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Centralised Regulation, Grassroots Involvement, Key Policy Actors or All?  
Conditions of Successful Policy Integration in Turkey

Dr. Gökhan ORHAN

Assistant Professor  
Department of Public Administration,  
Balıkesir University, Turkey  
gorhan@balikesir.edu.tr

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## **I. Introduction**

Traditional organization model of bureaucracy is based upon a top-down hierarchy, specialization and division of work. However, complex and interdependent nature of environmental problems poses a major challenge to this model. Since environmental problems are related to a number of policy areas and sectors, integration of policy areas and sectors, co-ordination of environmental problem solving efforts and the co-operation of actors have been major policy prescriptions for the solution of environmental problems. Policy-makers and policy-documents, like the Brundtland Report, have highlighted policy integration as a solution to environmental problems. Furthermore, attainment of sustainable development objectives requires a certain level of policy integration.

In the meantime, environmental policy was developed as a separate area of public policy, and realization of sectoral policy integration became a difficult task. As a result most of the studies in environmental policy reported failures in policy integration. In return, they prescribed policy integration as a panacea for complex and interdependent environmental problems. However, policy analysis is not only about keep reporting failures of implementation and prescribing similar policy recommendations. In order to get out of this vicious circle, policy analysis should focus on successful examples of integration and identify the conditions of success.

In this paper, two successful cases of environmental policy integration in Turkey, namely Ankara air pollution case and the case of Koceli will be analysed and conditions of policy success will be identified. In the analysis of these cases, roles of the centralised regulation, grassroots involvement and key actors will be taken as the independent variables and particularly the nature of their interaction will be explored. As these cases suggest, though they are necessary factors, strategies of centralised regulation and existence of a legal and institutional framework are not sufficient and do not guarantee sectoral policy integration in the case of Turkey. Bottom-up involvement of local actors and the existence of strong policy actors play a decisive role in the process of policy integration and environmental policy success.

## **II. Historical Developments: Emergence of Policy Integration as a Panacea to Environmental Problems**

The traditional organization model of bureaucracy and administration relied upon division of work, compartmentalisation and specialisation within a strict chain of command. This model has been successful for some time in dealing with the problems of modern societies. First generation environmental policies also relied upon the same model. According to Weale, the pollution control strategies of 1970s include the assumptions that environmental problems can be dealt with adequately by a specialist branch of the machinery of government, the character of environmental problems was well understood and can be handled discreetly (Weale, 1992: 75). The main policy instruments of the traditional environmental policies were legal and administrative regulations and the preferred governmental arrangements for environmental problem solving assumed units specialised on the environment.

Yet again the traditional organization model of bureaucracy and administration failed in dealing with complex problems like environmental problems, which cross-cuts a number of other policy areas. As Torgerson pointed out, traditional model of administration created massive, narrowly focused bureaucracies of “experts” both public and private, which exhibit “an incompetence to deal with the key holistic features of reality”. There is, in other words, a mismatch between the prevailing form of human organisation and the systemic properties of the natural environment. As a result, with each organisation oriented to the efficient

performance of specific functions, the ensemble of public and private bureaucracies persistently generates a vast, complex array of unintended, unanticipated consequences, which often eludes effective monitoring and control (Torgerson, 1990: 27).

In the meantime, problems of the first generation environmental policies were identified and those assumptions built into the first generation environmental policies were challenged. In the mid 1980s, it became increasingly apparent that the environmental policy strategies based upon compartmentalisation from the period of the 1960s and 1970s were not adequate in dealing with complex environmental problems.

In response, sustainable development proposed as an alternative to the problems stemming from existing forms of administration. In short, implementation of policies aiming sustainable development requires a major institutional change, involving the co-ordination of environmental policy making and the integration of environmental concerns into other areas of public policy. Since the environment itself is interdependent and most of the economic activity is directly or indirectly influenced the environmental quality (and has environmental consequences) co-ordinated decision-making with the integration of the environmental concerns into other areas of public policy is recommended by the Brundtland Report (WCED, 1987: 9-11).

As it was argued in the Brundtland Report the most important and fundamental challenge to the sustainable development project comes from the systemic nature of environmental problems and the need for an integrated policy approach to solve environmental problems. This challenge comes from the interdependence between environmental problems and other sectors of economy. Suggested policy changes by the Brundtland Report have several institutional implications. The objective of sustainable development and the integrated nature of the global environment and development challenges pose problems for institutions, national and international, that were established on the basis of narrow preoccupation and compartmentalised concerns (WCED, 1987: 9, 310).

According to the Brundtland Report, these institutions tend to be independent, fragmented and working to relatively narrow mandates with closed decision processes. Those responsible for managing natural resources and protecting the environment are institutionally separated from those responsible for managing the economy (WCED, 1987: 9, 310). Separate policies and institutions can no longer cope effectively with these interlocked issues, and there is a need for the integration of environmental concerns into economic decision-making (WCED, 1987: 310).

When we look at studies concerning the implementation of sustainable development in the less-developed context, there is a preoccupation with the low capacity and the inefficiency of the state bureaucracies in regulating public life. This is a widely accepted view and there is an underlying tendency to see strong and centralised bureaucracies as conducive to the success of the implementation of sustainable development (Khator, 1991: 119-120). Because of the integration and co-ordination demands that sustainable development places on the policy-making process as a whole, it is sometimes argued that a strong and centralised state is needed as a necessary condition for ecologically sound development. Alternatively, it has been argued that, in certain circumstances democracy can be sacrificed in the interest of wider ecological goals (Baker et.al, 1997: 35).

In this paper, those issues will be discussed in Turkish context to assess whether we need strong central bureaucracies to ensure policy integration, or alternatively a more participatory approach will be more likely to ensure policy integration. However, we need to give some background information about the state of policy integration in Turkey.

### III. Policy Integration and Turkish Environmental Policy

Turkey, like many other developing countries, faces the dilemma of coupling economic development with environmental protection. As an OECD report has put it, “Turkey is in a stage of rapid and dynamic change and confronted with the challenge of reconciling environment and unprecedented development” (OECD, 1992: 155). Turkey experiences a number of environmental problems that can be stated as follows<sup>1</sup>:

- Soil pollution is often serious, stemming from industrial production, waste disposal and extensive use of pesticides, insecticides and fertilisers in agriculture, as well as the loss of valuable agricultural land to human settlement and industry.
- Deforestation and resulting soil erosion is one of the major environmental problems of Turkey (ÇB, 1997: 103-118). In addition, the percentage of major protected areas in relation to total area is 1.1 per cent in Turkey compared with the OECD average of 9.2 per cent, so that there is a problem of loss of bio-diversity.
- Air pollution from industrial sources, motor vehicles, and domestic heating is one of the major problems, especially during the winter months in most of the big cities and in some smaller cities and towns.
- Water pollution stems from the discharge of sewage and industrial wastes to the sea, river and lakes without treatment. It also arises from: the impact of the use of chemicals in the agriculture; acidification of water resources because of air pollution; and water pollution from ships. Izmit Bay and Izmir Bay are two of the most polluted spots on Turkish shores. Similarly, most of the rivers are polluted by untreated industrial and domestic wastewater. Even in those rivers without an industrial or domestic source of pollution, it is possible to find pollution stemming from extensive use of fertilisers and pesticides (ÇB, 1997: 51-101).
- High rate of urbanisation and pressure on urban land results in the use of most urban land for dwelling purposes and leaves very limited space for recreation areas. In big cities like Istanbul, Ankara, Izmir and Adana there are plenty of illegal settlements, most of which are without proper infrastructure facilities (ÇB, 1997: 377-387).

