation to trust:

In Lebanon as in many other Middle Eastern societies, 'cooperation' has two faces: one that increases chances of successful implementation of policies and programs; and one that seems to attain the opposite. The cooperation between the stakeholders in public and private sector, between citizens and stakeholders in the public or private sector, takes also place through a practice that is referred to as 'wasta': an 'implicit social contract, which obliges those within the group to provide assistance (favorable treatment) to others within the group' (Barnett, Yandle and Naufal, 2013, p.2). Smith et al. describe it as 'the process whereby one can achieve goals through links with key persons in positions of high status (2012, with reference to Cunningham and Sarayrah, 1993). Barnett et al. argue that, in the Middle East, 'It [wasta] is deeply embedded in the fabric of these societies and visible in everything from the way in which governments interact with businesses to the way in which

public policy is formulated' (Barnett, Yandle and Naufal, 2013, p. 41). Similar to trust, *wasta* lowers the transaction costs and improves chances of successful cooperation – also when this is counterproductive for environmental protection, for examples on quarry industry, or waste management and reconstruction (Leenders, 2012).

This paper distinguishes between the opportunity structures which are reflected by the trust and cooperation relationships positively affecting the environmental management, and 'wasta' which is based on trust and cooperation relations with public authorities, to successfully circumvent environmental regulations. In this paper, 'opportunity structure' means the framework of rules people are encouraged to follow in order to achieve what their culture considers to be success. According to Alsop and Heinsohn, and Ibrahim and Alkire, it refers to the institutional environment consisting of formal and informal contexts in which the actors function (2005 and 2007), often simultaneously. The next section will explain the methodology and methods used in this research.

Methodology

The data gathered based on: 1) primary data from a survey completed by citizens and from interviews conducted with public and private sector's stakeholders who are involved in the environmental management process in Lebanon; 2) secondary data from previous document mainly about the environmental problems in Lebanon.

In this study in North Lebanon we invited stakeholders to comment on their trust and cooperation relations; and their willingness to volunteer in environmental initiatives, or to comply with environmental regulations. The reason for this 'indirect' approach is that testing of trust relations in an experimental setting, as explained in literature (references from psychology), combined with measures of cooperation (the type, duration, intensity and purpose of cooperation), in a hybrid and complex policy environment is unlikely to give clear results.

Secondary data

Documents analysis was carried out for the first step. Ministry of Environment reports, World Bank, and as well as previous studies such as IMAC were searched. This step aimed to collect information already existed on trust relations, environmental problems in Lebanon, and the role of trust and cooperation relation to environmental management in Lebanon.

Survey

The survey was administered to citizens of the northern coastline of Lebanon, which constitutes around 40% of the Lebanese coast (Mitri et al., 2012) (Figure 1), in the form of a questionnaire during mid-August to December 2011. The aim of this survey was to study the perception of citizens regarding trust relations between them and the public and private stakeholders involved in environmental management in Lebanon.

A total of 499 questionnaires were completed, distributed proportionally to the population in each of the five main areas based on the sample size formula $n = \frac{N}{1+N(e)^2}$ (Israel,1992); where n is the sample size, N is the population size, and e is the level of precision 10% in this case for each region and 5% for the entire study area. Most of the survey questions were in the form of a 5 point Likert scale from 1 (strongly agree) to 5 (strongly disagree). In the analysis phase, some of these 5 point scorings were converted into 2 categories (nominal scale), 0 (disagree) and 1 (agree) or 0 (No) and 1 (Yes). The remaining few questions in the survey were open. Some of the survey statements were negative and these were balanced by positive statements and some open questions.

The choice of participants assessed in the survey was based on systematic *random* sampling from each of the sub areas (K was chosen randomly). A pilot test was conducted before the main survey. The questionnaire was amended accordingly and adjusted for

accuracy and simplicity for its final form. After completing the surveys, data entry was entered into an ACCESS spreadsheet and later transferred to the SPSS package.

