Overall agri environmental performance environmental sciences essay

Agricultural land use and management practices are adversely impacting natural and semi-natural habitats, and as a consequence damaging wild flora and fauna species [3]. The 1% increase in the area under agriculture between 1990-92 to 2002-04 (Figures 3. 28. 2 and 3. 28. 3), has led to land clearing for farming, mainly involving the ploughing of steppe land and conversion of forests, coupled with intensification through greater use of agro-chemicals has had adverse impacts on wild species both direct and indirect [3, 53]. With the lowering of stocking densities on pasture, especially semi-natural grassland steppe areas, this has helped to ease the pressure on these habitats. Overgrazing, however, remains a problem in some regions, notably the grazing of forests and pasture near the Black Sea and in the Mediterranean where overgrazing has reduced the number of pastoral vegetation species during the 1990s from about 25 to 5-6 [13, 34]. Nationally there are some 200 wetlands, nine of which have been classified as sites of international importance under the Ramsar Convention, which Turkey signed in 1994 [3, 11]. Agriculture has been one of the major causes of wetland degradation, including from the: adverse impacts of constructing irrigation projects and diversion of water causing chanin water flows to wetlands; excessive extraction of aquifers reducing water flows to wetlands; agricultural pollutant run-off, especially the eutrophication of inland and coastal wetlands; and the expansion of the area cultivated in some areas leading to a loss of wetlands [3]. But the drainage of wetlands was largely halted in the mid-1990s, although some reclamation for agricultural use has continued, such as the Çukurova-Akyatan delta and Sultan marshes [11, 13, 27]. The impact of farming on bird populations measured by the BirdLife International Important Bird Areas (IBAs) indicator, defined as prime bird

habitat, shows that around 40% of the most significant threats to Turkish IBAs originates from farming [41, 59]. The main threats include: intensification of production from greater use of agro-chemicals; loss of semi-natural farmed habitat to other uses; and construction of irrigation projects [3].

Overall agri-environmental performance

Overall the expansion in agricultural production has exerted greater pressure on the environment since 1990. This is in part because of the increased area farmed and greater use of purchased variable inputs including fertilisers (except phosphate fertiliser) pesticides, water and energy, although there has been a lowering of agricultural air pollution emissions (methyl bromide and greenhouse gases). Soil erosion remains a major problem and irrigation water application rates (litres per hectare) increased significantly, compared to a declining trend for most other OECD countries where irrigation is important. There are also concerns for biodiversity, both the erosion of agricultural genetic resources (notably plant species) and also harmful impacts of land use changes and farming practices on natural and semi-natural habitats and as a consequence harmful impacts on wild flora and fauna. The agri-environmental monitoring system needs to be considerably improved, to help enhance the quality of information for policy makers to evaluate the environmental effectiveness of newly introduced agri-environmental and environmental policy measures [3, 27, 54]. Some areas of agri-environmental monitoring are now well established, especially related to irrigation water use and management, and greenhouse gas emissions. But for most agri-environmental issues monitoring is weak or, where data do

exist, their quality and reliability are poor [3, 27]. Support from international groups, such as the World Bank, however, is helping to develop a base for tracking environmental performance. Agri-environmental policies are being strengthened and many environmental measures have been introduced since the mid-1990s. Under the 2006 Agricultural Policy Strategy 2006-10 the share of budgetary support for agri-environmental purposes will be 5% [15]. As part of the amended (2005) ARIP, the Environmentally Based Agricultural Land Protection (CATAK) programme, support will be provided for environmental cross compliance and organic farming, as well as combating soil erosion and developing irrigation systems that use less water [9]. The government is also in the process of introducing measures to encourage greater production and use of renewable energy, including energy and biofuels produced from agricultural biomass feedstocks [43]. These measures could be important in providing incentives for using the considerable potential of agricultural biomass as a feedstock for energy and fuel production that exists in Turkey [43]. Measures to address overgrazing, under the Grazing and Pasture Law of 1998, are attempting to restrict stocking levels on state owned grasslands [41]. Despite the introduction of policies to address agri-environmental issues many problems persist, although overall the intensity of agriculture is much lower than across most OECDEuropean countries. While in part soil degradation (particularly erosion) is naturally occurring, the absence of widespread adoption of soil conservation practices has failed to improve soil quality, in particular, as a result of overgrazing and ploughing grassland. Subsidies for purchased variable inputs while increasing farm output as intended, has kept agriculture on a technically suboptimal trend and led to unintended

environmental damage [2, 13]. Continued subsidies for water charges and electricity for pumping (and diesel for machinery) are undermining the efforts to achieve sustainable agricultural water use, especially groundwater, and in the case of energy and diesel reduce greenhouse gas emissions. The operation and management responsibilities for local irrigation networks (previously run by a national monopoly), however, have been transferred to self-financing water user associations. This has led to an increase in water charges in order to cover operating costs and is helping toward more effective use of scarce water resources [2, 39, 42]. Projections suggest that agricultural production is likely to expand up to 2016, and that agricultural pressure on the environment may continue [60]. While most of the growth in production will derive from higher yields, the area cultivated for some crops may also increase, such as for cereals [60]. The future rise in agricultural production implies higher demand for water, with projections of water demand from other users (e. g. industry, households tourism) expected to be more rapid than for agriculture up to 2030, as national population, incomes and foreign tourism increase the demand for water [4, 42]. An important part of the government strategy toward expanding agricultural production are a number of large scale irrigation projects, in particular, the South-Eastern Anatolian Project(GAP). The GAP requires the utilisation of some of the water potential of the Dicle (Tigris) and Firat (Euphrates) to irrigate the 1. 7 million hectares in the GAP region. This has raised concerns not only for the ecology of the GAP region, but also for water flows for neighbouring countries downstream, namely Iraq and Syria. At present there is some progress in addressing the environmental impacts of the GAP project and agreement between Turkey and these countries on the equitable allocation of water

from the Dicle – Firat basin. These rivers comprise less than a half of Turkey’s and most of Iraq’s and Syria’s water supply [23].

