



Munich Personal RePEc Archive

**Political economy of citizens'
participation in environmental
improvement: The case of Istanbul**

Adaman, Fikret and Gökşen, Fatoş and Zenginobuz, Unal

September 2003

Online at <https://mpra.ub.uni-muenchen.de/375/>

MPRA Paper No. 375, posted 10 Oct 2006 UTC

FROM THE CITIZENS' PERSPECTIVE THE MULTI-FACETED ASPECTS OF ENVIRONMENTAL PROBLEMS: THE CASE OF ISTANBUL*

Fikret Adaman^a Fatoş Gökşen^b E. Ünal Zenginobuz^c

September 2003

Summary: We aim at questioning, within a political economy framework, the institutional context of environmental policies for the case of Turkey in general and of Istanbul in particular. The paper is centred around a survey study conducted with citizens of Istanbul (n=1565), a metropolitan city whose population is around 9 millions, with regard to their attitudes and behaviours on environmental issues, together with a set of in-depth interviews (n=16) carried out with representatives of business, NGOs, trade unions, and bureaucrats. The point of departure of the paper is the claim that environmental policies are likely to alter, overtly or covertly, the income distribution of societies, and *ipso facto* those who will be worse off in the *ex-post* sense will have a clear incentive to influence public authorities and politicians (be they central or local units) in not implementing them—their success depending of course on the extent to which the governing body is not sterile but open to corruption (the so-called “government failures”). The implication of the existence of such government failures on the enforceability of regulations dealing with environmental issues is certainly an area to which attention has recently been given, both at theoretical and empirical levels, where the issue of institutional context has emerged as one if not the important issue in addressing such failures. Turkey, being one of the clear examples of the existence of such corruptive elements, should certainly offer rich inputs to the said discussion, and the paper makes an attempt to questioning the institutional aspect of environmental policies from the point of view of citizens of Istanbul and of different stakeholders.

1. INTRODUCTION AND BACKGROUND INFORMATION

The purpose of this chapter is to make a contribution to the analysis of environmental problems in Turkey from a political economy standpoint. The paper is centred around two sources of data. The first data source comes from a survey study conducted with citizens of Istanbul, a metropolitan city with a population of 9 millions, and the second data source comprises a set of in-depth interviews carried out with representatives of business, NGOs, trade unions, and bureaucrats. The survey and in-depth interviews provided information with regard to their positions on environmental issues and their preferred institutional framework for regulation and environmental policies.

Environmental degradation is known to be associated with overuse of natural resources and/or disposal of waste above the assimilative capacity of the ecosystem. The lack of well-defined property rights and the existence of market failures have typically been referred to in explaining the “economic rationale” of such problems (see, for a standard account, Pearce and Turner [1990]). It is also a well-established fact that a distorted wealth and income distribution coupled with the existence of a relatively high portion of society living under the poverty line would make environmental degradation more aggravated (see *e.g.*

* This paper is based on a research undertaken with an award under the Middle East Research Awards Program in Population and Development (ME Awards) of the Population Council (Project: MEA 385), for which the authors are grateful. The authors would also like to thank, without implicating, Begüm Özkaynak for her very able assistance, the FREKANS Research Company for their careful work in conducting the survey, and Cem Behar, Ali Çarkoğlu, Korel Göymen, Oğuz Işık, Martin O'Brian, Begüm Özkaynak, İnsan Tunalı and Tansel Yılmaz for their stimulating comments. This paper has some overlapping points with an earlier paper of one of us (Adaman [1997]) as well as two companion papers (Zenginobuz *et al.* [2000]; Gökşen *et al.* [2002]) that are based on the mentioned study.

^a Dept. of Economics, Boğaziçi University, Bebek, Istanbul, 80815, Turkey. <adaman@boun.edu.tr>. Corresponding author.

^b Dept. of Sociology, Koç University, Istanbul. <fgoksen@ku.edu.tr>

^c Dept. of Economics, Boğaziçi University, Istanbul. <zenginob@boun.edu.tr>

Inglehart [1990, 1995]; Boyce [1994]; Brechin & Kempton [1994]; Duraiappah [1998]). Whatever the causes and the explanation of environmental problems, a “social-guardian” government, be it local or central, can take necessary actions to curb degradation, by *inter alia* assigning property rights on the use of natural resources, enforcing direct control over pollutants and devising incentive mechanisms to encourage the use of abatement facilities.

Yet, capability does not always bring about implementation! One should also pay attention to the question of “[w]hether government activities are undertaken costlessly and selflessly by public servants who can omnisciently determine exactly what constitutes a socially optimum set of techniques and volumes of production of various goods and services” (Krueger [1994:422 *et seq.*]). As in most instances environmental policies would alter, in an implicit or explicit way, the income distribution of societies (see e.g. Boyce [1994]), those who will be worse off in the *ex-post* sense as a result of the implementation of a pro-environmentalist policy will have a clear incentive to bribe public authorities (be they central or local) not to implement them—their success depending of course on the extent to which politicians and civil servants are not “sterile” but open to corruption (thus the so-called “government failures”). The implication of the existence of such government failures with regard to the enforceability of regulations pertaining to environmental issues is certainly an area to which attention has recently been given, both at theoretical and empirical levels, where the issue of institutional context has emerged as one if not *the* important issue in addressing such failures (Baumol [1987]; North [1990]; Rose-Ackerman [1999]). Turkey, being one of the clear examples of the existence of such corruptive elements, may offer rich inputs to the said discussion, and the present paper makes an attempt to questioning the institutional aspect of environmental policies from the point of view of different stakeholders on environmental issues and the public at large.