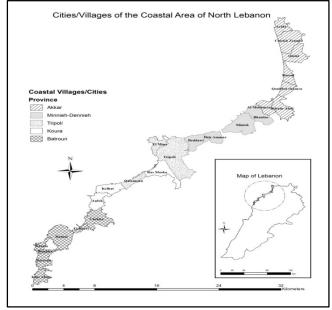


Figure 1. Map showing villages and cities in coastal North Lebanon.

The Interviews

Most of the 49 interviews made were face to face, only few were made by email. The interviews were both structured and semi- structured interviews. In the structured interviews, first all the interviewees were asked the same questions and in the same order. The answers were in the form of rating scales mainly 5 point Likert from 1 (strongly agree) to 5 (strongly disagree). Sometimes in the analysis phase, these 5 point scorings were converted into 2 categories for example: 0 (disagree) and 1 (agree). These predetermined answer- rating scales increase the reliability across interviews and the objectivity of judging the interviewees responses (Campion, Pursell and Brown, 1988).

The structured interview was used to ensure that all the interviews were assessed accurately. To enhance consistency, the same interviewer was used in all interviews. All the questions asked in these interviews were to reveal to what extent the interviewees believe there is trust and cooperation between the various stakeholders involved in the environmental management process. The semi-structured interview was used to explore the perceptions of the interviewers and allows searching for more information and clarification of answers by asking open ended questions.

This research also made sure that all interviewees have shared a common vocabulary and meanings for the key words and all the questions were in the same wording and sequence for all the interviewees. This is important for the analysis phase, especially when comparing the perception of different interviewees on a complex issue like trust, which can have many meanings. A pilot test was conducted before the main interviews and some of the questions of these interviews were adjusted for accuracy and simplicity. From the interviewees that were contacted, only few interviews were not conducted due to refusal or lack of interest of the interviewees. In general, the data was collected by sectors, public then private, starting from September 2011 till December 2012.

In the public sector, the main stakeholders interviewed were heads or representatives of heads of the 24 municipalities of the area covered; seven ministries related directly or indirectly with the environmental management in Lebanon; and three public institutes (only a few agreed to be interviewed). In the private sector, the main stakeholders interviewed were head or representatives of heads of six private companies, three academic and research centers, and six experts on different environmental issues (12 were contacted but only six

accepted to be interviewed). The private companies included were mainly consultancy companies and those that provide services. Five interviews with industrial factories were attempted, since it is believed that the industrial sector is having a negative impact on the environmental of the area (IoE, 2007a), but only one agreed to be interviewed. Private sector actors were generally not willing or able to participate in the interviews as most regarded the data they have as confidential.

Results and Discussion

Citizen perceptions of trust relations with stakeholders in the public sector

The results indicate that 96.1 % of the citizen respondents agree that there is lack of trust between citizens and public authorities involved in environmental management at national level in Lebanon. Also, 95.2% of the citizens stated that they are not satisfied with the government environmental management process (e.g. laws, decision making). This research agrees with Hetherington (1998) who state that satisfaction with the government can be linked to people's expectations, and to what extent people perceive that the government is operating effectively; in other words to the political trust. When the citizens were asked if they have ever participated in an environmental initiative, 63.3% of them replied "No". When they were asked in an open question to state the reasons for their lack of participation, lack of trust in decision makers and stakeholders who plan or get involved in these initiatives was frequently mentioned (Abbas et al. 2013a).

The result is in agreement with social exchange theory. Citizens' lack of trust, and thus lack of confidence in the stakeholders of public sector, results in the lack of citizens' participation in the environmental initiatives, or in the complying of citizens with environmental laws. Consequently, this negatively affects the environmental management process in Lebanon. In order to improve environmental management we need to investigate the underlying causes that are resulting in citizens' lack of trust in the stakeholders of public sector; this will enhance the citizens' cooperation in both environmental initiatives and in complying with laws. This is also considered to be the case in the relationship between trust and cooperation (Ferrin, Bligh and Kohles, 2007; Lundin, 2007; Edelenbos and Erik-Hans, 2007, Abbas et al. 2013a; Abbas et al. 2013b). The more citizens trust the institutions involved in environmental policy procedures and management, the more they are willing to cooperate and accept changes following implementation of environmental policies (Cvetkovich and Winter, 2003).