Community-based Ecological Resistance: The Bergama Movement in Turkey

The Bergama community has resisted gold-mining activity in Turkey for more than ten years. First, the characteristics of community-based resistance movements are outlined in order to provide theoretical tools to be used in the analysis of the Bergama movement. Then are investigated how the elements of the Bergama movement, such as the perceived threat, the philosophy behind the struggle, the actors themselves, their demands, targets, strategies and tactics, are incorporated into a political project to defend and sustain the symbiotic relationship between the community and the environment. The paper also shows the ways in which the movement has expanded its geographical scale, and discusses its political and economic consequences for other local movements, capital accumulation and environmental conservation. Fifteen years ago no-one could have imagined that a community movement in the Turkish town of Bergama would have such an immense impact, but it has become the largest scale and longest running ecological resistance movement modern Turkey has ever seen. It emerged in the early 1990s, has mushroomed since 1997 and continues to be on the national agenda today. The Bergama community has continued its struggle, just as the mining corporation and the state have insisted on putting the mine into operation. The present paper places the movement within the analysis of a conflict between two symbioses, between the community and the environment on the one hand, and between the

corporation and the state on the other. The former symbiosis informs us of what the struggle is for, namely to sustain the symbiotic community–environment relationship. The latter symbiosis is what the activists oppose, namely the relationship between the Turkish state and the mining company. The activists' responses to the state–corporation symbiosis in this specific case have a bearing on the development of the movement itself.

Community-based Resistance MovementsIt is common in the literature on environmental movements to classify these movements according to aims, demands, definitions of the perceived threat, ideologies, actors, strategies, medium of action, duration over time, scope, location, organisational design, foes, the degree of radicalism, and so forth [e. g., Carmin, 1999; Castells, 1997: 112–21; Finger, 1994; Freudenberg and Steinsapir, 1991; Gould, Schnaiberg and Weinberg, 1996: 1–4; Habermas, 1981; Martinez-Alier, 2002: 1–15; Kamieniecki, Coleman, and Vos, 1995: 319–31; Kousis, 1999: 172–75; Lohmann, 1995; Ru¨dig, 1995]. However, even if, for instance, a community-based resistance movement and a local environmental movement seem to be devoted to the aim of local environmental protection (the criterion is ' aim'), it would be problematic to put both into the same category, without examining other features of these two movements such as strategy, tactics and organisational forms. It is noted that some problems may arise when the degree of institutionalisation2 [Scott, 1990: 34; Diani and Donati, 1999: 17–24; Jamison, 1996: 230–40; Staggenborg, 1997] and the degree of radicalism [Radcliffe, 2000: 143, 153–4; Castells, 1997: 114; Diani, 1995: 2] are employed as criteria in any classification. Similarly, the criterion of the location of activism may become ill-defined as activists use a variety of actions both inside and outside the institutional procedures of the state

[Crossley, 2002: 164; McAdam, Tarrow and Tilly, 2001: 6–7]. What the above view suggests is not that classifications of environmental movements in the literature are irrelevant, but rather that they are limited in their utility. The emphasis here is that classification criteria should not be employed independent of each other as if characteristic elements of a movement should be taken in isolation. 3 One way of overcoming these limitations is to reconsider classification criteria as being interwoven within the movement in question, as what gives a movement its distinctive characteristics is the specific combination of its features. The interrelation-ships between the elements of community-based resistance movements have not previously been elucidated in this sense, although some attention has been paid to community-based environmentalism [e. g., Kousis, 1997, 1999; Szasz, 1994; Taylor, 1995; Thiele, 1999: 155–65]. Therefore, the analysis under-taken in the following section is an attempt to clarify the distinctive characteristics of this kind of movement. ENVIRONMENTAL POLITICSAn environment particularizes or contextualizes a community, situating it within and bonding it to both the natural world and the larger ‘ containing’ society. . . . [Communities are] conjoined to and inter-penetrated by particular environments which they transform and partially construct and which in turn transform and partially construct them. Far from being mere passive backdrops or props in an essentially (or exclusively) human play, environments so conceived are the embodiment, or material extension of communities. . . . Communities, then, are as much results as they are causes of their own environments. This interconnectedness and symbiotic relationship between community and the material world is the crucial point at which the specific combination of the constitutive elements of the