Turkey’s ever-increasing environmental problems, which have been escalated in the post-1970 era as a consequence of high rates of industrialisation, urbanisation and tourism activities that have not been properly planned and regulated, together with the widening gap of wealth and income distribution, have been of great magnitude. The main ones are: air pollution in most cities (especially in shanty towns) and industrial spots; household and industrial discharges polluting ground, thermal and mineral waters, rivers, lakes and coastal zones; discharges coupled with inappropriate use of fertilisers polluting the soil; heavy soil erosion in most parts of the country; early and excessive grazing as well as building and infrastructure construction threatening forests, pastures and grasslands; and noise pollution in most cities (see Türkiye Çevre Vakfı [1999]).

This being said, however, even a quick glimpse will unveil that Turkey has a substantial body of legislation regarding environmental protection, with well-defined responsibilities and duties that are assigned to different public institutions (Yaşar [1999]; Adaman [1997]; Keleş and Hamamcı [1993]). Not only have environmental rights been clearly defined in the Constitution, but also public authorities have

been empowered within a well-constructed organizational and structural scheme to be able to deal with environmental issues.¹ This paradoxical situation of having, on the one hand, a regulatory set-up and mandate and, on the other, an ongoing degradation of nature thus needs an explanation: it goes without saying that either the government does not in fact consider environmental issues at its priority level (but at the same time does want to give itself a pro-environmentalist image), or a set of corruptive elements has been causing “government failures” in blocking the implementation of environmental rules—or both (for a detailed discussion, see Adaman [2002, 1997]). Whatever the reason(s), the legislative body as of today can by and large be categorised as not fully effective, to say the least.

The existence of poverty in the country is clearly visible both in the shanty towns of major cities (Istanbul being a prime example), the occupants of which are mainly employed in the informal sector with low salaries and virtually no social protection, and in most rural areas, where land workers on average are reluctant to switch to environmentally-friendly but more costly technologies, must certainly be playing a role in the ongoing degradation (Adaman [2002]; Türkiye Çevre Vakfı [1999]; UNDP [1998]).² When the poverty element is considered, the central government and local authorities may understandably find themselves inclined not to enforce tough environmental regulations, as this determination may well put some of the poor below the subsistence level.

This noticed, however, recent studies have also indicated that corruptive actions are widespread in the country, thus forming “black holes” in the public arena (*Transparency International* [2002]; Adaman and Çarkoğlu [2000]; Adaman *et al.* [2001]).³ It is likely that of these black holes a portion is to do with environmental issues. A related issue is the erosion of people’ trust in public institutions. A lack of trust may be either because of insufficient competence on the part of public institutions, or because of the existence of corrupt activities, or both. In a recent survey on this topic conducted with 3021 households as representatives of the urban population of Turkey, Adaman *et al.* [2001:40-45] showed that households gave, on average, the scores of 3.9, 3.2, and 2.1 out of 10, where 10 was meant full trust and 0 no trust at all, in the central government, the Parliament, and the political parties, respectively (see also Adaman and Çarkoğlu [2000]; Esmer [1999]). The same survey also revealed that AKUT, the Rescue and Search Team, emerged as one of the most trusted institutions, along with the Armed Forces, scoring 7.6 and 7.7, respectively. It is telling that an NGO, which was originally established as a mountain rescue team but later

¹ Cf. the Article 56 of the present Constitution: “Everyone has the right to live in an unpolluted environment, enjoy on an equal basis the beauty of nature. The state and citizens have both responsibility in preventing pollution and protecting as well as enriching the environment.” The formation of an undersecretariat of environment goes back to 1978--this body was then transformed in 1991 into the ministry of environment.

² Although the absolute poverty does not seem to be a major problem in Turkey (those getting 1USD or less per day is 2.5% of the population), relative poverty does indeed. The GINI index fluctuates around 45%, thus representing a rather unequally distributed income (DPT, 2001).

³ According to *Transparency International*, Turkey’s corruption perception index is found to be 3.2 out of 10, where 10 means not corrupt at all and 0 totally corrupt, ranking her at 62nd out of 102 countries (*Transparency International* [2002]).

extended its activities to cover natural disasters as well and subsequently conducted many monumental operations after the devastating August 1999 earthquake, could get the trust of the public at large. Another noteworthy outcome is the trust felt in municipalities. Here, the urban population gave a trust score of 4.4, which is just below the midpoint of 5 but certainly above the scores for the Parliament and the central government.

As important as the institutional framework are individuals' concerns, attitudes and behaviours towards environmental protection. To what degree are individuals concerned with environmental problems? Do they make a differentiation between local and global environmental problems? To what extent do they act in an environmentally-friendly way? Are they politically active in relation to environmental issues? Are they fully committed to the environmental cause? Are they ready to make sacrifice, if necessary? These and other related questions are of course crucially important in understanding individuals' positions *vis-à-vis* environmental issues. Needless to say, the personal attributes and the "rules of the game" should be treated as being in interaction with each other. On the one hand, the rules have an impact over individuals' positions and, on the other, individuals have a right and power to alter the institutional framework. The exploration of this junction constitutes the centre of gravity of this paper.

To achieve our aim we draw on two sources of data. The first is a survey study (with a total of 1565 interviews) that we conducted in Istanbul (in December 1998)—a large metropolitan city in a developing country—intended to draw out the concerns, attitudes, political activism, and commitment of the citizens of Istanbul on environmental issues. Special attention was paid to the commitment dimension through asking our respondents to reveal their willingness to pay (WTP) for environmental improvement. WTP is thus used as a proxy for commitment, for reasons to be explored later. Furthermore, in order to address the issue of the distinction between local versus national versus global environmental issues, sea pollution (the Bosphorus) in Istanbul, soil erosion in Turkey, and ozone depletion were chosen as three *separate* environmental issues to be valued. Finally, respondents were also asked to reveal their choices regarding the institutional body that they think should be responsible in implementing the improvement project of the three environment issues.

