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# Environmental policy in Hungary

by

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# 1. INTRODUCTION AND BACKGROUND

## 1.1. Geography

Hungary is a small country, even by European standards - 93,030 square kilometres. From the thirty-three countries of our Continent the territories of fifteen countries are smaller than that of Hungary. Hungary lies in the geographical center of Europe: Budapest is located 3,000 km from Europe's easternmost point in the Urals and 2,500 km from the westernmost point on the seacoast of Portugal. In the north-south direction Hungary is much closer to the southern edge of Europe than the northern one on the Scandinavian peninsula. The location between Eastern and Western Europe is reflected in the fauna as well as the climatic and soil conditions, and as a result, there is a great variety of landscapes within the small country.

The number of population of Hungary is 10.7 million, and is slightly declining. The population density (114 people per square kilometer) is higher than the European average. When compared by population density, Hungary is ninth among the European countries and the second (after the GDR) among the European socialist countries. There are no striking differences in the territorial distribution of the population. The Budapest agglomeration is the area of highest density (170 people per sq. km).

The physical geographical features of the country can be summarized as follows:

a) The main feature of the surface is its lowland character. In fact, only 15 percent of the country's area rises to more than 200 meters above sea level, and only 2 percent is higher than 400 meters. Thus, the landscape is very favourable for agriculture.

b) From the physiographic point of view, Hungary belongs to the Carpatho-Balkan-Dinaric subcontinent, or more precisely, to

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the Carpathian Basin. The country can be divided into six macroregions, of which the largest unit is the Great Plain, which occupies 56 percent of the total area.

c) The climate of Hungary is temperate. The country lies in the narrowing western part of the Eurasian continent, relatively close to the Atlantic Ocean and the Mediterranean Sea. This position results in the predominance of western air masses of oceanic origin, so the winter weather is rather temperate. Consequently, the average annual mean temperature of the country is 2 °C higher than its geographic position would otherwise justify. The Alps deflect the westerlies carrying precipitation, and therefore the climate has a droughty character. The low degree of cloudiness provides the area with considerable solar radiation.(Average annual temperature is +10 °C) Precipitation averages 550 mm annually, and fluctuates considerably from year to year and from region to region.

d) Hydrography. The entire territory of Hungary belongs to the catchment area of the Danube, as the second largest river, the Tisza, also flows into the Danube (in Yugoslavia).

The Danube, The Tisza and their tributaries flow across the Great Plain in shallow beds without cut-in valleys. Before flood control measures were introduced, the floods had extended over a wide area, and the rivers, particularly the Tisza, changed their direction of flow several times. The fertile land reclamed by flood control amounts to 20 percent of the country's arable land and to about 30 percent of the territory of the Great Plain.

The largest Hungarian lake, Lake Balaton, is one of the largest standing waters of Europe. The 70-kilometer-long southern shoreline is the longest continuous lakeshore beach in Europe.

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Hungary's water resources are limited. The surface river network is poor, and only the Danube carries water of significant quantities. The ground water table, mostly in the Great Plain is close to the surface, and it is usually heavily polluted. Deep thermal waters can be found in great abundance along geological fault lines. Many of these waters are reputed to have curative effects.

An important feature of the Hungarian water budget is that water resources originating within the national boundaries comprise only 4 percent of the surface waters. Thus, both water utilization programs and protection against water pollution can be realized only by international cooperation.

e) Major environmental concerns are as follows:

- soil erosion in the hilly and mountanous areas. The quantity of eroded soil is about 65 million cubic meters. Supposing a humus content of 2.2 percent, the annual humus loss is about 1.43 million tons. The annual loss in decreased food production can be estimated at about 8 to 10 million tons of grain.
- irrigation systems have unsolved problems with the draining off of superfluous irrigation water, as well as the uncovered irrigation canals may cause further alkali soil formation.
- continuous ground water and soil pollution be untreated sewage of settlements. Sewage treatment lags behind the development of running water systems and domestic and industrial water consumption. Small rivers are heavily polluted, the Danube's pollution is medium level, Lake Balaton has also eutrification problems.
- air pollution causes serious problems in the Northern industrial regions and in the capital city. There are some improvements as to dust pollution. We are witnessing a growing effect of acid rains.