In order to solve mounting environmental problems, Turkish governments established new institutions for the implementation of environmental policy in the late 1970s and introduced a brand new environmental legislation throughout 1980s and 1990s. However, Turkey performs badly in solving its environmental problems and in particular striking a balance between the economic development and environmental protection has been the main dilemma of Turkish environmental policy. Although, policy integration has been an integral part of the existing regulations concerning the environmental protection and particularly the integration of environmental concerns into other policy areas has been spelled out in several documents, Turkish environmental policy could be taken as an example of failure of in terms of environmental policy integration.

Among several problems concerning the implementation of the existing environmental legislation, problems stemming from bureaucratic fragmentation stand out. Most key actors complain about the fragmentation and lack of co-operation in the Turkish bureaucracy in general and environmental policy in particular. Due to bureaucratic fragmentation and compartmentalisation, problems with environmental policy integration is widespread and despite several provisions concerning the integration of environmental concerns into other policy areas, policy integration has not been institutionalised and yet to become a part of the

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<sup>1</sup>See also, EFT (1995) and OECD (1992) for good documentation of the environmental problems in Turkey.

standard operating procedures. In sum, Turkey has a centralised but fragmented bureaucracy, which fails to co-operate for environmental problem solving and does not present a bright picture in terms of integration and co-ordination of policies. Other organisations are yet to integrate environmental concerns into their decision-making processes. This is an issue highlighted in several official reports (Hamamcı et al., 1992; Hamamcı and Emre, 1993; Erim et al., 1996) and papers (Algan, 2000: 231-233; Yazgan, 2000:19; Arat, 2000:174) on Turkish environmental policy. However, there are a few examples of successful environmental policy integration and these cases may shed some light on the conditions of policy integration in Turkey.

#### **IV. Successful Cases of Policy Integration in Turkey**

It is more or less impossible to find a success story in terms of the complete cleaning up of environmental pollution and having a perfectly integrated decision-making process for environmental policy, which prevents all forms of pollution. Since success in the developing countries is limited, piecemeal and in that sense the failure stories look like the rule, those success stories look like exceptions. That's why success will be defined in relative terms, like the reductions in the air pollution or water pollution figures as a result of a deliberate or conscious intervention by policy makers (or relevant public authorities) to solve that particular problem. In this context, the policy analysts should find relevant successful cases of environmental problem solving and study what made the success possible.

In this paper, if action by public authorities to solve a problem is introduced from above by using relevant regulatory mechanisms, it will be taken as a case of centralised environmental policy. Finding cases for decentralised environmental policy, with the active involvement of local people in the policy-making and implementation process is rather difficult and almost absent from the scene of environmental policy in Turkey. Most local involvement is in the form of NIMBY type of protests. Although the involvement of local people through campaigns is important in highlighting the environmental issues, bringing them to the agenda and attention of high profile political figures, and making their alternatives heard against mainstream proposals, there are rather few cases of environmental policy-making with the active involvement of people in the influencing the outcome. In terms of environmental problem solving and cleaning of the existing pollution, there are only a few cases of success with the involvement of the people.

In this paper, the success of Kocaeli Province, and particularly İzmit Metropolitan Municipality's Integrated Environmental Project and Ankara Air Pollution Case will be analysed. These examples emerged as a result of the interviews conducted with a number of key actors during the late 1990s, in both cases we come across a certain degree of co-ordination and integration of environmental policies with co-operation among the responsible units and actors and our analysis will show the relative merits of different methods in Turkish environmental policy. These cases will be instrumental in identifying conditions under which environmental policy integration is possible in the context of different approaches to environmental problems.

##### **a. The Case of Air Pollution in Ankara**

Developed from a small central Anatolian market town to the capital and the second largest city of Turkey, Ankara was one of the first cities to experience air pollution problem in Turkey, as early as the late 1950s and 1960s. The air pollution problem of Ankara was particularly significant because the entire population suffered from air pollution and related respiratory illnesses. One major reason for the pollution was the geographical and climatic conditions of Ankara. Ankara was established on a bowl-shaped plain, surrounded by mountains, which blocked the circulation of air and contributed to the inversion. As Leighton

James noted, 'It's a haze of the fumes that sits over the town like a thick blanket and it's particularly bad in winter because of the extended use of coal and oil.' (Cited in Jones, 1989: 36). However, Ankara stood as an example of success of control measures in terms of its air pollution figures. Strict implementation of measures to combat severe air pollution has been rewarded with greatly reduced air pollution problem, with sharp drops in the SO<sub>2</sub> and PM concentrations<sup>2</sup> (EFT, 1995: 43).

In those respects, Ankara is a case of success where politics of centralised regulation played a major role. For some commentators, the only reason behind these improvements was the substitution of coal and fuel oil by natural gas in heating, no need to search for complex explanations. Indeed, natural gas made a substantial impact in solving air pollution problem in Ankara. However, introduction of natural gas was accompanied by a number of other measures and regulations. As a result, it is not the technical solutions themselves but the organisation behind these solutions, particularly the conditions of policy integration that deserve special attention.

Despite the establishment of a special committee for the prevention of air pollution in Ankara during the 1970s, achievements remained limited. The authorities organised the measurement of air pollution levels, regulated the burning hours of the central heating systems, and issued warnings for people to not to go out of their homes when the pollution level exceeded the limits and posed health risks. They also provided basic training for stokers to ensure the effective and efficient burning of the coal.

The air pollution problem was solved in the early 1990s. In addition to the regular measures mentioned above, the first step was the use of low sulphur-high calorie imported coal and special low-sulphur fuel oil, with max. 1.5 % sulphur content. The Ankara Provincial Public Health Board prohibited the storage, transport, distribution and use of the fuels other than coal imported and distributed by the Municipality and special fuel oil (Çevre ve İnsan, 1995a: 9). Check points were established at the entrances of the city and the Municipality did not let other types of fuel to enter Ankara. As a result of spot-checks of vehicles carrying fuel into the city and distributing it within the city and in buildings, 4400 tons of illegal coal was confiscated by the authorities during the 1994-1995 winter and public authorities took legal action against those breaking the law (Çevre ve İnsan, 1995b: 27-9).

