

Türkiye'de Endüstrinin Gelişmesi ve Çevre Problemleri

The Development of Industry and Environmental Problems in Turkey

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Türkiye'de çevre kirlenmesi ve buna bağlı olarak meydana gelen çevre problemleri aktüel konular haline gelmiş bulunmaktadır. Gerçekten gelişmiş ve gelişmekte olan ülkeler çevre problemleri üzerinde büyük bir hassasiyete sahip olup, hepsi problemlerinin çözümünü için çalışmaktadırlar.

Türkiye'de, 25 senedenberi gelişmeye başlayan ziraat teknolojisi 8-10 seneden beri hızlı endüstrileşme bu teknoloji ile yer değiştirmeye başlamıştır. 4-5 sene öncesine kadar yalnız su getirme ve kanalizasyon problemleri büyük şehirlerin çevre problemleri görünümünde idi. Bununla beraber, Ankara'nın hava kirliliği problemi ciddi ve gerçek bir problemdir.

The environmental problems relevant to the pollution have become one of the current issues in Turkey. Actually, both of the developed and the developing countries have a great interest in environmental problems, and all of them are trying to find solutions to them.

In Turkey, agricultural technology is being developed since 25 years and rapid industrialization has begun to take place since 8-10 years. We had only sewage and water supply problems of the big cities regarded as environmental problems only before 4-5 years. Beside these, the air pollution of Ankara was also a serious and an actual problem.

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INTRODUCTION

One of the main causes of these problems in the rapid urbanization. Because as the average increase of population annually is % 2.5, this increase of population reaches to % 7 in the cities.

Although the urban population was % 25 of the total population in the year 1950, this ratio has come up to %40.1 in the year 1975. So, it hasn't been possible to establish the water and sewage network for the highly increasing population, and for this reason the environmental problems has occurred.

TABLE 1 — Total Population, Urban Population and the Percentage of Urban Population

Years	Total Population	Urban Population	Urban population (%)
1950	20.947.118	5.244.337	25.00
1955	24.064.763	6.927.343	28.7
1960	27.754.620	8.859.731	32.00
1965	31.391.421	10.847.740	34.2
1970	35.605.176	13.725.776	38.0
1975	40.197.669	16.799.796	40.1

THE CURRENT SITUATION

The situation of 4-5 years before has been changed now. A great deal of pollution has appeared because continuous measures were not set at the beginning of the rapid growth of industrialization. As a result, the region between İstanbul and İzmit, Adapazarı, Samsun, Murgul, İzmir Bay, Lake of Hazer, Eskişehir —Porsuk Dam—, Adana—Tarsus region are completely polluted by the industrial wastes at present. In these regions, the industrial wastes which are in the forms of liquid, solid and gas compounds cause serious environmental problems.

Beside the industrial wastes and urbanisation problems, there are many other factors that cause environmental problems. In order to find the necessary solutions to the environmental problems in the whole country, there has been established «The Coordination Committee on Environmental Problems at the Ministerial Level». This Committee is having scientific studies on the causes of the environmental pollution problems and their elimination.

Establishment of the industrial plants on the productive agricultural lands, is another aspect of the environmental problems. As the estab-

ishment of industrial plants on the productive agricultural lands hinders the development of agriculture, it will also destroy these lands in future. Ministry of Industry and Technology is also doing researches on this subject at present.

ACTIVITIES OF THE MINISTRY OF INDUSTRY AND TECHNOLOGY ON ENVIRONMENTAL PROBLEMS

Ministry of Industry and Technology is having researches on the elimination of environmental problems that are caused by the industrial plants. There has been prepared a questionnaire on the environmental problems and some results have been taken in the previous year. An inventory study of the existing plants is being obtained out of this questionnaire. The aim of this questionnaire was to find out the kinds of industrial plants that cause environmental problems. Therefore, from this point of view, it will be possible to take measures at the beginning for pollution of the industrial plants that are going to be established newly. Beside this, the plants taking incentives from our Ministry are also obliged not to cause environmental problems. At the same time, in order to prevent the establishing of new plants at the over polluted regions of Turkey, the industrial plants are being spread all over the country.