community-based resistance movement can be seen. Demands, perceived threat, philosophy, actors, aim, targets, strategy and tactics are incorporated into the political project of defending and sustaining the symbiotic relationship between community and environment. In a similar vein, it is suggested that an analysis of collective action should combine actors and identities with the mobilisation process and forms of action because actors are not self-propelling entities with fixed identities but socially embedded beings who interact with other such beings at the sites of action where ‘ contentious politics does not simply activate preexisting actors but engages actors in a series of interactive performances’ [McAdam et al., 2001: 56–7]. So, we should look at the combination of demands, dynamics, mechanisms and forms of action in order to make sense of community-based ecological resistance. The demands of the community do not develop solely around the idea of either ‘ save the environment’ or ‘ save the community’, but, instead, around both. Because community life and the environment are seen, not as two different, independent areas but as interwoven; an effort to protect the local environment is also an effort to protect community life and livelihood, and vice versa. Opposition to coal mining in eastern Kentucky in the US, for example, ‘ was motivated by people’s love of the mountains and the tight connection between their way of life and land’ [Edwards, 1995: 47]. In other movements against logging in Thailand [Lohmann, 1995: 122] and Malaysia [Gedicks, 1995: 95–6], against harmful industrial activities in Greece [Kousis, 1997: 244–5], and against the proposed zinc–copper mine in Crandon, Wisconsin [Gedicks, 2001: 128–34], activists emphasised the interactions between community and environment (particularly, the depen-dence of community life on clean water, clean air, forests, fish, birds and). As in all

these cases (and in the Bergama case which will be discussed below), forms of environmental degradation are perceived as a threat to the community's way of life. This is seen as inseparable from the environment in the sense that the community lives with and within the environment. An emerging threat as such triggers a resistance movement committed to defending and sustaining the community's way of life. This common aim is then knitted around an understanding of the symbiotic community– environment relationship, as Anderson [1994] shows in her analysis of village movements in Central America. Put differently, philosophical reasoning has little, if anything at all, to do with either anthropocentric or ecocentric thinking. The activists in a community-based movement have a relational understanding of the human–environment relationship. It is quite different from dualist accounts in which the significance of either the existence of the environment, or that of the human being is reduced to the other [Barry, 1999; Benton, 1989; Humprey, 2000]. It is argued that community-based ecological resistance in the US [DiChiro, 1998], in Costa Rica and Nicaragua [Anderson, 1994: 5], in Thailand [Lohmann, 1995: 125] and in some Asian countries [Kalland and Persoon, 1998: 3–5] challenges both anthropocentric and ecocentric discourses. A resistance strategy is forged by the organising idea of the ' rejection of the rejectors', to borrow Zygmunt Bauman's [1998: 127] phrase. This is because a community's demands are not generally taken into consideration by those states and corporations that make different claims about the same environment [see Kousis, 2001: 133–5]. The response of the community to the rejection is, then, to resist any attempt which threatens the community– environment symbiosis via the strategy of the rejection of the rejectors (I will elaborate on this below by employing

Gramsci’s concept of ‘ war of position’). For instance, the Penan people in Malaysia asked the government and logging companies to stop destroying the forest: ‘ if you decide not to heed our request, we will protect our livelihood’ [cited in Gedicks, 1995: 96]. As the logging activity continued, the Penan people had to resort to direct action with a resistance strategy. This brings us to the question of the possibility of evolving from resistance to collaboration. Rather than oscillating from challenge to collaboration, it is a defensive, reflexive and reactive movement in response to a threat. The mobilisation evolves around the strong demand for a return to the earlier condition of the community’s way of life. The target is not corporate or government policies to be influenced by means of alternative and innovative proposals or suggestions. This is the case with some environmental movements or organisations where activists want to participate in decision-making processes, in the proactive sense, in order to make policies and industrial operations environmentally friendly, or at least less destructive [cf. Castells, 1997: 110–33]. This sort of target identification provides a basis for collaboration. However, the target of activists in community-based resistance movements is, instead, a harmful industrial activity itself (e. g., the cessation of the logging activity (Thai and Malaysian cases) or of the mining activity (Kentucky, Wisconsin and Bergama cases) or the annulment of the decision to build an incinerator (Greek case)). Complementary to this resistance strategy are the tactics used. Various forms of tactics are employed in these movements [see Marinez-Alier, 2003; Gedicks, 2001; Shiva, 1989; Lohmann, 1995; Taylor, 1995; and the Bergama case below]. What is significant in tactical terms is that tactics are not used in a symbolic way, with a limited number of participants, but in a massive way, with the

participation of a mass of community members, as in the Thai [Lohmann, 1995], Malaysian [Gedicks, 1995], Costa Rican and Nicaraguan [Anderson, 1994], Indian [Shiva, 1989], West Papuan [Gedicks, 2001] and Greek [Kousis, 1997] cases. In some types of environmental movements [e. g., Greenpeace, see Brown and May, 1989: 13–15], the symbolic direct actions of a few strongly committed participants based on the logic of bearing witness are testimonies against some forms of environmental degradation [della Porta and Diani, 1999: 178–80]. By and large, they are tools designed to exert pressure, via creating media attention, on governments or corporations to adopt a particular version of environmental protection. In contrast, direct actions by communities of resistance are organised to stop the members of the communities themselves from becoming victims of a specific industrial activity [see Edwards, 1995: 47] and are designed to demonstrate their sufferings. This clarification of the characteristics of community-based resistance movements will help shed light on the analysis of the Bergama movement below. A Community Resisting Gold Mining4The preparations for the Bergama gold mine started in the early 1990s. Eurogold, a multinationally-owned corporation, conducted test drilling in Bergama to investigate the structure of the earth. During the drilling, poisonous chemical substances contaminated the water, and caused illness among local children [Abacioglu, 1997: 1]. This incident produced a high level of suspicion about the Eurogold project. After holding meetings within the community and with academics invited to provide more information about the mine, local people found out that their means of subsistence, their local environment and animal species would be destroyed by the hazardous mining activity where tons of cyanide would be used to leach the gold and silver from the ore, tons