The Governor's Office and the Metropolitan Municipality implemented these measures. In short, the Metropolitan Municipality of Ankara provided good quality and less polluting coal, developed and improved the coal distribution services, controlled the intensity of the air pollutants, inspected fuels used in domestic heating, and trained and controlled the stokers to prevent air pollution. The second phase of solving the air pollution problem was the use of natural gas for heating (Çevre ve İnsan, 1995b: 27-9). The Governor's office used its authority to make the use of natural gas compulsory and authorised the Metropolitan Municipality of Ankara and Provincial Health Directorate to make the necessary inspections and apply all penalties in line with relevant regulations and legal framework. These measures were implemented very strictly. For instance the ban on coal provision to areas where natural gas was available was targeted the parliament building and parliament avoided freezing by signing a protocol that promised to convert its heating system to natural gas.

In the second phase, education and training played an important part. As a part of an Energy Conservation Programme, there was training for stokers and inspections of the proper burning of coal in an effective and efficient manner in central heating systems, and expert advice and on-the-spot training provided as well. Furthermore, a data bank established by the

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<sup>2</sup> See Table 3 at the end of the paper for the Ankara Air Pollution 1970-2001 Winter Average Figures.

Municipality with information on 12,000 buildings, consisted of information on the living area, heating system, type of fuel and amount of fuel consumed. By making comparisons between buildings at certain times they identified the buildings with inefficient heating systems and invited their owners to the Energy Conservation Counselling Centre to clarify the problems and find solutions.

Following the first set of measures targeting domestic and industrial sources of air pollution, the next step aimed to curb air pollution from other sources, like motor vehicles, because almost half the air pollution originated from motor vehicles (AIÇKV, 1995). Studies shifted from pollution stemming from heating to those on the role of exhaust gases in air pollution problems of Ankara. Indeed studies, which measured CO, hydrocarbon (HC), particle matter and Pb emissions and trace elements in the atmosphere, showed that almost all elements display seasonal changes. According to statistical analysis based on these measurements, the primary source of pollution was motor vehicles (EFT, 1995: 44). Given the contribution of exhaust gases to air pollution in Ankara, the Metropolitan Municipality introduced a new scheme for the use of natural gas in transport. In collaboration with the Middle East Technical University, Department of Mechanical Engineering, they began to convert the diesel engines of city buses to natural gas engines. They painted these buses green and called them Green Buses.

In order to control emissions from motor vehicles, a number of measures were taken among which three centres were established to check emission levels of motor vehicles; two mobile teams established to check emission levels for fleets of public and private institutions in their own garages; and one shock team was established to make on the spot controls of motor vehicles in traffic; and to check whether the vehicles had have their regular tests, and impose fines if not. In addition to these, the Governor's office authorised nine private service stations to test emissions and issue certificates (and stickers) for that (Şahinoğlu, 1995).

The Ankara Province Environmental Protection Foundation organised a series of meetings, workshops and panel meetings with the participation of interested parties and experts to reduce the levels of pollution stemming from exhaust fumes. They have a draft framework document, with a number of proposals to reduce the air pollution stemming from vehicles and distributed leaflets to drivers in Ankara. In addition to these comprehensive efforts, Municipality introduced a new underground transport system, which eased the city's dependence on buses in urban transport and contributed to the reductions in the air pollution problems.

Behind all these efforts, there is a comprehensive strategy of environmental regulation, which integrated several concerns and depended on the co-operation of institutions and actors as well as their harmonious working relationships. First of all, a complete system for measurement and monitoring of air pollution was established and Refik Saydam Institute of Hygiene was responsible for measuring pollution levels and they monitored the air throughout the day. In this process, the Governor's office acted like a co-ordinating body and organised the efforts of different offices and local governments. Since the Municipality did not have the necessary personnel and technical capacity, the Provincial Health Directorate co-ordinated efforts. Later regulation on coal and fuel oil was introduced and strictly implemented by the Municipality. A new company was established by the Municipality to import and distribute coal. Following these initial measures, natural gas pipeline reached Ankara in August 1988 and supplied to Ankara for residential and commercial use in October 1988.

According to some key actors involved, an important role was played by the governor Saffet Arıkan Bedük and the then Prime Minister Turgut Özal. For some commentators, it was solely Mr. Özal's decision. What's more, some commentators argued that the air pollution

problem was resolved in Ankara just because the then Prime Minister and President Turgut Özal wanted to solve it and made it possible by channelling substantial financial resources for that purpose. For instance Ural claimed that “It happened to come into Turgut Özal’s mind and he changed the whole system<sup>3</sup>.” However, for some others, these projects were first developed by the Governor’s Office, and once the governor was persuaded by his staff on the possibility of solving the air pollution problem of Ankara, he presented this project to the Prime Minister. Once the Prime Minister was persuaded it was easier with the available resources. In an alternative scenario, it was the efforts of the Municipality under Mayor Murat Karayalçın, his harmonious relationship with the governments and the support he received from other public authorities. These accounts indeed highlight the role of key actors in solving air pollution problem of Ankara. Since several institutions are responsible for the implementation of environmental policy in Turkey, harmonious relations among these institutions makes a genuine difference. There is a network of technocrats in different institutions, working together harmoniously and co-operate for the solution of environmental problems in Ankara. During the interviews conducted in the late 1990s, all interviewees praised the efforts of the other institutions. Instead of conflict, competition and fragmentation, they put their efforts together for the solution of the problems.

The Governors of Ankara made a difference as well. Interestingly, a Provincial Environment Directorate did not exist in the Ankara. For that reason, the Ankara Provincial Health Directorate and the Ankara Governorship Environmental Foundation played an active role in problem-solving under the co-ordination of the governor. In that sense the project was implemented under the personal control of the governor.

The Ankara Governorship Environmental Foundation organised several workshops, seminars and symposiums in collaboration with universities and professional organisations, such as Workshop on the Prevention of Air Pollution Stemming from Motor Vehicles and a Symposium on the City and Noise. They published several books and leaflets for the purpose of environmental education. They published two brochures for the environmental education of drivers, prepared by the Environmental Commission of the Ankara Branch of the Chamber of Mechanical Engineers. They distributed an environmental guide to 10,000 taxi drivers and organised a short course for taxi drivers on how to be environmentally friendly, which basically aimed to give information on the methods of fuel saving.

In the Ankara case we can observe achievements over a ten-year period, and we can draw several conclusions from these developments.