We have taken 2200 replies to the questionnaire that we had prepared. Out of 2200 industrial plants, it has been found out that 336 (% 16.63) industrial plants are causing environmental problems. 170 industrial plants out of 336 (% 46.44) have treatment facilities. %37.97 of them is adequate for solving the environmental problems. As a general total, only %6.3 of these industrial plants are adequate to solve the environmental problems. The industrial plants that cause environmental problems are dedicated according to the sectors in table 2.

TABLE 2 — Environmental Problems According to the Sectors

Sectors	Having Environmental Problems	Having Treatment Plants	Having adequate Treatment Plants
Mining	15 (% 4)	7	4
Manufacturing	349 (%95.5)	161	133
Consumer Goods	64 (% 17)	25	24
Intermediate Goods	222 (%60.6)	106	84
Energy	2 (%0.5)	2	2

The results relevant with liquid, solid and gas discharges of these industrial plants are shown in table 3.

TABLE 3 — The Percentages (%) of Solid, Liquid and Gas Discharges

Type of Discharge	Number of Plants	%
Solid	117	31.96
Liquid	156	42.62
Gas	93	25.42
TOTAL	366	100.00

The number and the percentage (%) of the industrial plants which cause environmental pollution according to the cities are shown in Table 4.

TABLE 4 — The Environmental Problems According to the Cities

Cities	Number of Plants	%
İstanbul	158	43.13
Kocaeli	23	6.22
İzmir	19	5.20
Bursa	19	5.20
Adana	18	4.90
Kayseri	18	4.90
Ankara	14	4.16
Sakarya	7	1.81
Others	90	24.49
TOTAL	366	100.00

As it is seen in Table 4, the most polluting plants are in İstanbul. For this reason, in our Ministry it is considered very beneficial to shift the new investments away from the big cities, such as from İstanbul.

My Ministry is also providing financial assistance to another survey which is the air pollution project of İzmit. In this project, the pilot region between İstanbul and İzmit is taken into consideration.

The air pollution of that region is searched from the point of view of;

- Quality
- The amount of suspended particulates
- Pollution sources

Beside this, we are going to develop another project in the same region concerning of searching out the solid and liquid discharges and the elimination of them with treatment plants.

The industrial plants at this region will be separated into proto types in this project and special treatment plants will be evaluated for every type of plant. So, it will be possible to solve the problems of the newly establishing plants at the beginning phase.

THE OTHER FACTORS

Another important environmental problem of the developed countries is the uneasiness and the stress of the human beings. In order not to have this kind of problem in Turkey, measures are being taken. As it is known, this problem is the mechanization of people who are employed in the industrial plants. When the industrialization begins in a region, then people from the surroundings start to settle in that region. At this point, many physical and moral problems start to come out. It is obvious that a person who does the same job with the same machine everyday cannot be happy. The human beings have many moral feelings, they will lose their spiritual health if they do the same monotonous job everyday and this will cause environmental deterioration. Concerning with this problem, I can give an example from the United States of America. In that country, there is a great number of people who goes to the psychiatry clinics because of this unnesiness. Staff training must take the priority if new industrial plants are planned to be established. We have also surveys regarding with this issue in my Ministry. To provide comfort and welfare to the human beings is the most important purpose.

CONCLUSION

At the present, the environmental problem are very important for the developed countries. Because in these countries, the possible solutions are searched after the pollution has existed. But, it is different in our developing country. At the present, the great part of Turkey is not industrialized and polluted. For this reason, as we are at the starting phase, we have the advantage of solving the environmental problems before they become extremely serious. The most important matter at this point is that the projects will not be so productive and the costs will be a little bit higher. This extra increase in the costs can

be eliminated with the special measures that might be taken at the construction period.

As a consequences. I can say that at the project level, beside the economic feasibility, the following factors should also be taken into account:

- 1 — At the project planning level, the control experts must examine the environmental and industrial pollution,
- 2 — In order to prevent the deterioration of air and water quality, alternative places must be found out,
- 3 — Hydrologic, geologic, sismologic and meteorologic studies must be done in order to assume the damages that might occur in the environment and to reduce them to the minimum level
- 4 — And above all these, an ecological plan must be prepared and the kind of plants that is going to be established every reason must be found out.

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