of heavy metals would be left behind, and the dust arising from the crushing and grinding would contaminate the air and land. Indeed, the mining site is too close to human and animal habitation. The mining site is surrounded by 17 villages with a population of 11, 000. The nearest village (Ovacik) is only 60 metres away. The area surrounding the mine is also home to a very significant population of fauna such as many bird species under international protection [Erden 1995; Siki, 1995; Gemici, 1995]. The area on which the community is most dependent consists of agricultural, vegetable and fruit fields, and olive, poplar and pine trees. According to the chamber of commerce of Bergama, the annual production of cotton, tobacco, tomatoes and olive oil in the Bergama district equals US$ 42 million [Taskin, 1997: 67], US$ 7 million higher than the total amount of the Eurogold investment. Defending the SymbiosisHeavily engaged in agriculture, the Bergama community is physically dependent on nature. In agricultural activities human labour ‘ is deployed to sustain or regulate the environmental conditions under which seed or stock animals grow and develop’ [Benton 1989: 67]. From the community’s point of view, the mining activity threatens the sustainability of these conditions. The Bergama villagers were very aware of their dependence on the environment. At a village meeting, a woman leader noted that ‘ thousands of people rely on this land that they are going to destroy, and you can see that human beings are somehow rooted in the land like plants’. One farmer also underlined the villagers’ concerns about the mine: ‘ our land is very fruitful and more valuable than their gold, but if we do not hinder the poisonous project we all will die because they will turn this land into Arabian deserts’ [in Alevcan, 1998: 90–4]. The main aim of the mining opponents thus appears to be to defend their

livelihoods and nature against degradation or, as one farmer put it, ‘ to protect their homes, land and water’ [Turkish Daily News, 18 October 1997]. One can observe the similarity between the Bergama case and other community-based resistance movements in terms of the activists’ understanding of the community–environment symbiosis discussed in the previous section. The farmers’ views cited above represent their understanding of the symbiosis. This is further illustrated by the Inscription of the 17 villages. 6 In May 1997, the villagers decided to place an inscribed stone panel in the village square in Camkoy stating the aims, views, determination, friends and foes of the movement. It reads ‘ those who value gold over life are cutting down trees and robbing the earth’. The local people, however, ‘ love life and the nature that is their life’, ‘ they identify their lives with and protect all living things above and below the ground. For them, all things above and below the ground are as important as the air they breathe. They know that they cannot live without any of them’. In a different part of the world in San Juan Ridge, California, participants at the Peoples’ Gold Summit held in June 1999 declared their opposition to gold mining with language rather similar to that used in the Inscription text. The Manifesto [cited in Martinez-Alier, 2003: 211] resulting from this Summit helps us locate the Bergama case in a broader perspective. The Manifesto emphasises that ‘ life, land, clean water and clean air are more precious than gold’ and ‘ destruction created by gold mining is greater than any value generated’. Recognising that communities’ relationship to land is central to their identity and survival, it states that gold mining violates the right to life by destroying ‘ the spiritual, cultural, political, social and economic lives of people as well as entire ecosystems’. Obviously, both the Bergama villagers and Summit participants value life and

components of life more than gold and point to the critical importance of the symbiotic community–environment relationships for present and future generations. The community's spokespersons announced at a press conference [Cumhuriyet, 15 October 1994] that the mine was a threat to vineyards, olive trees, their children and the future and that they would not let it operate. Research carried out for Eurogold, to ascertain the views of the community about the mine, showed that more than 90 per cent of the respondents were against the mine [ARAS, 1994: 58–61]. In order to show the degree of the community's rejection of the mine to the state and corporation, the activists organised a referendum in the eight villages nearest the mining area, and all the participants (2866 villagers) in the ballot said ' no' to the mine. Almost all members of the community, children, women and men of all ages, have been active participants in the movement, as in other cases of community-based ecological resistance. Those villagers who were working on the construction of the mining site and did not oppose the mine, were isolated. The community condemned them as being ' Eurogold men', did not allow them to sit in the communal coffee houses, and broke off all social relations with them even when they were relatives [Milliyet, 27 July 1997; Apolitika, 1997: 25–7]. In August 2002, an argument between relatives holding different opinions about the mine led to a fatal incident where one villager was murdered and another seriously wounded, both of whom opposed the mine. For the villagers, the incident was another sign of the deleterious effects of the mine on community life, destroying the integrity of the community as well as the environment. Every new step by the corporation in the process of setting up and operating the mine (i. e., whenever the community perceived the threat to itself and nature moving

one step closer) engendered rage among the members of the community and re-ignited the resistance movement. They felt caught in a trap, as one farmer put it at a community meeting, like ‘ a frog in the mouth of a snake’; ‘ we urgently have to find the way out because it is Doomsday for us, we have to stop it coming about’. The early mobilizations took the form of meetings and panels in the village coffee houses, picnics in the fields, press releases and press conferences. Actions gathered momentum when the potential threat became reality with the progress in production preparations. In 1996, Eurogold commenced construction by cutting down as many as 2500 olive trees for the open pit operation. A crowd of 5000 people blocked the main road connecting two big cities, Izmir and Canakkale, for 6 hours on 15 November 1996. Their actions continued in different forms including demonstrations, marches, sit-ins at the mining site, petitions, lobbying activities, picnics, festivals and days of planting trees. One of the biggest actions took place when farmers heard that 21 tons of cyanide had been brought to the mining site. Some blocked the road connecting the mine to the main road to check whether any more vehicles carrying cyanide were going to arrive so that they could stop them while others were occupying the site. The governor of the city of Izmir came to the site to negotiate with the protestors. They insisted that the only subject for negotiation was the demolition of the plant. In the end, 36 farmers who were believed to be the ring-leaders of the action were arrested. Although both men and women have been involved in the movement, it must be noted that from the outset the motors and the most determined participants have been women. A spokesman [Engel, 1998: 222] points out that ‘ they organised the villages falling behind in the fight by visiting the women there whose subsequent