- This case is a good example of effectiveness of centralised measures in the Turkish case. It shows that it is possible to solve certain environmental problems with technical measures by using instruments of centralised administrative regulation.
- The introduction of the natural gas in Ankara had a major impact on the prevention of air pollution. This was a centralised decision, and implemented vigorously, and proved very effective. Generally speaking we see very centralised decisions of the Governors, such as the compulsory use of the natural gas wherever available.
- The role of the governor was also important in this case because it ensured the co-operation among public authorities and co-ordination of the efforts for environmental problem solving. Policy integration was made possible with the personal efforts of governors.

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<sup>3</sup> Interview with Engin Ural, Secretary General, Environment Foundation of Turkey.



- The co-operation of the municipality was important in the implementation of measures for the prevention of air pollution. The Municipality was effective in its approach to air pollution problem and for some commentators its failure in implementation meant that the problem of air pollution returned to Ankara.
- Financial support of the central government made the achievement of this project possible, because this project was very costly and beyond the reach of local governments.
- In the Ankara case the international dimension was important in the sense that the British Government supported the project with long-term, low-interest, soft loans and British Gas provided technical support and know-how for the project. Similarly, the natural gas link with Russia was the other element of the international link that made the realisation of this project possible.
- Co-operation between the local government and governor, as well as other public authorities in Ankara, was crucial for success. Since several different institutions were responsible for different aspects of environmental policy, co-operation is an important part of this success.
- In the Ankara case we can observe a learning process. It began with a health scare. First, domestic heating hours were regulated and the personnel were educated in effective and efficient burning. Following that, environmentally friendly coal was introduced, and then natural gas. All these measures were strictly implemented. At the same time some polluting industries were relocated. The Municipality introduced Green Buses that use natural gas. Following these initial measures, the authorities realised that the domestic heating is only a part of the problem, and they made a move to tackle other sources of pollution. The new target was the pollution caused by motor vehicles.
- In the light of the evidence from this case, we can argue that governors play an important role in the implementation of environmental policy within their jurisdiction. A proactive governor can stimulate efforts for environmental protection as we have seen from the Ankara air pollution case.
- However, the Governor's efforts may not be enough as Municipalities have significant authorities on the regulation of environmental matters. Thus, an active co-operation between the governors and mayors is an important aspect of the effective implementation of environmental policy in Turkey.

In this case, centralised environmental measures were successful. The Governor's office started the process, and later the municipality took it over; and this initiative of local actors was supported by central government through providing necessary funds. International funds were channelled into these projects and the Treasury guaranteed their back payments. Environmentalist groups welcomed the projects, and the implementation of the transition to natural gas was trouble free. Centralisation, in this case, solved the air pollution problem. Abundance of foreign credits and financial assistance of the central government contributed to the success of this project. However, it is not only that project but also other measures taken by the municipality and Governor's Office, co-operation among several organisations responsible for environmental policy and their comprehensive approach that made success possible.

The last point that needs to be highlighted is the doubt as to the centralised nature of the measures in Ankara. Some of the commentators I interviewed disagreed with the centralisation arguments. They argued that there was a whole intellectual and scientific debate

and discussion process behind this project, especially on the alternatives<sup>4</sup>. Other experts supported this claim and argued that even if there was no formal participation, it was the pressure on public authorities and the campaigns of the professional chambers, associations and environmental associations that made this result possible. Furthermore, people co-operated in the implementation of the measures to resolve the air pollution problem<sup>5</sup>. Indeed, we cannot disregard the discontent of people with the air pollution or the pressure they put on the authorities. However, the decision and commitment of the political elite contributed to success more than other factors.

In the final analysis, centralised measures could facilitate policy integration, co-operation among institutions and co-ordination of efforts towards policy integration. Yet again strong and determined policy leaders are necessary for the policy integration. In this case both Governor and mayor resorted to already existing legal provisions about environmental protection and mobilised already existing legal and institutional resources. Furthermore, the existence of a legal and institutional framework about environmental policy does not guarantee their implementation. It is a necessary condition, but not sufficient and requires the existence of those key actors and also the political pressure from the public. Otherwise, those measures supposed to be implemented all around Turkey.

### **b. The Case of Kocaeli**

The northwestern part of Turkey and particularly the area between Istanbul and İzmit, the provincial centre of Kocaeli Province, is a heavily industrialised region. Although it is one of the smallest provinces in Turkey, Kocaeli produces 20.43 % of industrial output and the highest per capita GNP, and it is heavily populated, with an average of 284 people population per km<sup>2</sup>, almost four times the Turkish average. Rapid industrialisation and economic development of the province, together with rapid and uncontrolled urbanisation resulted in severe environmental problems in the form of air and water pollution, soil contamination, odour and noise and the was one of the dirty spots of Turkey until the 1990s.

The household wastes of the city of İzmit were discharged into the İzmit Bay at various points, with the result of that an unpleasant odour pervaded the city, particularly in the summer. This odour, which is compounded by odours from the city's slaughterhouses, originated from the septic conditions and the city dump at the eastern tip of the bay and varied depending on temperature and wind directions. People living around the Bay area also discharged their household wastewater into it through various streams and none of the municipalities has an adequate sewerage network, and their septic tanks either were weak or overflow. As in the city of İzmit itself, there was pervasive odour from the environs, and the pollution of the coastal waters deterred people using the area for recreation (EFT, 1995: 101).

In terms of industrial pollution, over 120 industrial enterprises, most located along the Bay's northern shore, discharged their wastewaters into the Bay. The pollution loads carried by their wastewaters was examined by environmental organisations during the mid-1980s (EFT, 1995: 101). Research has shown that 82 % of the total BOD load, 66 % of the suspended solids load and 60 % of the oil loads is discharged into the eastern sections of the Bay. Meanwhile, 57 % of the phosphorus and 64 % of the ammonia were also discharged into this section. Approximately 58 % of the 180.000 m<sup>3</sup>/day industrial wastewater came from SEKA (paper and pulp), PETKIM (petrochemicals) and IPRAS (oil refinery) and almost 50 % of the

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<sup>4</sup> Interview with Sinan Erer, Director of Kent-Kur, a private consultancy firm on urban planning and Gönül Mıhladı, a city planner in Kent-Kur.

<sup>5</sup> Interview with Nesrin Algan Assoc. Professor in the Ankara University, School of Political Science, the then Director of Foreign Affairs in the Ministry of Environment.

organic load introduced into the Bay's surface waters originated from SEKA plants. Furthermore, the BOD load of six industrial enterprises constituted 92 % of the total load reaching the Bay. The two fertiliser factories alone were responsible of the 80 % of the total nitrogen load originating from industry (EFT, 1995: 102).