The second source is information gathered from a set of in-depth interviews (n=16), conducted between February and March 1998 with representatives of industry, NGO's, local and central government authorities, and labour unions, which were aimed at eliciting different stakeholders' positions on environmental issues. The interviews also probed respondents' positions on possible actions that can be taken at local/national/global levels with regard to environmental protection and their reactions to the possibility of forming a co-ordinating agency to seek and sustain a consensus among different interest groups on environmental issues.

In what follows we first present and analyse the results of the quantitative survey and then present and evaluate the in-depth interviews. On the basis of these evaluations we provide a better picture of the political economy of the environment in Istanbul and make suggestions in improving the preservation of the nature. We also suggest some new areas of research.

2a. RESULTS: QUANTITATIVE STUDY

Sample

The questionnaire of our study was administered (between 10-31 December 1998) to a total of 1565 households drawn from metropolitan Istanbul (by using a clustered random sample).⁴ First, 125 districts were drawn from a total of 567 districts (with probabilities proportionate to their population counts); second, in each district 4 blocks were selected randomly; finally, three households were chosen in each block using a table of random numbers.⁵ All households were asked questions on general environmental issues (viz. concern, attitudes, and political activism) and on demographic characteristics. Concerning the questions on commitment (WTP), the total sample was divided into three, with a view to extracting people's *willingness to make sacrifice in monetary terms* for three different environmental issues. Each household in a block was assigned a version that involved a different environmental issue to be considered, which assured that there were three sub-samples, one for sea pollution in Istanbul (n=524), one for soil erosion in Turkey (n=524), and one for global ozone depletion (n=517), each roughly of equal size. As already mentioned, sea pollution (Bosphorus) in Istanbul was chosen as the local environmental problem to be valued, a concrete environmental issue for the citizens of Istanbul; the soil erosion, which is not particularly a problem for Istanbul but a major environmental issue at the national level, was chosen as the national environmental problem; finally, ozone depletion was chosen as the global environmental issue to be valued. The ex-post statistical analysis revealed that the three sub-groups are not statistically different from each other in terms of demographic characteristics.

Measures

Environmental Concern: The question that probed environmental concern and awareness listed a total of 15 different environmental problems, and respondents were asked to report their degree of concern for each problem. The possible answers consisted of "not concerned", "somewhat concerned", "much concerned" and "never heard". The percentages of "much concerned" together with "never heard" are

⁴ Main characteristics of our sample are as follows: 55.1% are female; the mean age is 37.9; 67.4% are born in Istanbul; the mean education is 8 years 3 months; the average household size is 4.6.

⁵ Lists of voter registration that were constructed for the 1995 parliamentary elections were taken as the base for the sampling, according to which population above 18 years of age was known as 4,869,598.

provided in Table 1. “Never heard” category was used so as to tap awareness rather than knowledge. Respondents were not asked to describe the probed environmental problems; as such, this study has not attempted to tackle the problematic concept of “environmental knowledge”. Knowledge of the environment is not a unidimensional concept; besides mere awareness, it involves detailed information (educated information) about several environmental problems and their consequences. Moreover, knowledge is highly interdependent with concern: knowing something about an environmental issue leads to concern that in turn leads to further learning about the environment (Arcury [1990]). The discussion on the nature of environmental knowledge is beyond the scope of this paper.

As Table 1 makes clear, people in Istanbul seem to be much concerned with not all but most environmental problems. These figures are in conformity with the earlier work that was conducted by Dunlap *et al.* (1993).⁶ For the use in statistical estimations, however, instead of taking these 15 items separately, we have constructed a 0-1 point scale through a factor analysis, whose loadings were used as the variable of environmental concern.

[Insert Table 1]

A telling initial observation is that awareness drops when the issues of tropical deforestation, acid rain, and global warming and greenhouse effect are questioned. More specifically, one notices that more than a quarter of our sample have indicated that they had not heard of problems of global warming and greenhouse effect, despite their being under media coverage for some time. This indicates that a group of citizens of Istanbul are not aware of some of the surrounding environmental problems. The lack of awareness of environmental issues was tested further. Despite the fact that the impact of NGOs in the environmental political arena in Turkey can by no means be categorised as marginal, of our sample close to three fifth (58%) were *unable* to spell out correctly the name of at least *one* of such organisations.

Attitudes: Expressing concern is one thing, showing an attitude that can be defined as pro-environmentalist is another. To unravel this, respondents were asked to indicate their attitudes towards a list of four pro-environmentalist actions with regard to their daily behaviour: (1) To carry out litter for themselves if no litter bins are available nearby; (2) To put aside glasses, plastics and metals from the rest of the garbage for recycling purposes; (3) To put aside newspapers and other papers from the rest of the garbage for

⁶ When a factor analysis is conducted, air pollution, soil pollution, sea pollution, soil erosion and solid waste (garbage) turn out to constitute one group (that can be labeled as ‘local environmental concern’), whereas global warming and green house effect, tropical deforestation, ozone depletion, acid rain, nuclear waste and extinction of species turn out to constitute another group (that can be labeled as ‘global environmental concern’). Further analyses indicate that the mean of the local concern is statistically higher than that of the global one. (For details, see Gökşen *et al.* [2002].)

recycling purposes; (4) To bring along their own bag while shopping. All such activities require a personal cost, however minimal in some cases, and their return is very seldom personal gain (e.g., it is extremely rare in Istanbul that you will be charged for the plastic bag to be supplied by the shop, or that you will be fined for throwing away your litter). Hence, an affirmative answer can be understood as a pro-environmentalist action. The results are tabulated in Table 2. For use in statistical computations, however, the following recording was designed: The one who indicated “always” or “sometimes” for an item was given a score of 1, and “never” a score of 0. As such, the maximum score one respondent can take appears as 4 (if s/he replies “always” or “sometimes” to all the four questions) and the minimum one as 0 (if s/he replies “never” to all the four questions). Further computations reveal that of our population 14% have scored 4, while 4% have scored 0, and the rest getting scores in between 0 and 4 (exclusive).