participation encouraged men to join the movement more actively'. Women's leadership is usually the case for community-based movements in different parts of the world from India [Forcey, 1996: 74–6; Shiva, 1989: 67–77] to Brazil [Campbell, 1996], Spain [Bru´-Bistuer, 1996] and the United States [Gedicks, 1995: 105; McAdams, 1996; Szasz, 1994: 152]. Indeed, it is not surprising to find women at the forefront of these movements because of their socially constructed roles in the community–environment symbiosis. Women as food producers as well as food providers [Elliott, 1996: 16–7] are especially concerned about any damage to nature not least because, although it affects all, it indisputably hits women most by placing additional burdens on those who are linked to the production and reproduction of the economic life of the community [Lorentzen, 1995: 60]. It is also the case in Turkey, as two social anthropological studies have shown, that the problems faced by farming households place extreme pressure on women [Morvaridi, 1993; Onaran-Incirlioglu, 1993]. Related to this is the fact that women bear the brunt of childcare. It is because women are disproportionately more responsible for child rearing, that any cause of malnutrition (e. g., a decrease in wealth caused by environmental deterioration) and sickness (e. g., contaminated water, poisoned soil) among children adversely and directly affects women's lives. In the Bergama movement, women raised the question of an increase in the number of miscarriages caused by the explosions at the mining site. And it was usually the women who linked the issues of a clean environment and the future of their children [Ulkede Gundem daily, 8 October 1997; Abacioglu, 1997: 13]. It was they who emphasised that the destruction of nature would mean the destruction of food sources, livelihood and everyday processes of survival, and vice versa.

The Development of Environmental Consciousness in Modern Turkey

Introduction

Turkey has a very central geography that bridges East and West, North and South, Europe, Asia, and the Middle East. This unique geographical position implies rich biodiversity, sensitive ecological habitats and a wealth of cultural and historical resources. Turkey's rugged topography experiences high seismic activity where earthquakes and erosion can pose hazards. (Turkey has experienced some major earthquakes in recent years.) Topography and soil conditions allow only a third of Turkey's total land area to be suitable for various types of agriculture, creating pressure on available fertile land. Although Turkey is blessed with an abundance of water resources, it requires proper management to utilize the water in the most efficient way. Other natural resources whose management should receive attention include certain minerals, forests, fertile soils, and fisheries. 1With an estimated 67 million people, Turkey is one of the twenty most populous countries in the world and has the fastest population growth rate of all OECD countries (1. 6% in 1997). A relatively high growth rate normally puts additional pressure on natural resources and results in greater production of wastes. Rapid urbanization usually exposes a growing population to a range of concentrated environmental problems and puts pressure on resources (marine and coastal resources, for example). Rural migration to the urban centers usually originates in areas with low agricultural production where the use of land often exceeds its carrying capacity. Excessive migration combined with inadequate infrastructure facilities in the urban centers

causes environmental concerns. 2Major Environmental Problems 3Being the ancient cultural and spiritual home, indeed the birthplace, of many civilizations, Asia Minor’s fertile soils in have experienced many environmental problems in her long history, as a result of human-nature interaction. The National Environmental Action Plan of Turkey categorizes the coutnry’s current major environmental problems as follows: ٭ the urban environment (air quality, water supply and wastewater, and solid waste management)natural resource management (water resources, soils and land, forests, biodiversity)marine and coastal resourcescultural and natural heritagenatural as well as man-made environmental hazardsAir pollution is the first environmental problem Turks confronted beginning in the early 1980s. It was a visible and disturbing problem in major cities and industrial zones and sites. 4 Air pollution is caused by " unplanned and unregulated urbanization, manifested through the use of low-quality fuel coupled with improper combustion techniques, shortage of green areas, unplanned and unregulated construction, and heavy traffic; and inappropriate selection of industrial sites and the emission of waste gases into the air without adequate technical precaution." 5 Studies have indicated that between 1990-1995, in 26 cities-including the cities of Bursa, Diyarbakır, Gaziantep, Istanbul, Kocaeli and Konya, which each have a population of more than one million according to the latest census in 1990 the average sulfur dioxide concentration in winter exceeded the long term limit set by the Regulation on Protection of Air Quality; in 34 cities, the short term limit was exceeded for more than 100 days in the said period. Since then, however, the problem of air pollution has decreased in major cities with the implementation of a natural gas network and other measures. The second environmental problem is water pollution,

that is, " ground, thermal, and mineral waters, rivers, lakes and coastal zones are under the threat of heavy pollution due to household and industrial discharges, and extensive or incorrect usage of pesticides and fertilizers." 6The third problem is soil pollution, which is associated with water pollution. It is also caused by household and industrial discharges, and inappropriate use of fertilizers and pesticides. Erosion, moreover, is one of most important soil problems in Turkey. Recent studies have estimated that roughly 500 million tons of topsoil is being lost every year, causing productivity losses in agriculture and a decrease in the storage capacity of reservoirs. 7The fourth problem is the maintaining the flora in Turkey, such as forests, pastures, and grasslands. All these areas are under the threat of an excessive and incorrect use of fertilizers and pesticides, fires, and direct human destruction. The fifth critical environmental problem is noise, especially in big cities, which adversely affects human auditory health and perception, upsetting physiological and psychological balance, and lowering work performance. The main sources of noise pollution are traffic, places of entertainment, building and road construction, and industry. Another problem peculiar to Turkey is solid waste landfills, which " not only pollute the environment but may also jeopardize safety of anyone near them from methane gas explosions. Such a problem was witnessed in Istanbul’s Umraniye District. A methane explosion in April 1993 at a waste disposal site triggered a landslide, resulting in the death of 30 people who hold lived in houses in the surrounding area." 8Behrooz Morvaridi, a scholar from Yale, considers Turkey’s " environmental problems" as social problems, which reflect the interrelationships among resource change, human productive activities, and the accompanying transformations of people’s lives. 9The