Citizens' responses to statements in the survey also confirm this finding, especially in their answers to the following two statements: 'The more you trust decision makers and stakeholders involved in the environmental management process, the more you (as citizen) are willing to comply with relevant laws and regulations' and 'For you as a citizens, the more you trust a stakeholder involved in an environmental management initiative, the more you are likely to cooperate in this initiative.' Results indicate that citizens strongly agree that the more they have trust in the stakeholders or decision makers, the more they are likely to cooperate in the initiatives (99.2%) and are willing to comply with the laws and regulations (97.4%).

Public and private stakeholders' perceptions of trust and cooperation relations between stakeholders in the public and private sectors:

In the interview, the question: 'From your experience, how can you evaluate cooperation between the stakeholders in the public and private sectors involved in the environmental management process?' was asked of both the public and private interviewees. 23 out of 34 public stakeholders and 10 out of 15 private stakeholders perceive that there is a weak cooperation between the public and private stakeholders involved in the environmental management process in Lebanon. Results reveal that this weak cooperation between the main sectors involved in the environmental management process is negatively influencing trust relations; this idea is confirmed by Ostrom and Ferrin (2007) and Bligh and Kohles (2008).

When the public and private interviewees were asked an open question why they believe there is a weak cooperation, the following reasons were given. According to public sector stakeholders, ministry representatives stated that the main reasons behind improving and enhancing this cooperation are: weak administration, default in the state, lack of continuity in the cooperation process, lack of trust from private sector stakeholders in public sector stakeholders and, lack of budget and human resources in the ministry. Of the public institutes, only one of the interviewees answered this question and stated that the lack of agreement among the various stakeholders is making the cooperation weak.

According to the stakeholders in the private sector, the main reasons for this weak cooperation between public and private stakeholders are: deficiency and weakness in municipality organization; lack of cooperation of the municipality with the requests and demands of private companies; lack of trust from private sector stakeholders in public sector stakeholders. Interviewees from academic and research centers mention the following reasons: no real environmental management process in Lebanon; lack of trust from private sector stakeholders of in public sector stakeholders; lack of expertise and human resources or financial resources among stakeholders in public sector makes work harder; and unwillingness of public sector stakeholders to cooperate with stakeholders in the private sector, even though stakeholders from private sector want this. For many experts one of the most reasons for weak cooperation is trust relations. Other reasons mentioned by some experts are: private agendas; the bureaucratic system; and lack of motivation among public sector stakeholders. Nevertheless, there is some cooperation through funding mechanisms and consultation, advisory services and networks (public/private sector).

Both public and private interviewees were asked if they agree that this cooperation between the stakeholders in the public and private sectors involved in the environmental management process in Lebanon is related to trust relations? The results show that 21 out of 34 of the public stakeholders and 9 out of the 15 private stakeholders agree that cooperation among public sector stakeholders is related to trust, a finding similar to other studies (Ferrin, Bligh and Kohles, 2007; Lundin, 2007; Edelenbos and Erik- Hans, 2007). When parties trust the other party they feel bound by a certain values such as cooperation and reciprocity, and thus these parties will be encouraged to have more cooperation with each other (koeszegi, 2004; Ferrin, Bligh and Kohles, 2007). The results presented here demonstrate that, based on the public and private stakeholders' perspectives, having better trust relations between public and private stakeholders involved in the environmental management process is essential for having more cooperation among these stakeholders. This will enhance environmental management by having more successful decisions, developmental plans or environmental projects.

There are two other answers from the public and private stakeholder interviews that confirm this idea. The first is to the question: 'From your experience do you agree that the more we have trust, among the stakeholders in public and/or private sectors involved in the environmental management process, the more we will have cooperation between them? And the second question is: 'If you have trust and cooperation among the stakeholders involved in decision making, then more and better decisions will be taken regarding the environmental management process in Lebanon'. In the answers, 34 out of 34 public and 14 out of 15 private interviewees said they agree with these two statements.

Trust and cooperation relations that hinder the environmental management

Trust and cooperation relationships with certain public authorities can be used by some stakeholders to obstruct measures and institutions that could reduce environmental problems.