[Insert Table 2]

Political Activism on Environment: To have a pro-environmentalist attitude in daily life is certainly an important demarcation line, but to be politically active in the fight against the degradation of nature is yet another dimension, especially when one acknowledges the well-known collective action problems (Olson [1965]). To probe this dimension, respondents were asked to report whether or not they undertook a political action on the issue of environmental protection in the form of participating in a campaign, of writing a letter of concern to an official institution, and of informing the media on environmental issues. The results are presented in Table 3. For the use in statistical computations the following recording was devised: Those who gave a No answer to all the three questions were coded as “not active”, while those who gave one Yes answer or more were coded as “active”. According to this criterion, 14% of our population are categorised as politically active group.

[Insert Table 3]

Willingness-to-pay in Conjunction with Bosphorus Pollution/Soil Erosion/Ozone Depletion Problems: The survey study aimed at capturing the intensity of commitment towards environment protection by asking about people's WTP for specific improvements of well-defined environmental problems of Bosphorus pollution/soil erosion/ozone depletion. As such, the WTP method was employed as an indicator of attitude strength regarding environmental improvement. And the “contingent valuation” technique was used to reveal that information. The contingent valuation module started with a detailed description of the environmental problem included in the version (Bosphorus pollution/soil erosion/ozone depletion) that was assigned to the respondent. In each case verbal information was complemented with visual information in

the form of figures and charts. The description of the problem was followed by the description of a project, which, if adopted, would bring about well-defined improvement in the quality of the environmental good under consideration. The willingness to pay question used, following Carson *et al.* [1992], a binary discrete-choice referendum elicitation format, asking whether the respondent would approve (vote for) the proposed project that would solve the problem at hand if it cost a specified amount that would be paid by their household (as a one-time payment).⁷ In order to cover a wide range of possible willingness to pay amounts, four different versions, each with a different starting Turkish Lira amount as the first take-it-or-leave-it amount, were used for each of the three environmental scenarios. Before asking the willingness to pay questions, the respondents were reminded that it was equally socially acceptable to be against the implementation of the proposed project or not to agree to pay anything towards the program.

The construction of the willingness to pay variable was carried out as follows: The willingness to pay for each respondent was identified as the *minimum* amount the respondent has expressed willingness to pay for by saying “Yes” to that amount. The binary discrete-choice referendum elicitation format gave for each respondent an interval within which his or her true willingness to pay lay. The estimate we arrive at by using the lower bound of this interval is therefore a very conservative estimate for true willingness to pay. The average figures for the three different environmental projects are presented in Table 4. Note that respondents are willing to pay lesser amounts as we move from the local environmental problem to national and global environmental problems; however, the pair-wise differences between the means are not statistically significant.⁸ In our statistical analyses we also used the combined WTP figures.

[Insert Table 4]

We were also interested in people’s explanation for refusing to make any contributions. Note that half of the sample (780 out of 1565) has in fact indicated that they would *not* make the contribution that was asked for. Thus, we asked those who refused to make the announced contribution to reveal their reasons for their choice (Table 5). The first noteworthy observation is that the shares of not making a contribution are very close for all the three cases (252, 259 and 269 cases were reported for Bosphorus, erosion, and ozone, respectively, corresponding to 48, 49 and 52 percentages of the three subsamples). This being noted, we then observe that an overwhelming majority (around three quarters) of the respondents across the three

⁷ This type of question, also called as a take-it-or-leave-it question, requests the respondent give a yes-or-no response to a specific cost. Each respondent was then administered a double-bounded dichotomous choice question where the respondent was asked to give a yes-or-no response to a second pre-specified higher amount if the response to the initial take-it-or-leave-it question is “Yes” and to a pre-specified lower amount if the initial response is “No”. A one-time single payment was chosen as the payment vehicle. For a detailed description of the approach used, see Zenginobuz *et al.* [2000] and Gökşen *et al.* [2002].

⁸ Recall that the WTP variable was constructed using the minimum amount the respondent has expressed willingness to pay for by saying “Yes” to that amount (see the previous footnote). So the mean estimates presented in Table 4 are rather conservative.

cases who refused to pay showed their insufficient financial means as the reason for not accepting to pay the announced amount for the environmental improvement. Care should also be given to the fact that around 15% of those who refused to pay in all the three cases expressed concern with regard to the success of the projects, which comes to mean that of our sample around 8% (118 out of 1565) indicated that they were not convinced to the workability of the scenarios. More “convincing” scenarios could have therefore played a role of shifting these people from refusals to contributors. In the same vein, 25 persons (accounting for the 2% of our sample) who refused to pay revealed that they have no trust that the collected money will be used for environmental purposes. Similarly, one may speculate that should it be possible to increase these people’s trust with regard to the use of the to-be-collected money, then one may expect to have their financial contributions. A final worthy observation is the existence of 45 people (accounting for the 3% of our sample), who in fact protested to the whole idea of asking voluntary contributions on the basis that others and not themselves were responsible of these environmental problems (their relative share increasing for the case of Bosphorus might at least be partially explained by the fact that, as two major tanker accidents had occurred on Bosphorus in the last 25 years, people were more ready to associate sea pollution with industry).

[Insert Table 4]

[Insert Table 5]

Preferred Institutional Body Responsible for Implementing the Three Environment Projects: The next question put forward to those who accepted to make a contribution, that which institutional body—among the choice set of the Parliament, the government, the municipality, NGOs, and the United Nations—should be given the task of implementing the improvement project, reveals important information. Table 6 provides the results for the three cases. The choice among a set of five institutions (the “other” option was also given to check whether any institution was left outside the given options, but it turned out that suggested names other than the five were of minimal importance) should reflect citizens’ views with regard to the capability of an institution to implement a specific environmental improvement (thus the perceived competence of an institution) together with the trust felt towards an institution in not misbehaving (e.g. acting in a corrupt way). As the table makes clear, close to half of our sample indicated that NGOs should take the responsibility, and approximately one fifth went for the municipality option. Note that the support given to municipality gets its highest value of 26.5% in the case of Bosphorus and its lowest value of 17.7% in the ozone problem. The Parliament and the government each received just a bit higher than a ten percent support. The United Nations option got a support of an around six percent for the cases of Bosphorus and erosion, climbing to twelve percent when the ozone issue is at hand.