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## 1.2. Economy

Hungary is a medium industrialized country with an important agricultural sector. The post-war development was characterized by a rapid industrialization. Although the high growth rate of forced industrialization in the 1950s slowed down later, nevertheless, it achieved a 6 to 7 percent yearly growth between 1950-1980, putting Hungary among the most rapidly industrializing nations. The gross industrial product increased eightfold and the per capita industrial production brought Hungary among the thirty most industrialized nations in the world. In 1980, the industry employed 40 percent of active population (15 percent agriculture, and 45 tertiary sector). There have been important structural changes within the industry during the last three decades. Engineering and chemical industries have become leading sectors. This quantitative growth was not accompanied by adequate development in technology, and the improvement of capital efficiency.

In the industrial sector, the share of heavy industry and that of energy consuming branches is oversized. Since coal-heated central power stations produce the majority of electricity, this industry is a heavy pollutor. (Hungarian brown coal and lignite have a high sulphur content.) One fifth of the electricity consumed in the country is imported through the CMEA unified energy system. Since the energy import runs into difficulties from CMEA, Hungary has to develop its own energy producing capacity, either by increasing the relative amount of nuclear energy, or by opening new lignite deposits.

In the last fifteen years, the Hungarian agriculture has performed well. Its gross production growth in the 1970s was second to Holland in the world. There has been a spectacular growth in yields, and now the country produces substantial food surplus for exportation. Meantime, the number of agricultural population dropped by 60 percent. Massive use of chemicals (frequently

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overdosed) in agriculture and the liquide manure of industrial feeding lots have become dangerous pollutants of the environment.

Motorization started late in Hungary and is developing slowly. The government gives priority to mass transportation. Only half of the Hungarian families have a car. The only heavy concentration of cars is in Budapest, where the pollution (incl. smogs in early winter) is serious. The high proportion of outmoded models contributes to the problem.

Structural and technological changes in production are among the main economic concerns of the government. There are some promising successes in the reduction of energy used per units of production, and in the more rational use of agricultural chemicals. The priorities given to the technologically more advance industries will reduce the harmful environmental impact. Because of the lack of capital, spectacular progress in this respect cannot be expected.

## 1.3. The historical background of environmental policy and legislation

It was only in the late 1960s, that an overall policy for environmental protection started to develop in Hungary. The formulation of an environmental policy was made necessary by the following factors.

a) The rapid deterioration of the environment in countries with a highly developed industry and the shock, brought about by several environmental catastrophes, turned public and governmen attention to environmental problems in the developed countries. Wide concern about the environment was expressed at the UN Conference on Human Environment held in Stockholm in 1972, where a new specialized UN Organization, the UNEP was establish At that time, Hungary still hoped that the pollution in the

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country, having reached a much lower level than in Western Europe or Japan, could be stopped and reversed.

b) The Hungarian economy at the end of the 1960s and the beginning of the 1970s can be characterized by prosperity combined with a rapid rise in the living standard. This was the first time that the rapid economic development was restricted by the environment, first of all, by the scarcity of water. And also for the first time, the rise of the living standard enabled the government to extend its program for the increase of consumption to the improvement of the quality of life as well. This program contained the demands for the quality of the environment.

The overall policy for environmental protection combined three approaches into one single system.

The first one is the protection of the precious element of natural environment, that has been legally guaranteed since the 18th century.

The second is the protection of the population from the damage caused by industrial civilization, which was stated in Hungarian legislation after the urban and industrial development of the 19th century.

The third is the concept of the planned development of the environment, which quit the former idea of a reactive and defensive environmental protection, and which started to develop only in the 1970s.