The concentration of heavy industries in a small area has been one reason for the mounting environmental problems. Most of these industries were established during the 1960s and 1970s without taking environmental pollution into consideration. Similarly, public bureaucracy and local governments did not have much concern about environmental pollution. On 9 July 1978 fishermen from İzmit organised a protest in the İzmit Bay with the involvement of hundreds of small boats. In that way, they for the first time drew attention and highlighted the pollution problems in the İzmit Bay (Öz, 1989: 32). Even after Turkey developed proper environmental legislation and introduced new institutions for the implementation of these policies, the environmental problems of the area were only the subject of several scientific reports on the pollution levels, and plans to solve these problems. Despite mounting environmental pollution, public authorities did not do much to tackle those problems and refrained implementing existing environmental legislation. Consequently, mounting environmental problems forced people to find new ways of showing their discontent. As TDN reported, over 33,000 people signed a protest motion and presented it to the governor of Kocaeli calling for urgent measures to be taken against the pollution in the region (TDN: 22/10/1987).

Following this bleak picture of the environmental problems, Kocaeli Province and, in particular, İzmit proved to be a success case in implementation of an integrated plan for environmental clean up. From the 1992 onwards Kocaeli province initiated the establishment of a new organisation for the implementation of a *participatory, co-ordinated and integrated* environmental policy and İzmit Metropolitan Municipality developed an *integrated strategy* for the treatment of domestic and industrial wastewater and disposal of industrial and domestic waste. As a result, air and water quality have improved, and a piece of contaminated land was rehabilitated. By 1984, 27 factories used to discharge 78 tonnes of organic substance a day and as a result of these efforts organic waste discharge was reduced to 23 tonnes. The share of industrial pollution in İzmit Bay has been reduced from 26 per cent in 1984 to, 3 per cent in 1995. Coastal areas do not suffer from odour anymore and biological life in the bay area started to revive again and for some accounts 25 different types of fish species returned to the Bay. As it was illustrated in Figure 1 and Figure 2 sharp reductions in SO<sub>2</sub> and PM levels show some degree of success in terms of reducing air pollution.

Figure 1 Kocaeli Air Pollution Figures (1989-1996) Winter Average (December, January and February)

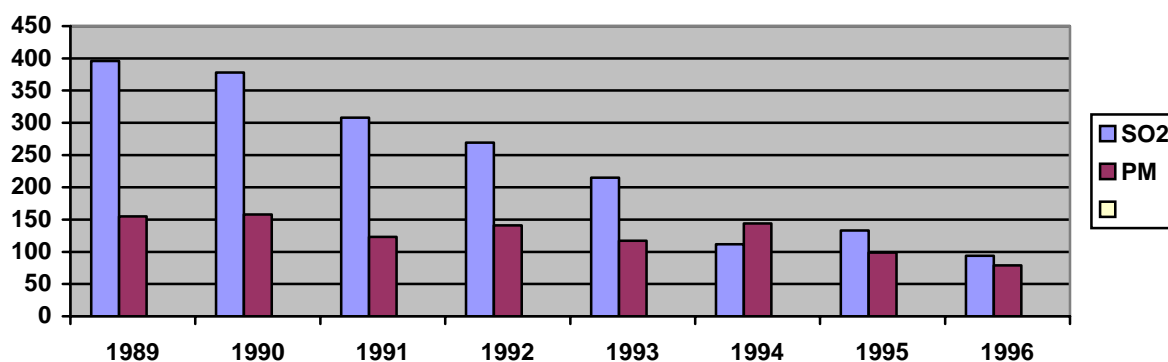
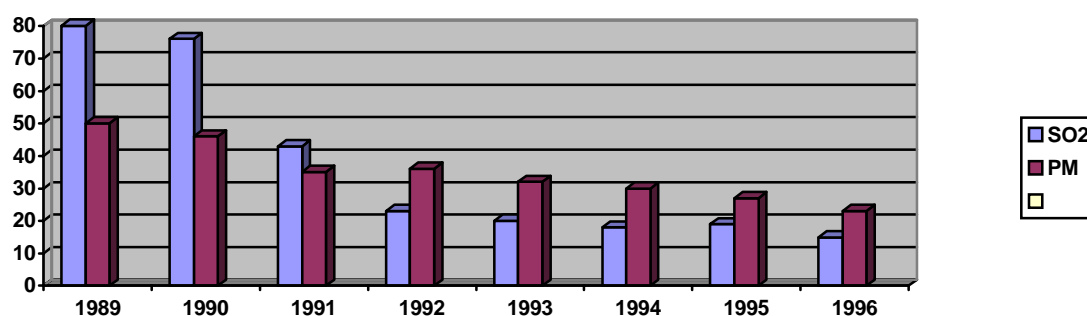


Figure 2 Kocaeli Air Pollution Figures (1989-1996) Summer Average (June, July and August)



This case stands as a successful case of environmental policy integration on the one hand and environmental problem solving on the other. Identification and analysis of the factors behind the design and implementation of these projects will shed some light on the conditions of successful policy integration in Turkey at the local level. In particular, the respective roles of bottom up involvement centralised regulation and determined key policy actors will be assessed.

First of all, high level of pollution resulted in wide range of health problems like asthma, bronchitis, heart and artery problems, and several allergies in the area and we could speak of a popular unrest about pollution and increasing environmental consciousness. Popular unrest was organised around organisations like Kocaeli Environmental Education and Protection Association (KÇEKD). As a result we could speak of a major pressure from public about the solution of environmental problems and an active, organised, committed and environmentally conscious civic community putting pressure on the public authorities. People devoted their time and energy to solve environmental problems. Local people joined the committees and formed environmental volunteer teams to monitor the sources of pollution. It was not only environmental associations taking part in this process, but also other civic associations.

The committed actors like the Governor and Mayor, who considered solving environmental problems as their main priority and finally, the introduction of a new institutional framework to achieve the objective of environmental protection played a major part in the achievement of successful environmental policy integration. Kocaeli New Environmental Organisation and Environmental Volunteers Project, (NEO-EVP) and İzmit Integrated Environmental Project (IIEP) were established to tackle environmental problems in the area and central government paid special attention to the problems of the area.

In terms of committed actors, Turkish environmental legislation attaches an important role to governors in the taking of precautionary measures to prevent pollution and to take necessary measures in the case of pollution. As the highest-ranking official representing the central government, they have a co-ordinating role in the provinces and are responsible for the administration of the province. Although this co-coordinator role may have an advantage in developing an integrated environmental policy to solve complex and interdependent environmental problems, they seldom use their authority in these matters. In this case, there is a more or less a consensus on the role of the Governor as a leader in this process, who gave high priority to environmental problems and understood that individual efforts or top to bottom regulatory moves were not sufficient to solve the environmental problems, and the only possible solution was the involvement of all interested parties and the *integration* of policies through *co-ordination* of the different policy areas and different institutions. The governor provided the first stimulus for change and acted as a leader. An efficient and effective use of the existing legal and institutional framework was ensured and new

institutional arrangements were introduced and government officials used their full authority to tackle environmental problems. Since the area under the jurisdiction of İzmit Metropolitan Municipality is rather limited and most polluting industries are outside its jurisdiction, the involvement of Governor's office was necessary for the successful implementation of integrated policies.

