T.C.
MARMARA ÜNİVERSİTESİ
AVRUPA BİRLİĞİ ENSTİTÜSÜ

AVRUPA BİRLİĞİ SİYASETİ
VE
ULUSLARARASI İLİŞKİLER ANABİLİM DALI

ISTANBUL METROPOLITAN MUNICIPALITY AND ENVIRONMENT THROUGH THE PERSPECTIVE OF THE EU

YÜKSEK LİSANS TEZİ

İhsan İKİZER

Istanbul – 2007

T.C.

MARMARA ÜNİVERSİTESİ

AVRUPA BİRLİĞİ ENSTİTÜSÜ

AVRUPA BİRLİĞİ SİYASETİ
VE
ULUSLARARASI İLİŞKİLER ANABİLİM DALI

ISTANBUL METROPOLITAN MUNICIPALITY AND ENVIRONMENT THROUGH THE PERSPECTIVE OF THE EU

YÜKSEK LİSANS TEZİ

İhsan İKİZER

Danışman: Yrd. Doç. Dr. Yeşeren ELİÇİN ARIKAN

Istanbul – 2007

ABSTRACT

Environment is one of the most challenging chapters in the negotiations process of Turkey with the European Union and the main implementer of this chapter is municipalities in Turkey as it is in the EU member countries. Istanbul Metropolitan Municipality (IMM), which is the greatest and the oldest local authority in Turkey, with around 50.000 employees serving for around 14 million people, is one of the most important implementing actors in Turkey, concerning environment. In this study, Istanbul Metropolitan Municipality has been examined with regards to its services in the area of environment through the perspective of the European Union's relevant legislation, thanks to activity reports and other documents of the relevant departments of IMM. It was observed that IMM undersigned many services and investments in the area of environment, which might be accepted as successful; however, it needs to exert more and more efforts to fully conform to the EU environmental standards.

Key Words: Istanbul Metropolitan Municipality, the European Union, environment, air, water, waste, noise, pollution

ÖZET

Türkiye'nin Avrupa Birliği ile olan müzakere sürecindeki en zorlu fasıllardan biri çevredir ve bu faslın Türkiye'deki uygulayıcısı, tıpkı AB üyesi ülkelerde olduğu gibi, belediyelerdir. Türkiye'nin en eski ve en büyük belediyesi olarak yaklaşık 50.000 çalışanı ile 14 milyon insana hizmet veren İstanbul Büyükşehir Belediyesi (İBB), Türkiye'de çevre alanındaki en önemli uygulayıcıdır. Bu çalışmada, İBB'nin çevre alanında sunmuş olduğu hizmetler, İBB'nin ilgili birimlerinden elde edilen faaliyet raporları ve diğer belgeler yoluyla, AB çevre mevzuatı perspektifinden değerlendirilmiştir. İBB'nin çevre alanında çok sayıda başarılı olarak kabul edilebilecek hizmete ve yatırıma imza attığı gözlenmiştir; ancak, AB çevre standartlarına tam olarak uyum sağlayabilmesi için İBB'nin kat etmesi gereken uzun bir yol vardır.

Anahtar Kelimeler: İstanbul Büyükşehir Belediyesi, Avrupa Birliği, çevre, hava, su, atık, gürültü, kirlilik

CONTENTS

ABBREVIATIONS

EC European Community

ECCP European Climate Change Programme

ECSC European Coal and Steel Community

ETC Emissions Trading Scheme

EU European Union

IETT Istanbul Public Transportation Administration

IGDAS Istanbul Natural Gas Distribution Co.

IMM Istanbul Metropolitan Municipality

ISKI Istanbul Water and Sewage Works Administration

ISTAC Environmental Protection and Waste Materials Valuation Industry and Trade Co.

GDP Gross Domestic Product

NGO Non-governmental Organization

OECD Organization of Economic Cooperation and Development

SEA Single European Act

TEU Treaty on the European Union

INTRODUCTION

The European Union, the successor of the European Economic Community and the European Steel and Coal Community, is a unique supra-national organization which was based on the idea of surrendering some of the sovereignty of member states to a committee consisting of merely technicians who seek the ways of realizing the goals of the organization. Thanks to 'spill-over effect', the EU adopted policies, which have many binding outcomes over its 27 member states, on many areas step by step. Today, the EU is regarded as one of the most influential entities in the international political system. It has delegations in 130 countries and 5 international organizations (UN, OECD, OSCE, WTO, FAO) with more than 5.000 staff. As an economic giant, it is the largest economy by producing nearly one third of the total GDP in the world. The influence of Euro, official currency of the EU, is going up in the World and it is currently the second most commonly held reserve currency, being approximately a quarter of allocated holdings.[1] The EU has become the biggest donor and the largest provider of humanitarian aid in international community with donations on development assistance over 160 countries in 2006, equaling to 46 billion €.[2] In brief, the EU has managed to be one of the most powerful actors in international political system.

The EU has managed to affect not only the international political system but also the daily lives of the peoples of its member countries. Other international organizations hardly ever prescribe some rules and standards that regulate a number of fields that are in the center of life, varying from environment to transport, from education to health etc. Even though the EU has a policy making role whose results are some rules and standards, it has no role of implementing these policies. In this point, local authorities seem to be rather eminent actors with the feature of being the closest units to citizens. There is no doubt that they play a central role in the implementation of the EU policies.

[1] International Monetary Fund, http://www.imf.org/external/pubs/ft/wp/2006/wp06153.pdf

[2] EU Commission, booklet entitled "the EU in the World", http://ec.europa.eu/europeaid/reports

Therefore local authorities can be accepted as central linkages in the relation between the EU and European citizens.

Local authorities are also effective in policy shaping, especially after Maastricht Treaty, following the criticism that there was 'democratic deficit' in the EU. The EU Commission is in touch with associations and unions consisting of representatives of local authorities, such as EUROCITIES (European Network of Major Cities), Energy Cities, International Association of Public Transport (UITP), Assembly of European Regions (AER) and the Council of European Municipalities and Regions (CEMR) during the phase of policy shaping. Such kinds of associations are asked to present their opinions in the form of position papers. At present, over 170 European liaison offices are representing regional and local authorities from all member states - and even some candidate countries- in Brussels and sharing the same purpose of better representing their own interests and projects at community level.[3]

Apart from providing better policies, involvement of local authorities in policy shaping is important, since many policies adopted by the EU are implemented by local authorities. With the principle of subsidiarity, the EU supports the understanding of provision of services on-site, as close as possible to citizens. The Committee of Regions (CoR), which was established with the Maastricht Treaty, reflects the importance the EU has attached to local authorities. CoR has to be legally consulted on most EU policies and it has the right to initiate and publish its own reports on a wide variety of issues.[4]

Today, the EU is in search of increasing the responsibility of local authorities as a part of the "decentralization" policies. The use of "framework directives" on many policy areas is going up, which allows local authorities to adopt their own methods and instruments to reach objectives set by the EU. The EU is aware of the fact that unless

[3] European Region of Tyrol-South Tyrol-Trentino, http://www.europaregion.info/en/65.htm

[4] The Committee of Regions, http://www.cor.europa.eu/En/index.htm

European citizens support EU policies, the implementation of policies creates some constrains. The former EU Commission President Romano Prodi states as follows:

> "The enlarged Europe will certainly need strong institutions. But they must be democratically legitimate institutions that operate in a transparent and accountable way and enjoy the full confidence of the citizens. People want a much more participatory 'hands-on' democracy. They will not support the European project unless they are fully involved in setting goals, making policy and evaluating progress. And they are right."[5]

When we look at the acquis communataire, which is the total of all directives, regulations and treaties of the EU, nearly half of it falls under the realm of responsibility of local authorities. This fact necessitates a well-organized strong local authority that has the due capacity and ability of implementing the requirements of the EU. Therefore, the EU allocates a considerable portion of its funds for enabling the local authorities to manage this difficult task of being the 'implementing actor' of the EU in many policy areas.

Turkey, which has only 5 % of its total territory in the continent of Europe, did not remain indifferent to the European Economic Community, forerunner of the EU. The EU has become so important for Turkey that it has been among the main issues at the agenda of the Ministry of Foreign Affairs of Turkey since the year 1959 when Turkey applied for associate membership. In fact, the EU has become an issue that interests not only top-level bureaucrats of Turkey, but also ordinary citizens. The main reason why the EU has been at the center of life in Turkey even though it has not been able to be one of its members is probably that Europeanization has been deemed as equal to westernization. The EU has become the symbol of modernity and now it connotes democracy, freedoms and high-quality life standards for many people in Turkey.

[5] Speech entitled "Shaping the New Europe:2000-2005", 15 February 2000, http://europa.eu/rapid/pressReleasesAction

Especially, after the year 2005, when negotiation talks with the EU started, government corporations and institutions as well as leading associations, foundations and private sector companies have started to re-evaluate their products and services in line with the EU standards. Today, many actors in public and private sector have established "Departments of Relations with the EU" and some of them (such as TÜSİAD, TOBB and İKV) have opened their liaison offices in Brussels in order to follow up relevant developments conducted by the EU. Some NGO's and local authorities are also seeking ways of establishing closer cooperation with the EU institutions in order to acquire support of several funds, which are provided mainly for social projects. In brief, the EU is now at the center of life in Turkey, especially with regards to standards set by the EU on different spheres of life.

On the path to the EU, local authorities have a vital responsibility of reconsidering their organization and capacity to meet the expectations of the EU. Even though the present Turkish legislation does not assign local authorities as many tasks as some European countries, there are still some policy areas that fall partly or completely under the responsibility of local authorities such as environment, food safety, transport and public health. It is doubtless that, local authorities should have the consciousness of exerting some efforts in parallel with the works carried out by the central government in the negotiations process. It is of great importance for local authorities to adopt a holistic approach towards the policies of the EU that affect the areas in which they provide people with some services even though they are not sitting in the negotiation table.

Istanbul Metropolitan Municipality (IMM), which is the greatest and the oldest local authority in Turkey, with around 50.000 employee serving for around 14 million people, will certainly be one of the most important implementing actors in Turkey when it becomes a member of the EU, since the population in Istanbul is nearly one fifth of the total population of Turkey.[6] It is among state organizations, which has established "Department of Relations with the EU". This department is striving to inform the employees of IMM and providing them with the perspective of EU so that the quality

[6] IMM Performance Program, 2007:10

standards of services might be increased. IMM is also following the EU policies through a liaison office in Brussels.

As it has been continuously stated by the actual Minister of Environment of Turkey, Mr. Osman Pepe, one of the most challenging chapters in the negotiations process will be environment and Turkey will need to spend nearly 35 billion Euros on environment. The minister adds that the implementing actors of environmental projects are municipalities and nearly 40 % of the above-mentioned cost will be covered by municipalities.[7] (On the other hand, it was stated in the OECD Report on Territorial Review of Istanbul that, only the city of Istanbul, needed new investments of 60 billion Euros in order to fully fulfill EU directives on environment). If one reads the Law on Municipalities and Environmental Law, it is possible to conclude that the basic task of municipalities is related with environment, namely solid waste management, drinking water and waste water treatment, air quality etc. Unless municipalities manage to heighten the standards of services they provide in the area of environment in line with the EU environmental legislation, it is nearly impossible for Ministry of Environment to conclude the chapter of environment in the negotiations process. What the ministry does is to make the necessary legislation and audit the implementation. The main implementing actor in the area of environment is municipalities.

In this study, Istanbul Metropolitan Municipality has been examined with regards to its services in the area of environment through the perspective of European Union's relevant legislation. The main reason why IMM was chosen as the subject of this thesis is that, it is the largest local authority in Turkey, which serves nearly 20 % of the total population in Turkey. It will be nearly impossible for the Ministry of Environment to conclude the chapter of environment unless the EU becomes satisfied with the works carried out in Istanbul, which is the gate of Turkey for Europe. To clarify the connection among the elements, we can conclude as follows: one of the most challenging chapters is apparently going to be environment and in Turkey, the implementing actor of environmental policies is municipalities and finally IMM, with the capacity of being the

[7] Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

largest municipality and the showcase of Turkey, is supposed to fulfill the expectations of the EU, if Turkey desires to conclude the chapter of environment.

Rather than analyzing all service areas of IMM, which have legal basis in the EU legislation, it was preferred to analyze only one sector, which is environment, in order to present a more precise and detailed outcome. The main reason why environment was opted among other service areas is that, it is one of the most challenging chapters in the negotiations process of Turkey with the EU and the main implementer of this chapter is municipalities in Turkey, as it is in many European countries. IMM, which provides municipal services for one fifth of the population of Turkey, has a crucial position on the way to Turkey's EU membership, as the implementer of environmental policy of the EU, which is being aligned with the EU environmental legislation. Data concerning activities of IMM in the area of environment have been acquired from the activity reports of relevant departments of IMM, such as Department of Environmental Protection, Directorate of Waste Management, Directorate of Sea Services, İSTAÇ (solid waste management company of IMM) and İSKİ (Istanbul Water and Sewage Affairs Administration).

Apart from these reports, IMM Activity Report, IMM Strategic Report, which sets objectives for the period of 2007 and 2011, IMM Investment Report, IMM Performance Program, Istanbul Environment Assessment Report published by the Governorship of Istanbul, Activity Reports of relevant Directorates of IMM and finally official web site of IMM have been the main sources of this study. Some speeches of Mayor of Istanbul, which reflect the environmental policy of IMM, have also been included in this study. The environmental policies of the EU have been presented with their guidelines, and the evolvement of the EU environmental policy was introduced. Then, basic requirements of directives of the EU, which fall under the responsibility of municipalities in Turkey, were presented in the areas of air and water quality (bathing water, potable water and waste water), environmental noise and finally waste management. The environmental policy and the present situation of IMM environmental services were assessed with its negative and positive aspects in the light of the relevant EU directives through the above-mentioned documents. It was aimed to take an

objective photograph of the environmental situation of IMM through the perspective of the EU. In addition, the future projects of IMM on the way to conforming to the EU standards have also been introduced.

CHAPTER I: EU AND ENVIRONMENT

1.1. POLICY MAKING IN THE EU AND LOCAL POLICIES

As it is well known, policy is the sum of consistent decisions and actions on a topic or a field. Not only states and international organizations but also medium and large-sized NGOs and enterprises adopt some policies on a certain area in order to achieve the desired goal by following a stable and thorough way. The EU, which can be considered as the most sound and influential regional organization, has had some policies to reach its goals since the time it was founded under the name of the ECSC (The European Coal and Steel Community) in 1952. At the outset, the main goal of the EU was improving the core policies of the EU, which were mainly market-related such as competition policy and commercial relations among member states, in order to strengthen peace in Europe.

Later, as the number of member states and the areas of cooperation increased, EU had to adopt some policies in order to cushion the negative effects of the market related policies and enlargement. Some of the policies that might fall under this category are as follows: Common agricultural policy, cohesion policy, environmental policy, regional policy, social policy etc. Apart from these policies, a third policy type is the non-market policies which are mainly on the area of freedom, security and justice.[8]

When we look at the development of policies in the EU, it is clear that there is an evolvement from simplicity to the complexity. With the engines of enlargement and deepening, member states further developed their cooperation, more and more policy areas emerged at the agenda of the Commission and the Council. For example, no one could think about adopting environmental policy or transport policy in the ECSC in 1950s, without bringing cooperation to a certain level. Once, the barriers with regards to people, capital, goods and labor were removed, and then member states faced the necessity for aligning their standards by formulating policies. For instance, with the

[8] Sbragia, A. 2002:119-129

enlargement, many developing regions were added to the Union, which necessitated the need for improving regional economic conditions, in order not to lead mass migrations. Similarly, the foreign policy of the EU evolved based on needs. In 1960s, the Community had limited relations with the third countries, especially former European colonies.[9] Even, the EU did not use the expression 'foreign policy' until Maastricht Treaty in 1993. As the Community got stronger, more and more states looked for the ways of establishing cooperation with the community. Permanent delegations were established in the leading countries and even a high representative, who can be called like the foreign affairs minister of the EU, was assigned. As it is seen, policies in the EU were formulated as needs arose and these policies were modified by member states in accordance with the changing situation.

The general outline of the EU policies is formed in the European Council meetings, which is held with the participation of heads of governments and states. The European Council sometimes set objectives and declare long term policies as it was done with the Agenda 2000 and Lisbon Strategy. For example, In the meeting of the European Council in Lisbon (March 2000), the Heads of State or Government launched a "Lisbon Strategy" aimed at making the European Union the most competitive economy in the world and achieving full employment by 2010. This strategy, which was developed at subsequent meetings of the European Council, rested on three pillars: economic, social and environmental.[10]

Before moving to the policy making mechanism in the EU, policy competency of the EU will be briefly introduced. Policy competence refers to the primary legal authority to act in particular 'policy area'. There are some policies which fall under the 'executive competence' of the EU such as external trade, monetary and customs etc., meaning that the EU has the primary legal authority to act in these policies. On the other hand, there are some policy areas on which member states are the main players whereas the EU is involved as coordinator or contributor in the policies such as education,

[9] Smith 2002:230

[10] Summaries of the European Union Legislation, http://europa.eu/scadplus/glossary/environment_en.htm

culture, employment, security and foreign policies. Lastly, there is 'shared competence' of the EU, which means that both the member states and the EU have authority to formulate a policy. Most of the policies fall under this category such as environmental policy, consumer protection and transport. [11]

The policy making process of the EU is more complex than nation states due to different decision-making procedures across pillars. It includes four stages, namely agenda setting, policy formulation, policy decision and finally policy implementation.[12] The agenda setting phase is contributed and affected by a number of actors such as the EU institutions, interest groups, political parties in the EP, member states, NGO's and other international organizations. Some demands of the mentioned actors are put on the working table of the main actors in the EU, which are European Commission (the Commission), the European Parliament (EP) and the Council of the EU (the Council).[13]

Decision-making procedure, which has three procedures namely co-decision, consultation and assent, can be called as the most important phase in policy making process. Co-decision is the most widely used decision-making process within the EU and is applied to a range of policy areas such as education, health, environment, transport, and culture. The co-decision procedure was introduced by the Maastricht Treaty on European Union in 1993 and its field of application was extended by the Treaty of Amsterdam in 1997. Co-decision places the EP and the Council on an equal footing. The Council, representing the governments of the Member States, and the EP, directly elected and representing the peoples of the EU, adopt legislation jointly.[14]

The institution initiating policy formulation that falls under pillar one including all policies except security, foreign policy, police and judicial affairs, is the

[11] Smith 2002:230

[12] Richardson 1996:5

[13] http://www.scottish.parliament.uk/business/research/pdf_res_brief/sb02-78.pdf

[14] http://www.scottish.parliament.uk/business/research/pdf_res_brief/sb02-78.pdf

Commission.[15] Demands coming from several actors are transformed into policy proposals by the Commission. The Commission can be compared to the government of a state with a president, like a prime minister. It is represented in the meetings of the Parliament and the Council of Ministers, but neither the Parliament nor the Council of Ministers is represented in the Commission. It plays such a powerful role in various stages of the policy-making process that it can be described as a co-player with the Council of Ministers. In other words, none of these institutions can act without the consent of the other.[16]

Before issuing a proposal, the Commission consults with relevant interested bodies, such as interest groups, external organizations, regional and local authorities, etc. NGO's, governments of member states and interest groups can contribute to policy formulation through expert committees and consultative committees. The Commission may launch an open consultation such as the publication of a Green Paper which is intended to stimulate discussion among interested parties or bodies or a White Paper, containing more detailed proposals for Community action in a specific field. The Commission frequently holds public hearings in Brussels where interested bodies can raise their particular concerns and have their voice heard. Each November, the European Commission publishes its annual work and legislative program for the coming year, which outlines the key priorities for the Commission during the year ahead and presents it to the European Parliament. The Commission has a pivotal position as a broker of interests and a forum for the exchange of policy ideas, and as a mediator among the member states and different EU institutions.[17]

Apart from that, the Commission also adopts its Annual Policy Strategy in the February of each year, which is the first stage in the strategic planning and programming cycle. At the start of each European Council Presidency, a series of priorities for the six-month duration of the Presidency are announced, which is useful

[15] Sbragia 2002:487

[16] Rometsch D. and Wessels W. 1994:221

[17] Mazey and Richardson 1997

for identifying forthcoming areas of legislation over the next six months. The Commission's proposed text is sent to both the Council of the EU and to the EP for its opinion. The directly elected EP plays an important role together with the Council in the policy process since it has the power to amend legislation.[18]

To recapitulate, a brief outline of the policy making process in the EU is as follows: The Commission generates draft laws and policies, and oversees the implementation of EU laws once agreed through national bureaucracies; Council of Ministers and the European Parliament fine-tune the content of proposals and decide which will become law and which will not; and the Court of Justice ensures that EU law fits with the goals of the treaties.[19]

The importance and role of local authorities within the EU has increased to a great extent since the introduction of the "subsidiarity principle" in the Single European Act. In 2001, the EU Commission adopted a white paper on European Governance. In this paper it was clearly stated how important the local authorities were with regards to realizing the EU objectives.

> There needs to be a stronger interaction with regional and local governments and civil society. Member States bear the principal responsibility for achieving this. But the Commission for its part will:
> · Establish a more systematic dialogue with representatives of regional and local governments through national and European associations at an early stage in shaping policy.
> · Bring greater flexibility into how Community legislation can be implemented in a way which takes account of regional and local conditions.
> · Establish and publish minimum standards for consultation on EU policy.
> · Establish partnership arrangements going beyond the minimum standards in selected areas committing the Commission to additional consultation in return

[18] http://www.scottish.parliament.uk/business/research/pdf_res_brief/sb02-78.pdf

[19] McCormick 2001:95

for more guarantees of the openness and representativity of the organisations consulted.[20]

Now, there are many unions and associations of local authorities that seek for ways of increasing their influence in the decision making process of the EU. Some of these associations are, EUROCITIES (Network of European Large Cities, IMM is a member of EUROCITIES) GATM, (Union of German Cities and Local Governments), LGIB *(Local Government International Bureau),* LGA *(Local Government Association),* CEMR (Council of European Municipalities and Regions) etc. Apart from that, Committee of Regions, as a body of European Union, issues its opinions through the perspective of local authorities.[21]

It should be also noted that the EU does not have its own machinery for implementing the decisions it takes in many policy areas. In other words, it is possible to say that the Union's decisions are implemented by the Member States. Nevertheless, closer examination reveals that, since the scope of its decision-making powers has expanded to include many policy areas, the Union's decisions are now in practical terms increasingly implemented by local and regional authorities even if the legal responsibility lies with the Member States. The policies of the EU, the implementation of which are under the responsibility of local governments are: environment, transport, social policy, local and regional finances, local elections, regional policy, energy, public health and consumer policy.[22] Since there is no single type of local government in the EU member states, responsibility areas of local governments vary. Moreover, the role of local and regional authorities is not confined solely to implementing legislation; rather, they often play a key role in initiating and maintaining a desired course of development.[23]

---

[20] COM 2001, http://ec.europa.eu/governance/index_en.htm

[21] Report on the function and role of local authorities within the European Union, Istanbul Metropolitan Municipality, and 2005:12

[22] European Commission, Delegation to Turkey, http://www.deltur.cec.eu.int/

[23] Legal framework for European local government, Local Governments Network of Central and Eastern European Countries, www.ceec-logon.net

It is sure that the European Union has some possible impacts on municipalities. The possible impact can be divided in three themes: Impact on the organizational structure of the municipality: new departments, new officials; input from the EU: the implementation of the EU legislation, meeting the criteria for Structural Funds, receiving money from the EU, and finally output to the EU: attempts to influence EU-legislation, attempts to influence the division of money from the Structural Funds, an organized lobby by creating an office in Brussels or appointing a lobbyist, contacts with national and European politicians.[24] We can see the impacts of the EU on Istanbul Metropolitan Municipality. For example, IMM has already founded a Directorate of EU Relations, and appointed bureaucrats who deal with the EU issues. On the other hand, IMM has opened a liaison office in Brussels in order to have direct relations with the EU and follow up the EU policies.