During the above mentioned period, the very concept of environment gradually grew wider, containing natural, as well as man-made, and occasionally, social elements (e.g.typical social problems created by the size and the social structure of great cities).

The first signs of a relatively overall legislation can be found in some 18th century laws for the protection of various precious elements of the natural environment, like forests and

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waters. The first law which tried to protect the environment from the unfavourable consequences of natural processes was the one about the prevention of damage caused by drift-blown sand. In the second half of the 19th century, as a result of the industrial revolution, a socalled industrial act was passed. This law provided for the prevention of environmental damage caused by industry.

Among environmental laws from the period between the two world wars, the most important is the No. 4 Act of 1935 about forests and the protection of nature, containing modern ecological ideas. Compared with earlier laws, this one determined a wider range of objects to come under environmental protection, introduced the notion of nature conservation areas and landscape protection areas, as well as ordained the establishment of the National Council for Environment Protection. Laws protecting the environment of settlements were of little effect. They failed to state whose duty it was to take measures, nor did they indicate limit values of pollution for the authorities.

For a long time after the second World War the primary political goal was the economic development, while no attention was paid to the environmental restrictions and consequences of this development.

Of all environmental media it was the protection of the quality of surface waters that was firstly and most frequently regulated. Since the 1950s, several laws have ordained that factories producing waste-water should use sewage-filtering equipment. The No. 4 Act of 1964 introduces finally a new type of administrative sanction: the waste-water fine. It prescribes quantitative standards of pollution and determines the fine according to them. The progress of the changes was made stricter by later laws, one of which introduced the sewer fine as well. In the early 1960s, more sectors of environmental protection became regulated. Acts were issued about the protection of agricultural land, waters, forests and wildlife, as well as

about a regulation of the protection of nature. Before the beginnin of the 1970s, some important laws were introduced concerning the construction about the use of chemicals in plant protection and about public health. They all contain several elements that refer to environmental protection.

The 1972 revision of the constitution was an important stage in environmental legislation. Environmental protection through whicl the basic civil right of the protection of human life and health has to be realized, was included in the constitutional law. The first two laws that mentioned the notion of environmental protectio though not yet in its full complexity, were the 1971 act about the principles of the development of settlements, and the one of 1972 about the questions of the protection of man's natural environment. The National Council for Environmental Protection was founded in 1974 to serve as a direct advisory body of the government. The Council was established in order to coordinate the environment protectional activity carried out earlier by different ministries. These events that were followed by three years of preparatory work which led to the formulation of the Act of 1976 on the Protecti of the Human Environment.

The Act No. 2 on the protection of the human environment was enacted on the 1st April, 1976, providing for a comprehensive regulation of the basic question of environmental protection. The act synthetized all the results of environmental legislation forming an integral part of the existing law but, at the same time, set the whole of environmental legislation in a system of independent and new structure and inherence. According to the act, environmental protection has a double meaning: protection against dangerous phenomena already existing, and the planned development of the environment. These two areas are only relatively separated.

The Act indicates the basis and the various areas of the system of legal demands concerning environmental protection, as well as the complex general legal regulation for the main special fields.

The second section of the act indicates the parts of human environment to be protected legally, the main ideas of the protection and its basic regulations. The main groups of the elements of legally protected human environment are: 1. land[+], 2. water, 3. air, 4.biosphere, 5. landscape[++], 6. man-built environment. The act sets up a general rule about the prohibition to cause any pollution, damage or other unfavourable effect to the protected elements of human environment, thus altering their natural characteristics for the worse or spoiling the conditions of human life. The elements of the environment are to be protected against the damage brought about by natural forces as well. The detailed regulations of the act provide a positive form of this general rule for each group of environmental elements.

[+] 'Land' is a piece of earth surface which is utilized by agriculture, forestry, residential area etc.