Similarly, the mayor of İzmit Metropolitan Municipality showed a similar commitment to the accomplishment of these projects and initiated new projects for the elimination of pollution in the area. In Turkish environmental legislation, municipalities have an important role in the implementation of the environmental policies. Although governors can intervene and convey orders for the implementation of certain policies, the co-operation of municipalities is essential to achieve sound solutions. In Turkish local governments, the Mayor is the key actor for all municipal policies and İzmit mayor gave environmental issues a high priority. The Municipality showed full co-operation in the establishment of the committees, preparation of the projects and implementation of the decisions. Furthermore the personnel of the municipality actively took part in the committees. The Mayor actively lobbied in Ankara to secure government guarantees for international loans and persuaded the government to make Kocaeli an environmental priority area and a model for others. Finally, the MoE paid attention to the environmental problems of the province.

NEO-EVP constituted the first step of policy integration. According to the Governor Kemal Nehrozoğlu, previous efforts by governors, local governments and voluntary associations did not produce much success, as they were individual efforts and his idea of "prevention of environmental pollution in the province is only possible with the involvement of associations, foundations, professional organisations, chambers, political parties, trade unions, and similar voluntary organisations and their support to public authorities", resulted in the establishment and start of the NEO-EVP on 17 August 1992 (Nehrozoğlu, 1995: 619). This project was one of the first in Turkey and aimed at: the unity and collaboration of the public authorities and environmentalists; establishment of an organisation (in collaboration with volunteers, individuals and other institutions) to co-ordinate joint control and monitoring (measuring air and wastewater pollution levels by using a Mobile Laboratory) and contribution to the development of public opinion on environmental matters. A new organisational model emerged in such a way as to ensure the participation of all municipalities, political parties, foundations, associations, professional chamber and organisations, trade unions, and other civil society organisations in the work of the public authorities in the process of environmental problem-solving. This strategy aimed to involve people in the process and to create identification with themselves as the guardian of the area they live, and a responsibility for the environmental problems of their locality (Nehrozoğlu, 1995: 619-620).

In this process, a phone number identified for complaints and a wireless network was established among administrative units to maintain instant intervention of technical units in pollution problems. Mobile monitoring units were established and citizens were encouraged to take part in these units as environmental volunteers. These units aimed to encourage the public to work with state officials in the monitoring, control and complaints mechanism and to share risks and responsibilities in resolving the problem. Environmental Volunteers Teams were made up of one civil servant and two volunteers. The environmental associations and professional chambers nominated volunteers. The Environmental Volunteers Administrative Committee arranged their shifts and organisation. Teams were equipped with equipment for waste water analysis, gas emission measurements, exhaust gas measurements, and noise level measuring equipment. In addition to cars, 1 plane, 1 helicopter, 6 boats of other public authorities, like Coast Guard, Navy and Customs, were used to assist monitoring of pollution from sea and air, which shows the degree of co-operation among the authorities. Teams

monitored both urban and rural areas and were not allowed to confront polluters and enter into factory premises. They reported their findings to the centre. All the information reaching to these centres was transmitted to the technical teams, which responded with their mobile pollution measurement equipments to check whether or not there was excessive pollution. If there was, they took the necessary action and measures.

Later on the Environment Co-ordination Commission was established and undertook the running of the projects and established seven sub-committees. The Co-ordination Commission was composed of the representatives of several official, semi-official and voluntary organisations. Its composition reflected the inclusive character of the new organisation. The Co-ordination Commission was composed of the Governor of the Province; the Metropolitan Mayor; representatives from Kocaeli University; Directors of the Provincial Health, Environment, Agriculture and Village Affairs, Port, Industry and Trade Authorities; representatives from Professional Organisations, like Secretary Generals of the Chambers of Commerce, Industry, Mechanical Engineers and Medical Doctors; Journalists' Association, Turkish Press Union; representatives from Voluntary Business Groups; one former MP; a retired Army Colonel and a former Director of Environmental Health.<sup>6</sup> All these committees were inclusionary in character and genuinely included representatives from all interested parties, from public authorities to local governments, voluntary business associations to semi-public business associations, professional organisations to individual businessmen, and universities to scientific institutions.

By 1992 the establishment of Provincial Environment Directorate in Kocaeli facilitated the establishment of sub-committees. Following the appointment of a director on 26 October 1992, the Provincial Environmental Administration together with NEO-EVP continued its efforts for the control and prevention of the environmental pollution in collaboration with public authorities, private corporations, associations and voluntary institutions. Committees met monthly and evaluated the previous month's programme and determined the next month's programme. They established a feedback system that monitors to what extent public authorities attend to the problems complained of. Besides, these monthly meetings were open to the policy proposals of the public and they took the feasible proposals to Co-ordination Board.

If we need to give some information about implementation;

- By winter 1992-1993, low sulphur content Fuel Oil was introduced and its use made compulsory.
- By winter 1993-1994 the use of low quality lignite was prohibited.
- Air pollution quality was regularly measured and reported to the public via a notice board.
- An Inventory of Industry, a database for industrial plants in the area, contained information on their production capacity, water consumption, fuel consumption, and the characteristics of their water discharge, industrial waste and gas emissions, was compiled.

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<sup>6</sup> Other committees were the Advisory Committee, the Purchasing and Finances Committee, the Commission for Reforestation and Greening, the Committee for the Prevention of Visual Pollution, the Environmental Volunteers Administration Committee, the Press and Public Relations Committee, the Education Committee, the Sea Committee, the Project Evaluation and Realisation/Accomplishment Committee

- In 1994 IZGAS (İzmit Natural Gas Distribution Industry and Trade Inc.) was established for the construction and the operation of a natural gas distribution network in İzmit.

In 1995, overall 4382 complaints reported. Wastewater team conducted 289, air pollution team conducted 235, and other teams conducted 320 controls. As a result of all these complaints on environmental pollution and other nuisances, suspected pollution sources were analysed and if they exceeded the limits and operated in an irresponsible manner, they were either warned to solve the problem, or fined; in some circumstances they faced closure. These stringent measures were applied to factories, ships, noise sources and even to cars and apartment blocks.<sup>7</sup> Similarly, wastewater problems were reported to the respective municipalities and they took necessary action<sup>8</sup>. As a result, 19 factories were fined for discharging their wastewater without treatment, one was closed for 8 days since it was not operating its filter systems and was causing air pollution, one was closed for three days because of the lack of proper filtering systems, one factory fined because they had some new extensions without proper permission. Ships and ports polluting the marine environment were heavily fined and the noise problems were solved at its origin.