1.2. ENVIRONMENTAL POLICY OF THE EU

Policies in the EU were not introduced all together. Until 1980s, the process of European Integration was associated with economic and agricultural matters. However, since the early 1990's, the balance has shifted. The European Integration expanded to incorporate a broader set of the so-called 'soft' or 'low' policy areas such as consumer affairs, regional policy, development aid, social policy, technology and environment.[25] The policy of common market, which can be accepted as the main dynamic of the European integration, necessitated some other policies to be adopted by all member states such as environment.

There was no reference made to environmental policy in the treaty of Rome, which had set "the creation of the common market and free movement of goods" as the

[24] The Impact of the European Union on Municipalities in the Netherlands, Preliminary Paper, Presented at the third Summer School in Comparative Politics, Leiden University, http://www.essex.ac.uk/ECpR/standinggroups/yen/paper

[25] Mc. Cormick 2001:17

main goal of the EC. In fact in the period between 1957 and 1972, there was an international consensus that economic growth was the main goal. Environmental policy was only a marginal policy topic and there was hardly notion of ecological degradation in that time. The first pieces of European environmental legislation arose without explicit legal authorization. European environmental policy was in these years a reactive policy that developed within the framework of the internal market policy. An independent European environmental policy as a power basis for the external dimension did not exist.[26]

By political, social and economic evolutions at the end of the sixties environmental degradation became a hot issue. The perception grew in Europe, that uncontrolled economic expansion can be a threat for the goals of the EC. Following the first United Nations Conference on environment in Stockholm in 1972 and growing concerns all over the World with regards to the limits to growth, the Commission initiated an original Community policy. The first Directive was adopted in 1967 on the harmonized classification and the labeling of dangerous chemicals. Gathering in Paris (October, 1972) the European Heads of State declared that economic expansion would no longer be the single goal of the EC. For the first time it was underlined that Europe needed an environmental policy.

On the basis of European Council commitments in 1972 to establish a Community environmental policy, the first Environmental Action Programme (EAP) was launched in November 1973. This programme already established the argument that economic development, prosperity and the protection of the environment are mutually interdependent. It was argued, that "the protection of the environment belongs to the essential tasks of the Community". Among the most important objectives were: the prevention, reduction and containment of environmental damage, the conservation of an ecological equilibrium and the rational use of natural resources.[27]

[26] Jordan 2002

[27] Christian Hey, European Environment Bureau, http://www.eeb.org/publication/chapter-3.pdf

The first reason behind the introduction of environmental policy is that different environmental policies in member states caused the cost of production to vary, which naturally led to unfair competition among companies. For example, some countries used to declare some purification plants mandatory, which would bring extra cost to companies, while other countries did not have legislation which necessitated these facilities. Naturally, there used to be unfair competition among companies in different member states. The common market and the unfair competition depending on different environmental policies of the EU is the starting point of the environmental policy of the EU.

Another reason behind a common environmental policy of the EU is that environmental problems have a trans-boundary character, which requires common action.[28] Dealing with air pollution or water pollution in one single country does not bring positive results unless the bordering countries take similar measures. For example, the Rhine, which is the longest river in Europe, passes through Switzerland, Germany, France and the Netherlands. For centuries, many cities and major industrial areas, such as the Ruhr Valley, have occupied its banks. One of the world's densest road and railway networks follows its course and the river also irrigates areas of intensive agriculture and vineyards. If one of the mentioned states pollutes the river it is no use for the rest three states to apply environmental policies which aim to protect the river. Since the river is transboundary, all the mentioned states needed to converge their policies instead of adopting policies independently. The need to set up a permanent intergovernmental body to handle general pollution issues became clear and the International Commission for the Protection of the Rhine (ICPR) was established on June 11, 1950 at a meeting of representatives from the countries along the river. In 1976, the European Community joined the ICPR and lent it more authority.[29] The Rhine issue clearly indicates that environmental problems especially those which have transboundary character such as air and water quality require cooperation and problems can be solved more easily in cooperation rather than each country deals with them individually. It was noted in an international conference in Basel in 1948, that the

[28] Budak, 2000:3

[29] UNESCO, http://www.unesco.org/courier/2000_06/uk/planet.htm

Salmon fish really had disappeared from the Rhine. Today, the Rhine, once considered the "sewer of Europe", is again home to the salmon.[30]

Apart from these two reasons behind adopting common environmental policy, the international conjuncture was also effective with regards to initiating the EU environmental policy. Especially after the second half of the 20th century, the Earth started to face dreadful consequences of environmental pollution. It was assumed that air and water were free and plentiful and the industrial community gave little damage to environment. However, especially in the second half of the 20th century, several developments changed this picture. For example, in late October 1948 the Monongahela River Valley town of Donora, Pennsylvania, was subsumed in noxious smog. Residents had to keep lights on all day and the high school football teams couldn't see their opponents. In the five days between October 26 and 31, 20 people died and more than 7,000 people were sickened.[31] Similarly, in another air pollution incident in New York in 1953, 170 to 260 lost their lives. Again in New York in 1963, 403 people were killed due to heavy smog. It was reported that the main reason for air pollution tragedy was that nitrogen oxides and hydrocarbons in the presence of ultraviolet radiation from the sun formed smog. [32]

To give another example from Europe, in December 1952, London was exposed to such great air pollution that within two weeks nearly 4.000 people were killed and 8.000 more people were killed due to diseases stemming from air pollution. This event, which was result of heavy coal combustion, was named as “London Smog Disaster”, which was the worst air pollution disaster in the World. Following this disaster, Clean Air Act was adopted in the UK in 1956, which gave local governments the authority to provide funds to households to convert their coal-fired heaters for use of cleaner sources of energy such as gas, oil, smokeless coal, or electricity.[33] Apart from this tragedy,

[30] BBC, http://news.bbc.co.uk/2/hi/science/nature/6476273.stm

[31] http://www.pbs.org/now/science/smog.html

[32] Environmental Institute of Houston, www.eih.uh.edu/outreach/tfors/history

[33] The Encyclopedia of Earth, http://www.eoearth.org/article/London_smog_disaster,_England

London faced another air pollution disaster in 1962, which caused nearly 750 people to be killed.

Not only air pollution, but also water pollution was also rapidly increasing in the second half of the 20th century. For example, on June 25, 1969 the Cuyahoga River in Cleveland, Ohio (the USA) was so polluted with hazardous industrial wastes that it caught fire due to oil and other wastes. When Canada and the United States approved the first version of the Great Lakes Water Quality Agreement in 1972, the running joke in Cleveland was that anyone unlucky enough to fall into the Cuyahoga River would decay rather than drown. The Cuyahoga, which meanders through the city before reaching Lake Erie, helped inspire the cleanup initiative and attracted peoples' attention to environmental pollution.[34] As a result of the accidental pollution of the Rhine in Europe in 1969, by 500 liters of Endosulfan, a kind of insecticide, the river was contaminated on more than 600 km and more than 20 million fish died.[35]

People, having experienced negative effects of environmental pollution, started to act against the exploitation of natural resources in different ways. Rachel Louise Carson, an American marine biologist and nature writer, wrote the famous book *Silent Spring*, which was probably among milestones launching the global environmental movement. It was known as Carson's crusade, and she worked on this book till her death. Carson explored the subject of environmental connectedness: although a pesticide is aimed at eliminating one organism, its effects are felt throughout the food chain, and what was intended to poison an insect ends up poisoning larger animals and humans. In *Silent Spring*, which was among best-sellers at that time, she suggested that DDT and other pesticides may cause cancer. *Silent Spring,* which focused on the environment and pesticides in particular, had an immense effect in the United States, where it triggered anti-chemical and anti-pesticide movements during the 1960s. Later, in 1972, DDT, a pesticide, was banned in the USA.[36] Similarly, Jacques Ellul's book

[34] *Washington Post,* http://www.washingtonpost.com/wp-dyn/content/article

[35] EU Commission's DG Environment, www.ec.europa.eu/environment/pdf/50year

[36] Natural Resources Defense Council, http://www.nrdc.org/health/pesticides/hcarson.asp

The Technological Society published in 1954 and Leo Marx's book *The machine in the garden; technology and the pastoral ideal in America,* published in 1964 became also effective in arousing public awareness on environment.[37]

Another milestone on the way to environmental awareness is the Club of Rome. It is a leading NGO on environment, founded in April 1968 by Aurelio Peccei, an Italian industrialist, and Alexander King, a Scottish scientist with the idea that the future of humankind is not determined once and for all, and that each human being can contribute to the improvement of societies. This international organization raised considerable public attention with its report entitled "Limits to Growth", which sold 30 million copies in more than 30 translations, and it became the best selling environmental book in the world history. It was based on the consequences of a rapidly growing world population and finite resource supplies.[38] Apart from that, the Greenpeace, founded in 1971 in Canada, has managed to draw the attention of public on environmental problems. The Greenpeace's official mission statement describes the organization as follows: *Greenpeace is an independent, campaigning organization which uses peaceful direct action and creative communication to expose global environmental problems, and to force solutions for a green and peaceful future. Greenpeace's goal is to ensure the ability of the earth to nurture life in all its diversity.* Today, the headquarters of Greenpeace organization is situated in Canada and has 41 regional offices and 2,8 million supporters worldwide.[39]

Not only in literature but also in the world of politics, some steps were taken as a result of the increasing concerns over environmental pollution. In March of 1972 the world's first green party, the United Tasmania Group, was formed at a public meeting in Hobart, Australia. On the same year, in Atlantic Canada, 'the Small party' was formed with similar goals. In May 1972, a meeting at Victoria University of Wellington, New Zealand, launched the Values Party, the world's first countrywide green party to have

[37] The University of Radfurd, Environmental History Timeline, http://www.runet.edu/~wkovarik/envhist

[38] Club of Rome, http://www.clubofrome.org

[39] Greenpeace International, http://www.greenpeace.org/international/about/history

Parliamentary seats nationally. In the following year, in 1973, Europe's first green party, the UK's Ecology Party, came into existence.[40]

The environmental tragedies and peoples' increasing sensitivity and demands towards cleaner environment forced governments to adopt environmental policies and laws. The USA was the leading state with regards to adopting laws against environmental pollution. The U.S. Air Pollution Control Act (APCA), which was the first act about air pollution, was put into effect in 1955. This act suggested additional research and education on the issue, and recognized air pollution as a serious problem. However, this act did not put into effect any restrictions.[41] Later, in 1970, the US Congress responded to concern over visible air pollution, irritating smog and associated health and ecological effects by enacting the "Federal Clean Air Act" (CAA), which required reduction of automobile emissions and set National Emission Standards for Hazardous Pollutants.[42] On the same year, the US Congress passed "The National Environmental Policy Act" (NEPA), which required an environmental impact statement (EIS) to be written for all major federal actions which may have a significant impact on the environment. This act also established Council on Environmental Quality, which was a division of the White House that coordinated federal environmental efforts. Apart from that, in 1970, the Environmental Protection Agency was founded in the USA in order to protect human health and to safeguard the natural environment—air, water, and land. Two years later in 1972, growing public awareness and concern for controlling water pollution led to enactment of the Federal Water Pollution Control Act Amendments of 1972. As amended in 1977, this law became commonly known as the Clean Water Act and it established the basic structure for regulating discharges of pollutants into the waters of the United States.[43]

---

[40] Green Party, http://www.greens.org.nz/about/history.htm

[41] Rice University, Clayton D. Forswall and Kathryn E. Higgins, www.ruf.rice.edu

[42] Stanford University, http://www.stanford.edu/group/efmh/POLbook/AirPolHSRCh8.ppt

[43]Environmental Protection Agency, http://www.epa.gov/history/topics/epa/15b.htm

Following the environmental disasters and peoples' demands with regards to taking concrete precautions against environmental problems, The United Nations, took an important step. Economic and Social Council underlined the urgent need for intensified action at the national and the international level, to limit and, where possible, to eliminate the impairment of the human environment. Endorsing the Council's recommendation, the General Assembly decided to convene a United Nations conference on the human environment. In Stockholm, in 1972, with the attendance of representatives of 113 countries, 19 inter-governmental agencies, and more than 400 inter-governmental and non-governmental organizations, "the United Nations Conference on the Human Environment" was held. This conference, which led to the establishment of United Nations Environment Programme, is widely recognized as the beginning of the modern political and public awareness of global environmental problems.[44]

When we look at the beginning of 1970s, the parts of the environmental picture are as follows: Environmental disasters, many books and reports on the negative effects of environmental pollution, activities of some NGO's, subsequent acts against environmental pollution in the USA, Green Parties which advocate sustainable development and finally the UN Conference on the Human Environment. In such an international conjuncture, the EEC could not turn a blind eye to the issue and it did not. The EEC accelerated its efforts on converging environmental policies of the EEC member states in 1970s and especially in 1980s. Until 1980s, the priorities of the EEC were mainly economic. The main logic behind a regional integration was to increase the prosperity of European countries which would prevent a possible war after World War II. However, environment was not taken into consideration in the years when prosperity was boosting and European environment was negatively affected in this process. To give a few examples, European farmers used more chemical fertilizers and herbicides, adopted more intensified farming techniques and converted more woodland to farmland, especially following the introduction of Common Agricultural Policy in 1962. Another destructive attempt with regards to environment was the development of new transport

[44] United Nations Environment Programme, http://www.unep.org/Documents

networks especially after the opening of borders among the EU member states. Finally the expanding European middle class as a result of the economic prosperity boosted with the EEC, which led to a great increase in the consumption. The number of vehicles on road and energy consumption dramatically went up.[45] Between 1970 and 2000, the number of cars in the European Union trebled from 62.5 million to nearly 175 million.[46]

All these developments and especially the UN Conference on the Human Environment between 5-16 June 1972 and the report "Limits to Growth" by the Club of Rome became influential in the initiation of European Environmental Policy. In the statement of the Paris Summit of the European Council, which was held between 19 to 21 October, 1972, the following paragraph was included: "The Heads of State or of Government emphasized the importance of a Community environmental policy. To this end they invited the Community Institutions to establish, before 31 July, 1973, a programme of action accompanied by a precise timetable."[47] This paragraph is a milestone in the history of the environmental policy of the EU, since the European Council is the body that sets the framework and general guidelines of the European Union policies. Handling this issue in the conclusion remarks of the European Council Summit indicates that all the member states agreed on adopting a common environmental policy. However, it should be noted that environmental policy was given a legal basis only with the Single European Act and Maastricht Treaty, and principles in enacting environmental legislation were established with these amendments to the Rome Treaty.[48]

During the 1980s, the EU environmental policy underwent a rapid and profound transformation and by 1987, the organization had adopted more than 200 pieces of environmental legislation and four action programs. However, early measures on the classification, labeling, and packaging of hazardous substances were clearly justified as

[45] Mc. Cormick 2001:4

[46] White Paper: European Transport Policy for 2010, www.europa.eu/scadplus/leg/en

[47] European School Governance, http://www.ena.fr/accueil.php

[48] Andrew Jordan, EU Environmental Policy at 25: The Politics of Multinational Governance, http://www.encyclopedia.com/doc/1G1-20330012.html

part of the development of a common market. Environmental issues such as natural habitats, genetically modified organisms, and climate change went beyond any conceivable standards that would be strictly necessitated by a concern to ensure a single functioning market.[49] It is safe to say that much of what the EU has done in the environmental field has been spillover from its primary concern of building the single market.[50]

There was a perception at the end of the 1980's, that the competitive position of the internal market could globally be maintained by protecting the internal market against external competitors, by applying environmental standards under the condition that these were also spread internationally. The ambition to play a leading role in international environmental politics was initially driven by economic objectives; later on the EU accepted the moral responsibility of global environmental leadership. Whereas one expressed formerly only a number of modest declarations concerning the role of the EU in international environmental politics, from the nineties on, the EU stated a political manifest as the EU was economically, politically but also morally predestined to exercise global environmental leadership. This discourse of responsibility requires a far-reaching coherence between the internal dimension and the external dimension of the European environmental policy. "The Community's credibility and effectiveness at this wider (international) level depends in large measure on the ability to adopt progressive environmental measures for implementation and enforcement by its Member States."[51]

The broad objectives of the EU environmental policy as set out in Articles 174-176 of the Maastricht Treaty; provide the Community with legal competence to act in all areas of environmental policy. However, it is clear from the treaty that this competence is not exclusive and that it is shared with the Member States. In practice,

[49] Weale, 1996: 598

[50] Mc. Cormick 2001:18

[51] Edith Vanden Brande, http://www.keele.ac.uk/research/lpj/ecprsumschool/Papers/E.BrandeGnCivPower.pdf

the scope of the Community's intervention in environmental policy is limited by two major factors. The first one is the principle of 'subsidiarity', which restricts action at the EU level to those areas where it can be more effective than national or regional interventions. This principle was first introduced specifically in relation to environmental policy in the Single Environment Act, and later given legal force in relation to all Community policies in the Maastricht Treaty. Partly as a result, some environmental directives have taken the form of 'framework' legislation such as air and water framework directives, leaving Member States with considerable discretion in their implementation. The second factor limiting the scope of the Community's environmental policy has been the continuing requirement in the Treaty for the unanimous support of Member States in the Council of Ministers for Community action, in areas which most of them regard as particularly sensitive such as green taxation, quantitative management of water resources, town and country planning and aspects of energy policy.[52]

The EU took several serious precautions against environmental problems. By the end of 1999, the EU published five successive action programmes, adopted nearly 850 pieces of environmental law, published numerous green and white papers, created a European Environment Agency to improve quality of data gathering, established a Green Forum to promote non-governmental input into policy making, run several programmes designed to finance environmental protection and developed strategic approaches to problems in several key policy areas, including air and water quality. The EU's environmental action programmes have effectively had two main purposes: They suggested specific proposals for legislation that the Commission intends to put forward over the next few years; and they provide an occasion to discuss some broad ideas in environmental policy and suggest new directions for the future. The first five action programmes (The first one: 1973-76, the second one: 1977-1981, the third one: 1982-1986, the fourth one 1987-1992 and the fifth one: 1993-2000), were merely political statements of intent. The first four EAPs had been prepared mainly for the prevention of environmental pollution and did not lead to the desired effect in the EU. The general

[52] Institute for European Environmental Policy, http://www.mep-online.com./contributors.html

environmental situation of the EU member countries deteriorated. The EU then started to support policies on "sustainable development" with the fifth EAP.[53]

As a result of the Maastricht Treaty (1992), the Sixth Environment Action Programme took the form of a Decision, adopted jointly by the Council and the European Parliament under the 'co-decision' procedure.[54] The Environmental Action Programmes outlined the Commission's intentions and recommendations regarding environmental policy which are translated into Regulations, Directives, Recommendations and non-binding Opinions.[55]

Although the first Community Law on environment was adopted in 1959 and the first Community Environmental Action Programme was adopted in 1973, it was not until the signature of the Single European Act in 1987 that environmental protection was formally recognized as part of the legal competence of the European Union.[56] The European Community institutions were given the authority of dealing with environmental problems and introducing necessary actions, with the Single European Act.[57] Title VII, article 174 of the Single European Act lists the objectives of the Community concerning environment:

> Action by the Community relating to the environment will have the following objectives:
> to preserve, protect and improve the quality of the environment;
> to contribute towards protecting human health;
> to ensure a prudent and rational utilization of natural resources[58]

[53] Budak 2000:241

[54]Institute for European Environmental Policy, http://www.mep-online.com./chapter2/section_2_1_2.html

[55] Artis and Lee 1997

[56] Mc. Cormick 2001:1

[57] ibid., 18

[58] Ibid., 303

The Single European Act enhanced DG XI's position in the Commission by stipulating that environmental protection was to be a component of the EU's other policies. It also introduced the polluter-pays principle and eased the adoption of environmental standards by introducing qualified majority voting in the Council of Ministers for environmental measures linked to the single market.[59] Environmental protection became an important goal in its own right, and not merely an adjunct to economic growth considerations.[60]

Community action developed over the years and environment was called as a policy with the Treaty on European Union (Maastricht Treaty):

> Article 2: Economic development must be sustainable.
> Article 3: For the purposes set out in article 2, the activities of the Community shall include as provided in this Treaty and in accordance with the timetable set out therein:
> k) a policy in the sphere of environment.[61]

The polluter pays principle, which is a principle in international environmental law where the polluting party pays for the damage done to the natural environment, was included in the Maastricht Treaty. Later, this principle was elaborated with a Directive (2004/35/EC), which establishes a common framework for liability with a view to preventing and remedying damage to animals, plants, natural habitats and water resources, and damage affecting the land. The liability scheme applies to certain specified occupational activities and to other activities in cases where the operator is at fault or negligent. The public authorities are also responsible for ensuring that the operators take or finance the necessary preventive or remedial measures themselves.[62]

---

[59] Andrew Jordan, EU Environmental Policy at 25: the Politics of Multinational Governance, http://www.encyclopedia.com/doc/1G1-20330012.html

[60] UK Presidency of the EU 2005, http://www.eu2005.gov.uk

[61] Mc. Cormick 2001:305

[62] Summaries of the European Union Legislation, http://europa.eu/scadplus/leg/en/lvb/l28120

Apart from that, the Maastricht Treaty prescribed that environmental problems should be handled on the precautionary principle, and integration and implementation of environmental policies with other EU policies should be ensured:

> Title 16, Article 130r
> 1. Community policy on the environment shall contribute to pursuit of the following objectives:
> - preserving, protecting and improving the quality of the environment;
> - protecting human health;
> - prudent and rational utilization of natural resources;
> - promoting measures at international level to deal with regional or worldwide environmental problems.
>
> 2. Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. Environmental protection requirements must be integrated into the definition and implementation of other Community policies.[63]

Another important feature of the Maastricht Treaty was that it replaced unanimity with qualified majority voting between member states for most environmental measures and the principle of subsidiarity, which was introduced in the Single European Act, was given legal force in relation to all Community policies. This principle proposes collective solutions within the EU only when the solutions cannot be reached at national level.[64] On the other hand, the introduction of cooperation and co-decision procedures greatly enhanced the role of the European Parliament's Environment Committee.[65]

[63] Official EU Law Portal www.eurlex.europa.eu

[64] Leveque, 1996

[65] D. Judge, D. Earnshaw, and N. Cowan 1994:27

There has been a flurry of legislative and policy activity of the EU institutions addressing a broad range of environmental issues. From a time when most legal activity was focused on matters such as air and water quality, waste management and the control of chemicals, the EU has become involved in problems as varied as the protection of wildlife, the conservation of energy, the control of genetically modified organisms, the promotion of organic agriculture, the management of fisheries, the control of acid pollution, and international attempts to address the problem of global warming. [66]

1987, the year in which the SEA became effective, was exclaimed as the European year of environment. One of the objectives of the campaign around the European year of the Environment was to show the complementary between economic development and environmental protection to the general public. Later, environmental protection as legitimizing principle for the European environmental policy was gradually replaced by sustainable development.[67] An important step was taken with the Treaty of Amsterdam, which indicates the principle of sustainable development and environmental protection as among the European Community's aims. In the preamble of the Treaty of Amsterdam, it says that:

> Determined to promote economic and social progress for their peoples, taking into account the principle of sustainable development and within the context of the accomplishment of the internal market and of reinforced cohesion and environmental protection, and to implement policies ensuring that advances in economic integration are accompanied by parallel progress in other fields.[68]

The Amsterdam Treaty introduced sustainable development as an objective into the European Community Treaty. It is now laid down in Article 2 of that Treaty, which reads:

---

[66] Mc. Cormick 2001:1

[67] Johnson and Corcelle 1995, Lenschow 2004: 140-157

[68] Mc. Cormick 2001:308

> 'The Community shall have as its task […….] to promote throughout the Community a harmonious, balanced and sustainable development of economic activities, a high level of employment and of social protection, equality between men and women, sustainable and non-inflationary growth, a high degree of competitiveness and convergence of economic performance, a high level of protection and improvement of the quality of the environment, the raising of the standard of living and quality of life, and economic and social cohesion and solidarity among Member States.'[69]

To achieve the aim of sustainable development as effectively as possible, the Fifth Community Action Programme on the Environment "Towards Sustainability" established the principles of a European strategy of proactive measures for the period 1992-2000 and took account of all the causes of pollution (industry, energy, tourism, transport, agriculture, etc.).This across-the-board approach to environmental policy was confirmed by the Commission in its 1998 Communication on integrating the environment into European Union policies by the Vienna European Council (11 and 12 December 1998). The Community institutions have been obliged to take account of environmental considerations in all their other policies. Since then, this obligation has been taken into account in various Community acts, particularly in the fields of employment, energy, agriculture, development cooperation, single market, industry, fisheries, economic policy and transport.[70]

Under the mission "Towards Sustainability", the traditional command and control approach was replaced by a more integrated approach. Involvement of the stakeholders, the support for environmental R&D within the framework of a preventive policy, self-regulation and the use of market instruments have become the policy principles of the new approach. On the other hand, Cost-effective measures and market-based solutions dominated the new European environmental agenda. It seemed as if environmental protection had obtained a less high status on the European agenda, for the benefit of the promotion of competitiveness of the internal market.[71]

---

[69] Official EU Law Portal, www.eurlex.europa.eu

[70] Summaries of the European Union Legislation, www.europa.eu/scadplus/leg/en/lvb/128062.htm

[71] Johnson and Corcelle 1995

The Sixth Action Programme for the Environment, adopted in July 2002, is the result of a formal inter-institutional decision-making process embodying a commitment of the Council, the Commission and the European Parliament. It sets out the priorities for the European Community up to 2010. With this programme, focus has moved increasingly to improving the implementation of existing laws rather than just passing new laws. Four areas are highlighted for urgent action: climate change, nature and biodiversity, environment and health and the management of natural resources and waste. Measures to achieve these priorities are outlined as follows: improving the application of environmental legislation, working together with the market and citizens and ensuring that other Community policies take greater account of environmental considerations. On the other hand, this Action Programme is based on seven thematic strategies. These address the need for rationalization and modernization and the gradual replacement of numerous individual legal acts by legal frameworks and flexible strategies. The areas covered as thematic strategies are as follows: air pollution, the marine environment, the sustainable use of resources, waste prevention and recycling, pesticides, soil quality and the urban environment.[72] When compared with other policy areas in the EU, the above-mentioned legislations and precautions indicate that, environment is one of the most carefully handled policies in the EU.