Emergence of Modern Environmental ConsciousnessAlthough the history of environmental problems goes back to ancient times, environmental consciousness in modern sense is a new phenomenon for Turks just as it is for others. Western societies began to perceive the harmful and devastating effects of industrialization and development in the early 1960s. Since then, as Apel puts it, " scientific-technical civilization has confronted all nations, races, and cultures, regardless of their group-specific, culturally relative moral traditions, with a common ethical problem. For the first time in the history of the human species, human beings are faced with the task of accepting collective responsibility for the consequences of their actions on a world-wide scale. 10 Environmental consciousness, therefore, arose first as a response to the these problems respectively in industrial and developed societies. Turkey, like many other nations in the process of development and industrialization, has experienced similar problems and has been trying to learn from, if not only to mimic, the Western experience of environmentalism. I personally believe that, as Apel reminds us above, one cannot talk about environmental problems and resulting environmental consciousness in the rest of world without paying attention to the world-transforming activities of the eighteenth, nineteenth, and early twentieth centuries. European hegemony and influence, for example, not only destroyed the traditional Muslim political system but also the economic and social institutions that had sustained it. 11 With these remarks in mind, we can look at the development of environmental consciousness in modern Turkey. The Turks began to settle in Anatolia (Asia Minor) from the second half of the eleventh century and created a number of political entities. The greatest were the Anatolian Seljuks, the Ottoman Empire and now the

Republic of Turkey. As nomadic tribes, Turks possessed a sense of reverence for nature even in their pre-Islamic history. Like primal peoples elsewhere, they lived within a state of natural balance and held natural objects in high esteem, in some cases even considering them as sacred. This can be compared with the ecological attitudes and practices of American Indians, for example. 12 The ancient Turks regarded mountains, rivers, brooks, springs, trees, and lakes as sacred. 13 With the coming of Islam, they came to see nature as the realm in which the beautiful names of God were manifested. This shifting perception could be seen in Turkish folk poetry, especially in the poetry of the thirteenth-century Anatolian dervish and folk-poet Yunus Emre (d. 1321). 14 As a Sufi (Muslim mystic), Yunus believed that every particle in the world, animate and inanimate, was a manifestation of the beauty and greatness of God, and therefore was a sign of the Divine. Some of Emre’s poems are still used today by those seeking to raise environmental consciousness among modern Turks. His conception and vision of the environment is best summarized in his famous saying: " We love all creation for the sake of the Creator." In the Ottoman Empire, there existed some institutions for the protection of natural sites, though these were admittedly rare and benefited mainly the elites. Within civil society, however, there existed charitable foundations (waqfs), which were well-known throughout the Muslim world. 15 When the constitution of these institutions is studied, evidence of concern about environmental protection and well-being of animals can be seen. 16Certain new organizations emerged in the second half of the nineteenth century through the influence of the French Revolution. In 1909, for example, a Law of Associations [Cemiyetler Kanunu] was issued, and almost remained intact till 1938. 17 However, this should

not be regarded as an indication of environmental awareness in the modern sense, but rather as a general consequence of the traditional Islamic value system. 18Although the Turkish Republic replaced the Ottoman Empire in 1924, it seems that some basic attitudes restricting the participation of individuals in the decision-making process remained the same. In other words, " the state dominance over the society in Ottoman Empire...reflected itself to the new Turkish state" and resulted in " a rigid sate-society polarization." 19 The founders of Modern Turkey were overwhelmed with the problems of a war-torn country in the early years of their careers. However, by the 1930s, a number of organizations had become interested in environmental issues, including the Animal Conservation Association, the Island Reconstruction Association, the Embellishment of Çamlica Association, the Mountaineer Club, and the Turkish Association of Foresters. The crucial point, however, is that these organizations were not bodies which were independent from state. 20 The activities of these and other organizations were strictly limited and controlled through one party rule. Therefore, none of them could act as a pressure group during the early period of the Republic, which ended in 1950s with the dawn of the multiparty era. At that time, the ban on associations and strict control over the social and political participation of the citizens was lifted. As a result new social groups emerged, representing different interests and views arising from the public sphere. Ironically, environmental problems such as the inadequacy of infrastructures in big cities, the rise of squatter housing because of rapid industrialization, and migration to large cities, began to show their face around the same time. One result was the establishment of the Turkish Association for the Conservation of Nature and Natural Resources, one of the