In terms of co-operation among actors and organisations; inspection and controls for illegal fuel were arranged with the co-operation and joint operation of the Gendarmeries, Police and Municipal Police Forces. Since they are all responsible from different areas, their co-operation was necessary and they regulated the fuel control issue by their joint operations. “Environment Schools Project”, a joint project by the İzmit Chamber of Commerce, the Provincial National Education Directorate, and the Provincial Environmental Authority, provided environmental education from primary to high school. For pollution from ships Navy and Coastal Guard co-operated with the officials of the Provincial Environment Directorate. The Municipality and the Environment Directorate worked together to chase polluting industries. The Governor and mayor lobbied in Ankara to get the support of the central government and other actors supported their efforts as well. In disciplining industry, public authorities co-operated with business associations, they used both stick and carrot; on most occasions they used methods of persuasion rather than punishment. Public pressure on polluters was one important factor behind the authorities and the local press played a major role in this process. Sometimes the authorities collaborated with local press and leaked the names of polluters, which had a major impact on industry’s behaviour.

Today the committees no longer meet but the tradition of co-operation among the actors was kept continuing. Since then, environmental concerns have been integrated to the standard operating mechanisms of the bureaucracy and decision-making process. Provincial Environment Board is responsible of matters related to environmental matters and composed of the representatives of several public and private institutions. At the moment, from factories to housing developments every single economic activity required to get wastewater discharge permits and emission permits. These permits are granted on the basis of the discharge and emission analyses. Furthermore the municipality organised a participatory forum for people, İzmit City Council, with the participation of representatives from all major groups. In that sense participation continued in a new form. In addition to all those efforts, the IIEP Project constituted the centre stage of the success in the area.

İzmit Metropolitan Municipality’s IEPP has been the second step of efforts towards policy integration. Municipalities have a number of responsibilities in implementing environmental policies. According to Turkish legislation, (Municipalities Law, General Public Health Law,

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<sup>7</sup>Members of public reported registration numbers of polluting motor vehicles to the authorities.

<sup>8</sup> In some cases workers informed the authorities about the pollution stemming from their workplaces.

Metropolitan Municipalities Law, and MoE's Regulation on Waste Control, Collection and Disposal) the collection, transportation and disposal of waste are the responsibilities of the municipalities. Under the Metropolitan Municipalities Law local municipalities were responsible for collection and transportation, but disposal is the Metropolitan Municipalities' duty.

İzmit Metropolitan Municipality proposed an Integrated Environmental Protection Project, to solve existing water and odour pollution stemming from domestic and industrial wastewater, and also to solve the existing domestic and industrial waste disposal problem. Overall, the project proposed an incineration plant for clinical and hazardous industrial waste and chemicals that aimed the protection of underground waters, the Bay, the atmosphere and green areas; a landfill area for domestic waste, non-hazardous industrial waste, and waste from incineration plant that aimed to prevent contamination of ground water, air pollution and odour and haphazard disposal of industrial hazardous waste and its long-term health effects; a collector, 7.25 km long, for the industrial and domestic wastewater of the Eastern part that aimed at the cleaning of the Eastern Canal and expected to carry high oxygen content rainwater to the inner bay; a wastewater treatment plant for the collected wastewater that aimed at contributing to the elimination of pollution in the inner bay and prevent further pollution; for domestic waste they recommended manual separation and recycling (of at least 10-15 per cent of the waste), and landfill.

The MoE accepted these proposals and projects and those other central government institutions, particularly the Undersecretariat of Treasury, authorised international credits and government guarantee for their repayment. İzmit Municipality has completed building of a collector for the wastewater, wastewater treatment plant, landfill facilities and an incineration plant in 1997 and became the first Turkish city to complete an integrated environmental project and it was considered as a model for other cities. However, solid waste incineration plant has been a point of disagreement between the environmentalists and the Municipality because of the dioxin levels in its surrounding area. Greenpeace members highlighted the issue of dioxin levels around this plant through their direct action type protests, like climbing smokestacks and chaining themselves to doors and this incineration plant remains the only point of confrontation in the area.<sup>9</sup>

Finally İzmit Municipality received "Harmonisation Towards European Union: City 2000" award from the EU Commission's General Directorate of Environment due to its İzmit Integrated Environmental Project (IIEP), Natural Gas Project and drinking water project. By the April 2001, İzmit Metropolitan Municipality received the European Flag of Honour from the European Council. In this case a combination of several factors gives us a good indication about the conditions under which environmental policy integration could be attained at the local level.

- Severe pollution in the area prompted the authorities to find a solution; the MoE saw these projects as a showcase, the SPO and Treasury supported the projects. Yet again, local authorities tried hard to persuade bureaucrats and politicians at the central government level, about the necessity and vitality of these projects. That is why the pressure from below has a major role in this case. Without the pressure put upon the central government institutions, it was impossible to persuade Undersecretariat of Treasury to authorise those loans and they are not enthusiastic to authorise similar loans.<sup>10</sup>

<sup>9</sup> Information is taken from <http://arkabahce.ada.net.tr/~proje/gpeace/izaydas.html>.

<sup>10</sup> Interview with Bülent Özgün, the then Deputy Undersecretary of the Undersecretariat of the Treasury.



- However, other areas in Turkey with similar environmental problems have made any attempt to solve them. The role of the major actors and their will as policy brokers and leaders is important in determining those results. A proactive metropolitan mayor and governor, primarily responsible for the implementation of environmental policies under Turkish legislation, facilitated the process. The governor identified the environmental problems as the most important and urgent problems of the area and mobilised resources for the solution of environmental problems. Municipalities actively took part in the new organisation, undertook the difficult task of implementation of these new regulations, and introduced the IIEP.
- The popular unrest against the pollution levels played a major role in the development as well as implementation of these projects. Voluntary associations organised local discontent and put pressure on the public authorities and polluters for the solution of the environmental problems. The local press played an important role in this process. Sometimes public authorities collaborated with the local press to put pressure on polluters.
- The legal and institutional framework of environmental policy in Turkey may be sufficient for problem-solving, if you have the right people in the right place to interpret the legislation in the right way and implement these policies. This brings us to the role of institutions as providing constraints and opportunities. Actors not only use already existing opportunities but they also create opportunities from already existing stock of institutions and legal frameworks in mobilising resources.
- Although we could not speak of a genuine participation at the local level, active involvement of people during the initial decision-making process, monitoring of the sources of pollution, and control of the enforcement was essential to environmental problem solving. There were several crosschecks in the system, both on the polluters and the public authorities responsible for the solution to the problem.
- Active involvement of all stakeholders in the decision-making process, in the committees was important. Not only representatives of the central and local government, or environmentalists, but also those regulated industries actively took part in the process and co-operated with the regulators.
- Different levels of government, local governments and private actors co-operated for environmental problem solving. For instance, the active involvement of the representatives of Industry in the Committees; co-operation between the mayor and governor; Provincial Directorate of Environment's support of local environmentalist groups with necessary resources for monitoring the polluting industries.
- The co-ordination of the work of the different institutions through the New Environmental Organisation implied an integrated, total and comprehensive approach to environmental problem solving. They considered the problem as whole, different committees composed of various experts did their bit of work and the co-ordination commission maintained the integrity of the policies and measures to be taken, and ensured co-ordination and co-operation among the units.
- The nature of environmental problems is another factor. Pollution sources were concentrated in a rather small area and some technical fixes existed to solve the problems. It is easier to implement initial measures and achieve substantial improvements in the environmental quality.
- The Governor's Office and the Municipality used international sources of finance and benefited from international technical assistance, for instance they worked with UNEP in

identifying appropriate technology. In that sense, again they created their own resources and opportunities.