There is no single document of the EU, which indicates the priorities of the environmental policy. However, six major objectives can be deducted from the Fifth Environmental Action Programme, the mission statement of the Environment Directorate General and article 174 of the treaties. These objectives are as follows: Preserving, protecting and improving the quality of the environment, protecting human health, prudent and rational utilization of resources, promoting measures at the international level to deal with regional or worldwide environmental problems, improvement of quality of life and finally increased environmental efficiency.[73]

The Lisbon Strategy, which was set out by the European Council in Lisbon on March 2000 as an action and development plan for the European Union had the

[72] Summaries of the European Union Legislation, www.europa.eu/scadplus/leg/en/lvb/128062.htm

[73] Mc. Cormick 2001:23

objective of "making Europe, by 2010, the most competitive and the most dynamic knowledge-based economy in the world". One of the decisions taken at Lisbon was that the EU's institutions and its Member States should 'set out by 2001 a strategy for further co-ordinated action to simplify the regulatory environment, including the performance of public administration, at both national and Community levels.' This led to the development of a Communication and Action Plan for simplifying and improving the regulatory environment, and the related initiatives on consultation and impact assessment [74]

Following the Lisbon Strategy, at the Gothenburg Summit in June 2001, the EU leaders launched the first EU sustainable development strategy based on a proposal from the European Commission. In fact, the EU had adopted the declaration of the "Environmental Imperative" in the Dublin Summit of Heads of States and Governments in 1990, which was mainly on the sustainable use of natural resources.[75] Sustainable development which was first introduced with the report "Limits to Growth" by the Club of Rome, stands for meeting the needs of present generations without jeopardizing the needs of future generations, a better quality of life for everyone, now and for the coming generations.[76] The EU SDS (Sustainable Development Strategy) and the Lisbon Strategy for growth and jobs are regarded as components which complement each other.

The EU SDS offers a vision of progress that integrates immediate and longer-term needs, local and global needs, and regards social, economic and environmental needs as inseparable and interdependent components of human progress. Already in 1997, sustainable development became a fundamental objective of the EU when it was included in the Treaty of Amsterdam as an overarching objective of the EU policies. The 2001 strategy was composed of two main parts. The first part proposed objectives and policy measures to tackle a number of key unsustainable trends. The priorities were as follows:

[74] http://www.mep-online.com./contributors.html

[75]University of Pittsburgh, Archive of European Integration, SEC 91, 1744 final, http://aei.pitt.edu/49311/003172_1.pdf

[76] Council of the European Union, http://register.consilium.europa.eu

- combating climate change,
- ensuring sustainable transport,
- addressing threats to public health, such as chemicals, pollution, unsafe food and infectious diseases,
- managing natural resources more responsibly and stop biodiversity decline,
- combating poverty and social exclusion, and
- meeting the challenge of an ageing population.[77]

The second part of the strategy revised the way that policies are made and it called for a new approach to policy-making that ensures the EU's economic, social and environmental policies. The central instrument developed for this purpose was the obligation for the Commission to submit each new policy proposal to an 'Impact Assessment' procedure. It also stressed the global dimension of sustainable development - the important contribution that the EU can make to helping all nations, particularly developing countries, reach a sustainable development path. Launching the strategy, EU leaders declared that it "adds a third dimension, environmental dimension, to the Lisbon Strategy" of economic and social renewal. The Gothenburg declaration also encompassed other programmes and commitments. For example, it included the commitments made at the 2002 World Summit on Sustainable Development in Johannesburg and the Millennium Development Goals agreed in 2000.[78]

The European Council of June 2006 adopted an ambitious and comprehensive renewed SDS for an enlarged EU. According to this document the EU sets the objective of the renewed sustainable development strategy as follows: Safeguard the earth's capacity to support life in all its diversity, respect the limits of the planet's natural resources and ensure a high level of protection and improvement of the quality of the environment. Prevent and reduce environmental pollution and promote sustainable consumption and production to break the link between economic growth and environmental degradation.[79]

[77] The EU Sustainable Development Strategy, http://ec.europa.eu/environment/eussd

[78] Sustainable Development Strategy, http://ec.europa.eu/environment

[79] Council of European Union, www.ec.europa.eu/environment

Global warming or in other words climate change has also been among the issues at the top of the European Union Environmental Agenda. The EU has been taking serious steps to address its own greenhouse gas emissions since the early 1990s. As a first step to limiting greenhouse gases, the joint Energy-Environment Council of October 29, 1990 decided to stabilize CO2 emissions in the Community in the year 2000 at 1990 level and this target was realized. In 2000, total EC greenhouse gas emissions were 4.059 Tg (CO_2 equivalents), a figure which was 0.3 % above 1999 but 3.5 % below 1990 levels.[80] On the other hand, the EU issued the first Community strategy to limit carbon dioxide (CO_2) emissions and improve energy efficiency on October 14, 1991, in the form of a Communication from the Commission to the Council. This strategy, which sets some objectives with regards to minimizing the factors that cause climate change, indicates the sensitivity of the EU on this issue, in the beginning of 1990s. Apart from these steps, the EU adapted SAVE programme in 1991 and ALTENER Programme in 1993 for the promotion of greater energy efficiency.[81]

On 4 February 1991 the Council authorized the Commission to participate on behalf of the European Community in the negotiation of a United Nations framework convention on climate change, which was adopted in New York on May 9, 1992. The European Community ratified the Framework Convention by the Decision 94/69/EC of 15 December 1993. After much work, the Kyoto Protocol was adopted on 11 December 1997 in Kyoto, Japan. At the fourth meeting of the Conference of the Parties in Berlin in March 1995, the parties to the Convention decided to negotiate a Protocol containing measures to reduce emissions for the period beyond 2000 in the industrialized countries. The European Community signed the Protocol on 29 April 1998. In December 2001 the Laeken European Council confirmed that the Union wanted to see the Kyoto Protocol enter into force ahead of the Johannesburg World summit on sustainable development (26 August - 4 September 2002). To that end, with this decision the Protocol was

[80] Report on Greenhouse Gas Emission Trends in Europe, 1990–2000, European Environment Agency, http://reports.eea.europa.eu/topic_report_2002_7/en/Topic_7.pdf

[81] Mc. Cormick 2001:282

approved on behalf of the Community. The Member States were to coordinate their action to deposit their instruments of ratification at the same time as the Community, and as far as possible by 1 June 2002. Annex II to the Decision sets out the commitments to limit and reduce emissions agreed by the Community and its Member States for the initial commitment period (2008 to 2012).[82]

The European Union has played a key role in the development of the two major treaties addressing the issue, the 1992 United Nations Framework Convention on Climate Change and its Kyoto Protocol, agreed in 1997. The Kyoto Protocol to the United Nations Framework Convention on Climate Change assigned mandatory emission limitations for the reduction of greenhouse gas emissions to the signatory nations. The objective of the protocol was the "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system."[83] 175 Parties have ratified the Protocol to date. Of these, 36 countries and the EEC are required to reduce greenhouse gas emissions below levels specified for each of them in the treaty. In the Kyoto Protocol, the EC agreed to reduce its greenhouse gas emissions by 8 % by 2008–12, from 1990 levels.[84]

Within the overall target of reducing greenhouse gas emissions by 8 % by 2008–2012, differentiated emission limitation or reduction targets have been agreed for each of the pre-2004 Member States under an EU accord known as the 'burden-sharing agreement' . On the other hand, the new Member States have individual targets under the Kyoto Protocol. The Czech Republic, Estonia, Latvia, Lithuania, Slovakia, Slovenia Bulgaria and Romania have reduction targets of 8 % from the base-year (1990), while Hungary and Poland have reduction targets of 6 %. Cyprus and Malta have no Kyoto target. Croatia, which started accession negotiations with the EU in 2005, has a reduction target of 5 %, although it has not yet ratified the Kyoto Protocol. Turkey, the

[82] Summaries of the European Union Legislation, http://europa.eu/scadplus/leg/en/s15011.htm

[83]The United Nations Framework Convention on Climate Change, Article 2, unfccc.int/essential_background/convention/background/items/1353.php

[84] http://ec.europa.eu/environment/climat/home_en.htm

other candidate country, has no reduction target, since it is not party to the Kyoto Protocol.[85]

In March 2000 the Commission launched the European Climate Change Programme (ECCP), whose initial task was to develop further policies and measures focused on the energy, transport and industry sectors. Therefore, a number of working groups were set up to consider and give recommendations on the most important options for reducing greenhouse gas emissions cost-effectively. Each of these working groups developed and reported to the European Commission on the potential initiatives it had considered for reducing greenhouse gas emissions. As a result, in June 2001, the Commission published an ECCP Report on the findings of the working groups. The ECCP has led to the adoption of a wide range of new policies and measures. Among these is the pioneering EU Emissions Trading Scheme, launched on 1 January 2005, which has become the cornerstone of EU efforts to reduce emissions cost-effectively.[86]

ETC (Emissions Trading Scheme) fixes national greenhouse gas emission quotas and creates a market in greenhouse gas emission rights, so as to allow undertakings to reduce their emissions in an economically viable manner. It covers CO_2 emissions from large stationary sources including power and heat generators, oil refineries, ferrous metals, cement, lime, glass and ceramic materials, and pulp and paper. Other sectors, such as the transport sector which accounts for a significant part of CO_2 emissions, are not covered by the ETS. Under the ETS, operators receive (emission) allowances which have to be surrendered after each year according to the actual verified emissions of an installation during that year. Operators holding more allowances than actual verified emissions may sell unneeded allowances to operators in need of more allowances or keep them for future years. The Linking Directive allows operators to buy JI/CDM (Joint Implementation or Clean Development Mechanism) credits and bring them into the EU ETS to fulfill their obligations. From 2008 EU Member States will specify to

[85] EEA, Greenhouse Gas Emission Trends and Projections in Europe 2006, www.eea.europa.eu

[86] European Environment Agency, Greenhouse Gas Emission Trends and Projections in Europe 2006, www.eea.europa.eu

what extent companies can use these units. The other mechanism to reduce the greenhouse gas emissions is the mechanism for monitoring greenhouse gas emissions , under which Member States annually report on their national situation and measures that are planned with regards to greenhouse gases.[87]

Apart from that, in January 2007 the European Commission set out proposals and options for achieving the objectives set by the Kyoto Protocol in its Communication "Limiting Global Climate Change to 2 degrees Celsius: The way ahead for 2020 and beyond" The key targets in the Communication, were endorsed by the EU leaders at the Council summit in Brussels on 8-9 March 2007, which means that the EU leaders attach considerable importance to the issue of climate change. The EU leaders also agreed on a binding commitment to produce 20% of their energy from renewable sources, such as wind or solar power, by 2020.

> European Council: stresses the need to increase energy efficiency in the EU so as to achieve the objective of saving 20 % of the EU's energy consumption compared to projections for 2020, as estimated by the Commission in its Green Paper on Energy Efficiency, and to make good use of their National Energy Efficiency Action Plans for this purpose.[88]

Another objective set out in the same Summit is related with the share of biofuels. According to that, the share of biofuels in overall EU transport petrol and diesel consumption by 2020 will not exceed 10 %. The EU leaders also declared that on condition that the developed countries commit themselves to comparable emission reductions and economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities, the EU could even manage a 30 % reduction in greenhouse gas emissions by 2020 compared to 1990.[89]

---

[87] European Environment Agency, Greenhouse Gas Emission Trends and Projections in Europe 2006, www.eea.europa.eu

[88] Presidency Conclusions, Council of the European Union, 8-9 March 2007, http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec

[89] ibid.

> This Communication proposes that the EU pursues in the context of international negotiations the objective of 30 % reduction in greenhouse gas emissions (GHG) by developed countries by 2020 (compared to 1990 levels). This is necessary to ensure that the world stays within the 2ºC limit. Until an international agreement is concluded, and without prejudice to its position in international negotiations, the EU should already now take on a firm independent commitment to achieve at least a 20 % reduction of GHG emissions by 2020, by the EU emission trading scheme (EU ETS), other climate change policies and actions in the context of the energy policy. This approach will allow the EU to demonstrate international leadership on climate issues.[90]

We understand from the Communication "Limiting Global Climate Change to 2 degrees Celsius: The way ahead for 2020 and beyond", which is addressed to the Spring 2007 European Council, that the EU aims to be leader in the challenge against the Climate Change, in international platform.

On the other hand, another sign of how serious the EU is with regards to the Kyoto protocol that, it makes use of legal actions against member states that are not fulfilling their obligations. The European Commission took legal action against six member states (Bulgaria, Estonia, Greece, Italy, Luxembourg, and Malta) for not providing information required as part of the EU's efforts to combat climate change. Luxembourg is stated that it will be taken to the European Court of Justice and Estonia and Greece will receive final warnings for not communicating important technical information relating to their greenhouse gas emission targets under the Kyoto Protocol.[91]

As mentioned above, the EU adopted numerous laws on environment to reach these objectives. However, it should be kept in mind that, although the EU formulates environmental policy with the entire legislative infrastructure, responsibility of

---

[90] COM 2007, Official EU Law Portal, www.eurlex.europa.eu

[91] The European Union, Press Releases, 22 March 2007, www.europa.eu

implementation rests with the member states. Implementation is a three step process. First, European law must be transposed or incorporated into national law, which is not as simple as ensuring that directives are transposed into national law. Apart from that, national legislative and administrative framework should also be suitable for attainment of the objectives set out by directives. The second step involves practical implementation and measurable results. In order for national and local authorities to comply with the law, relevant authorities may have to be strengthened. In other words, member states must create the necessary administrative, technical and scientific infrastructure to protect and improve the quality of the environment. The final step in implementation involves monitoring the application and effect of each law. The Commission is the responsible body for ensuring the application of the EU law and encouraging member states to implement the EU policies.[92]

The issue of implementation begins with the drafting and adoption of the EU legislation, since ambiguous or incomplete legislation may be difficult to implement. In the case of a Directive, Member States have to transpose it into national law or administrative measures, a process described as 'formal compliance'. This national legislation then has to be applied in practice so that the desired ends are achieved. This can involve ensuring that a 'competent authority', once appointed, has adequate staff and takes the necessary steps, such as granting authorizations, drawing up plans, following procedures. It may involve investments in new products, processes and equipment by both private and public sector. It may also involve monitoring of emissions or of environment quality, or of procedures followed. It might also include reporting by a regulated body to the competent authority; by the competent authority to the Member State; by the Member States to the Commission; by the Commission to the Parliament and Council.[93] Finally, implementation involves enforcement under the processes of law. This can include actions by competent authorities (including the steps taken before reference to national courts), action before the courts by the third parties,

[92] Collins and Earnshaw 1993: 215

[93] Report on the State of Reporting by the EC Commission in Fulfillment of Obligations Contained in the EC Environmental Legislation, Institute for European Environmental Policy, http://www.mep-online.com./contributors.html

complaints by third parties to the Commission that the EC legislation is not being properly complied with, and action by the Commission against Member States leading to a reference to the European Court of Justice.[94]

The EU is aware of the fact that implementation of environmental policy falls mostly under the responsibility of local authorities. Statistics indicate that eight out of ten people live in cities in Europe, which is the main reason of the focus on local authorities with regards to environment.[95] They are the actors closest to the problems at the local level and they play a decisive role in improving the environmental performance. For that reason, the EU has started to address directly local authorities in order to solve environmental problems 'on site'. For example, the 6th Environmental Action Programme, which runs from 2002 to 2012, requires the European Commission to prepare Thematic Strategies covering seven areas, namely, Air Pollution, Prevention and Recycling of Waste, Protection and Conservation of the Marine Environment, Soil, Sustainable Use of Pesticides, Sustainable Use of Resources and finally Urban Environment.[96] Thematic Strategy on the urban environment has the objective of contributing "to a better quality of life through an integrated approach concentrating on urban areas" and "to a high level of quality of life and social well-being for citizens by providing an environment where the level of pollution does not give rise to harmful effects on human health and the environment, and by encouraging sustainable urban development."[97] The aim of this strategy, which was adopted on 11 January 2006, by the Commission, is to contribute to better implementation of the EU environmental policies and legislation at the local level. In the communication from the commission to the Council and the European Parliament, with the number (SEC, 2006, 16), the eminence of local authorities with regards to environmental policy is clearly stated:

---

[94] Stages of Implementation, Institute for European Environmental Policy, http://www.mep-online.com./contributors.html

[95] Margot Wallström, Commission Vice-president in charge of Communications Policy, a news portal on the EU, www.euractiv.com

[96] http://ec.europa.eu/environment

[97] www.ec.europa.eu/rapid/pressReleasesAction

> Local authorities have a decisive role in improving the urban environment. The diversity in terms of history, geography, climate, administrative and legal conditions calls for locally developed, tailor-made solutions for the urban environment. Application of the subsidiarity principle, where action should be taken at the most effective level, also implies acting at the local level. Member States have a responsibility to help regional and local authorities to improve the environmental performance of the cities of their country.[98]

This aim is planned to be realized by supporting and encouraging local authorities to adopt a more integrated approach to urban management and by inviting Member States to support this process by exploiting all funding opportunities offered at the EU level. Apart from that, another means to be used for this aim is exchange of experience and good practice among Europe's local authorities.[99] Even though this strategy has no binding effect like directives and regulations, which is criticized by the Committee of Regions, it is a very important document to understand the emphasis the EU has placed on local governments with regards to environment.

[98] www.europa.eu/rapid/pressReleasesAction

[99] www.europa.eu/rapid/pressReleasesAction

PART II: A CASE STUDY: ENVIRONMENTAL POLICY OF ISTANBUL METROPOLITAN MUNICIPALITY

Turkey's EU membership bid started in 1959; one year after the establishment of the European Economic Community, with the application for being associate member and four years later the Ankara Agreement was signed by both parties.[100] Following a fluctuating path towards full membership, Turkey became a member of the Customs Union in 1996 and reached the status of candidate state for full membership in the Helsinki Summit of December 1999.[101] The other milestone date in Turkey's path to the membership is December 2004 when it was decided in the Brussels Summit that membership negotiations with Turkey would start on October 3, 2005. Turkey started the membership talks with the EU on the mentioned date with the chapter of "Science and Technology", which is one of the 35 chapters. Apart from that, screening process also started for all chapters including environment, to detect how compliable the Turkish legislation is with the EU acquis.[102]

It is sure that, municipalities in Turkey, as it is the case in nearly all countries, shoulder an important part of the responsibility with regards to environment, since they are the closest authority to people. In fact, environmental sensitivity in Turkey has still been still developing since 1970s. Turkey, as a developing country, has tried to take environmental precautions in a way that do not impede its development. The fact that the first law on environment was formulated in 1983 and the Ministry of Environment was established in 1991 indicates the poor importance that was attached to environment in Turkey in the past. Apart from that, when we look at the "big picture" in Turkey through an environmentalist perspective, we immediately get astonished and understand that the chapter titled "environment" will be at the top of the most challenging chapters in the process of negotiations between Turkey and the EU. To give a few figures about the poor situation of environment in Turkey, in a special statement made for the daily

[100] Aykaç and Parlak 2002: 103

[101] Öniş 2003:3

[102] Ministry of Foreign Affairs, General Secretariat for the European Union, www.abgs.gov.tr

Milliyet, Minister of Environment Mr. Osman Pepe states the following: "Out of 81 cities in Turkey, in 65 of them, the collected waste is stored in irregular landfill areas in a wild way, which lack technical infrastructure. There are 3.225 municipalities in Turkey and 70 % of them do not treat their waste water and discharge it directly into rivers or seas."[103] In a report prepared by the Chamber of Environment Engineers in June 2007, titled "Environmental Situation Report" the environmental picture of Turkey was taken as follows: "Only 69% of the municipalities in Turkey has canalization system. Out of 3.225 municipalities, 324 municipalities treat their waste waters through 195 waste water treatment facilities. Only 304 of the municipalities have treatment facilities for potable water. There are only 46 regular landfill areas and only 40 % of medical waste is burned." [104]

Istanbul Metropolitan Municipality, which was selected as a case study to have a clue of understanding how ready Turkish local authorities for the EU accession in the negotiations period, was examined with a critical approach only with regards to the policy area of environment. We can define environment as the basic policy area of not only Istanbul Metropolitan Municipality but also for all municipalities in Turkey, when we take responsibilities and tasks inferred on municipalities by the relevant laws into consideration. It is safe to say that environment will be among the most challenging chapters in the negotiations process of Turkey with the EU and the main implementer of environmental policies, the guidelines of which are set by the central government, is municipalities in Turkey, as it is in many European countries.[105] IMM, which provides municipal services for nearly 14 million people, has a sensitive position on the way to Turkey's EU membership. IMM will be the implementer of environmental policy of the EU, which is being aligned with the EU environmental legislation.