[Insert Table 6]

Analysis

This section will provide three sets of analyses with regard to our measurements. The first set consists of investigating the possible connections between our measurements. The second searches for the determinants of our measurements among a set of independent variables. The third focuses on the determinants of the choice of institutions in charge of implementing the environment projects.

Correlation Matrix: In Table 7 we present Pearson correlation coefficients with the aim of understanding whether or not our measurements presented above are correlated with each other. The matrix indicates that although there is a statistically significant positive correlation between concern and attitude, concern and political activism, concern and WTP, attitude and political activism, and political activism and WTP, the degree of correlation in all cases is very close to zero. The matrix therefore suggests that environmental concern, pro-environmentalist attitude, political activism towards environmental protection, and material commitment represent different dimensions, despite being very loosely correlated with each other.

[Insert Table 7]

Determinants of Dependent Variables: The second set of analysis is concerned with searching the determinants of the dependent variables. Towards that aim the following independent variables have been selected/constructed: *Age*: This variable represents the age of the respondent, and it is categorised as 18-30, 31-45, and 46-81. The age distribution of our sample according to this categorisation is 39.4%, 33.5%, and 27.1%, respectively. *Gender*: This variable indicates the gender of the respondent. 55.1% of our sample are women and 44.9% men. *Education*: The question tapping education asked the degree that the respondent has from a formal education program, and it is categorised as illiterate and primary school with no degree, primary school (five years), secondary school (three/four years), high school (three years), and university and higher (four and more years) degrees. The education distribution of our sample according to this categorisation is 7.7%, 36.7%, 13.4%, 29.3, and 13.0%, respectively. The mean education was found to be 8.3 years. *Material Security*: Factor analysis was performed on occupation rankings, per capita consumption (monthly expenditure divided by household size), and the summative scale of household belongings (see Table 8). Factor loadings of the analysis were saved as the variable of material security and then these were coded as low, middle, and high, corresponding to 13.1%, 70.1%, and 16.8% of our population, respectively. *Urbanity*: the Urbanity measure was computed from the variables of place of birth (metropolitan, city, town, and village) and the number of years lived in Istanbul weighted by age. If the

respondents were born either in the metropolitan area or city and lived at least 50% of their life in Istanbul, it was coded as urban, otherwise as rural. 40.1% of our sample happen to be rural, and the remaining 59.9% urban.

The summary of econometric analyses aiming at finding out the determinants of our dependent variables is given in Table 9.⁹ The results indicate that increased age has a positive effect on environmental attitudes and political activism; being woman increases environmental concern and attitudes, whereas being man makes someone politically more pro-environmentalist; increased education turns out to have a positive impact over all the dependent variables; more material security means more environmental concern, higher political activity and more WTP; urbanity, finally, turns out to increase one's environmental concern and attitudes.

[Insert Table 9]

Determinants of the Choice of Institutions: Finally, regarding the determinants of the choice of institutions, a multinomial regression analysis has been conducted with the same set of independent variables that have been used so far, the summary results of which are given in Table 10 (note that the reference institution is the UN). The results reveal that as education goes down, more responsibility is attributed to the Parliament, the government and the municipalities. Age is also found to have an impact over the choice of institutions; being young is associated with a more positive attitude towards the Parliament, municipalities and NGOs. It is also interesting to note that material security is not found to form a statistically significant dimension in the choice of institutions.

[Insert Table 10]

2b. RESULTS: IN-DEPTH INTERVIEWS

A set of in-depth interviews (n=16) were conducted with representatives of industry, NGO's, local and central government authorities, and labour unions, with a view to eliciting more specific attitudes, concerns, priorities and perceptions about improving environmental quality.¹⁰ Information sought probed, among other things, their

⁹ For the Political Activism variable the logistic technique has been used, for the remaining ones the OLS technique has been applied. Detailed econometric results can be obtained from the corresponding author.

¹⁰ The in-depth interviews were conducted with the following persons, to whom the research team would like to express their gratitude: Ahmet Asena (director of the division of education, Confederation of Revolutionary Workers' Unions of Turkey [DİSK]), Mustafa Beken (member of the executive board, Association of Independent Industrialists and Business Persons [MÜSİAD]), Nejat Büyükkörsal (director of the office of environmental protection, Municipality of Beşiktaş [a main commercial district of the city with a population of approximately 220,000]), Korhan Gümüş (director, Association for Human Settlement), Memduh Hacıoğlu (industrialist, former president of Istanbul Chamber of Industry), Selçuk Tayfun Ok (director of the research department, Istanbul Chamber of Trade), Mustafa Öztürk (head of the office of environmental protection, Municipality of Greater Metropolitan Istanbul), Ruhi Paker (former vice governor of Istanbul), Haluk Tükel, Ümit İzmen and Umut Ergezer (secretary general, assistant to the secretary general and specialist assistant, respectively, of Association of Industrialists and Business Persons of Turkey [TÜSİAD]), Halil Ünlü, Nurdan Sirman and Neşe Eriş (members of the environment unit, Istanbul Chamber of Industry), Nergiz Yazgan and Selen Akhuy (director general and director of projects, respectively, of Association for the Preservation of Natural Life [DHKD]).

positions on possible environmental actions to be taken and their reactions to the possibility of forming a coordinating agency to seek and sustain a consensus among different interest groups on environmental issues. All interviews were conducted before the household survey, between February and March 1998.