Some of the ministry' representatives stated that it is known that some Lebanese policemen benefit from lack of implementation of certain environmental laws. Some private

sectors actors use their 'wasta', or even bribe policemen to obtain complicity with their lack of compliance with law. This illustrates how trust and cooperation can be used to obstruct measures that could reduce environmental problems. This observation was also confirmed by other studies that mention the "wasta" concept and how it is deeply embedded in the fabric of many Middle Eastern societies, including Lebanon (Barnett, Yandle and Naufal, 2013). Negative manifestations of trust and cooperation in relation on the environmental management process also include examples such as solid waste management. For example, it is estimated that Beirut municipality can collect its own waste at about half the cost currently charged by the private companies (Antoun et al., 1998; Wakim, 1998).

Some private companies that deal with solid waste management in Lebanon use their trust and cooperation relationships with some Lebanese political leaders or public institutes to get agreements with government, or to renew initial agreements (Leenders, 2012). According to Michael al Murr, a previous interior minister, 70% of a certain company's cost went in commission to top leaders in the government (Daily Star 21 July 2003 in Leenders, 2012). Sometimes these private companies also give the leaders a controlling stake in the companies (Leenders, 2012). In other words, private companies dealing with solid waste management trust the leaders, because of personal interest and financial benefit, to cooperate with them and assist them in taking certain agreements and contracts with the government. This was confirmed by a manger of a private company, who stated that politics goes very well with the garbage business you have to build trust and close relations with politicians and they want a service from you in return (Daily Star 13 April 1999 in Leenders, 2012). When citizens were asked their opinion about this issue, many agreed, saying that from their experience they have noticed that nowadays some of the citizens and private sector stakeholders use the "wasta" with their leaders to circumvent laws, including environmental laws. According to citizens' perceptions, even public sectors stakeholders use "wasta" with public authorities in high positions to by-pass laws and regulations. It is important to mention that this research have no real evidence of this process, it is only reporting perceptions and supporting it by some literature. Hopefully this process will be studied further in the future by other researchers.

This finding illustrates that when discussing trust and its relation to environmental management in Lebanon, it is important to distinguish between the 'positive' and 'negative' relations of trust and cooperation.

Conclusion

In summary, the results demonstrate that citizens have a lack of trust in public sector stakeholders at national level. Also, there is a low level of citizens' participation in environmental initiatives in Lebanon. This research agrees with the social exchange theory and argues that lack of trust in public or private stakeholders is one of the reasons that lead to the lack of citizens' participation in environmental initiatives, or to citizens complying with environmental laws. Most of the public and private sector interviewees state that there is weak cooperation between public sector stakeholders and private sector stakeholders involved in the environmental management process in Lebanon. This weak cooperation is perceived by both public and private participants to be related to trust relations. Other reasons also mentioned by the public and private sector interviewees that can explain this weak cooperation between public and private sector stakeholders involved in the environmental management process in Lebanon. For example, weak administration among public sector stakeholders, lack of budget, lack of human resources in public institutions, and lack of motivation among the stakeholders in the public sector.

Repeated conflict makes Lebanon a particularly interesting case study to investigate the role of trust on the environmental management. Academic studies have rarely mentioned the lack of trust although it is believed to be characteristic of interactions between various actors in Lebanese society (Ker Rault, 2009; Allen, 2011). Nevertheless information about

lack of environmental protection and weak environmental management processes in Lebanon do exist (IoE, 2007a; Abi Saab, 2012; Sarraf, Larsen and Owaygen, 2004).

The results presented here demonstrate the link between trust and cooperation. Trust and cooperation relationships between the various stakeholders involved in the environmental management process in Lebanon are one of the factors that enhance the environmental management process. Although trust and cooperation is found to be weak, some findings also showed that this relation is used to hinder the environmental management; specifically when some stakeholders use the 'wasta' concept to effectively obstruct measures that could reduce environmental problems. This finding was also supported by other studies (e.g. Leenders, 2012; Wakim, 1998). This research stresses that when there is discussion of trust relations in the environmental management, we have to distinguish between trust and cooperation as a means to obstruct environmental management, and trust and cooperation as a means to enhance environmental management.