first achievements of Turkish environmentalism, in 1955. The founders of this and similar organizations included forestry engineers, bureaucrats, and scientists, and their goal was to prevent forest destruction and to preserve soil and water resources. 21The term " environment" (çevre) is spelled out for the first time in the 1961 Turkish Constitution, where according to article 49, " everyone’s physical and mental health should be protected." The subsequent development of environmental institutions and protections has been based on this article. Official Response to Environmental CrisisAwareness of local environmental problems acquired an international dimension and became a global issue in the early 1970s. In fact, the idea of developing national policies to conserve environmental resources first appeared right after the 1972 United Nations Conference on the Environment in Stockholm. The Turkish government also grew concerned about environmental problems, and became an active member of numerous international institutions to address the problem. With the influence of the conference, in the Third Five-Year Development Plan (1973-1977) which was prepared in 1973, environmental problems were dealt with for the first time. The plan stressed that the regulations concerning environmental protection should be added to the corpus of existing law. As a result, environmental law was incorporated into the national canon in 1983. 22 The efficient use of natural resources and their transmission to further generations was also emphasized in subsequent Five Year Development Plans as follows: " in the utilization of the natural resources in Turkey, importance will be attached to the conservation and development of these resources, taking into account the ecological balance and to enable the future generations to make use of them." 23 In 1978, organization at the state level continued with the forming

of the Undersecretariat of Environment. A growing awareness of environmental issues can be seen in the 1982 Turkish Constitution, which includes several articles on the protection of the environment. Article 56, for example, proclaims that " everyone possesses the right to live in a healthy and balanced environment. Developing the environmental circumstances, protecting environment health and preventing environmental pollution are the duties of the state and its citizens." However, Article 56 is not the only article regarding environmental protection. Article 43, for example, states that the public interest should be respected in coastal zones; Article 63 indicates the duties of the state to protect all historical sites and sites of exceptional natural beauty; Articles 44, 45, and 169 give the state the responsibility of undertaking all precautions to preserve the soil and forests; Article 23 gives the state the right to regulate, and if necessary to suspend, the freedom of establishment in cases where environmental danger exists. Turkey’s major environmental law institutions are based on the aforementioned constitutional principles. Accordingly, an " Environment Law" was established by Parliament in 1983. It was followed by the National Park Law, the Law for Protection of Cultural and Natural Wealth, the law to Protect Coastal Zones, the Construction Law, the Municipalities’ Law, the Law to Protect General Health, the Law to Encourage Tourism, the Law of Forestry, the Law of Water Products, and the Decree on Using Agricultural Lands. In the wake of all this new legislation, the Ministry of Environment was founded in 1991. Although the Turkish state assumed the responsibility for maintaining a suitable and healthy environment for its citizens, it also left open the door for citizens to play a role in environmental protection. The Role of the Ministry of EnvironmentThe role of the Ministry of Environment

has been limited by its share of state funds. One reason for its small budgetary allocation may be that it was a new institution without a traditional bureaucracy of its own. However, many environmentalists believe that the state still does not consider environmental protection to be a high priority. In other words, politicians and policy makers are not really interested in long-term policies. Even so, the Ministry of Environment has organized some major conferences and invited different environmental groups and sectors to discuss the current environmental problems threatening Turkey and how to address these problems. The Ministry has also published books, pamphlets, films, and pictures to enlighten the public and raise environmental awareness. By publishing these books, The Ministry of Environment has tried to show its willingness to see the environmental problems from a broader perspective on the one hand, while at the same time encouraging and promoting scholars of diverse backgrounds to produce similar works. 24Environmental Education in SchoolsThe role of education in raising environmental awareness is clear. In recent years many countries have expanded their educational curricula to include environmental courses and revised other relevant courses in the sciences, history, and other fields to include an ecological dimension. The Turkish national educational system is not an exception to this trend. In fact, in accordance with Article 56 of the 1982 Turkish Constitution, new environmental studies courses have been implemented at different levels of the educational system. The Ministry of Environment has worked with the Ministry of National Education to develop the materials to be used, and provided in-service education for teachers. In 1990, the Ministry of National Education signed an agreement with UNESCO on a project for environmental education. As a result, the Ministry has

prepared a handbook for primary school teachers. It has been hoped that teachers could help raise the awareness of children on issues such as health and the environment with the help of this handbook. 25Environmental topics covered at the primary and high school levels include the major environmental problems and the protection of air, water, and soil; remedies for pollution; lower risk ways of improving living standards; and the conservation of natural resources. 26 The Ministry of Environment also provides schools with pamphlets, brochures, pictures, books, films, slides and seminars. Furthermore, students participate in tree-planting activities organized by schools and the Ministry of Forestry. (The Ministries of Environment and Forestry have recently merged.)Turkish Universities are also adapting themselves to respond the environmental challenge. Today, many universities have environmental engineering departments and research centers. There are now more than 2, 000 environmental engineers in Turkey. Other departments deal with environmental sciences, conservation planning, and threshold analysis, while certain architecture, landscape design, chemistry, construction engineering, physics and medicine programs offer environmental courses. 27However, the education of the public and the raising of environmental awareness should not be left to formal educational institutions alone. NGOs, the mass media, and local authorities can also play a role in increasing public awareness about the environmental challenge and working towards an environmentally-friendly way of life. This point is underlined by Robert Brull, who notes that " The social learning capacity of our society must be expanded to generate new ways to respond to the process of ecological degradation. One key component in fostering social learning to address ecological degradation is