To start with, all the interviewees agreed that environmental degradation was of great magnitude in Turkey, almost all referring—with different accentuation—to problems associated with pollution and overuse of natural resources. Similarly, they tended to agree that not much action had been taken so far in dealing with the ongoing degradation, and that there was not much optimism for the future in terms of improving environmental conditions unless radical measures were undertaken. But when two interrelated questions were raised regarding (i) what are the reasons for the failure of regulating the economic and social aspects of life with the aim of protecting the environment, and (ii) what needs to be done to change the failure story into a success one, positions differed a great deal.

Regarding the reasons for failure, interviewees from the central and local governments put emphasis on the lack of effectiveness and the remaining ambiguities in the existing legislation, especially underlining the fact that the responsibilities between municipalities and representative institutions of the central government were not always clearly defined. But both also pointed out that if they wanted to fully apply the legislation, via resolving or bypassing these imperfect points, they would have faced much resistance from diverse sources. In this regard, four main headings were mentioned for the case of Istanbul: First, the existence of a large informal sector, bringing about the difficulty of control over mostly small/medium-sized ateliers that have been practically impossible to regulate; second, the continued increase of demand for new building, most but not all derived by immigration to the city of Istanbul; third, the lack of funds to be able to undertake large projects, as in the case of a complete solution to the sewage system, that would render the city more environmentally friendly; and fourth, the political interference in terms of demands to favour some specific groups. NGO representatives, on the other hand, pinpointed the rent-seeking activities that translate themselves into patronage networks as the main source of continued degradation as well as the absence of civil engagement in political decision-making processes. They stressed that lack of people's participation should be seen as the main reason for the existence of corruptive activities that had roots in governments, be they local or central. Industry representatives mainly blamed national poverty, i.e. the level of development, or rather underdevelopment, as the main reason for environmental degradation. They claimed that the existence of a large informal sector in Istanbul, as the main source of industrial pollution, had to be accepted as a *realpolitik*, otherwise the major industries would not be able to compete in international markets and unemployment would rise drastically. Finally, a representative of one of the main labour unions made it clear that they directed their attention towards

pollution within firms that could have implications for their members' health and that they approached the issue of environmentalism mainly within the "capital-labour" relationship.

When the issue of "what is to be done" is raised, the representatives of the central and local governments demanded modifications to existing legislation, making it more effective in terms of procedure and incentive structure. They also underlined that fighting corruption should be equally important and therefore be incorporated in the environmental legislation, under the assumption that there would always be a core of bureaucrats ready to implement the legislation. NGO representatives placed emphasis on the transformative dynamics of civil engagement and also underlined that rent-seeking activities, motives behind corruption, could only be stopped through wider participation of interested parties with a stake. The industry representatives were rather optimistic on the grounds that at a higher industrialisation phase the informal sector would dissolve, thus reducing pollution at a greater rate. They added that the trend in international markets was moving towards environmentally-friendly processes and goods, and therefore the industry in Istanbul, largely under the pressure of international competition, would stick to that trend. They also noted that, to the extent that a local demand for environmentally-friendly produced goods arose, then production would inevitably follow this demand—further increasing the environmental sensitivity of the industry. They finally insisted that consensus-building should be tried in the environmental policy arena, as co-operation turned out to be a driving force in implementing projects that would have different impacts on different parties. Finally, the representative of the labour union indicated that unless the power relation of the whole society was redefined, environmental degradation that was present within and outside production units could not be stopped.

3. DISCUSSION and CONCLUDING REMARKS

The results obtained from both qualitative and quantitative interviews, confirming and to some extent complementing each other, indicate a set of realities that certainly need to be taken into account in any attempt to reconsider the ongoing environmental degradation in Turkey. We have four main interrelated results from the survey study that represents citizens of Istanbul. The first conclusion is that, faced with ongoing environmental degradation, people in Istanbul in general do not seem to be desperate in demanding urgent and radical actions towards protecting the environment, despite the fact that there is a great concern for environmental problems, when other pressing issues are present. This also reflects itself, as a second conclusion, into the figures of willingness to pay: when the issues of local, national and global environmental issues are presented, people seem to be ready to commit themselves in so far as their financial constraints do not bind—a constraint that seems to be effective for many who choose not to make any contribution. Furthermore, as a third conclusion, of those who contribute, a clear distinction towards committing money to three distinct environmental items *cannot* be found, suggesting that, if ready to

contribute, people do so without much considering whether the item in question has a local, national or global character. A fourth conclusion is the insistence of a large body of people that the implementing body should be neither the Parliament nor the government, but NGOs and to some extent municipalities (and in one case the UN). These outcomes seem to be in conformity with the trust scores that were mentioned at the Introduction; lack of trust to the Ankara government expressed itself in our results as well. Finally, econometric analyses suggested that increased education and material security would make people more concerned and more committed when the issue at hand is the environment. This last finding could also be read as a reform suggestion: reducing the number of those living around or under the poverty line and increasing education opportunities would help to reduce environmental degradation.

Similar and complementary insights were obtained from the in-depth interviews that were conducted with representatives of industry, NGO's, local and central government authorities, and labour unions, in that there seems to be an acknowledgement, perhaps with different accentuation, that the present legislative system on environmental protection is to a greater extent non-functional in dealing with the ongoing degradation mainly because of the existence of corruptive elements. To be able to deal with the patron-client type networks that basically disable this legislative body, emphasis was given, again with different accentuation, to reforming the existing legislation and to demanding more civil engagement. Finally, the in-depth interviews unanimously indicated that combating poverty should be targeted in tackling environmental issues.