Istanbul Metropolitan Municipality (IMM), which is the largest local authority in Turkey with around 50 thousands employee serving for around 14 million people, will

[103] Daily *Milliyet,* http://www.milliyet.com.tr/2005/04/18/guncel/axgun02.html

[104]Chamber of Environment Engineers, http://www.cmo.org.tr/yeni/duyuru2.php?did=72

[105]Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

certainly be mentioned as the most important actor when the chapter on environment is opened. The present administration is allocating fund for environment as much as possible. The Minister of Environment stated that IMM spent around one billion Euros on environment in 2006. Environment comes after transportation in terms of the share in the investment budget in IMM.[106] When we look at the responsibilities and authorizations of Metropolitan Municipalities in Turkey, with regards to environment, we come across with the article 7 of the Law on Greater City Municipality Law (Law Nr. 5216), which lists the following responsibility areas:

> To enable protection of the environment, agricultural areas and water basins according to applicable development plan; to undertake planting of trees; to designate storage areas for excavated earth, debris, sand and pebbles, coal and wood sales and storage places, to take measures avoiding environmental pollution during transport of the same; to prepare refuse management plan for the greater city, or to delegate other to undertake this task; excluding the works relating to accumulation of the wastes in the well and transport to the transfer places, to undertake services relating to recycling, storage and disposal of wastes, to establish and operate or let others to establish and operate plants for this purpose; to perform the services relating to industrial and medical refuses, to establish and operate or let others to establish and operate plants for this purpose; to undertake collection and purification of refuses discharged from sea carriers by preparing regulations on this subject. To undertake water and sewage services, to construct and operate or to let others to construct and operate dams and other plants for such purpose; to engage in improvement of rivers.[107]

As it can be concluded from this law, Metropolitan Municipalities are mainly responsible for all kinds of waste collection and management, recycling, provision of clean drinking water and waste-water management, planting of trees and improvement of rivers. On the other hand, this law does not bring any responsibility with regards to taking measures against air pollution, noise pollution and marine pollution. In other

[106] http://www.ibb.gov.tr/IBB/Popup/tr-TR/PrinterFriendlyHaberler.aspx?CultureId

[107] Istanbul Metropolitan Municipality, www.ibb.gov.tr

words, local authorities in Turkey can conduct some works in these areas only if they wish to do so. However, we see that Istanbul Metropolitan Municipality has some works concerning these areas, as a reflection of its environmentalist approach. For example, according to a protocol between the Ministry of Environment and Istanbul Metropolitan Municipality, the power and responsibility of monitoring and evaluation of environmental noise was shared with IMM, as well as some other municipalities in Turkey.[108] This protocol indicates the sensitivity IMM has with regards to environmental issues.

One of the weaknesses with regards to management of environment in Istanbul is that there are Directorates of Environment both in Istanbul Metropolitan Municipality and in the Governorship of Istanbul. IMM is given some responsibilities, but it is not equipped with the necessary instruments such as issuing fine to legal and natural persons, that break laws on environment.[109] In general, Directorate of Environment in Governorship of Istanbul, the representative of Ministry of Environment in Istanbul, has the authority of issuing fines, which is usually effective with regards to forcing people to obey the relevant rules. For example, in the area of waste water treatment, Governorship of Istanbul has the authority of issuing fines to the industrial plants that leave waste water into rivers or seas without treatment. On the other hand, IMM is responsible for waste water management and improvement of rivers. This situation creates a conflict and makes the issue much more complex.

EU tries to prepare the local authorities of candidate countries in the accession process. For example, the European Commission, under the LIFE-Third Countries Programme 2006, has approved a total contribution of 660.000 Euro to IMM for the projects of monitoring air quality and management of electrical and electronic equipments.[110] Apart from that, Regional Environment Center (REC), an independent international institution established with the support of the USA, Hungary and Council

[108] IMM Activity Report, 2006

[109] IMM Strategic Plan: 2007-2001, p.125

[110] http://ec.europa.eu/environment/life

of Europe in 1990, opened its office in Turkey in 2004. This institution tries to implement Local Environmental Action Plans, plans similar to European Environmental Action Plans, in Turkey. As an NGO, REC Turkey, supports local authorities in the accession process to the EU, through organizing some seminar programs. On the other hand, IMM also accepts the European Union legislation on environment as an opportunity for handling environmental problems in Istanbul more carefully, since this legislation is going to have a binding effect in Turkey's negotiation process with the EU.[111] For example, it was stated in the same strategic plan that the IMM aimed at issuing reports on environment and some other areas which analyze if services provided by IMM conforms to standards set by the EU. Also, it was stated that IMM had the aim of obtaining more allocation from the EU funds and holding some seminar programs on EU policies for the IMM employee.

It is not difficult to note that the present authority holding the office in IMM has an environmentalist approach. For example, the present Mayor of Istanbul, Mr. Kadir Topbaş, expressed for many times that it was mainly the mega cities that caused global warming and climate change since most of the population is living in urban areas. He adds that, therefore, metropolises need to unite their power and combat with the climate change.[112] In the same meeting, the Mayor, explained the project of "green roofs" as a measure against the climate change. According to this project, KİPTAŞ, the construction company of IMM, is going to construct buildings with gardens that are located at their roofs in order to attract rain clouds and to create a greener scene in the city. Apart from that, it was noted in the same address that city dwellers who were willing to apply the same project in their own buildings were going to be supported by IMM.[113]

The Mayor expressed some of his projects with regards to reducing negative effects of the climate change to the Mayors' of leading Cities in New York, on the

[111] IMM Strategic Plan: 2007-2001, p.125

[112] His address to the media members after his meeting with OECD Secretary General Mr. Gurria, http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24170

[113] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24170

occasion of the Large Cities Climate Summit, organized by the Clinton Foundation, held on 14-17 May, 2007:

> REPZEP – Hydrogen-Fueled Boat Project:
> Within the scope of a project to be carried out in cooperation with the Turkish Scientific and Technical Research Institute, two boats with a capacity of 50 to 60 passengers will be put into operation in Golden Horn for touristic purposes within two years. The project will be the first one in this field all over the world and will cost 7 million dollars.
>
> Project of encouraging Bio-Fuels in Local Public Transport:
> The project encourages the use of bio-diesel fuel in rubber-tired public transport vehicles in Istanbul.[114]

The Mayor also stated in his speech that Istanbul Metropolitan Municipality aimed to reduce sera gas emissions by 1.800.000 tones per year especially with the projects on energy, transportation, waste management and electricity generation from waste gas, and IMM would firmly continue the efforts that have been started for encouraging public transport, using new energy sources and reducing emissions.[115] On the other hand it should be noted that IMM signed the Green Cities Declaration in San Francisco, on June 5, 2005 (World Environment Day). This declaration, which sets out 21 specific actions for sustainable urban living, addresses seven environmental areas common to all the world's large cities: water, energy, waste, urban design, transportation, urban nature, and environmental health.[116] According to this declaration it is aimed to provide 10 % of the electricity of Istanbul with renewable energies. When we look at the Turkish Municipal legislation, we see that municipalities are not responsible for developing solutions against negative effects of climate change, which is an international problem. We also see "sustainability", another issue which does not fall under the responsibility

[114] IMM Foreign Relations Department, Document Archive

[115] IMM Foreign Relations Department, Document Archive

[116] http://www.citymayors.com/environment/environment

of municipalities in Turkey, among the main principles of IMM.[117] In the strategic plan of IMM, it is stated that sustainable development should be realized by giving priority to protection of water resources, making use renewable energies, fight against deforestation and protecting bio-diversity.[118]

Mayor Topbaş expressed his concerns over sustainable development and climate change in his speech that he delivered in the session titled "Tomorrow's Europe: Contribution of Local and Regional Administrations" in the Committee of Regions in Rome, on the occasion of the 50th anniversary of Rome Treaty as follows: "The main cause of the climate change is people, and since more than half of people live in cities, it is the responsibility of cities to solve this 'disaster'. We, as local governments, should come together and develop common strategies against climate change and ensure sustainable development". The Mayor expressed his similar views on climate change for many times in his bilateral meetings with statesmen and mayors. For example, the Mayor, in his meeting with the president of Iceland, H.E. Ragner Grimsson on the 29th of June 2006, stated that local governments should unite under one umbrella and a new initiative should be started to fight against global warming.[119] However, no international step has been taken against climate change although there have been so many statements against it. On the occasion of the OECD Forum, organized in Istanbul on June 27, 2007, the Mayor repetead his views on environment and he called on local governments for international cooperation against global warming:

> We are facing the fearful reality of global warming. Now we all know that limitless environmental issues are not just a national problem. This is why we have to find solution to this issue in a global platform. As global cities, we have to work for the sake of our children with the knowledge that; 'we had this world from our children as a loan'. Another current issue is the protection of our natural wealth which includes sea, underground water reserve, soil and living area of species. Quick reduction of natural resources, pollution of environment,

[117] IMM Performance Program 2007:70

[118] Strategic Plan 2007:70

[119] IMM Foreign Relations Department Document Archive

> and depletion of living species are threatening our existence in the world. This is why one of the most important topics of our agenda should be the protection of biological diversity. We must protect the resources of our drinking water. We have polluted our seas, inner seas, and rivers. Now we have to make a big expenditure for a clean sea. [120]

IMM tries to solve these problems as much as its financial sources allow. There are some efforts of IMM on heightening the environmental awareness among people of Istanbul. IMM allocated a fund of 590.000 YTL for the years 2006 and 2007, to be spent on projects related with heightening the environmental awareness.[121] IMM issued a declaration on environment on June 5, 2005 (World Environment Day), which touched on especially environmental consciousness. In this declaration it was stated that without heightening peoples' awareness, environmental problems could not be solved.[122] For example, IMM Directorate of Waste Management started a campaign in Istanbul with the title "Let's Keep our Environment Clean and Let's find our Environment Clean" on June 2007. Experts of Directorate of Waste Management informed people about environment and request them to keep their environment clean.[123] This campaign deserves to be noted since it indicates a sign of environmental policy. Similarly, another campaign was organized in December 2005. According to this campaign, 500 students were employed to inform people about the importance of separate collection of wastes.[124] IMM also supports the scientific studies carried out in the area of environment. In December 2006, in collaboration with the Ministry of Environment of Germany, the Union of Marmara and Straits Municipalities, whose president is the Mayor of Istanbul, "Turkish-German Environment Center" was opened. This center is conducting scientific studies concerning environmental problems in Istanbul.[125]

---

[120] IMM Foreign Relations Department, Document Archive

[121] IMM Investment Plan, 2007:76

[122] Declaration on Environment http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=19623

[123] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24182

[124] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=21286

[125] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=23117

It is possible to claim that IMM has some sensitivity with regards to environment; however, it cannot be accepted as sufficient since Istanbul still faces many environmental problems. It is a fact that Istanbul's environment is challenged by a number of threats. According to the OECD Report on Territorial Review of Istanbul, the city needs new investments of 60 billion Euros in order to fully fulfill EU directives on the environment. The main cause of the severe environmental problems is that, as Mayor of Istanbul continuously utters, Istanbul is the "economic capital of Turkey", which is full of industrial plants and the most crowded city in Turkey. It has a bigger economy than 127 world countries with its 133 billion dollars of gross domestic product (GDP), which is expected to reach 287 billion dollars in less than fifteen years. Istanbul is also a continental coordination center because its export share in Turkey is 56.6 % and it's import share is 60.2%.[126] Being an "economic capital" without taking sufficient environmental measures, which is the case in Istanbul to a certain extent, naturally results in some environmental problems.

It should be also taken into consideration that the population of Istanbul is increasing by nearly 400.000 every year, half of which occurs through immigration. In the last three years, the population increased by more than one million and the number of cars registered to traffic was around 600 per day, which amounts to around 520.000 cars. Heavy traffic, undeveloped underground metro, which is only around 43 kilometers, all pose great environmental problems especially with regards to air and noise pollution.[127] Nearly 43% of Turkey's economy is generated in Istanbul with a total GDP of 130 billion US Dollars.[128] Being a city with an industrial character poses a great threat for Istanbul since many of these industrial plants do not treat their waste water with phosphate and nitrogen.[129] Another threat is the Bosphorus which is considered as one of the most hazardous, crowded, and potentially dangerous waterways in the world. As expressed in one of Mr Pepe's speeches, Minister of

[126] IMM Document Archive, Speech of Mr. Topbaş, delivered on the occasion of OECD Forum in Istanbul, on June 27, 2007

[127] Mayor Topbaş, (http://www.ibb.gov.tr/IBB/Popup/tr-TR/PrinterFriendlyHaberler.aspx

[128] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24187

[129] OECD Report on Territorial Review of Istanbul

Environment of Republic of Turkey, in 2003, 8.000 vessels passed through the Bosphorus and 63 vessel accidents occurred in the same year.[130] To give an example about the threat the Bosphorus poses, in a vessel accident on March 13, 1994, nearly 20.000 tonnes of crude oil leaked into the sea from the vessel called Nassia. The fire in the vessel lasted four days which resulted in the suspension of traffic in the strait.[131] So many vessels mean marine pollution through some wastes and bilge water, which is a great threat against the environment of Istanbul.

2.1. AIR QUALITY

Air, like water, is an environmental medium, which circulates freely though the environment and together with soil/land and water forms the habitat for all flora and fauna. The different elements contained in the air we breathe every day and deposited on water and soil are influenced by an array of different factors such as weather patterns, complex atmospheric chemistry and anthropogenic activities leading to air pollution.[132] Air pollution is the result of the burning of fossil fuels and the fuel used in vehicles. In parallel with the increase in population, demand for energy also increased, which led to air pollution. It has been one of Europe's main political concerns since 1970s, with the effect of the report published by the World Health Organization regarding the levels of ambient air pollutants that constitute hazards to health in 1972.[133]

While most of the current air legislation in the EU was formulated during the 90s, air pollution has been in the political debate for much longer. Over time, different aspects of the problem became the focus of political attention. Strong environmental concerns brought air pollution onto the political agenda: the problem of acidification of

[130] www.cevreorman.gov.tr/konusmalar

[131] Turkish Marine Foundation, The Turkish Straits: Maritime Safety, Legal and Environmental Aspects, www.tüdav.org

[132] Meyer 2005:46

[133] www.ecologic.de/download/projekte/850899/890/isa/isa_eu_air_quality_framework_directive.pdf

Scandinavian lakes and rivers was discovered in the late 1960s. This was followed by concerns over air pollution impacts on forests, including the acidification of forest soils in the 1980s. Since the 1990s, the debate has also focused strongly on the health damage caused by air pollution, particularly with regard to urban air quality. Clean air policy-making in the EU has also been influenced by international negotiations on air pollution: under the 1979 Convention of Long-range Transboundary Air Pollution, and its various protocols, in particular the 1999 Gothenburg Protocol (Official Convention Web-site, http://www.unece.org/env/lrtap). Important EU policy-goals relating to air pollution were laid down in the Fifth (1992) and Sixth (2002) Environment Action Programmes and the Community Strategy to Combat Acidification (1997). [134]

European Union policy on air quality aims to develop and implement appropriate instruments to improve air quality. The objective considered in the Sixth Environment Action Programme concerning air quality is to achieve the levels of air quality that do not give rise to unacceptable impacts and risks to human health and the environment. The Community is acting at many levels to reduce exposure to air pollution, through EC legislation, through work at the wider international level in order to reduce cross-border pollution, through working with sectors responsible for air pollution and with national, regional authorities and NGOs, and through research. The focus for the next ten years will be implementation of air quality standards and coherency of all air legislation and related policy initiatives.[135]

Two of the main milestones in the EU's fight against air pollution were the 1996 Air Quality Framework Directive (Council Directive 96/62/EC of 27 September 1996 on ambient air quality assessment and management) and the national emission ceilings (NECs) 2001/81/EC Directive. The air quality directive defines the minimum standards for the protection of health and the environments that are to be met everywhere. The main objectives of this directive are:

[134] Meyer 2005:48

[135] http://ec.europa.eu/environment/air/index.htm

- to define and to establish objectives for ambient air quality in the Community designed to avoid, prevent or reduce harmful effects on human health and the environment as a whole,

- to assess the ambient air quality in Member States on the basis of common methods and criteria,

- to obtain adequate information on ambient air quality and to ensure that it is made available to the public, inter alia by means of alert thresholds,

- to maintain ambient air quality where it is good and improve it in other cases.[136]

The first objective of this directive is rather broad. The Directive requires the Daughter Directives to set effects-based limit values, aimed at safeguarding human health and the environment. It is further specified in the four subsequent "Daughter Directives" that were agreed by the EU in the years 1999, 2000, 2002 and 2004, covering all the 12 pollutants. The second objective complements this by indicating where the Directive applies. It clearly states that air quality should not deteriorate anywhere in the EU. The Framework Directive on ambient air quality assessment and management (96/62/EC) from 1996 lays down, for the first time, common rules and principles for setting effects-based air quality limit values to be met everywhere in the EU. It lists 12 pollutants for which legislation, including limit values, measurement and assessment requirements must be developed.[137] The NEC Directive further complements ambient air quality standards by setting the long-term environmental quality and health objective "of not exceeding critical levels and loads and of effective protection of all people against recognized health risks from air pollution".[138]

The Sixth Environment Action Programme (the 6th EAP), which was adopted by the European Parliament and Council in 2002 and runs until 2012, required the

[136] Official EU Law Portal, www.eurlex.europa.eu

[137] Meyer 2005:48

[138] Directive 2001/81/EC, Official EU Law Portal, www.eurlex.europa.eu

European Commission to prepare a thematic strategy on air pollution and this strategy was adopted on September 21, 2005. It establishes objectives for air pollution and proposes measures for realizing some objectives by 2020. Achieving the 6th EAP objective of "levels of air quality that do not give rise to significant negative impacts on, and risks to human health and the environment" is also the main objective of this strategy. Other objectives of the strategy are as follows: modernizing the existing legislation, placing the emphasis on the most harmful pollutants, and involving to a greater extent the sectors and policies that may have an impact on air pollution.[139]

IMM has taken considerable steps to increase the air quality in Istanbul towards meeting the EU limit values in line with the Air Quality Framework Directive. IGDAŞ, a municipal enterprise of IMM which was founded in 1988, provided nearly 90 % of Istanbul, with natural gas, which can be accepted as the main factor in decreasing high level of air pollution in Istanbul, in 1990's. The air quality of Istanbul was very poor especially in the beginning of 1990's. Istanbul was plagued with such intensified air pollution that media asked people not to go outside at certain times. For example, in 1992, the SO_2 level in Istanbul hit the alarming degree of 4000 $\mu g/m^3$, which was around 18 $\mu g/m^3$ in Istanbul in the winter period between 2005-2006. The officially permitted limit by international standards is 150 $\mu g/m^3$.[140] At that year, the air quality situation in Istanbul was so severe that the Governorship of Istanbul made it mandatory for people to use natural gas if there is natural gas installation in their district, on October 31, 1994.[141]

Today, as of June 2007, the number of natural gas clients in Istanbul is 3.455.000.[142] It is clear that, natural gas is the key instrument to be used for improving air quality and the task carried out by IGDAŞ is quite important in that sense. According to the data collected from 10 different measuring stations, average limit

[139] Summaries of the European Union Legislation, http://europa.eu/scadplus/leg/en/lvb/l28159.htm

[140] Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, 2002:117

[141] Daylan and İncecik 2002:2

[142] İGDAŞ, Istanbul Natural Gas Distribution Company, www.igdas.com.tr

values of SO_2 obtained in Istanbul during the last three years did not exceed the values set by the Directive on Ambient Air Quality Assessment and Management (96/62/EC) and Council Directive 1999/30/EC of 22 April 1999 relating to limit values for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air, which is a daughter directive of the former one.[143] It should be also taken into consideration that since 1995, the coal consumed in Istanbul is inspected by the Environmental Council of Istanbul, of which IMM is a member. Coal, which is intended to be marketed in Istanbul, undergoes some tests in the "coal and environment laboratory" of IMM and it is permitted to be marketed only if it meets the standards.[144]

IMM established 2 measuring stations in 1995 and today, there are 10 measuring stations in Istanbul, in the following provinces: Yenibosna,Esenler, Saraçhane, Alibeyköy, Beşiktaş, Sarıyer, Üsküdar, Kadıköy, Ümraniye and Kartal. The data, which are obtained on 10 different substances in these stations, are published on the official website of IMM everyday, which is also the necessity arising from article 8 of the Directive 1999/30/EC:

> Member States shall ensure that up-to-date information on ambient concentrations of sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead is routinely made available to the public as well as to appropriate organizations such as environmental organizations, consumer organizations, organizations representing the interests of sensitive populations and other relevant health-care bodies by means, for example, of broadcast media, press, information screens or computer-network services.[145]

However, it should be noted that the Framework Directive on air prescribes that measurement of air quality is mandatory in agglomerations, which are defined in the second article as zones with a population concentration in excess of 250.000 inhabitants. It is sure that Istanbul has many zones that have a population over 250.000

[143] Official EU Law Portal, http://eur-lex.europa.eu

[144] IMM Activity Report on Environment, 2007:157

[145] Official EU Law Portal, http://eur-lex.europa.eu

inhabitants and therefore new measuring stations need to be established in accordance with the mentioned directive. 10 measuring stations are insufficient when we take into consideration that the population of Istanbul is around 14 million.[146] Although, the existing law on Metropolitan Municipalities does not impose any liability over establishing measuring stations, it is essential to increase their number in order to follow up air quality not only in certain centers, but across the city. This number is aimed to be increased to 17 until the end of 2011 according to the strategic plan, which is still less than the standard set by the EU.[147]

Although IMM was successful enough to decrease the high level of SO_2 to the limits prescribed by the relevant directive, it does not meet the limit values on particulate matter set by the same directive. Particulate matter (PM_{10}) in the air does not comply with the EU standards in some provinces of Istanbul. For example, in the province of Kartal, particulate matter (PM_{10}) values in the air exceeded the limit values set by the relevant directive for 27 times only in January and February in 2007.[148] However, according to the mentioned directive, the limit values on PM_{10} should not exceed for more than 25 times during a year. When we look at the graphic of the annual PM_{10} limit values, we see that the EU standards have not been able to be fully met in Istanbul since 1995. According to article 7 of the Framework Directive on air quality (96/62/EC), some plans must be developed for the areas of poor air quality with specific improvement deadlines. However, there is no published plan about the improvement of air.

> Article 7: Member States shall draw up action plans indicating the measures to be taken in the short term where there is a risk of the limit values and/or alert thresholds being exceeded, in order to reduce that risk and to limit the duration of such an occurrence. Such plans may, depending on the individual case, provide for measures, control and, where necessary, suspend activities,

[146] This is the unofficial number mentioned by Mayor of Istanbul in his speeches

[147] IMM Strategic Plan: 2007-2001, p.170

[148] Results of air Quality Measuring Stations, http://www.ibb.gov.tr/tr-TR/HavaKalitesi/

including motor-vehicle traffic, which contribute to the limit values being exceeded.[149]

On the other hand, Directive 2000/69/EC of the European Parliament and of the Council of 16 November 2000 relating to limit values for benzene and carbon monoxide in ambient air requires the measurement of benzene and carbon monoxide.[150] However, benzene is not among the ten chemical substances that are measured in the measuring stations and the average carbon monoxide in the air in Istanbul is far more than the limit value, which is 10mg/m^3.[151]

It is sure that traffic congestion and excessive amount of cars are among the most important causes of air pollution. It is clear that half of the air pollution is caused by car exhaust gases.[152] Especially cars with poor technology release carbon monoxide and other pollutant gases more than standards. IMM does not have an authority of inspecting cars with regards to exhaust emissions. However, it is possible to ensure that municipal cars and especially buses conform to the standards. In Istanbul, let alone private cars, an important part of public buses, which are under the control of IMM, emit pollutants into air higher than standards. In his speech in the conference titled "Transportation and Sustainable Solutions", Minister of Environment, expressed that in Istanbul the pollution caused by public buses, which are not inspected, is not less than the pollution caused by cement factories.[153] When we take it into consideration that İETT, the public administration of IMM has 2.851 public buses and private companies have 2.037 public buses under the control of IETT, it is better understood that these buses need to be checked regularly with regards to pollutant gases emitted by them. The average age of public buses is 11 and the number of buses fueled by natural gas is only

[149] http://eur-lex.europa.eu

[150] ibid

[151] Results of air Quality Measuring Stations, http://www.ibb.gov.tr/tr-TR/HavaKalitesi

[152] http://www.ibb.gov.tr/tr-TR/CevreKoruma/HavaKalitesi/CKMCalismalar

[153]Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

100.[154] On the other hand, although there has been some works with regards to buses fueled by hydrogen, IETT still does not have such kind of a bus.