through the development and instantiation of binding ecological norms." 28" Social learning capacity" leads to increased empowerment within civil society as a whole. As the society and citizens grow more informed, they want to be a part of the decision-making process. The diverse character of society leads to dialogue and cooperation. It provides new opportunities to the voiceless, unrepresented and oppressed. The social aspect of environmental thought could thus be seen as a major contribution to modern ideals, specifically democracy. Through an increased environmental consciousness, people come to understand the interdependence and interrelatedness of ecosystems and humanity as well. This gives strong justification for developing an environmental ethic within society. As Marilyn Cooper suggests, " to enable large-scale, multicultural action among numerous human communities, an ecological ethic must work within the pluralist, postmodern world. This requires an ethic that can accommodate a wide range of cultural viewpoints, including conflicting notions of what is sacred and profane, what constitutes truth and heresy, and even basic notions regarding what it means to be human." 29NGOs and Environmental AwarenessThanks to the growing importance of civil society in the world, traditional Turkish political life also has been changing in recent decades and leaving more space for public participation. This is the main reason for the advent and rapid growth of NGOs in Turkey since the 1980s. Since then, we have seen the blossoming of environmental organizations and the raising of environmental consciousness among the Turkish public. In the early days of the Turkish Republic there were 26, 000 registered foundations, which were inherited from the Ottoman Empire. In fact, these were religious charity foundations (waqfs). Today, there are almost 60, 000 associations, 3, 000

foundations and 1, 000 unions in Turkey, each of which function in society for different purposes. 30 (A list of NGOs in Turkey is provided in Appendixes A and B.)In fact, environmental awareness in Turkey came largely as a reflection of global environmental movements. The global nature of the problem on the one hand, and the rapid acceleration of global communications on the other, have made possible an increasing level of solidarity and cooperation among environmental groups and movements worldwide. Turkish environmentalism has arisen within this context of global environmental consciousness. Initially, environmental initiatives tended to be protective and reactionary rather than based on any sort of thoroughgoing worldview. These initiatives were either against something conceived to be a threat to the environment, or for the protection of specific natural sites. Turkish environmentalists, for example, opposed thermal power plants at Gökova (1986), Aliağa (1989), and Yatağan (1989), and a nuclear power plant at Akkuyu (1993). To these can be added, from 1989 onward, the popular movement in Bergama (western Turkey) against the use of cyanide in gold mining. 31 The latter case is so far unique, in the sense that it has featured the active participation of villagers and local communities for the first time. It is surprising to see peasants, who just one decade ago used to demonstrate in favor of new industries in the hope of jobs and economic growth, were now demonstrating for the protection of the environment. The environmental movement, therefore, is coming to be seen as " a celebrating example of constitutional democracy and citizenship," and moreover, as " a precursor of social projects critical of the instrumental rationality in the Turkish context." 32Actions for the preservation of two relatively small parks in downtown Ankara, Zafer Park in 1986 and Güvenpark in 1987, which

inhabitants of the capital regarded as the lungs of the city, were protective in nature. Activists opposed any urban development policies that would reduce the city park system, arguing that if Ankara was to be the symbol of modern Turkey then it must contain green sites as well. The two parks were saved thanks to the activities of environmentalists, who proved able to inform the public about their rights and raise their voices to protect " their" parks and " their" city. The Aliağa Power Plant trial, meanwhile, occupied the Council of State for years. This case is highly significant because the relevant environmental statutes of the legal code, including Article 56 of the 1982 TurkishConstitution, were actively utilized, and the role of the administration in environmental conservation was emphasized. The legislative provision of the court included the opinion that " Ecology is above all the national interests." 33 This is interesting in the sense that by appealing to " anthropocentric" environmental legislation, Turkish environmentalists obtained an " ecocentric" result. 34The Bergama movement was significant in that it received sympathy from the public with its extensive participation by women, its non-violent approach, the creativity, persistence, and determination of its protesters, and the occasional use of shocking and non-traditional forms of protest, including a nude protest. The locals were well organized under an ad hoc Environmental Executive Committee; the organization was informal rather than institutional. The movement reached across boundaries, from the local level to the national, eventually receiving international support as well. Moreover, the activists framed the problem not only as an environmental issue, but also in terms of people’s right to resist in the interest of protecting their own welfare and livelihoods. The Bergama movement provided an opportunity to implement the right of social

opposition and civil disobedience. 35Furthermore, according to Öncü-Koçan, " The Bergama villagers accomplished a notable change in gender relationships and in the relationship between the public and private realms. The movement opens the political space to the experiences of the women who previously were excluded from public sphere, and hence broadens the social base of democratic citizenship." 36 In sum, the Bergama movement has been one of the most effective environmental initiatives to take place in Turkey. Mass reactions against nuclear plants are especially interesting in this context, and may have far-reaching implications. One motivating event may have been the Chernobyl disaster on 26 April 1986 in Ukraine. As former Soviet President Mikhail Gorbachev emphasized, " it has painfully affected the Soviet people, and shocked the international community. For the first time, we confront the real force of nuclear energy, out of control." 37 The Turkish people’s reaction toward nuclear power plans should be analyzed in the light of this and other environmental disasters. Chernobyl—which is located uncomfortably close to Turkish territory—showed the world very clearly the international dimensions of environmental problems. In the case of the Akkuyu nuclear power plant, demonstrations were nation-wide as public announcements and marches were held in various regions of the country to protest the decision of the plant’s construction. Today, Turkey’s environmental movement consists of a broad but generally ineffective official sector, a civil environmental movement (foundations, associations and cooperatives formed by the private sector) that prefers to exist in relation with the first group and which sometimes shows a technocratic tendency in dealing with environmental groups, and a third, tiny group which, though thoroughly independent of the first group, has largely been reduced to

ineffectiveness and silence. Arnd-Michael Nohl, after examining the manifestos, programs, and works of Turkish environmental NGOs, classifies Turkish environmentalist movements under four distinctive and in some cases overlapping groups: Greens, radical environmentalists, defenders for conservation of nature and environment, and protectors of industry and environment. 38The Turkish Green