Many have persistently argued that civil engagement alone, generally speaking, plays a role of resistance or opposition with much success, but when the issue of creating an alternative program is at hand civil engagement's success stories are not so rich, and have added that success is usually tied to the existence of an alliance between state (central and local) actors and social movement (see *e.g.* Held [1987]). The conclusion to be drawn therefore is that if central/local governments and social groups manage to avoid traditional patterns of co-optation and confrontation in policy making, the end result would be beneficiary to all parties (see Lemos [1998] for such a success story in Brazil). The results that were presented for the case of Istanbul may play a starting point to form the framework of such an alliance. One remark in-passing might be relevant, however, in that, when referring to stakeholders' participation, this should not be read as an easy and straightforward process; there are various ways and formats through which different stakeholders may come together, and the appropriate mechanism(s) may not always be easy to establish. The discussion on these different forms of participation with specific reference to Turkey does not seem to be abundant either (see, however, Belge and Bilgit [1997]; Adaman *et al.* [2002]).

The results of this paper should be understood as being a first-round proposal; further studies need to be conducted in analysing the possible ways and organisational settings that would create the much-needed

alliances to combat pollution and depletion. Here, attention should also be given to one of the findings of this research that people at large do differentiate the institutional context of undertaking environmental policies for local/national/global problems. A framework that will prove to be successful in combating one issue may not be so in combating another one. And finally, recalling that the study, both the quantitative and qualitative ones, indicated that investing on education and combating poverty would have a positive effect on environmental preservation, much attention should be given on the interdependency of poverty and environment for the specific case of Turkey.

REFERENCES

- Adaman, Fikret (1997). The political economy of the environment in Turkey. *New Perspectives in Turkey*, **Fall 17**, 129-150.
- Adaman, Fikret and Ali Çarkoğlu (2000). *Türkiye’de Yerel ve Merkezi Yönetimlerde Hizmetlerden Tatmin, Patronaj İlişkileri ve Reform*. TESEV, İstanbul.
- Adaman, Fikret, Ali Çarkoğlu and Burhan Şenatalar (2001). *Hanehalkı Gözünden Türkiye’de Yolsuzluğun Nedenleri ve Önlenmesine İlişkin Öneriler*, Tesev, İstanbul.
- Adaman, Fikret, Sina Mandalinci and Yahya Madra (2002). The prospects of co-determination: The textile industry in Turkey. in F. Adaman and P. Devine (eds), *Reciprocity, Redistribution and Exchange Revisited*, Blackrose, Montreal.
- Arcury, T.A. (1990). Environmental attitudes and environmental knowledge. *Human Organization*, **44**, 300-304.
- Belge, Taciser and Orhan Bilgit (eds) (1997). *Yurttaş Katılımı: Sivil Toplum Kuruluşları ve Yerel Yönetimler Arasında Ortaklık ve İşbirliği*. Burfaş, Bursa.
- Boyce, James K. (1994). Inequality as a cause of environmental degradation. *Ecological Economics*, **11**, 169-178.
- Brechin, Steven R. and Willett Kempton (1994). Global environmentalism: A challenge to the postmaterialism thesis, *Social Science Quarterly*, **51**, 121-137.
- Carson, Richard T., Robert C. Mitchell, W. Michael Hanemann, Raymond J. Kopp, Stanley Presser, and Paul A. Ruud (1992). A contingent valuation study of lost passive use values resulting from the Exxon Valdez oil spill. *A report to the Attorney General of the State of Alaska* (November 19, 1992).
- DPT (Devlet Planlama Teşkilatı) (2001), *Gelir Dağılımının İyileştirilmesi ve Yoksullukla Mücadele (Improving the Income Distribution and Poverty Eradication)*, Ankara.
- Dunlap, Riley E., George H. Gallup and Alec M. Gallup (1993). Of global concern: Results of the Health of the Planet Survey. *Environment*, **35**, 33-39.
- Duraiappah, Anantha K. (1998). Poverty and environmental degradation: A review and analysis of the nexus. *World Development*, **26(12)**, 2169-2179.
- Esmer, Yılmaz (1999). *Devrim, Evrim, Statüko: Türkiye’de Sosyal, Siyasal, Ekonomik Değerler*. TESEV, İstanbul.
- Gökşen, Fatoş, Fikret Adaman and E. Ünal Zenginobuz (2002). On environmental concern, willingness to pay, and postmaterialist values: Evidence from İstanbul. *Environment and Behavior*.
- Inglehart, Ronald (1977). *The Silent Revolution: Changing Values and Political Styles among Western Publics*. Princeton University Press, Princeton.

Inglehart, Ronald (1990). *Cultural Shift in Advanced Industrial Society*. Princeton University Press, Princeton.

Inglehart, Ronald (1995). Public support for environmental protection: Objective problems and subjective values in 43 societies. *Political Science and Politics*, **28**, 57-72.

Keleş, Ruhşen and C. Hamamcı (1993). *Çevrebilim*. İmge, Ankara.

Krueger, O. Anne (1994). Economists' changing perceptions of government. *Weltwirtschaftliche Archive*, **127**, 417-431.

Lemos, Maria C. (1998). The politics of pollution control in Brazil: State actors and social movements cleaning up Cubatão. *World Development*, **26(1)**, 75-87.

Michener, Victoria J. (1998). The participatory approach: Contradiction and Co-option in Burkina Faso. *World Development*, **26(12)**, 2105-2118.

North, Douglass (1990). *Institutions, Institutional Change and Economic Performance*. Cambridge University Press, Cambridge.

Olson, Mancur (1965). *The Logic of Collective Action. Public Goods and the Theory of Groups*. Cambridge, Mass.: Harvard University Press.

Pearce, David W. and Kerry R. Turner (1990). *Economics of Natural Resources and the Environment*. Hertfordshire: Harvester Wheatsheaf.

Rose-Ackerman, Susan (1999). *Corruption and Government: Causes, Consequences, and Reform*. Cambridge, Cambridge University Press.