It is sure that, when an important proportion of cars and buses use environment-friendly fuels such as natural gas and hydrogen in the future, air quality will improve. On the other hand, IMM has no authority of checking if cars conform to standards with regards to gases released. This responsibility lies with traffic policemen, who are working under the roof of the Ministry of Interior Affairs. All the IMM does with regards to exhaust gases is to distribute some booklets and pamphlets that inform drivers about this issue. It should be noted that the leaded petrol, whose lead enters the atmosphere, being poisonous to the developing nervous systems of children, was only banned in Turkey in February 2004, nearly ten years later than the EU member countries.[155]

IMM sets some aims in the area of air quality, to be realized by 2011 in its strategic plan. Some of these aims are as follows: determining the share of pollution caused by vehicles until 2011, transferring industrial plants out of the historical peninsula, following up wastes of 30% of industrial plants, which have a high tendency of causing pollution, in an on-line way, informing public about the air quality through electronic boards to be situated in eight squares of Istanbul, broadcasting the air quality in different districts of Istanbul, live on internet and finally improving air quality of Istanbul in line with the standards of the World Health Organization and the EU.[156] In order to reach the goal of following up wastes of 30% of industrial plants and prepare inventories of emission, IMM has applied the fund of LIFE-III, which is the EU's financial instrument supporting environmental and nature conservation projects, with the project of "Life Tcy 06/Tr/283 -Development of a GIS Based Decision Support System For Urban Air Quality Management in the City of Istanbul". The EU accepted to provide IMM with an amount of 160,295 Euros as gift aid.[157]

---

[154] 2006 Activity Report of IETT

[155]The Ekoloji Magazine, http://www.ekolojimagazin.com/?s=magazin&id=160

[156] IMM Strategic Plan: 2007-2001, p.170

[157] http://www.ibb.gov.tr/tr-TR/CevreKoruma/HavaKalitesi/HavaKalitesiCalismalari

2.2. WATER QUALITY

The issue of water is more complicated than air since it has many resources such as groundwater, river, lake and sea. In addition, water, which is also a natural habitat for some animal and plant species, is used for different purposes like drinking, irrigation, transport medium, fishing etc. It is sure that water is the backbone of environmental policies all over the world with regards to being the essence of life. Water pollution in industrialized countries comes mainly from six sources: agriculture (the use of chemical fertilizers and pesticides), domestic sources (insufficient sewage treatment plants), industrial plants (releasing hot or contaminated water, accidental spills or leakage of chemical substances), mismanagement of toxic and hazardous waste disposal, sea transport (accidental or deliberate release of petroleum products).[158]

European Community's early policy for water targeted public health issues through the setting of standards for the quality of drinking and bathing waters and the control of discharge of particularly dangerous substances. At these early times, the Community lacked a competence for developing an environmental policy and these measures were justified as setting harmonized environmental rules for competition in the common market. European legislation on water quality was initiated with two key directives, issued in 1975 and 1976. The first one dealt with the principles and the standards necessary to improve and sustain the environmental quality of waters as drinking water (COM 75 440), and the second one regulated the discharge of dangerous substances into the aquatic environment (COM 76 464). A number of other directives has emerged from these two key directives, based on their two distinctive philosophies: water use directives which are concerned with the quality of water which set Europe-wide standards to be complied in all member States; and water pollutant directives which are concerned with the control of emissions of particular pollutants to water, setting emission standards to be respected in all Member States.[159]

[158] McCormick 2001:194

[159] Somsen, 1990

Water legislation was one of the first sectors to be covered by the EU environmental policy and comprised more than 25 water-related directives and decisions. The first wave of legislation took place from 1975 to 1980, resulting in a number of directives and decisions which either laid down environmental quality standards for specific types of water, like the Surface Water, Fish Water, Shellfish Water, Bathing Water and Drinking Water Directives, or established emission controls and emission limit values for specific water uses, like the Dangerous Substances Directive and the Groundwater Directive. These directives were mainly based on the first Environmental Action Programme (1973), which called for both approaches to be used. In practice, however, the dual approach not only led to highly fragmented water legislation, but also to huge implementation problems. It proved less successful than expected in its environmental outcome. The second wave of water legislation, which was from 1980 to 1991, was less comprehensive. Apart from the introduction of two new instruments, the Nitrates and Urban Waste Water Treatment Directives, several 'daughter directives' implementing the Dangerous Substances Directive, were adopted.[160]

As the costs implicated in the implementation of this first wave of legislation started to be realized, so did the continuous deterioration of Europe's aquatic environment. Water policy was caught within two opposite forces: one asking for more legislation to account for environmental concerns and one for less legislation in view of the high costs involved in implementation. Politicians from the member states often echoed both positions. The second wave of legislation of the late 1980s and early 1990s tried to reconcile all these different needs and priorities. Waste water and use of nitrates in agriculture, two key sources of water pollution, were first targeted as a response to the call for more environmental protection. On the other hand, the drinking and bathing water standards were to be revised, not only to reconsider the implicated costs but also in order to "tune" them with progress in scientific knowledge. Directives of secondary importance, such as those for fish and shellfish waters became the easy targets of the call for less regulation.[161]

[160] Scheuer 2001

[161] Kallis and Nijkamp 1999:2

The arrival of this second wave of legislation meant that everyone involved in European water legislation (e.g. the Council, the European Parliament, the Member States, regional and local authorities, water users, environmental and consumer groups) found themselves 'drowning' in water-related proposals. Just as the real problems and costs of implementing the nitrates directive and the urban waste water treatment directive were being faced, four more directives and an action programme were laid on the table. In 1995, the European Commission realized the need for a more global approach to European water management, so as to integrate the fragmented pieces of legislation covering water of different types and destined for different uses. The Commission developed a discussion document, setting out a framework for European water policy. Following a broad consultation, the Commission then proposed (1997-1998) a new piece of legislation — the water framework directive — to ensure the overall consistency of Community water policy.[162] On the other hand, hardly any of the water protection Directives has been fully implemented and enforced in the prescribed way or by the prescribed deadline nor have its objectives been achieved. Member States were found guilty by the European Court of Justice for non-compliance with water legislation in 54 cases concerning 10 Directives in the period 1998-2004.[163]

2.2.1. Water Framework Directive (2000/60/EC)

The Water Framework Directive was the result of complaints of member states over the complexity of so many directives that handle issue of water. After the adoption of the water framework directive, the following directives were repealed: Bathing water quality directive (76/160/EEC), Dangerous substances directive (76/464/EEC), Drinking water quality directive (80/778/EEC), Surface water directive (75/440/EEC) and its revision (98/83/EC) Urban waste water treatment directive its daughter directive (91/271/EEC) and Nitrates directive (91/676/EEC). On the other hand, the directives

[162] EU Focus on Clear Water, http://ec.europa.eu/environment/eufocus/clean_water.pdf

[163] Demmke: 2000

that remained in force are as follows: Dangerous substances directive (76/464/EEC), Surface water directive (75/440/EEC) and its daughter directive (79/869/EEC), Fish water directive (78/659/EEC), Shellfish water directive (79/923/EEC), Groundwater directive (80/68/EEC) and Information exchange decision (77/795/EEC).[164]

The idea behind this Directive is that it forms the very basis of the European water strategy. It aims to bring considerable improvements in sustainable and integrated management of water resources. New instruments are introduced in the framework water policy to protect and improve all European waters such as an ecological and holistic water status assessment approach; river basin planning; a strategy for elimination of pollution by dangerous substances; public information and consultation and financial instruments.[165] The main purpose of this directive is stated in the Article (1) as follows:

> the protection of inland surface waters, transitional waters, coastal waters and groundwater which:
> (a) prevents further deterioration and protects and enhances the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystems;
> (b) promotes sustainable water use based on a long-term protection of available water resources;
> (c) aims at enhanced protection and improvement of the aquatic environment, inter alia, through specific measures for the progressive reduction of discharges, emissions and losses of priority substances and the cessation or phasing-out of discharges, emissions and losses of the priority hazardous substances;
> (d) ensures the progressive reduction of pollution of groundwater and prevents its further pollution, and
> (e) contributes to mitigating the effects of floods and droughts[166]

[164] EU Focus on Clean Water, 1999 http://europa.eu.int

[165] Lanz and Scheuer 2001:14

[166] Official EU Law Portal, www.eurlex.europa.eu

As it can be concluded from the article 1, this directive aims to protect water resources and enhance the status of aquatic ecosystems. However, it includes many ambiguous articles that might be interpreted in different ways by each member state. For example, the expression of 'good status' of water, which is stated as the main objective of the directive, is not defined with objective criteria as in the Article 4: " (ii) Member States shall protect, enhance and restore all bodies of surface water, subject to the application of subparagraph (iii) for artificial and heavily modified bodies of water, with the aim of achieving good surface water status at the latest 15 years after the date of entry into force of this Directive"[167] On the other hand, timetables which were placed in annexes to the directive, are of paramount importance with regards to implementation.

According to the law on Greater City Municipality Law (Law Nr. 5216), undertaking water and sewage issues is among the responsibilities of Metropolitan Municipalities. Istanbul Water and Sewage Administration (ISKI), the body of Istanbul Metropolitan Municipality responsible for water issues, is the World's third largest water administration. It has a budget of 2.434.566 YTL, nearly 4.000.000 clients and provides the city with around 2.000.000 m^3 water every day.[168] Istanbul Water and Sewage Administration (ISKI), the body of Istanbul Metropolitan Municipality responsible for water issues, has invested around 5 billion $ since 1994 in order to catch up the European standards.[169] ISKI might be accepted as successful with regards to protection of river basin protection, which is broadly handled in the framework directive. ISKI monitors the river basins via satellite photographs and reviews each river basin every three months. Special teams have been employed to protect river basins and in case of an illegal construction, strict regulations are applied immediately in line with Article 6 and 8.

> Article 6: Member States shall ensure the establishment of a register or registers of all areas lying within each river basin district which have been designated as

[167] Official EU Law Portal, www.eurlex.europa.eu

[168] ISKI, www.iski.gov.tr

[169] *Aksiyon* Magazine, www.aksiyon.com.tr

> requiring special protection under specific Community legislation for the protection of their surface water and groundwater or for the conservation of habitats and species directly depending on water.[170]
>
> Article 8: Member States shall ensure the establishment of programmes for the monitoring of water status in order to establish a coherent and comprehensive overview of water status within each river basin district.[171]

On the other hand, ISKI has not published its river basin management plan, which is prescribed in the directive, in article 13, which should include some information defined in Annex VIII: "Member States shall ensure that a river basin management plan is produced for each river basin district lying entirely within their territory."[172] In fact, ISKI has not published a master plan since 1999 and this situation is criticized in the report on "Istanbul Environmental Order Plan", which was published by Istanbul Metropolitan Planning Center (a body dependent on IMM) in July 2006 (2006:76). The river management plan is described in the directive as a detailed account of how the objectives set for the river basin (ecological status, quantitative status, chemical status and protected area objectives) are to be reached within the timescale required. The plan will include all the river basin's characteristics, a review of the impact of human activity on the status of waters in the basin, estimation of the effect of existing legislation and the remaining "gap" to meeting these objectives; and a set of measures designed to fill the gap. Apart from that, ISKI has not released the analysis of characteristics of river basins in line with the methodology defined in Annex II:

> Each Member State shall ensure that for each river basin district or for the portion of an international river basin district falling within its territory:
> — an analysis of its characteristics,
> — a review of the impact of human activity on the status of surface waters and on groundwater, and
> — an economic analysis of water use

[170] Official EU Law Portal, www.eurlex.europa.eu

[171] Official EU Law Portal, www.eurlex.europa.eu

[172] http://eur-lex.europa.eu

> is undertaken according to the technical specifications set out in Annexes II and III and that it is completed at the latest four years after the date of entry into force of this Directive. [173]

As it is stated in the Water Framework Directive (WFD), the best model for a single system of water management is management by river basin.[174] For that reason, an important part of the WFD was allocated for river basin management. The WFD entered into force in October 2000 and expects member states to reach the following goals until 2015:

> - prevent deterioration, enhance and restore bodies of surface water, achieve good chemical and ecological status of such water and reduce pollution from discharges and emissions of hazardous substances;
>
> - protect, enhance and restore all bodies of groundwater, prevent the pollution and deterioration of groundwater, and ensure a balance between abstraction and recharge of groundwater;
>
> - preserve protected areas.[175]

When we look at the activities of ISKI with regards to improvement of rivers, it is possible to say that IMM will be able to meet the EU standards on this issue if the existing works continue without losing pace. For example, ISKI has managed to improve 15 rivers, which has a length of 281 km, out of 68 rivers which has a length of 600 km. 23 rivers are still being improved and the projects for 17 rivers have been completed. 80 kilometers of the rivers have been improved in the last three years. As indicated by the Prime Minister of Turkey, in the ceremony held on the occasion of the completion of the improvement of the Alibeyköy river, the locations where flood occured decreased from 6.205 to around 100. The Mayor also expressed that with the project entitled "140 solutions for the Bosphorus and Marmara Sea", on June 2006, that until 2009, when the local elections will be held in Turkey, they were planning to

[173] Official EU Law Portal, www.eurlex.europa.eu

[174] http://ec.europa.eu/environment/water/water-framework/info/intro_en.htm

[175] Official EU Law Portal, www.eurlex.europa.eu

improve all the rivers. However, in the Strategic Plan of IMM, it is stated that until 2011, pollution that is carried by the rivers into the sea will be eliminated by 80 % .[176] So, there are two different aims about the improvement of rivers. However, the aim set in the strategic plan seems more realistic. On the other hand, in 2006, ISKI made an investment of around one billion YTL in Istanbul and it is planning to invest around 1.3 billion YTL in 2007.[177]

Apart from ISKI, IMM Department of Sea Services conducts cleaning works in some rivers (Kağıthane, Alibeyköy, Çırpıcı, Küçükçekmece and Göksu) as well as in Haliç.[178] The collected mud from rivers is processed and compost is produced to be used in parks and gardens. On the other hand, estuaries in Istanbul are cleaned and deepened in order to improve rivers and prevent pollution conveyed into Bosphorus and the Sea Marmara by rivers.

On the other hand, ISKI, commented on the Water Framework Directive and the situation of Istanbul with regards to this directive through a paper presented in the "International Congress on River Basin Management" which was organized in Antalya, Turkey, on 22-24 March, 2007. It is a positive sign for ISKI to assess its situation in line with this directive: An important part of the paper that includes a future plan on "basin management" is as follows:

> Due to its position Istanbul is not suitable for a management principle on the basis of river basins that is provided within the Water Framework Directive, thus it has been necessary to make a different basin definition taking into account both management and sustainability principles. As a result of the analyses and investigations conducted, this basin has been determined as the "Istanbul Water Basin" protection of water resources within the scale of Istanbul means the protection of the coastal environment of the Bosphorus, the Sea of Marmara and the Black Sea in such a way that no damage is done to

[176] IMM Strategy Report 2007-2011, 2007:167)

[177] www.ibb.gov.tr

[178] Activity Report 2006, The Department of Sea Services

natural life, fishing and economic sectors such as tourism as well as protection of surface and underground drinking water resources and basins. It would be appropriate to determine an "Istanbul Water Basin" encompassing the coasts of the Sea of Marmara, the Black Sea and the Bosphorus in relation to the protection of environment and also the protection of present drinking water resources and basins for Istanbul. Moreover it is also important to bear in mind the public water services boundaries. The basin management approach suggested within the scope of the Water Frame Directive should be implemented in the Istanbul Water Basin determined on this foundation.[179]

2.2.2. Potable Water Directive (98/83/EC)

The Potable Water Directive is intended to protect human health by laying down healthiness and purity requirements which must be met by drinking water. The objective of the directive is expressed in the Article 1 as follows: "The objective of this Directive shall be to protect human health from the adverse effects of any contamination of water intended for human consumption by ensuring that it is wholesome and clean." It applies to all water intended for human consumption apart from natural mineral waters and waters which are medicinal products.[180]

1. 'water intended for human consumption' shall mean:
(a) all water either in its original state or after treatment, intended for drinking, cooking, food preparation or other domestic purposes, regardless of its origin and whether it is supplied from a distribution network, from a tanker, or in bottles or containers; (b) all water used in any food-production undertaking for the manufacture, processing, preservation or marketing of products or substances intended for human consumption unless the competent national authorities are satisfied that the quality.[181]

[179]ISKI, Istanbul Water Basin Management and European Union Water Framework Directive, 2007

[180] Official EU Law Portal, www.eurlex.europa.eu

[181] Official EU Law Portal, www.eurlex.europa.eu

The Directive sets standards for the most common substances –parameters- that can be found in drinking water. Member States are expected to meet the standards set by the directive; however, it is possible to adopt higher standards. According to this directive, a total of 48 microbiological and chemical parameters in drinking water, which are stated in Annex I, must be monitored and tested regularly by member states. For the purposes of the minimum requirements of this Directive, water intended for human consumption, must be free from any micro-organisms and parasites and from any substances which, in numbers or concentrations, constitute a potential danger to human health, and meet the minimum requirements set out in Annex I (Article 4).

The Directive requires Member States to regularly monitor the quality of water intended for human consumption by using the methods of analysis specified in the Directive. For this purpose, they are asked to determine the sampling points and draw up monitoring programmes. Member States are required to report at three yearly intervals the monitoring results to the European Commission. The Commission assesses the results of water quality monitoring against the standards in the Drinking Water Directive. After each reporting cycle the Commission produces a synthesis report, which summarizes the quality of drinking water and its improvement at a European level.

Istanbul Water and Sewage Administration (ISKI), the body of Istanbul Metropolitan Municipality responsible for water issues, treats 2.004.725 m^3 water everyday in its six potable water treatment facilities (Ömerli, Kağıthane, Büyükçekmece, Elmalı, Darlık and İkitelli).[182] It has constructed a length of 1.643 drinking water pipelines in the last three years. ISKI monitors the quality of drinking water in its laboratory, which has recently been developed in collaboration with TUBITAK and some universities, through samples taken from nearly 400 sampling points. The values obtained in seven sampling points are announced on the official website of ISKI as a report with the title of "Water Quality Report" every month.

[182] 2006 figures, ISKI Activity Report, 2006:12

According to the report, announced on June 2007, water quality of Istanbul complies with the parameters set by the above-mentioned directive except for the parameter of aluminum.[183] ISKI announced on October 10, 2005 on the official website of Istanbul Metropolitan Municipality that drinking water provided in Istanbul fully complied with the above-mentioned EU Directive.[184]

2.2.3. Urban Waste Water Directive (91/271/EC)

This directive is about the collection, treatment and discharge of urban waste water and the treatment and discharge of waste water from certain industrial sectors. Its aim is to protect the environment from any adverse effects due to discharge of such waters. It sets out guidelines and legislation on how we collect, treat and discharge urban waste water, which means domestic waste water or the mixture of domestic waste water with industrial waste water and/or run-off rain water.[185]

The directive requires Member States to ensure that there are collecting and treatment systems for urban waste water in agglomerations which meet the criteria laid down in the directive as follows:

> "At the latest by 31 December 2000 for those with a population equivalent of more than 15 000, and — at the latest by 31 December 2005 for those with a population equivalent of between 2 000 and 15 000. Where the establishment of a collecting system is not justified either because it would produce no environmental benefit or because it would involve excessive cost, individual systems or other appropriate systems which achieve the same level of environmental protection is required to be used.[186]

[183] www.iski.gov.tr

[184] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=21084

[185] Article 2, http://eur-lex.europa.eu

[186] Article 3, http://eur-lex.europa.eu

Member States are asked to ensure that urban waste water entering collecting systems shall before discharge be subject to secondary treatment or an equivalent treatment as follows: — at the latest by 31 December 2000, for all discharges from agglomerations of more than 15. 000, — at the latest by 31 December 2005 for all discharges from agglomerations of between 10 000 and 15 000 , — at the latest by 31 December 2005 for discharges to fresh-water and estuaries from agglomerations of between 2 000 and 10 000. This directive also requires Member States to draw up and update regularly the lists of sensitive and less sensitive areas which receive the treated waters according to the criteria set in the Annex II. [187]

For a long time Istanbul's sewage capacity was far from contemporary demands. IMM had only 2 waste water treatment facilities and treated wastewater was only 9.3% by the end of 1993. However, it steadily increased to 70 % in 1999.[188] The same report expected this rate to be 95% by the end of 2002 (2002:112). However, this expectation has not been realized yet, which indicates that the pace of IMM has decreased in this area. Today, IMM has 14 waste water treatment facilities and nearly 85 % of the total waste water (1.750.000 m^3 out of 2.000.000 m^3) undergoes treatment before discharged into sea.[189] All the treated waste water is discharged into deep-sea in Istanbul. According to a thesis prepared on the discharged waste water into Marmara between 2000-2002, it was seen that this waste water did not create any pollution on the surface water of Marmara.[190] Also, in 2006, 5 waste water treatment facilities started to be constructed.

On the other hand, when we look at the districts of Istanbul, we see that, for example, Şile, which is a district with a population of around 200.000, suffers from

[187] Article 4, 5, http://eur-lex.europa.eu

[188] Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, 2002:112

[189] Mevlüt Vural, Head of ISKI, Seminar on Environmental Law, http://www.tisk.org.tr/yayinlar.asp?sbj=ic&id=2315

[190] Aslı Aslan-Aydın, Istanbul University, Institute of Marine Sciences, http://www.istanbul.edu.tr/enstituler/denizbilimleri/turkce/personel/asli/aslitr.htm

untreated waste water.[191] That Şile is also among the most popular beaches in the northern part of Istanbul makes the issue worse since untreated waste water is discharged into sea. The waste water in Silivri, another district of Istanbul in the western part with a population of around 100.000, is completely discharged into sea without any treatment.[192] Both districts, which have quite a high population, do not have waste water treatment facilities. On the other hand, the Mayor, explained in June 2006 that with the project entitled "140 solutions for the Bosphorus and Marmara Sea", waste water treatment facility would be established in Silivri. A water treatment facility has been under construction in the district of Şile since September 2006.[193] It is safe to say that, now Istanbul is trying to meet the EU standards on waste water years after the deadline on the completion of treatment facilities became over. The EU had required its member states to complete waste water treatment facilities until 2000. The fact that Istanbul, the European Capital of Culture for the year 2010, has still a district, with a population of around 200.000, which does not have a waste water treatment facility, gives some clues about how ready Istanbul is for the EU.