[++] 'Landscape' is the total surrounding natural environment, percepted and evaluated by men.

## 2. MANAGEMENT AND ORGANIZATIONAL STRUCTURE OF ENVIRONMENTAL PROTECTION

### 2.1. The nationwide management system of environmental protection

With the establishment of new institutions and the reorganization of the old ones, the formulation of a uniform nationwide system of environmental protection was completed by the end of the 1970s. The system falls into two subsystems: a general management system covering the whole of environmental protection and the management system of the various special fields. The two subsystems are closely connected and complementary to each other.

The main elements of the general management system are the following:

a) The Council of Ministers

According to the Act on environmental protection, it is the Council of Ministers that is responsible for the management, control, coordination and development of the whole environment protection activity.

b) The National Council for Environmental Protection and Nature Conservation (OKTT)

Till the end of 1985 it was one of the eight government committees. It was a consultative, advisory and controlling body of the Council of Ministers in the field of environmental protection, as it prepared, gave advice on decisions of the Council of Ministers and controlled their execution. The activity of the Council was carried out by

- the representatives of the most important national administrative authorities,
- the representatives of non-government organizations,
- scientists and experts invited by the President of the Council.

The Council had sessions two times a year. It made proposals for the environmental protection tasks of the national economic plan; initiated the issue or modification of environmental laws; designated the main direction of environmental protection and the use of environmental funds.

These tasks will be devided among OKTH; its advisory body and a new parliamentary committee (see point "D"), but the appropriate manner of it is to be elaborated.

c) The National Authority for Environmental Protection and Nature Conservation (OKTH)

It is an independent ministerial authority which has tasks in two areas:

- it coordinates and controls the whole environmental protection activity;
- it controls directly some special fields of environmental protection.

A new advisory body of the President of the Authority is planned to be set up for giving advice, suggestions on the conceptual questions of environment management. The majority of members are planned to be invited from among scientists.

d) Parliamentary Committee for Settlement Development and Environmental Protection

After the dissolution of the OKTH this committee was established. By its regular activity - it listens to the ministers' reports, prepares the work of the Parliament - it will take over some tasks of the OKTH.

The detailed management system of the special fields of environmental protection is given in the Appendix. The different elements of natural endowments and human environment are controlled by different ministries or nationwide authorities, e.g. the land and forests by the Ministry of Agriculture and Food; the waters by the National Water Authority; the air by the OKTH.

To summarize the activities of this nationwide management system, it must be stated that in its present form it has not got

the sufficient political force to fight for the interests of environmental protection against other sectoral interests. There is no designated control authority in some special environmental fields (e.g. protection of mineral and medicinal waters, treatment of non-dangerous agricultural and industrial wastes). The burning issue of environmental protection in Hungary is the protection of water and soil, but these elements are not covered by the authority of the National Authority for Environmental Protection and Nature Conservation. Sometimes, ministries controlling special environmental field should represent both their own sectoral and environmental interest; they should promote the frequently contradictory activity of increasing production and environmental protection.

## 2.2. Local management of environmental problems

As the environmental pollution problems are usually of local feature local management has an important role in the general management of environmental protection and in the control of special environmental fields.

Councils - being at the same time self-governmental bodies and the local authorities of state administration, as well - operate in a two-level system:

a) county councils in 19 counties and in the capital;
b) local councils in villages, towns and districts of the capital.