Türkiye Çevre Vakfı (1999). *Türkiyenin Çevre Sorunları*. Ankara, Türkiye Çevre Vakfı.

UNDP: *İnsani Gelişme Raporu* (1998). Ankara, UNDP.

Yaşamış, Firuz D. (1999). Turkish Environmental Law: an overview of legal principles. Mimeo.

Zenginobuz, E. Ünal, Fikret Adaman and Fatoş Gökşen (2000). Local vs. national vs. global environmental goods: Does it make any difference in terms of willingness to pay?—Evidence from a contingent valuation survey in Istanbul. Mimeo.

Table 1. *Perceived Seriousness of Specific Environmental Problems (n=1565)*

Environmental issues	Much Concerned (%)	Never Heard (%)
Deforestation	92.6	0.8
Sea pollution	84.3	1.2
Industrial waste	80.9	1.7
Solid waste (garbage)	79.6	0.8
Extinction of species	76.7	2.1
Water pollution	75.4	0.2
Air pollution	72.5	0.3
Soil erosion	68.8	5.6
Ozone depletion	68.4	8.9
Nuclear waste	67.6	7.7
Noise pollution	64.2	3.0
Tropical deforestation	53.6	15.5
Acid rains	49.8	20.8
Soil pollution	45.2	10.2
Global warming and greenhouse effect	31.4	26.2

Table 2. *Environmental Attitudes in Daily Life (n=1565)*

Environmental Attitudes in Daily Life	Never (%)	Sometimes (%)	Always (%)
To carry out litter with themselves if no litter bins are available nearby	8.4	19.6	71.8
To put aside glasses, plastics and metals from the rest of the garbage for recycling	54.9	21.1	22.7
To put aside newspapers and other papers from the rest of the garbage for recycling	46.6	17.0	35.6
To bring their own bag when going to shopping	63.6	15.5	19.6

Table 3. *Political Action (n=1565)*

Political Action	Yes (%)	No (%)
To be a member of an environmentalist NGO or active in an environmentalist campaign (in the last 2 years)	4.1	95.9
To make an inquiry on environmental protection to an official institution	9.2	90.8
To write a concern letter on environmental protection to the press	4.9	95.1

Table 4. Mean WTP for Environmental Issues
($n=524+524+517=1565$)

	N	Mean (Million TL)
Sea Pollution (Bosphorus) in Istanbul (Local Issue)	524	10.53
Soil Erosion (National Issue)	524	9.86
Ozone Depletion (Global Issue)	517	9.51

Note: 1 USD was approximately equal to 400,000 TL at the time of the fieldwork.

Table 5. Reasons given for not Contributing ($n=780$; percentages in parantheses)

	Bosphorus	Erosion	Ozone	WTP combined
Cannot afford	175 (70%)	195 (75%)	203 (75%)	573 (73%)
No faith to the success of the project	38 (15%)	38 (15%)	42 (16%)	118 (15%)
I'm not responsible—the responsible should pay	23 (9%)	11 (4%)	11 (4%)	45 (6%)
Collected money will not be used for this purpose	13 (5%)	10 (4%)	2 (1%)	25 (3%)
Not a big issue	1 (1%)	2 (1%)	7 (3%)	10 (1%)
Other	2 (1%)	3 (1%)	4 (1%)	9 (1%)
Total	252 (100%)	259 (100%)	269 (100%)	780 (100%)

Table 6. Choice of Institutions to be in Charge in Implementing the Project (%)

	Bosphorus	Erosion	Ozone	WTP combined
Parliament	12.8	10.0	11.3	11.4
Government	13.2	12.8	12.1	12.7
Municipalities	26.5	22.0	17.7	22.3
Environmental NGOs	38.1	47.6	42.9	42.6
United Nations	6.6	5.6	12.1	7.5
Other	3.8	2.0	3.9	3.5

Table 7. Pearson Correlation Matrix of Dependent Variables

	Concern	Attitudes	Political activism	WTP
Concern	X	0.132**	0.133**	0.068**
Attitudes	0.132**	X	0.131**	0.03
Political activism	0.133**	0.131**	X	0.081**
WTP	0.068**	0.03	0.081**	X

**Correlation significant at 0.01 level (2-tailed).

Table 8. Scales and Individual Items Used to Construct Scales

Scale	Items
URBANITY	<ul style="list-style-type: none"> - Where were you born? (metropolitan, city, town, village) - How long have you been living in Istanbul? (weighted by age)
MATERIAL SECURITY	<p>Composite measure of:</p> <ul style="list-style-type: none"> - Occupation - Per capita consumption - Household belongings
PER CAPITA CONSUMPTION	<ul style="list-style-type: none"> - Approximately how much do you spend for expenditures in a month? - Including yourself, how many people live in your household?
OCCUPATION	<p>What is your occupation? What kind of work do you do? Explain in details. (Categories below were created after the examination of the above open-ended question)</p> <ul style="list-style-type: none"> - Unemployed - Housewife - Student - Retired - Worker - Small-to-medium size business - Medium-ranked manager - Professional
HOUSEHOLD BELONGINGS	<p>Do you own the following items?</p> <ul style="list-style-type: none"> - Washer - Dishwasher - Refrigerator - Dryer - Cellular phone - Vacuum cleaner

Table 9. *Determinants of Dependent Variables*

	Concern	Attitudes	Political activism	WTP
Age		Old**	Old*	
Gender	Women**	Women**	Men**	
Education	+**	+**	+*	+**
Material Security	+*		+**	+**
Urbanity	+**	+**		

**Significant at 0.01 level.

*Significant at 0.05 level.

Table 10. *Determinants of the Choice of Institutions
(with reference to UN)*

	Parliament	Government	Municipalities	NGOs
Age	Young*		Young*	Young**
Gender				
Education	-*	-**	-**	
Material Security				
Urbanity				

**Significant at 0.01 level.

*Significant at 0.05 level.