As it was mentioned above, the EU requires member states to ensure that urban waste water entering collecting systems shall before discharge be subject to secondary treatment or an equivalent treatment for areas that have a population of 10.000. In the above-mentioned directive, "secondary treatment" is described as "treatment of urban waste water by a process generally involving biological treatment with a secondary settlement or other process in which the requirements established", and "primary treatment" is described as treatment of urban waste water by a physical and/or chemical process involving settlement of suspended solids, or other processes in which the BOD5 (5 day biochemical oxygen demand) of the incoming waste water is reduced by at least 20 % before discharge and the total suspended solids of the incoming waste water are reduced by at least 50 %.[194] The Mayor told reporters in a ceremony that, 89 % of the waste water out of 2 million m^3 waste water, the amount which is produced in Istanbul

[191] a web site on news, http://www.ntvmsnbc.com/news/379321.asp

[192] Municipality of Silivri, http://www.silivri-bld.gov.tr/haber_detay.asp?id=1278&tur=344

[193] http://www.iski.gov.tr/arasayfalar.php?digerhaberler&hdevam=99

[194] Article 1, Official EU Law Portal, www.eurlex.europa.eu

every day, underwent primary treatment, and only 11 % of the waste water underwent secondary treatment. The Mayor said that their target was to increase the rate of secondary treatment to 46% when the treatment facilities, which are now under construction, are over.[195]

Even though, great steps have been taken in this area by IMM, there is still a great gap between the EU requirements and the present situation of waste water treatment in Istanbul. The present authority declared in June 2006 that thanks to 140 solutions for the Bosphorus and the Marmara Sea, environmental pollution stemming from waste water and poor conditions of river would be over until 2009.[196] The steps taken by IMM indicate that the present authority is committed to solving waste water problem. For example Bay of Istinye, in the district of Beykoz, used to severely suffer from both industrial and domestic waste water of that region through the river of İstinye. As of February 2006, a new pipeline for the waste water was constructed and the waste water was conveyed to the treatment facility in Baltalimanı.[197]

On the other hand, the implementation of this directive also faces some problems in the EU member states. Only two EU Member States, Denmark and Austria, were close to conforming to the requirements of the Urban Waste Water Directive regarding their large agglomerations discharging into sensitive areas by the end of 2001. Germany and the Netherlands have designated their whole territory as a sensitive area, but are not in conformity with the goal of 75% reduction of nitrogen. 158 of the 526 cities with population equivalents greater than 150 000 did not have a sufficient standard of treatment by the end of 2001 to meet the objectives of this Directive.[198]

[195] http://www.zaman.com.tr/webapp-tr/haber.do?haberno=485150

[196] Istanbul Metropolitan Municipality, www.ibb.gov.tr

[197] Municipality of Beykoz, http://www.beykozweb.com/haberler/haber_1107.htm

[198] European Environment Agency, http://themes.eea.europa.eu/IMS/ISpecs

2.2.4. Bathing Water Directive (2006/7/EC)

The directive on Bathing Water, which set minimum mandatory standards for the quality of bathing, was adopted by the EU as one of the first environmental legislation in 1976. The main aim of this directive and its revision, (2006/7/EC), is to protect public health and environment from pollution at locations where people bathe. The factors affecting bathing water quality include discharges from sewage treatment works and agricultural sources. Typically, the presence of sewage discharges and the level of treatment applied to those discharges constitute a major problem. While the previous directive required regular monitoring of 19 pollutants or other parameters (for example, water colour), the present directive reduced this list to just two microbiological indicators of faecal contamination: E. Coli and Intestinal Enterococci.[199] This simplification reflects recognition that faecal material, for instance due to inadequate sewage treatment and pollution from animal waste, is the primary health threat to bathers. It will apply to surface water where a large number of people are expected to bathe, establishing a method for monitoring bathing water quality during the bathing season. Directive 2006/7/EC requires Member States to draw up a management plan for each site to minimize risks to bathers, based on an assessment of the sources of contamination that are likely to affect it.

> Article (1) This Directive lays down provisions for:
> (a) the monitoring and classification of bathing water quality;
> (b) the management of bathing water quality; and
> (c) the provision of information to the public on bathing water quality.
> Article (2)The purpose of this Directive is to preserve, protect and improve the quality of the environment and to protect human health by complementing Directive 2000/60/EC.[200]

[199] http://ec.europa.eu/water/water-bathing/index_en.html

[200] Official EU Law Portal, www.eurlex.europa.eu

According to this Directive, users of the bathing sites should be actively involved in developing the management plan. Apart from that, information on a bathing site's quality classification (4 levels of classification obtained according to the results of the last three years poor, sufficient, good and excellent, Article 12), the results of water quality monitoring, the site's management plan and other relevant information should be made readily available to the public, both through displays at the site and through the media and internet. However, IMM neither has prepared a plan for the management of bathing water quality nor classified bathing water. In fact, as it is done for air quality, similarly, bathing water quality can easily be reported and people can be informed about it via internet.

> Article (11) Member States shall encourage public participation in the implementation of this Directive
> Article (12) Member States shall ensure that the following information is actively disseminated and promptly made available during the bathing season in an easily accessible place in the near vicinity of each bathing water: (a) the current bathing water classification and any bathing prohibition or advice against bathing referred to in this Article by means of a clear and simple sign or symbol; (b) a general description of the bathing water, in non-technical language, based on the bathing water profile established in accordance with Annex III;[201]

Istanbul Metropolitan Municipality carries out some works in order to improve the bathing water quality of the sea Marmara and the Bosphorus although marine pollution does not fall directly under the responsibility of IMM according to the Law on Metropolitan Municipalities. Especially Bosphorus is quite vulnerable to pollution stemming from not only untreated urban waste water but also the heavy sea traffic. Everyday, nearly one million people commute between the Asian and European sides via 2000 sea vessels and more than 60.000 international sea vessels pass through Bosphorus every year.[202] Apart from works conducted in the areas of urban waste water

[201] Official EU Law Portal, www.eurlex.europa.eu

[202] Istanbul Environment Assessment Report, Governorship of Istanbul, Directorate of Environment and Forestry, 2006:411

and river improvement, some other works are also carried out with regards to marine pollution. For example, IMM established 16 teams in order to clean the shore of Istanbul and 21.460 m^3 of solid waste was collected in 2006. The surface of the Marmara Sea is also cleaned through 7 special vessels and 1.716 m^3 of solid waste was collected in 2006.[203] The number of these vessels is planned to be increased to 20 and a special waste facility for vessel wastes is planned to be constructed until the end of 2008.[204] IMM also sets some goals with regards to wastes collected from vessels and sea surface. What is interesting is that IMM aims to conform to bathing water quality standards set by the Directive 76/160/EEC.[205] However, this directive was revised in 2006 with the Directive 2006/7/EC.

Apart from that, ISTAÇ, Istanbul Metropolitan Municipality Environmental Protection and Waste Materials Valuation Industry and Trade Co., a Municipal Company of Istanbul Metropolitan Municipality, established a waste treatment facility in Haydarpaşa in September 2006, for wastes with petroleum derivatives generated by ships.[206] IMM also carries out inspection of ships with regards to pollution thanks to its special planes equipped with cameras. In 2006, IMM issued fines of around 3 million YTL to 169 ships, which released their wastes directly into the sea.[207] In the first seven months of 2007, 204 ships were issued fines of around 5,5 million YTL.[208]

It is a fact that, marine pollution is mostly caused by waste water which is discharged directly into sea or indirectly through rivers. Nearly 85 % of the waste water collected in Istanbul undergoes treatment in the 14 water treatment facilities and then

---

[203] IMM Activity Report 2006, 2006:156

[204] IMM Strategy Report 2007-2011, 2007:167

[205] Ibid., 168

[206] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=22483

[207] IMM Activity Report 2006, 2006:156

[208] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24272

discharged into sea.[209] This figure indicates that 15 % of waste water is discharged into sea without any treatment. Any attempts with regards to river improvement are certainly much more effective and lasting than works carried out directly in the coastal waters. IMM is improving rivers in order to prevent both floods and prevent pollution both in rivers and the sea. For example, 15 rivers, which has a length of 281 km has been improved by IMM. Department of Sea Services, collected nearly 226.700 m^3 mud from the rivers Kağıthane, Alibeyköy, Çırpıcı, Küçükçekmece and Göksu in 2006.[210] The mud, which is collected from rivers, is processed and compost is produced in order to be used in parks and gardens. The same department also collects and treats the wastes of all ships anchored in the coastal waters of Istanbul in line with the international convention Marpol.[211]

With regards to bathing water quality of shores in Istanbul, there are confusing results, which were obtained from analyses made by two institutions, namely ISKI and the Governorship of Istanbul Directorate of Health. According to a report published in August 2006, the number of points which meet the EU minimum standards with regards to bathing water is 115. On the other hand, there is no published analysis report by ISKI concerning bathing water quality, which does not meet Article 12 of the above-mentioned directive. However, without publishing a report to the public, it was stated by Mayor of Istanbul that out of 234 km shores of Istanbul, 160 km. is suitable for swimming and 56 points have "blue flags" according to the EU standards.[212] The General Director of ISKI also had declared that in Istanbul, in 157 points, regular analyses are conducted once in every 15 days in summer and once in every month in winter in collaboration with the University of Istanbul Institute of Marine Sciences and Technologies.[213] On the other hand, IMM is planning to increase the number of points

[209]Mevlüt Vural, Head of ISKI, seminar on environmental law, http://www.tisk.org.tr/yayinlar.asp?sbj=ic&id=2315

[210]Activity Report 2006, The Department of Sea Services, http://www.ibb.gov.tr/IBB/DocLib/pdf/birimler/atolyeler_mud/deniz.pdf

[211] IMM Activity Report 2006, 2000:155

[212] 05.06.2006, www.ibb.gov.tr/haberler

[213] http://www.kenthaber.com/Arsiv/Haberler/2006/Mart

suitable for swimming to 200 and it is also planned to inform people about the quality of bathing water in these points every week via internet until 2011.[214] It should be also kept in mind that the standards taken into consideration by both departments were from directive (76/160/EEC), which was revised in July 2006 and standards were increased.

On the other hand, Directorate of Health Affairs of Governorship of Istanbul took samples from 83 points on Marmara and Bosphorus beaches, which had been declared as suitable for bathing, in May 2007. According to the results released by the Director of Health Affairs, out of 83 points, 43 points were good, 35 points were sufficient and 5 points poor with regards to water quality. It should be taken into consideration that, it is the first time that bathing water is assessed in Istanbul according to the Bathing Water Directive of the EU. On the other hand, Mayor Topbaş, aims to clean all the shores of Istanbul, which will be suitable for swimming until 2009. According to IMM Strategy Report for 2007-2011, it is aimed to make 85% of the shores of Istanbul suitable for swimming (2007:168). This aim is of course dependent on Mayor's other aims, which are to improve all rivers of Istanbul and treat all waste waters.[215] This target might be assessed seriously since IMM managed to open 6 beaches in Istanbul as a result of the works conducted for waste water and river improvement, which cost about one billion US Dollars in 2005 and 2006. For example the famous Caddebostan Beach in the district of Kadıköy had been closed for 40 years due to wastes discharged into Marmara and Karadeniz without treatment. Following the establishment of waste water treatment facility in Kadıköy, this beach was re-opened in July, 2005. In the following three years, ISKI is planning to spend three billion dollars in order to completely reach the EU standards.[216]

[214] IMM Strategy Report 2007-2011, 2007:167

[215] http://www.ibb.gov.tr/IBB/Popup/tr-TR/PrinterFriendlyHaberler

[216] 140 solutions for Marmara and Bosphorus,
http://www.ibb.gov.tr/IBB/Popup/tr- TR/PrinterFriendlyHaberler

2.3. ENVIRONMENTAL NOISE

Environmental noise (also called community noise, residential noise or domestic noise) is defined as noise emitted from all sources except noise at the industrial workplace. Main sources of community noise include road, rail and air traffic; industries; construction and public work; and the neighborhood. Typical neighborhood noise comes from premises and installations related to the catering trade (restaurant, cafeterias, discotheques, etc.); from live or recorded music; from sporting events including motor sports; from playgrounds and car parks; and from domestic animals such as barking dogs.[217]

According to the Green Paper published in 1996, (COM(96) 540), around 20 % of the European Union's population suffers from noise levels that scientists and health experts consider to be unacceptable, where most people become annoyed, where sleep is disturbed and where adverse health effects are to be feared. An additional 170 million citizens are living in the so-called "grey areas" where the noise levels are such to cause serious annoyance during the daytime.[218]

For more than twenty years (the first piece of legislation on environmental noise was adopted in 1970, 70/157/EEC) community environmental noise policy consisted of legislation fixing maximum sound levels for vehicles, aeroplanes and machines with a single market aim. The 1993 Fifth Action Programme started to remedy environmental noise and it included a number of basic targets for noise exposure to be reached by the year 2000. The Sixth Community Environmental Action Programme set the objective of 'substantially reducing the number of people regularly affected by long-term average levels of noise, in particular from traffic which, according to scientific studies, cause detrimental effects on human health, and preparing the next steps in the work with the environmental noise directive'.[219]

---

[217] Berglund and Lindwall 1995:7

[218] The Green Paper on Future Noise Policy, 1996, COM (96) 540, http://ec.europa.eu/environment/noise/greenpap.htm

[219] Report from the Commission to the European Parliament and the Council, www.eurlex.europa.eu

Further to the Commission proposal for a Directive relating to the assessment and management of Environmental noise (COM(2000)468), the European Parliament and Council adopted directive relating to the assessment and management of environmental noise (2002/49/EC) in 2002 whose main aim is to provide a common basis for tackling the noise problem across the EU. This directive contains four elements: The harmonization of noise indicators and assessment methods for environmental noise, the collection of information about noise exposure in the form of noise maps, the preparation of action plans and finally informing and consulting residents.[220] The goal of the directive is to establish a common European approach, which aims to avoid, prevent or limit the effects caused by exposure to environmental noise. In the first phase, noise maps have to be drawn up for urban areas with over 250,000 inhabitants, all major roads carrying more than 6 million vehicles a year, major railways with over 60,000 rail passengers a year, and finally, the major airports. In the second phase, urban areas with over 100,000 inhabitants, all major roads carrying more than 3 million vehicles, and railways with over 30,000 rail passengers a year will also be covered.[221]

> 1. The aim of this Directive shall be to define a common approach intended to avoid, prevent or reduce on a prioritised basis the harmful effects, including annoyance, due to exposure to environmental noise. To that end, the following actions shall be implemented progressively:
>
> (a) the determination of exposure to environmental noise, through noise mapping, by methods of assessment common to the Member States; (b) ensuring that information on environmental noise and its effects is made available to the public; (c) adoption of action plans by the Member States, based upon noise-mapping results, with a view to preventing and reducing environmental noise where necessary and particularly where exposure levels can induce harmful effects on human health and to preserving environmental noise quality where it is good.

---

[220] Official EU Law Portal, www.eurlex.europa.eu

[221] Official EU Law Portal, www.eurlex.europa.eu

> 2. This Directive shall also aim at providing a basis for developing Community measures to reduce noise emitted by the major sources, in particular road and rail vehicles and infrastructure, aircraft, outdoor and industrial equipment and mobile machinery.[222]

Environmental noise in Istanbul has been discussed to a great extent due to the existence of entertainment centers situated along the Bosporus, which produces noise especially in summer terms. In fact, the noise caused by traffic in daytime is far more than the noise caused by entertainment centers in summer terms. According to a study conducted by the Directorate of Environmental Protection of IMM, in 2004, the noise level in Istanbul, especially in certain regions, is so high that it might cause some health problems. For example, in the region of Aksaray, the noise in daytime is around 78 decibel, which is 13 decibel higher than the EU standards. The noise level in the famous Taksim Square is around 80 decibel and the main artery of E-5 experiences between 80 and 90 decibel. Experts warn that noise over 65 decibel might cause hearing loss gradually. According to the EU noise map regulations, areas which experience over 65 decibel are named as black and a possible noise map of Istanbul will highly probably be covered with black and grey points.[223]

It is difficult to claim that the requirements of the above-mentioned directive have been met by Istanbul Metropolitan Municipality. However, in the framework of a "Twinning Project", series meetings were held in Istanbul Metropolitan Municipality between 5-9 February 2007, in order to initiate some works to reduce environmental noise in line with the EU standards.[224] Experts from the Directorate of Environmental Protection were given a seminar on the EU environmental noise legislation, which can be accepted as a sign of efforts for conforming to the EU standards on this area.

What Article 4 of the Directive requires member states to do is to draw up noise maps of centers of population of over 250,000 inhabitants, major roads, major railways

[222] Official EU Law Portal, www.eurlex.europa.eu

[223] *Aksiyon* Magazine, http://www.aksiyon.com.tr/detay.php?id=13579

[224] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=23384

and civil airports, before July 2007. After the mentioned meetings, it was decided to start drawing up noise map of Atatürk airport as a pilot region. In addition, the noise map of the Bosphorus region will try to be prepared through establishing 15 on-line measurement stations.[225] This target for on-line measurement stations was increased to 30 for the year 2007, by the Secretary General of IMM, in a press conference held on June 2007. In the press conference, the Secretary General announced that in 2006, a total of 2.250 inspections were held with regards to environmental noise and thanks to the authority inferred on IMM by the Ministry of Environment, 121 legal people were issued fines.[226] On the other hand, in an interview, the Director of Environment and Forestry of the Governorship of Istanbul, stated that a total fine of 15 million YTL was issued between May 2006 and July 2007. He adds that thanks to continuous inspections, the entertainment facilities that were closed temporarily or given fines, have taken necessary measures against noise pollution.[227] The fact that both IMM and Governorship of Istanbul have authority with regards to inspection and issuing fines in the area of environmental noise, causes some drawbacks. It is sure that if this authority remains in the hands of one institution, more efficient results can be obtained.

Article 9 of the same Directive also requires the results of the measurement of noise levels to be made available for public, which is not implemented in Istanbul. It should not be so difficult for IMM to publish noise maps since it regularly publishes air quality reports prepared according to the data obtained from the measurement stations. On the other hand, apart from IMM, Prof. Selma Kurra, an expert on environmental noise from Bahçeşehir University Department of Architecture, announced that in collaboration with the Ministry of Environment, they started to prepare noise maps in some regions in Istanbul.[228]

---

[225]Directorate of Environmental Protection, http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=23384)

[226] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=24069

[227] 15.07.2007, Daily *Akşam*

[228]12.06.2007, Architecture Center http://www.arkitera.com/haber_17457_istanbullu-tehdit-altinda.html

According to the press release made by IMM, serious precautions would be taken to lower environmental noise caused by entertainment centers.[229] The average noise to which people are exposed to in Istanbul, in especially central areas, is far higher than the limits set by the EU legislation. For example, according to the 5th Environmental Action Programme, exposure of the population to noise levels in excess of 65 should be phased out; at no point in time a level of 85 should be exceeded after the year 1994.[230] However, according to a noise map prepared by Mrs. Neşe Yüğrük Akdağ from the Technical University of Yıldız in the Boulevard of Barbaros, Beşiktaş, in 2002, the noise level in this area is far beyond the standards set by the EU and the World Health Organization.[231] In another research conducted in 2004 in Mecidiyeköy and Beşiktaş, two important business districts in Istanbul, the average noise level was over 90 decibel.[232] This figure is far beyond the target limit that was set for the year 1995 by the 5th Environmental Action Programme.

Istanbul Metropolitan Municipality Department of Environmental Protection, regularly checks the noise level in Istanbul, especially in areas where entertainment facilities are mainly situated. The procedure that is followed by the IMM is as follows: When a facility is measured with more noise than the standards, IMM issues the first warning to the facility in question. If the same facility is measured with more noise than the standards for the second time, a second warning is issued. If the same repeats for the third time, the process for the closure of the facility in question is initiated.[233] The authority of IMM with regards to environmental noise prevention was furthered thanks to a protocol signed between Ministry of Environment and IMM. Ministry of Environment shared its authority of issuing fine to people or institutions that produce higher noise than the limit values set by the relevant regulation, with Istanbul

[229] January 2007, http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=23259

[230] a non-profit organization on noise pollution, https://www.nonoise.org/library/eunoise/greenpr.htm#Annexes

[231] Akdağ, 2003, July- August, The Magazine of Architecture, Chamber of Architects, http://old.mo.org.tr/mimarlikdergisi

[232] http://arsiv.sabah.com.tr/2004/04/18/cp/iyi102-20040411-102.html

[233] www.ibb.gov.tr

Metropolitan Municipality.[234] On the other hand, IMM aims to prepare the noise maps of the whole Istanbul until the end of 2010. The EU had set the date of June 2007, for the preparation of noise maps. The IMM also aims to catch the EU levels with regards to environmental noise until 2011.[235] The present works carried out in this area support the idea that IMM might be able to realize this aim. In the same strategy report, it was aimed to prepare the noise maps of Atatürk Airport and the region of Suriçi for the year 2007, and both maps are still being prepared. Apart from these works, IMM aims to construct 'noise wall" against the noise stemming from train in the region of Ataköy and E-5 highway, as a pilot project.[236]

It should be also noted that the main cause of the pressure by the Governorship of Istanbul and Istanbul Metropolitan Municipality over the facilities that produce noise over the standards is the activities of civil society. For example, on the 29th of July, 2006, 11 entertainment facilities, including famous night clubs Sortie and Reina were, were closed down. It was later understood that a petition signed by nearly 15.000 people was sent to Prime Ministry, Ministry of Environment and Governorship of Istanbul thanks to the pioneering role of Public Initiative of Çengelköy (a district by the Bosphoros), Association of Kuzguncuklular (Kuzguncuk is a district by the Bosphoros) and Association of Solidarity of Beylerbeyliler (Beylerbeyi is a district by the Bosphoros).[237] The initiative against environmental noise was also supported by some mass media columnist in Turkey.[238]

[234] IMM Activity Report, 2006

[235] IMM Strategy Report 2007-2011, 2007:169

[236] IMM Investment Plan, 2007:76

[237] a web-site on news, www.haber7.com

[238] Derya Sazak, daily *Milliyet*, http://www.milliyet.com.tr/2005/08/21/yazar/sazak.html

2.4. WASTE MANAGEMENT (2006/12/EC)

Waste management is one of the most important environmental policy areas within the EU since the rubbish produced is increasing day by day as parallel with the increase in wealth. According to the statistics of the European Environment Agency, the total waste produced every year in the European Union is around 1.3 billion tones of solid waste - some 40 million tones of which are hazardous. Agricultural waste, which is around 700 million tones per year, is not included in the above-mentioned figure.[239]

The European Union's approach to waste management is based on three principles: waste prevention, recycling and reuse, improving final disposal and monitoring.[240] The EU has adopted many directives concerning solid waste management since 1970s. However, due to the complexity of numerous legislation, it was decided to adopt one single framework directive that sets the general outlines of waste management. As a result of that, the EU adopted the Framework Directive on waste in April 2006 (2006/12/EC).[241]

The Framework Directive applies to all wastes except gaseous effluents, or to radioactive waste, mineral waste, animal carcasses and agricultural waste, waste water with the exception of waste in liquid form, and decommissioned explosives where these types of waste are subject to specific Community rules (Article 2). Member States are asked to prohibit the abandonment, dumping or uncontrolled disposal of waste and to promote waste prevention, recycling and processing for reuse (Article 3). Member States must ensure that waste is disposed of without giving any harm to the environment:

---

[239] Commission Staff Working Document on the Prevention of Recycling and Waste, http://www.eea.europa.eu

[240] http://ec.europa.eu/environment/waste/index.htm

[241] Official EU Law Portal, www.eurlex.europa.eu

> 1. Member States shall take the necessary measures to ensure that waste is recovered or disposed of without endangering human health and without using processes or methods which could harm the environment, and in particular: (a) without risk to water, air or soil, or to plants or animals; (b) without causing a nuisance through noise or odours; (c) without adversely affecting the countryside or places of special interest. 2. Member States shall take the necessary measures to prohibit the abandonment, dumping or uncontrolled disposal.[242]

Also, the competent authorities designated by the Member States are required to prepare waste management plans which handle the following issues for the implementation of the above-mentioned measures: (a) the type, quantity and origin of waste to be recovered or disposed of; (b) general technical requirements;(c) any special arrangements for particular wastes; (d) suitable disposal sites or installations.[243] In accordance with the "polluter pays" principle, the cost of disposing of waste must be borne by the holder who has waste handled by a waste collector or an undertaking and/or by previous holders or the producer of the product from which the waste came.[244]

Article 7 of the Law on Greater City Municipality Law (Law Nr. 5216), requires metropolitan municipalities in the area of waste management to carry out the following:

> To designate storage areas for excavated earth, debris, sand and pebbles, to undertake services relating to recycling, storage and disposal of wastes, to establish and operate or let others to establish and operate plants for this purpose; to perform the services relating to industrial and medical refuses, to establish and operate or let others to establish and operate plants for this purpose; to undertake collection and purification of refuses discharged from sea carriers by preparing regulations on this subject.

[242] Article 4, Official EU Law Portal, www.eurlex.europa.eu

[243] Article 7, Official EU Law Portal, www.eurlex.europa.eu

[244] Article 15, Official EU Law Portal, www.eurlex.europa.eu

When we look at the tasks inferred on metropolitan municipalities with regards to environment, we see that most of these tasks are in the area of waste management. In Turkey, waste management is assessed as the basic task of municipalities. Istanbul, with its population around 14 million, is a gigantic city and such a great population means so much waste and pressure over environment of Istanbul.