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References:

Abbas, N. H., Van der Molen I., Nader M., and Lovett J. 2013a. Citizens' perceptions of trust relations in the environmental management process in North Lebanon, Under Review.

Abbas, N. H., Van der Molen, I., Nader, M. R., & Lovett, J. C. 2013b. Perceptions from the Public and Private Sector on Trust and Cooperation in the Field of Environmental Management in Lebanon. *Academic Journal of Interdisciplinary Studies*, 2(8), 571.

Abi Saab, M A. 2012. Marine Biodiversity coastal waters. In: Kouyumjian & Hamze, eds. *Review and perspectives of environmental studies in Lebanon*. Lebanon: National Council for Scientific Research, pp. 1-30.

Allen, M. 2011.Trust: the absent keystone in Lebanese democracy. *Middle East Political AND Economic Institute*. Available at :< http://mepei.com/in-focus/3800-trust-the-absent-keystone-in-lebanese-democracy> [Accessed 12 February, 2013].

Alsop R and Heinsohn N. 2005. *Measuring Empowerment in Practice: Structuring Analysis and Framing Indicators*, World Bank Policy Research Working Paper 3510.

Antoun, R. et al. 1998. Waqi' al- Baladiyat fi Lubnan wa 'Awaiq al -Musharika al - Muhaliya wa at-Tanmiya al- Mutawazina. Beirut: Lebanese Centre for Policy Studies.

Atallah, S. 2012. Establishing Regional Administrations for Integrated Development. *The Lebanese Center for Policy Studies* (LCPS), 2. Available at: < http://www.lcps-lebanon.org/publications/1347371684-policybrief_2.pdf.> [Accessed 24 May 2013]

Axelrod, R. 1984. The evolution of cooperation. New York: Basic Books.

Barnett, A., Yandle, B., and Naufal, G. 2013. Regulation, Trust, and Cronyism in Middle Eastern Societies: The Simple Economics of 'Wasta'. *The Journal of Socio-Economics*, 44, pp. 41-46.

Bazzi, M. 2007. Lebanon's Bloody Summer. *The Nation*, 16 July. Available at:http://www.thenation.com/article/lebanons-bloody-summer>[Accessed 9August 2012].

Bazzi, M. 2009. *In Lebanon: New Government, Old Politics*. Interviewed by Bernard Gwertzman. [Council on Foreign Relations, 12 November]. Available at: http://www.cfr.org/publication/20749/in_lebanon.html [Accessed 5 February 2013].

Campion, M., Pursell, E., and Brown, B. 1988. Structured interviewing: Raising the psychometric properties of the employment interview. *Personnel Psychology*, 41, pp. 25-42.

Cunningham, R.B. and Sarayrah, Y. 1993. Wasta: The Hidden Force in Middle Eastern Society. Westport, Conn: Praeger.

Cvetkovich, G. and Winter, P. L. 2003. Trust and social representations of the management of threatened and endangered species. *Environment and Behaviour*, 35: 286–307.

Deutsch, M. 1958. Trust and suspicion. *Journal of Conflict Resolution*, 2, pp.265–279.

Deutsch, M. 1960. The effect of motivational orientation upon trust and suspicion. *Human Relations*, 13, pp. 123-139.

Edelenbos, J, and Erik-Hans K. 2007. Trust in complex decision-making networks: A theoretical and empirical explanation. *Administration & Society*, 39, pp. 25–50.

Ferrin, D. L., Bligh, M. C., & Kohles, J. C. 2007. Can I trust you to trust me? A theory of trust, monitoring, and cooperation in interpersonal and intergroup relationships. *Group and Organization Management*, 32(4), pp.465-499.

Ferrin, D.L., Bligh, M.C., & Kohles, J.C. 2008. It Takes Two to Tango: An Interdependence Analysis of the Spiraling of Perceived Trustworthiness and Cooperation in Interpersonal and Intergroup Relationships. *Organizational Behavior and Human Decision Processes*, 107(2), pp.161-178.

Habib, A. 2012. Demography and Socio-Economic Characteristics of the Lebanese Coastal Population. In *Review and perspectives of environmental studies in Lebanon* (pp. 265-295). Edited by Kouyumjian & Hamze, National Council for Scientific Research. Lebanon.