## **V. Conclusions**

Although Turkish environmental policy has a number of problems concerning implementation and policy integration, these cases illustrated the possibility of policy integration and success in the centralised and fragmented political and administrative system of Turkey. The success of these measures shows the possibility of policy integration and solving environmental problems within the current framework of regulations. In this sense, centralised regulation and development of a legal and institutional framework is a necessary condition, but not sufficient for policy integration. In the case of Ankara, policy integration was assured with the involvement key actors and, most important of all, mobilisation of resources and creating opportunities with the co-operation of the actors and institutions at local level.

In the case of Kocaeli, policy integration was assured with the bottom-up involvement of people, participative decision-making and implementation, initiatives of key actors and mobilisation of resources and creating opportunities with the co-operation of the actors and institutions at local level.

Here these achievements may look like the success of the central government alone. It looks that if powerful players in the Turkish political elite want to introduce and implement policies for sustainability, there are actually few institutional barriers to doing so in this centralised system. That is partly true and the efforts of political elite worked in these cases. However, what we should keep in mind that even in a case where centralisation might seem to provide necessary conditions for long-term development, some participation seems important, and may be desired by important actors whose institutional position gives them freedom of manoeuvre. Yet again pressures from below on local elite played a major role in this case and local actors played a major role in this process of mobilising the central government institutions towards this intervention.

Another conclusion to be drawn from this experience is about the local character of environmental problems. Central governments may not get interested on pollution problems as such. However, environmental problems disturb local people and those people facing environmental pollution become involved in the policy process. If local people do not get involved in the policy process it is not likely that the central government will be mobilised to solve those problems. Pressure on the central government for change is very important and without this pressure it would be impossible to solve environmental problems. In Turkey central government do not pay much attention to environmental problems, but at the local level environmental problems are important issues. What we could argue that policy integration, co-ordination of efforts for sustainability and co-operation between the actors are easier at the local level and the co-operation of actors at the local level made the difference.

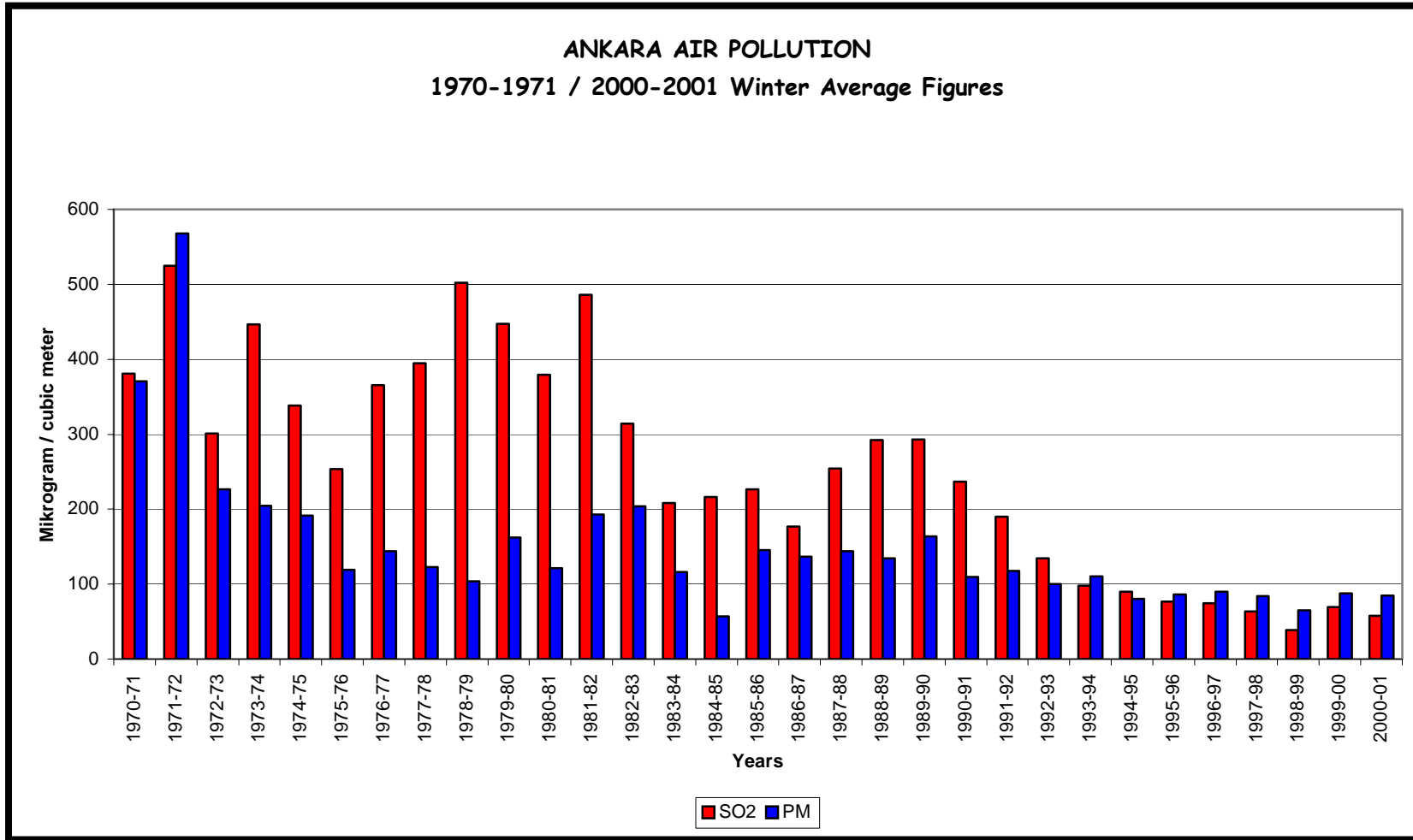
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Figure 3. Ankara Air Pollution 1970-2001 Winter Average Figures<sup>11</sup>



<sup>11</sup> Source <[http://www.rshm.saglik.gov.tr/hki/graf/1970-2001\\_k\\_so2\\_pm.xls](http://www.rshm.saglik.gov.tr/hki/graf/1970-2001_k_so2_pm.xls)> [Accessed 30 November, 2004]