IMM is spending some efforts to conform to the EU standards, which are accepted as the most advanced and ideal in environmental services. However, it seems that Istanbul Metropolitan Municipality is much more determined to adopt the EU standards regarding waste management when compared to other environmental areas. First of all, IMM has a road map on the way to align the existing situation in Istanbul with regards to solid waste management with the expectations of the EU. Adopting a road map on the way to a target implies that IMM is willing to conform to the EU standards in the area of solid waste management. In 2005, in collaboration with Istanbul Technical University Department of Environmental Engineering, a strategic plan titled "Integrated Solid Waste Management Plan in line with the EU Environmental Legislation" was prepared by ISTAÇ A.Ş, the Municipal Enterprise that deals with solid waste management in Istanbul on behalf of Istanbul Metropolitan Municipality. This plan conforms to the requirement expressed in Article 7 of the Framework Directive on waste management. However, when this strategic plan, which is based on three different scenarios, was prepared, the framework directive on waste, (2006/12/EC), was not adopted yet. The directives that were taken into consideration in the strategic plan are as follows: the framework directive on waste, (75/442/EEC), directive on regular storage (99/31/EC) and finally directive on package waste (94/62/EC). The time table that was adopted in this plan is 5 to 10 years longer than the time tables that were adopted by the EU in the mentioned directives.[245] The disparity between the EU and IMM with regards to timetable might be a result of inadequate financial resources allocated on solid waste management in Istanbul. In addition, the fact that Istanbul has larger population than

[245] Öztürk and et all 2005:64

many EU member countries means that IMM has a more difficult task than many cities in Europe.

The waste management in Istanbul, with the perspective of the EU standards does not go back to old times. Until 1953, waste collected in Istanbul used to be dumped into the sea. Later, the wastes were stored in irregular dumpsites in the regions of Ümraniye and Levent, which were not far away from the city center. With the commencement of mass immigration into Istanbul, these irregular dumpsites were moved to outside city center, such as Hekimbaşı, Aydınlı, Halkalı and Hasdal. The dumpsite areas had no technical infrastructure and trucks of wastes used to be just left in these areas irregularly. The uncontrolled dump used to cause adverse effects and the wind blowing over the garbage areas used to form dust clouds.[246] The leakage water caused by the wastes used to contaminate underground water. As a result of this "wild storage", in 1993, after 20 years from its opening, the landfill area in Ümraniye exploded due to methane gas and 27 people, living around this landfill area, were killed.[247] In 1999, this "wild area" was turned into a garden by IMM. The situation with regards to waste management in Istanbul was so tragic that, holding a press conference, the-then Prime Minister Prof. Tansu Çiller, announced that the authority of IMM with regards to Halkalı landfill area, protection of drinking water basins and protection of Bosphorus was transferred to the central government.[248] Another drawback in Istanbul with regards to solid waste management was that workers of IMM used to go on strike and tones of waste used to remain on streets.[249]

Following the local elections on March 27, 1994, the new administration immediately established a municipal enterprise titled "İSTAÇ, Istanbul Metropolitan Municipality Environmental Protection and Waste Materials Valuation Industry and

[246] Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, 2002:114

[247] Daily *Radikal*, http://www.radikal.com.tr/1999/05/08/turkiye/umr.html

[248] Prime Ministry, http://www.byegm.gov.tr/YAYINLARIMIZ/ayintarihi/1995/ocak1995.htm

[249] http://www.milliyet.com.tr/2005/09/22/yazar/asik.html

Trade Co.[250] The advantage of such kind of municipal enterprises is that, they operate like private sector companies which accelerate the process for establishing facilities without bureaucratic obstacles. In 1995, two regular landfill areas (Odayeri and Kömürcüoda) were established with the necessary technical infrastructure. Within two years, five waste transfer stations were established in Istanbul.

The responsibilities of district municipalities and IMM are as follows: Collecting wastes lies under the responsibility of district municipalities and the collected wastes are carried to the transfer stations. The responsibility of IMM starts in transfer stations (Baruthane, Yenibosna, Halkalı, Hekimbaşı, Aydınlı) and the collected wastes are transferred to landfill areas through 400 semitreylers. Today, the number of transfer stations has increased to seven with the inclusion of Küçükbakkalköy transfer station, and lastly Silivri transfer station (June 2007).[251]

The total amount of solid waste collected in Istanbul everyday is around 13.000 tones. The collected waste has been stored in Odayeri region in the European side and in Kömürcüoda Karakiraz region in the Anatolian side since 1995 in line with the EU directive (1999/31/EC). The capacity of Odayeri landfill area is going to be over within five years unless an additional area is included. On the other hand, Kömürcüoda landfill area has a fifteen-year capacity (Öztürk and et all 2005:16). These figures indicate that Istanbul needs to build a new landfill area when we take into consideration that the population of Istanbul is expected to be around 20 million within 15 to 20 years.[252] Both landfill areas have special facilities to prevent any direct discharge of the waste water stemming from garbage into soil in line with the article 5 of the EU directive on the protection of groundwater against pollution caused by certain dangerous substances (80/68/EEC). The leakage water, which is caused by the stored garbage (in the area of Odayeri around 1.600 m3 per day and in the area of Kömürcüoda 1.000 m3 per day) undergoes treatment and then discharged. Thus, it does not penetrate into soil and contaminate the underground water. The capacity of facilities that treat leakage water is

[250] İSTAÇ, http://www.istac.com.tr/tarihce.asp

[251] ISTAÇ Activity Report, http://www.ibb.gov.tr/IBB/DocLib/pdf/birimler/istac_as/hakkinda.pdf

[252] Istanbul Metropolitan Municipality, Report on Environmental Order 2006

planned to be increased. Electricity from the gas occurring in the landfill areas is also planned to be generated.[253] IMM also collects the medical wastes, around 24 tones/day, with special vehicles and burn them in special facilities. A small amount of electricity is also generated during the burning process, which is later produced in the facility.[254]

Thanks to the facility of compost and recycling established in Kemerburgaz region in 2001, which has a capacity of 700 tones/day, everyday around 400 tones of compost are produced in line with the EU Directive (1999/31/EC) and the sorted package materials are sent to private recycling facilities.[255] (What makes compost different from fertilizer that it improves soil and keeps water in the soil.) Electricity is generated from the gas that is released during the recycling process. Since 2002, 15 million KWh electricity has been produced in this facility, which can meet the electricity need of around 30.000 houses.[256] Apart from that, the construction of new facility of compost in Kömürcüoda region with a capacity of 2.000 tones/day is still going on. The Mayor of Istanbul expressed in the Large Cities Climate Summit held in New York, on 14–17 May, 2007, that the power plants in the Region of Çatalca – Durusu with a capacity of 19.2 Mega Watt will be completed until 2008. In addition to that, another plant that has a capacity of 18 MW will be built in Odayeri. Both of these projects are expected to cost 38 million Euros.[257]

When we look at the activities carried out in the area of urban solid waste management, we see that important steps have been taken and severe problems have been handled seriously. However, the picture of waste management in Istanbul is still far away from the picture which the EU would like to see in member states. For example, article 5 of the Landfill Directive (1999/31/EEC) requires the following:

---

[253] İSTAÇ, http://www.istac.com.tr/faaliyetler.asp?faal=aritma

[254] Directorate of Waste Management, 2006 Activity Report, p.6

[255] Ibid., 5

[256] Öztürk and et all 2005:17

[257] IMM Foreign Relations Department, Document Archive

(a) not later than five years after the date laid down in Article 18(1), biodegradable municipal waste going to landfills must be reduced to 75 % of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which standardised Eurostat data is available

(b) not later than eight years after the date laid down in Article 18(1), biodegradable municipal waste going to landfills must be reduced to 50 % of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the latest year before 1995 for which stadardised Eurostat data is available;

(c) not later than 15 years after the date laid down in Article 18(1), biodegradable municipal waste going to landfills must be reduced to 35 % of the total amount (by weight) of biodegradable municipal waste produced in 1995 or the lates year before 1995 for which standardized Eurostat data is available.

Biodegradable waste, which is mentioned in the above-stated article, means any waste that is capable of undergoing anaerobic or aerobic decomposition, such as food and garden waste, and paper and paperboard (Definitions, Article 2). Unfortunately, there is no record with regards to the share of biodegradable waste within the collected total waste in Istanbul for the year 1995. We come across with the data of biodegradable waste commencing from 1996. In 1996, the share of the "biodegradable waste" within the total urban solid waste was around 60%. According to the above-mentioned directive, this number should have been decreased to 30 % in 2013. However we see that, rather than decreasing, this number increased to nearly 65% in 2005.[258] In 2025, IMM plans to decrease the share of biodegradable waste, which is sent to landfill areas, to 35 % of the total amount of biodegradable municipal waste produced in 1995.[259] What the EU expects from the member states is to attain the subject-matter target in

[258] Istanbul Environment Assessment Report, Governorship of Istanbul, Directorate of Environment and Forestry, 2006:316

[259] Şenol Yıldız, Director of Projects, İSTAÇ, Report on Removal of Wastes and New Technologies, p.19

2010. So, there is a gap of around 15 years between the expectation of the EU and the plan of IMM.

With regards to recycling, IMM needs to spend more and more efforts in order to catch the EU standards. In order to decrease the amount of biodegradable waste sent to landfill areas, sorting and pre-treatment is needed. The situation of IMM in the area of sorting and pre-treatment presents a picture full of black points. In the preamble of the Landfill Directive, the EU points out as follows:

> (8) Whereas both the quantity and hazardous nature of waste intended for landfill should be reduced where appropriate; whereas the handling of waste should be facilitated and its recovery enhanced; whereas the use of treatment processes should therefore be encouraged to ensure that landfill is compatible with the objectives of this Directive; whereas sorting is included in the definition of treatment;
>
> (17) Whereas the measures taken to reduce the landfill of biodegradable waste should also aim at encouraging the separate collection of biodegradable waste, sorting in general, recovery and recycling;[260]

When we look at the waste management system in Istanbul, we see that there is only one recycling facility in this gigantic city, which is always proud of being larger than many countries. The recycling and compost facility in the region of Kemerburgaz, around the village Işıklar, has a capacity of nearly 700 tones of waste and nearly 200 tones of compost is produced, which is used in parks and gardens in Istanbul. In this facility, packaging waste is also sorted out.[261] However, it should be kept in mind that, in Istanbul the total collected waste is around 13.000 tones and what goes under pre-treatment is only 6% of the total waste. It is not difficult to come to the conclusion that Istanbul needs more recycling and compost facilities to catch the EU standards with regards to share of biodegradable waste in the total waste. Otherwise, it does not seem

[260] Landfill Directive, 1999/31/EEC, Official EU Law Portal, www.eurlex.europa.eu

[261] Directorate of Waste Management, 2006 Activity Report, p.5

possible for IMM to catch the target set by the EU for 2010, which is that the share of biodegradable waste in the total waste in landfill areas should not exceed 20%.[262]

On the other hand, Istanbul Metropolitan Municipality signed some campaigns about separate collection of wastes, which has significant importance in order to decrease the amount of biodegradable waste sent to the landfill areas. For example, between November 1999 and December 2001, Istanbul Metropolitan Municipality Department of Environmental Protection launched campaign titled "Give paper and take your tree". At the end of this campaign, IMM managed to collect 6.314 tones of papers. If we think that one ton of paper saves 17 trees, 107.338 trees were saved at that period. Also, among students, a campaign was launched on collecting used papers, which aimed to increase the environmental awareness.[263] However, the amount of waste papers collected separately is still so little when compared to the total waste papers. Prof. Öztürk, the-then head of Department of Environmental Protection, stated in an interview conducted with him in 2001 that, 185.000 tones of papers were thrown into the landfill areas every year.[264] When we compare 6.314 tones of papers collected within two years to 370.000 tones of papers thrown within two years, the insufficient situation can be better understood. On the other hand, since people are at the center of the issue of separate waste collection, it is of paramount importance to heighten their environmental consciousness. Putting separate litter bins for different types of waste is not sufficient unless residents are sensitive enough to throw away their wastes separately. For that reason, the mentioned campaign is noteworthy.

IMM also falls short of meeting the Directive on packaging and packaging waste (94/62/EC). This directive was revised in 2004 and the timetable set out by the EU for the Member States to introduce systems for the return and/or collection of used packaging is as follows:

---

[262] Landfill Directive, 1999/31/EEC, Official EU Law Portal, www.eurlex.europa.eu

[263] IMM, Directorate of Waste Management Activity Report, 2001

[264] http://www.ntvmsnbc.com/news/70718.asp

> by no later than 30 June 2001, between 50 and 65% by weight of packaging waste to be recovered or incinerated at waste incineration plants with energy recovery;
>
> by no later than 31 December 2008, at least 60% by weight of packaging waste to be recovered or incinerated at waste incineration plants with energy recovery;
>
> by no later than 30 June 2001, between 25 and 45% by weight of the totality of packaging materials contained in packaging waste to be recycled (with a minimum of 15% by weight for each packaging material);
>
> by no later than 31 December 2008, between 55 and 80% by weight of packaging waste to be recycled;
>
> no later than 31 December 2008 the following targets for materials contained in packaging waste must be attained: 60% by weight for glass, paper and board; 50% by weight for metals; 22.5% by weight for plastics and 15% by weight for wood.[265]

According to the strategic plan titled "Integrated Solid Waste Management Plan in line with the EU Environmental Legislation" prepared in 2005 by the ISTAÇ A.Ş, in collaboration with Istanbul Technical University Department of Environmental Engineering, IMM is planning to shift to the system of collecting waste separately in 2010. At the beginning, 30 % of the population is planned to be included in this system, which is the prerequisite solution for attaining targets in the area of share of biodegradable wastes in landfill areas and recycling of packaging wastes. According to the IMM Strategic Plan for 2007-2011, IMM aims to reach the target of collecting 40% of wastes separately (2007:166). What the IMM does today is to collect all kinds of wastes without sorting them according to their types, and sort out only 6% of total wastes in the only recycling and compost facility of Istanbul.

In the mentioned plan, it is stated that IMM aims to establish new recycling and compost facilities soon after the introduction of this system. In the same plan of IMM, it

[265] 94/62/EC, Official EU Law Portal, www.eurlex.europa.eu

is aimed to realize the EU targets in the area of Packaging Waste Recovery and Recycling in 2020.[266] The target year of IMM is around 12 years later than the target year set by the EU, which is 2008. On the other hand, IMM Strategic Plan for 2007-2011, aims to recycle 61 % of the package wastes collected. In the same plan it is stated that as of 2006, only 15 % of the package wastes collected was recycled.[267] It should not be disregarded that most of the papers recycled in Istanbul is collected by 'street collectors', who collect package and metal wastes to earn their lives in a primitive way (2007:341). As a step towards collecting wastes separately at source (glass, paper, plastics and metal) a protocol was signed on August 8, 2007 with 16 district municipalities of Istanbul. As pilot regions, the project was initiated in districts of Beykoz, Bayrampaşa, Bağcılar, Kartal, Kağıthane, Maltepe, Tuzla, Silivri, Sultanbeyli.[268] In that context, İSTAÇ, has prepared a plan for the separate collection of wastes and recycling of package wastes.[269]

Today, a very limited amount of waste papers and used batteries are collected separately through special boxes situated in some parts of Istanbul. Especially boxes for waste papers are becoming widespread day by day in Istanbul. These boxes are sent to the companies, institutions, schools and hospitals etc. and collected at certain intervals. However, IMM has not been able to increase the number of collection points in line with the Article 8 of the Directive 2006/66 on batteries and accumulators and waste batteries and accumulators:

> Member States shall ensure that appropriate collection schemes are in place for waste portable batteries and accumulators. Such schemes: (a) shall enable end-users to discard waste portable batteries or accumulators at an accessible collection point in their vicinity, having regard to population density.[270]

---

[266] Öztürk and et all 2005:73

[267] IMM Strategic Plan 2007:166

[268] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=22677

[269]İSTAÇ, http://www.istac.com.tr/vizyonproje.asp

[270] Official EU Law Portal, www.eurlex.europa.eu

For example, the population of the district of Ümraniye is over 1 million; however the number of collection points is around 120 and weight of batteries collected in 2006 is around 700 kg.[271] Also according to directive on collection of batteries (91/157/EEC), a minimum average collection rate equivalent to 160 grams per inhabitant per year for spent portable batteries should have been reached until 1996. On the other hand, the new directive (2006/66/EC) on batteries and accumulators and their wastes was adopted by the EU. According to this new directive, which repealed the directive (91/157/EEC), member states are expected to ensure that a high proportion of spent batteries and accumulators are recycled, take whatever measures are needed (including economic instruments) to promote and maximize separate waste collections and prevent batteries and accumulators being thrown away as unsorted municipal refuse. Member states are also expected to make arrangements enabling end-users to discard spent batteries and accumulators at collection points in their vicinity. Collection rates of at least 25% and 45% have to be reached by 26 September 2012 and 26 September 2016 respectively.[272] Taking all these figures into consideration, it is possible to conclude that the collection of used portable batteries is far below the target set by the relevant EU directives.

What surprises one most when reading the 2006 activity report of Directorate of Waste Management of IMM is that, there is no work carried out in the area of waste electrical and electronic equipment, and end-of-life vehicles. It is stated in the Istanbul Environment Assessment Report that in the future, some works will be carried out by ISTAÇ.[273] Although, these two subjects do not fall under the responsibility of IMM according to the Law on Metropolitan Municipalities, some works might have been initiated to eliminate negative effects of waste electrical and electronic equipment, and end-of-life vehicles, which are left to environment. On the other hand, IMM is conducting a work with regards to industrial wastes. What accelerated the works in this area was that, in April 2006, in Orhaneli region of the District of Tuzla, hundreds of

[271] http://www.ibb.gov.tr/tr-TR/CevreKoruma/AtikPil/AtikPilToplamaNoktalari

[272] Official EU Law Portal www.eurlex..europa.eu

[273] Governorship of Istanbul, Directorate of Environment and Forestry, 2006:334

barrels of hazardous industrial wastes were found. In Istanbul, the total amount of industrial wastes produced in Istanbul is around 400.000 tones. Industrial wastes, which have the same character with domestic wastes, are collected by IMM. On the other hand, nearly 55.000 tones of hazardous industrial wastes are generated in Istanbul and since there is no special facility in Istanbul for this type of wastes, they are sent to the only facility for hazardous waste management in Turkey, İZEYDAŞ, which is in the province of Izmit.[274] Mayor Topbaş, following this illegal burial of hazardous wastes without any treatment in Tuzla, stated that IMM was given the authority of establishing facilities for the industrial hazardous wastes on 14 March, 2005. The Mayor added that two facilities for such kind of wastes would be established in the European and Asian sides of Istanbul, which would cost around 130 million US Dollars.[275] According to the IMM Strategic Plan 2007-2011, IMM is planning to establish this special facility until the end of 2008.[276]

[274] Şenol Yıldız, Director of Projects, İSTAÇ, Report on Removal of Wastes and New Technologies, p.14

[275] http://www.ibb.gov.tr/tr-TR/Haberler/HaberDetay.html?HaberId=22162

[276] IMM Strategic Report, 2007:166

CONCLUSION

Although there have been some ups and downs for Turkey in its ambition for full membership to the EU, it seems that, the number of member states supporting Turkey's membership has increased and Turkey is now committed to fulfill the expectations of the EU. It is not 100 % that Turkey's bid will result in full membership when we take the parameters of reel politics; however, it is sure that Turkey is striving to heighten its standards in all areas varying from democracy to freedom of expression from manufacturing to environmental standards. Not only the public sector but also the private sector in Turkey is in search of re-evaluating their standards in line with the expectations of the European Union. In Turkey, the quality of a service or product is appreciated if it is labeled with the expression "it conforms to the EU standards". It is not difficult to judge that now the EU is not only an issue which interests Turkish government, but also it interests ordinary people and it is in the center of life in Turkey.

Since October 2005, when negotiation talks started between the EU and Turkey, four chapters have been opened as of July 2007. It means that there are still 31 chapters to be negotiated by both parties. It is a common idea that environment will be among the most challenging chapters since Turkey does not have a very positive picture in the area of environment. The following data, stated by Mr. Pepe in his speeches, present the poor environmental situation in Turkey very clearly: "Out of 81 cities in Turkey, in 65 of them, the collected solid waste is stored in irregular landfill areas and 70 % of municipalities in Turkey do not treat their waste water and discharge it directly into rivers or seas."[277] In Turkey, as it is the case in Europe, the implementer of environmental policies and services are municipalities. In fact, environmental services are accepted as the most basic task of municipalities in Turkey. It is sure that, since environment will be among the most challenging chapters on the negotiation table, municipalities will have to spend more and more efforts to comply with the EU standards. Among 35 chapters in the negotiation process, environment will be the

[277]Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

chapter which will require most the efforts of municipalities. No other chapter requires or expects municipalities to exert efforts as much as environment. So, the chapter of environment will be mainly shouldered by municipalities, although they will not sit at the negotiations table.

When we look at the general picture of IMM through the perspective of the EU, the first thing that attracts our attention is that, a directorate of "Relations with the EU" exists. This directorate is organizing some seminars and conferences for employees of IMM, in order to help them in being familiar with the EU. It prepares some projects to be carried out in collaboration with the EU thanks to the gift aid provided by the EU. Secondly, we see that, IMM has opened a liaison office in Brussels in order to follow up the EU policies and regulations that interest local authorities. IMM is also an associate member of the EUROCITIES (European Network of Major Cities), which is effective in the EU circles. Lastly, we can say that the present administration has close relations with the Committee of Regions, which is an important body dealing with issues of local authorities in the EU. For example, Mayor of Istanbul, had delivered a speech in the session titled "Tomorrow's Europe: Contribution of Local and Regional Administrations" in the Committee of Regions in Rome, on the occasion of the 50th anniversary of Rome Treaty. When we bring all these parts, we can come to the following conclusion: even though these developments do not indicate that IMM is fully committed to meeting the expectations of the EU, we can safely say that IMM, in general, has tendency and willingness in conforming to the EU standards in several areas of services. When we look at the Strategic Plan of IMM, which plans what to be done in the period between 2007 and 2011, many articles include the expression that "to be arranged in accordance with the EU standards".

In this study, the environmental services of IMM were examined in the light of the relevant EU environmental legislation. The picture of air quality, water quality including potable water, waste water and bathing water, environmental noise and finally waste management in Istanbul was taken in an objective way. The EU environmental legislation was not completely presented. The legislation that does not interest local authorities in Turkey was not included. If one analyses the present situation of

environmental services provided by IMM, he will immediately notice the great changes and advances realized since the year 1995. The environmental map of Istanbul was full of black points, not long times ago, but only 12 years ago. It is not realistic to expect such a city whose environmental map was black, to adopt a snow white environmental map within such a short period. The EU also takes the negative conditions and inadequacies into consideration when it prepares timetables for member states. It is possible to say that, today, IMM has an EU oriented approach towards environmental problems of Istanbul; however, the action necessary to realize the goals of this approach is not sufficient as of 2007.

To give some examples, until 2005, there were no regular landfill areas in Istanbul and solid waste used to be dumped in irregular dumpsites. These "wild dumpsites" were in such a bad situation that in 1993, the dumpsite area in Ümraniye Hekimbaşı, exploded due to methane gas and 27 people, living around this dumpsite area, were killed. There has never been such kind of environmental accident in any of the EU member states. The first regular landfill areas in Istanbul were established in 1995 and then many advances took place in the area of solid waste management. So, it is not realistic to expect such a big metropolis to have the EU standards in the area of solid waste management, within a limited period. The advantage of IMM in the area of solid waste management was that it was able to found a company called ISTAÇ, Environmental Protection and Waste Processing Corporation in 1994, which aimed collecting and storing urban garbage, incinerating medical garbage and establishment of relevant facilities. This municipal company, which runs like a private sector company, accelerated works and helped bureaucratic obstacles to be overcome.