Haddad, S. 2002. The relevance of political trust in postwar Lebanon. *Citizenship Studies*, 6 (2), pp.201-218.

Hetherington, M.J. 1998. The political relevance of political trust. *American Political Science Review*, 92(4), pp. 791-808.

Ibrahim S and Alkire S. 2007. Agency and Empowerment: A Proposal for Internationally Comparable Indicators, *Oxford Development Studies* 35(4), pp. 379-403.

Institute of Environment (IoE). 2007a. IMAC: Status Report. Lebanon: University of Balamand.

Institute of Environment. 2007b. *IMAC: Assessment of the institutional and legal setting for coastal zone management in Lebanon: Final report.* Lebanon: University of Balamand.

Institute of Environment. 2009. IMAC: Project Summaries. Lebanon: University of Balamand.

Ker Rault, PA. 2009. Reconsidering public participation and governance style in integrated water management: moving towards pragmatic contextual participative strategy. In Jenny Pope (Ed.), *IAIA Ghana Conference Proceeding* (pp. 1-6). Fargo, USA: IAIA. Available at: http://www.iaia.org/iaia09ghana/documents/cs/CS2-5_Reconsidering-public-participation-and-governance.pdf.> [Accessed 28 March 2013]

Koeszegi, S. T. 2004. Trust-building strategies in inter-organizational negotiations. *Journal of Managerial Psychology*, 19, pp. 640-660.

Leenders, R. 2012. Spoils of Truce: Corruption and State-building in Postwar Lebanon. Ithaca: Cornell University Press.

Lundin, M. 2007. Explaining cooperation: How resource interdependence, goal congruence, and trust affect joint actions in Policy Implementation. *Journal of Public Administration Research and Theory*, 17(4), pp. 651–672.

Ministry of Environment, UNDP and ECODIT. 2011. State and trends of the Lebanese environment 2010. Lebanon: Wide Expertise Group.

Mitri, G., et al. 2012. Monitoring Landcover Changes on the Coastal Zone of North-Lebanon Using Object-Based Image Analysis of Multi-Temporal Landsat Images. In: EARSEL, *1st EARSeL Workshop on Temporal Analysis of Satellite Images*. Mykonos, Greece. Available at:http://www.earsel.org/SIG/timeseries/pdf/proceedings/proceedings_041.pdf.>[Accessed 25 January, 2013]

Ostrom E. 2007. Collective action and local development processes. *Sociologica* 3, pp.1–32. Ostrom, E and Walker J. 2003. Trust and reciprocity: interdisciplinary lessons for experimental research. In: Ostrom E, Walker J (eds) *.The Russell sage foundation series on trust*. New York Russell Sage Foundation.

Pahl-Wostl, C. 2007. The implications of complexity for integrated resources management. *Environmental Modelling & Software*, 22(5), pp.561-569.

Sarraf, M., Larsen, B and Owaygen, M. 2004. *Cost of Environmental Degradation: The case of Lebanon and Tunisia*. Washington DC: World Bank.

Smith, P. B., H. J. Huang, C. Harb, and C. Torres. 2012. How Distinctive Are Indigenous Ways of Achieving Influence? A Comparative Study of Guanxi, Wasta, Jeitinho, and 'Pulling Strings'. *Journal of Cross-Cultural Psychology*, 43(1), pp. 135-150.

Takshe, A., et al. 2010. Dealing with pollution from conflict: Analysis of discourses around the 2006 Lebanon oil spill. *Journal of Environmental Management*, 91(4), pp. 887-896.

Tennberg, M. 2007. Trust in international environmental cooperation in Northwest Russia. *Cooperation and Conflict*, 42(3), pp. 321-335.

Wakim, N. 1998. *Al-Ayadi as-Sawd*. Beirut: Shirkat al Matbu'at li-al-Tawzi' wa al-Nashr.

World Bank. 2007. Republic of Lebanon Economic Assessment of Environmental Degradation Due to July 2006 Hostilities. Report No. 39787-LB, Lebanon: Sustainable Development Department Middle East and North Africa Region.