There are so many aspects of solid waste management, that fall short of meeting the EU criteria, as expressed in this study. However, at least, we can say that IMM has an EU oriented vision in this area and has a 'road map', which was prepared in collaboration with Istanbul Technical University. This road map indicates the determination of IMM towards meeting the expectations of the EU. According to this road map, IMM expects to meet the EU criteria, which were set up in the relevant timetables, five to ten years later than the timetables of the EU. It is sure that,

environment is closely related with the education and consciousness of people. For example, sorting out garbage at home is prerequisite of qualified waste management. Many goals in this area are dependent on sorting out garbage at its source. For example, in order to comply with the expectations of directives on landfill areas and package waste, it is mandatory to sort garbage at its source. It is fine to know that IMM is conducting some campaigns to heighten peoples' awareness in this area. However, we see that there are not suitable garbage boxes on streets for garbage which was sorted out at home. It is surprising not to find suitable garbage boxes in the most central areas of Istanbul, such as Cihangir and Beşiktaş. These districts are known as areas where most of their residents are well-educated. If the situation in these districts does not comply with the EU standards, it is not difficult to guess the situation in the rest of Istanbul.

As a result of not sorting out garbage separately at source and not providing residents with sufficient number of special garbage boxes, IMM falls short of meeting the EU standards in the area of biodegradable waste and package waste. With regards to package wastes and recyclable metals , the 'street collectors', people who earn their lives through collecting valuable waste from garbage boxes such as package waste and some metals, fill in the gap in this area. These people, 'sort out' garbage in an unhealthy way in the garbage box, before it is collected by municipal workers. To recapitulate, IMM may not be able to stick to its road map in the area of solid waste management, when we take the pace of works carried out in this area and the scope of drawbacks.

Environmental noise might be accepted as the most second severe problem following solid waste management in Istanbul. What IMM does in this area is limited to inspection of entertainment facilities, which does not include all parts of Istanbul and issuing fines to entertainment centers that do not conform to standards. It should be noted down that the sensitivity which rose among people of Istanbul against noise pollution is only limited to entertainment centers that are situated along the Bosphorus, in summer terms. Thanks to the petitions of thousands of people living along the Bosphorus, which was a real civilian initiative, the Governorship of Istanbul had decided to share its authority of inspecting entertainment centers with regards to noise pollution. On the other hand, entertainment centers producing higher noise than

standards in areas except the Bosphorus such as the region of Cihangir does not attract the attention of IMM.

However, noise pollution does not mainly stem from entertainment centers, which cause noise pollution especially in summer terms. During the daytime, Istanbul is exposed to a great amount of environmental noise due to traffic. One of the reasons of this exposure is that main arteries such as E-5 and TEM highways remained in the middle of city due to unplanned expansion of the city. Especially, both sides of the highway of E-5 are full of high-rise flats, which means that hundreds of thousands of people are exposed to high level of noise pollution. Noise stemming from traffic is becoming more than the expectations since drivers in Istanbul are fond of sounding their horns all the time, which is a situation astonishing foreigners. According to the measurements conducted by IMM Directorate of Environmental Protection, the main artery of E-5 experiences between 80 and 90 decibel noise. Similarly, in the region of Aksaray, the noise in daytime is around 78 decibel and the noise level in the famous Taksim Square is around 80 decibel. When we take the warnings of experts into consideration that noise over 65 decibel might cause hearing loss gradually, the seriousness of this situation, or in other words the scope of the danger people of Istanbul face, is understood better.[278]

In fact, environmental noise is not an issue lying under the responsibility area of IMM according to the Law on Metropolitan Municipalities (Law Nr. 5216). Ministry of Environment shared its authority of inspecting and issuing fine to institutions that produce higher noise than the limit values, with IMM through a protocol signed in 2005 (IMM Activity Report, 2006). Although this protocol indicates the sensitivity of IMM with regards to noise pollution, unfortunately, all it does is to issue fines to entertainment centers. On the other hand there is no work with regards to noise stemming from traffic, such as noise walls which we see in some European cities. The only work with regards to noise wall is projected to be implemented in the region of

[278] *Aksiyon* Magazine, http://www.aksiyon.com.tr/detay.php?id=13579

Ataköy. Some projects have been introduced by IMM since the beginning of 2000, such as 'establishing green wall', which would prevent noise to be spread to settlement areas thanks to trees. However, no concrete step has been taken to prevent traffic noise, which impairs peoples' health gradually. There is no campaign about prevention of unnecessary sounding horns, which constitute a great part of the traffic noise. IMM also does not publish noise map of Istanbul, which is an expectation of the EU directive, and warn people against the negative effects of noise pollution. IMM plans to prepare the noise map of Istanbul until 2010 and lower the noise level of Istanbul in accordance with the EU standards until 2011; however, when we take the pace of works in this area into consideration, it is safe to say that IMM is away from realizing these aims until 2010 and 2011.

If we should classify the environmental problems of Istanbul, waste water management will be probably ranked as the third one, following solid waste management and environmental noise. As it was the case for solid waste management, IMM was in a 'terrible situation' with regards to waste water treatment not long times ago, but only 14 years ago. To give an example in order to understand the scope of the situation, IMM had only two waste water treatment facilities in 1993 and only 9.3% of the waste water used to be treated in these treatment facilities.[279] So, nearly 90 % of waste water used to be discharged into Marmara or Black Sea without any treatment, let alone secondary treatment. Istanbul was probably the only European city at that time, which treated only a little amount of the total waste water. The number of waste water treatment facilities rose from two to 14 within 14 years and today, nearly 85 % of the total waste water (1.750.000 m^3 out of 2.000.000 m^3) undergoes treatment before discharged into sea. Although today nearly half of the waste water undergoes biological treatment (secondary treatment), which is lower than the rate the EU requires, what IMM did in this area might be accepted as praiseworthy. However, still, nearly 15 % of waste water is being discharged into sea without any treatment, which is a very great rate for the largest city of an EU candidate country. IMM is planning to treat all waste

279 Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, 2002:112

water and increase the rate of waste water treated in the biological treatment facilities until 2009, with the project of "140 solutions for the Bosphorus and Marmara". Taking the enthusiasm and pace of works in this area into consideration, this projection appears realistic.

On the other hand, ISKI has improved 15 rivers, which has a total length of 281 km, out of 68 rivers which has a length of 600 km. Nearly 35 % of the rivers have been improved in the last three years, or in other words during the time when the present Mayor was in the office. The Mayor of Istanbul is planning to improve all rivers until 2009, with the above-mentioned project. Although, it seems that it will probably take longer time than the planned to improve all rivers of Istanbul, it is a fact that the present administration is much more enthusiastic about solving problems in this area than other environmental areas. As a result of considerable improvement of rivers, six beaches were opened in the last three years. Since the present administration assesses the improvement of rivers and increasing the bathing water quality of seas, which is a natural result of improvement of rivers, as a matter of prestige, it is safe to say that IMM might be able to catch the EU standards even if not in 2009, in a few years, as long as the pace of these works continues. Environmentalists who dwell upon environmental problems in Istanbul emphasize that, Istanbul experienced a severe drought in the period of 2006 and 2007, which caused water in the dams to decrease to alarming degrees. So, IMM might allocate more funds on increasing the water supply of Istanbul, and investments on river improvement and waste water management might be impeded. Concerning potable water, IMM can be said that it would not face any complaint from DG for environment if Turkey became an EU member now. However, concerning bathing water, IMM needs to undersign some works such as publishing regular reports on areas which are declared as suitable for bathing and preparing some plans for improvement of these areas with the participation of interested people and NGO's, in order to fully conform to the relevant directive.

With regards to air quality, IMM has undersigned a great success since the second half of the 1990's. Istanbul was plagued with such intensified air pollution that media sometimes asked people not to go outside and published toxic gas reports

regularly. For example, the sulfur dioxide rate rose to 2.330 microgram /cubic meters in the winter of 1993, which was an alarming rate. As natural gas became more widespread and measures were taken against poor quality coal, a considerable improvement has been monitored in the air quality of Istanbul. The sulfur dioxide rate rapidly decreased in microgram/cubic meters to 61 in 1997.[280] As of June 2007, the number of natural gas clients in Istanbul became 3.455.000 and 90 % of Istanbul has been provided with natural gas. The situation in Istanbul was so bad that even there was no measuring station of IMM in order to report the air quality and inform people about it. Today there are 10 measuring stations and reports of air quality are broadcast via internet. However, this number is not sufficient for Istanbul since the EU requires measurement of air quality in agglomerations which have more than 250.000 inhabitants. It is sure that Istanbul has many zones that have a population over 250.000 inhabitants and therefore new measuring stations need to be established. Also, IMM has not published air quality improvement report, which is among the expectations of the EU.

It should be kept in mind that air pollution does not only result from coal combustion but also pollutants of vehicles. Especially vehicles with poor technology release carbon monoxide and other pollutant gases more than standards. Even though IMM does not have an authority of inspecting cars with regards to exhaust emissions, it is possible to ensure that municipal vehicles and especially buses conform to the standards. As Minister of Environment, Mr. Pepe stated, in Istanbul, the pollution caused by public buses, which are not inspected, is not less than the pollution caused by cement factories.[281] There are more than one thousand municipal buses, produced in 1980s and pollute environment due to poor technology. Since the share of underground metro and light-tram is very limited in transportation, buses constitute the backbone of transportation. Therefore, IMM needs to heighten the standards of public buses to improve the air quality in Istanbul and initiate some projects to decrease the pollution

[280] Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, 2002:117

[281] Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

caused by vehicles, since the air quality in some regions of Istanbul does not conform to the EU standards in some parameters.

To wrap up, taking the size of Istanbul into consideration, the largest city in Europe with a population of nearly 14 million, the scope of the environmental challenges faced by Istanbul can be better understood. IMM has undersigned many successful services and investments in the area of environment; and important developments have been recorded which might be accepted as great accomplishments for a city. However, IMM needs more and more efforts to fully conform to the EU environmental standards. As the authority of local authorities and the funds allocated for environment increase, IMM will be able to align its environmental standards with the EU standards more rapidly.

REFERENCES

Akdağ, N. Y., 2003. The Importance of Noise Maps in the City Planning: The Sample of Barbaros Boulevard. [on line]. Yıldız Technical University. Available from: http://old.mo.org.tr/mimarlikdergisi/index.cfm?sayfa=mimarlik&DergiSayi=7&RecID=136 [Accessed 18 May 2007]

Andrew, J., 2005. EU Environmental Policy at 25: The Politics of Multinational Governance. [on line]. http://www.encyclopedia.com/doc/1G1-20330012.html [Accessed 12 June 2007]

Artis, M. J. and Lee, N., 1997. *The Economics of the European Union,* Oxford: Oxford University Press

Aykaç M. and Parlak Z., 2002. *Tüm Yönleriyle Türkiye-AB İlişkileri*. İstanbul: Elif Kitabevi

Berglund B. and Lindwall T., 1995 *Guidelines for Community Noise*. Geneva: WHO

Brande E.V., 2007. The Role of the European Union in Global Environmental Politics: Green Civilian Power Europe? [on-line]. Ghent University. Available from: http://www.keele.ac.uk/research/lpj/ecprsumschool/Papers/E.BrandeGnCivPower.pdf [Accessed 4 June 2007]

Budak S., 2000. *Avrupa Birliği ve Türk Çevre Politikası (Birincil Nitelikli Mevzuat)*, İstanbul:Büke yayınları.

Carson, R. L., 2002. *Silent Spring.* Boston: Houghton Mifflin Company

Clayton, D. F. and Kathryni, E. H., 2005. Clean Air Act Implementation in Houston: A Historical Perspective, 1970-2005. [on-line]. Rice University. Available from: http://www.ruf.rice.edu/~eesi/scs/SIP.pdf [Accessed 26 May 2007]

Codur and et al. 2007. "Istanbul Water Basin Management and European Union Water Framework Directive" [on-line]. Istanbul Water and Sewage Administration. Available from: http://www.dsi.gov.tr/english/congress2007/chapter_1/16.pdf [Accessed 10 July 2007]

Collins K. and Earnshaw D., 1993. The Implementation and Enforcement of European Community Environment Legislation. *In*: D. Judge, ed. *A green dimension for the European Community (Political issues and processes)*, London:Frank Cass, 213-249

Daylan G. and İncecik S., 2002. İstanbul'da Coğrafi Bilgi Sistemleri ile Hava Kalitesinin İncelenmesi, *İTÜ Dergisi/d – Mühendislik Serisi,* 1, (2), 51-62.

DEMMKE, C., 2000. Towards effective environmental regulation: Innovative approaches in Implementing and Enforcing European Environmental Law and Policy. [on-line]. European Institute of Public Administration. Available from: www.jeanmonnetprogram.org/papers/01/010501.rtf [Accessed 17 May 2007]

Farmer A. and Wettestad J., 2003. The EU Air Quality Framework Directive: Shaped and Saved by Interaction? [on-line]. Institute for European Environmental Policy. Available from: http://www.ecologic.de/download/projekte/850-899/890/isa/isa_eu_air_quality_framework_directive.pdf [Accessed 15 March 2007]

Guele B. and et al. 2002. Report on Greenhouse Gas Emission Trends in Europe, 1990–2000. [on line]. European Environment Agency. Available from: http://reports.eea.europa.eu/topic_report_2002_7/en/Topic_7.pdf [Accessed 12 July 2007]

Hey C., 2005. EU Environmental Policies: A Short History of the Policy Strategies. *In*: S. Scheuer, ed., *EU Environmental Policy Handbook,* Brussels: European Environmental Bureau, 18-27.

Howarth W., 1992. New Strategies for Water Directives, *European Environment Law Review*, l (4), 117-121.

Jacobson, M. Z., 2002. Atmospheric Pollution: History, Science and Regulation. [on line]. Stanford University. Available from: http://www.stanford.edu/group/efmh/POLbook/AirPolHSRCh8.ppt [Accessed 26 May 2007]

Johnson, S.P and Corcelle, G.,1995. *The Environmental Policy of the European Communities.* London:Kluwer Law International.

Jordan, A., 2002. *Environmental Policy in the European Union: Actors, Institutions and Processes.* London: Earthscan.

Judge D., Earnshaw D., and Cowan N., 1994. Ripples or Waves: The European Parliament in the European Community Policy Process, *Journal of European Public Policy* 1, (1), 27.

Kallis G. and Nijkamp P., 1999. *Evolution of EU Water Policy: A Critical Assessment and a Hopeful Perspective*. Amsterdam: Vrije Universiteit

Kerstin M., 2005. Air. *In*: S. Scheuer, ed., *EU Environmental Policy Handbook,* Brussels: European Environmental Bureau, 46-74

Lanz, K. and Scheuer S., 2001. *EEB Handbook on EU Water Policy under the Water Framework Directive.* Brussels: European Environmental Bureau

Lenschow, A., 2004. Environmental Policy: at a Crossroads? *In*: M.G Cowles and D. Dinan, eds. *Developments in the European Union 2*. Basingstoke: Palgrave Mc Millan, 140-159.

Leveque, F.,1996. *Environmental Policy in Europe: Industry Competition and Policy Process.* UK: Elgar

Lim, E. G., 2006. The Euro's Challenge to the Dollar: Different Views from Economists and Evidence from COFER (Currency Composition of Foreign Exchange Reserves) and Other Data. [on-line]. International Monetary Fund. Available from: http://www.imf.org/external/pubs/ft/wp/2006/wp06153.pdf [Accessed 12 May 2007]

Luderer G. and et al. 2006.Greenhouse gas emission trends and projections in Europe 2006. [on line]. European Environment Agency. Available from: http://reports.eea.europa.eu/eea_report_2006_9/en/eea_report_9_2006.pdf [Accessed 21 June 2007]

McCormick, J., 2001. *Environmental Policy in the European Union*. Basingstoke: Palgrave

Mouradian, A. M., 2007. The EU in the World. [on-line]. EU Commission. Available from: http://ec.europa.eu/europeaid/reports/50-50/50-50_en.pdf [Accessed 18 June 2007]

Oniş Z., 2003. Domestic Politics, International Norms and Challenges to the State: Turkey-EU Relations in the post-Helsinki Era. *In*: A. Çarkoğlu and B. Rubin, eds., *Turkey and the European Union,* London: Frank Cass

Oztürk and et al, 2005. *İstanbul için AB Çevre Mevzuatı İle Uyumlu Entegre Katı Atık Yönetimi Stratejik Planı.* İstanbul: İstanbul Teknik Üniversitesi

Richardson, J., 1996. Policy Making in the EU. *In*: J. Richardson, ed. *European Union Power and Policy Making.* New York: Routledge, 5

Rometsch D. and Wessels W., 1994. The Commission and the Council of Ministers. *In:* G. Edwards and D. Spence, eds., *The European Commission*. Essex: Longman. 221.

Rooij, R.A., 2000. The Impact of the European Union on Municipalities in the Netherlands. [on-line]. Leiden University. Available from: http://www.essex.ac.uk/ecpr/standinggroups/yen/paper_archive/3rd_euro_ss_papers/DeRooij.pdf [Accessed 12 April 2007]

Sbragia A., 2001. Politics in the EU. *In*: G. A. Almond and et al.,eds. *European Politics Today.* New York: Longman, 487.

Sbragia, A., 2002. Key Policies *In:* M. Cini ed. *European Union Politics*.
Bristol: Oxford University, 122-124

Scheuer S., 2005. Water. *In*: S. Scheuer, ed., *EU Environmental Policy Handbook,* Brussels: European Environmental Bureau, 125-152

Smith, H., 2002. *European Union Foreign Policy: What it is and what it does?* London: Pluto Press

Somsen H. and et al., 1990. *The Year Book of European Environmental Law*. New York: Oxford University Press

Weale A., 1996. Environmental Rules and Rule-Making in the European Union, *Journal of European Public Policy*, 3 (4), 594-611.

Wisman, P., 1985. Background: Why EPA was Established? [on line]. Environmental Protection Agency. Available from: http://www.epa.gov/history/topics/epa/15b.htm [Accessed 26 May 2007]

Yıldız Ş., 2005. Report on Removal of Wastes and New Technologies. [on line]. İSTAÇ. Available from: http://89.149.198.191/dosyalar/arastirma/bilimsel_toplantilar/seminerler/seminer_5.pdf [Accessed 19 April 2007]

Istanbul Metropolitan Municipality Strategic Plan: 2007-2001, 2007

Istanbul Metropolitan Municipality Performance Program, 2007

Istanbul Metropolitan Municipality Investment Plan, 2007

Istanbul Metropolitan Municipality Foreign Relations Department, Document Archive

Istanbul Metropolitan Municipality Activity Report on Environment, 2007

Istanbul Metropolitan Municipality, Istanbul Metropolitan Planning Center, Istanbul Environmental Order Plan, 2006

Activity Report of Directorate of Sea Services, Istanbul Metropolitan Municipality, 2006

Activity Report of Istanbul Water and Sewage Administration (ISKI), 2006

Istanbul Environment Assessment Report, Governorship of Istanbul, Directorate of Environment and Forestry, 2007

Activity Report of Directorate of Waste Management, Istanbul Metropolitan Municipality, 2006

Report on Istanbul titled "Urban Planning Studio", Bosphorus University and Columbia University, Istanbul, 2002

The Committee of Regions, http://www.cor.europa.eu/En/index.htm

Institute for European Environmental Policy,
http://www.mep-online.com./contributors.html

European Commission, Delegation to Turkey, http://www.deltur.cec.eu.int/

Council of the European Union, http://register.consilium.europa.eu

EU Commission's DG Environment, www.ec.europa.eu/environment/

Summaries of the European Union Legislation, http://europa.eu/scadplus/glossary/environment_en.htm

Official EU Law Portal, www.eurlex.europa.eu

The European Union, Press Releases, http://europa.eu/press_room/index_en.htm

ISKI, Istanbul Water and Sewage Administration, www.iski.gov.tr

Istanbul Metropolitan Municipality, www.ibb.gov.tr

IGDAŞ, Istanbul Natural Gas Distribution Company, www.igdas.com.tr

Environmental Protection and Waste Materials Valuation Industry and Trade Co., http://www.istac.com.tr/faaliyetler.asp?faal=aritma

Ministry of Turkish Foreign Affairs, General Secretariat for the European Union, www.abgs.gov.tr

Ministry of Environment and Forestry, Minister's Speeches, http://www.cevreorman.gov.tr/konusmalar.asp

United Nations Environment Programme, http://www.unep.org/Documents

The United Nations Framework Convention on Climate Change, unfccc.int/essential_background/convention/background/items/1353.php

White Paper: European Transport Policy for 2010, www.europa.eu/scadplus/leg/en

White Paper on European Governance, http://ec.europa.eu/governance/index_en.htm

The EU Sustainable Development Strategy, http://ec.europa.eu/environment/eussd

The Green Paper on Future Noise Policy, 1996, COM(96) 540, http://ec.europa.eu/environment/noise/greenpap.htm

EU Focus on Clear Water, http://ec.europa.eu/environment/eufocus/clean_water.pdf

Presidency Conclusions, Council of the European Union, 8-9 March 2007, http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/ec

UK Presidency of the EU 2005, http://www.eu2005.gov.uk

Legal framework for European local government, Local Governments Network of Central and Eastern European Countries, www.ceec-logon.net

The University of Radfurd, Environmental History Timeline, http://www.runet.edu/~wkovarik/envhist

Scottish Parliament, http://www.scottish.parliament.uk/business/research/pdf_res_brief/sb02-78.pdf

Environmental Institute of Houston, www.eih.uh.edu/outreach/tfors/history

The Encyclopedia of Earth, http://www.eoearth.org/article/London_smog_disaster,_England

European Region of Tyrol-South Tyrol-Trentino, http://www.europaregion.info/en/65.htm

UNESCO, http://www.unesco.org/courier/2000_06/uk/planet.htm

The Club of Rome, http://www.clubofrome.org

Natural Resources Defense Council, http://www.nrdc.org/health/pesticides/hcarson.asp

Greenpeace International, http://www.greenpeace.org/international/about/history

Green Party in New Zealand, http://www.greens.org.nz/about/history.htm

European School Governance, http://www.ena.fr/accueil.php

University of Pittsburgh, Archive of European Integration, SEC 91, 1744 final, http://aei.pitt.edu/49311/003172_1.pdf

Istanbul University, Institute of Marine Sciences, http://www.istanbul.edu.tr/enstituler/denizbilimleri

Municipality of Beykoz, http://www.beykozweb.com/haberler/haber_1107.htm

A web site on news, http://www.ntvmsnbc.com/news/379321.asp

BBC, http://news.bbc.co.uk/2/hi/science/nature/6476273.stm

Daily *Milliyet,* http://www.milliyet.com.tr/2005/04/18/guncel/axgun02.html

Daily *Radikal*, http://www.radikal.com.tr/1999/05/08/turkiye/umr.html

Washington Post, http://www.washingtonpost.com/wp-dyn/content/article

PBS Publications, http://www.pbs.org/now/science/smog.html

The Ecology Magazine, http://www.ekolojimagazin.com/?s=magazin&id=160

Aksiyon Magazine, www.aksiyon.com.tr

A web site on Istanbul, http://www.kenthaber.com/Arsiv/Haberler/2006/Mart

A web-site on news, www.haber7.com

A news portal on the EU, www.euractiv.com

Prime Ministry Department of Media and Publishing,
http://www.byegm.gov.tr/YAYINLARIMIZ/ayintarihi/1995/ocak1995.htm

http://www.citymayors.com/environment/environment_day.html

Turkish Marine Foundation, www.tüdav.org

Chamber of Environment Engineers, Environmental Situation Report, http://www.cmo.org.tr/yeni/duyuru2.php?did=72

A non-profit organization on noise pollution, https://www.nonoise.org/library/eunoise/greenpr.htm#Annexes