Councils have the following possibilities and ways to participate in environmental management on their own territory:

a) Executive committees of county and local councils can make environmental regulations, which cannot contrast with laws of higher level.
b) County Committees for Environmental Protection and Nature Conservation were established in order to coordinate local environmental protection. These committees are consultative,

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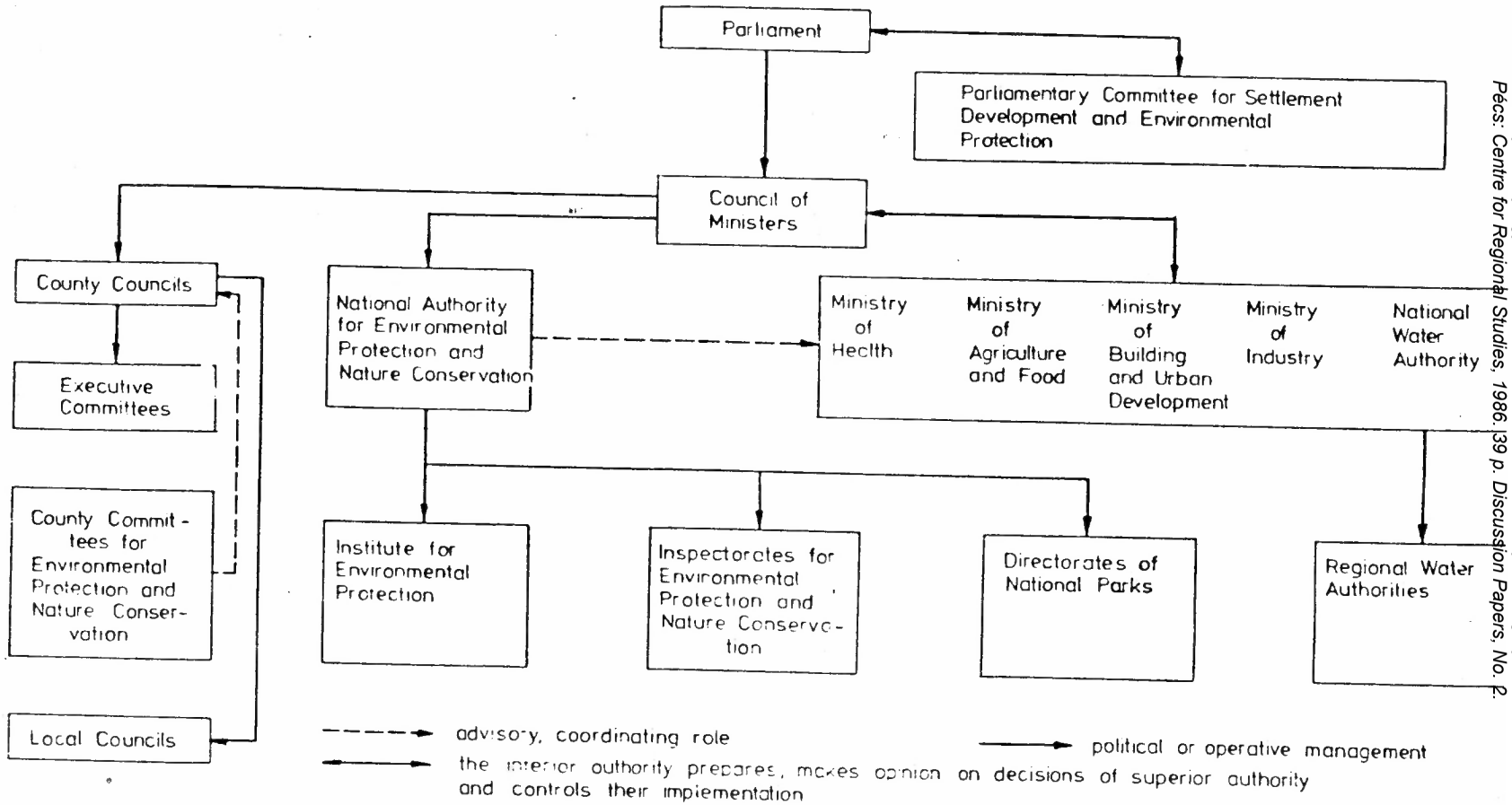
advisory bodies of the executive committees and control the execution of councils' environmental targets.

c) The County Secretaries of Environmental Protection and Nature Conservation work within the executive committees of county councils for continuous control of environmental protection. They follow with attention and promote the formation of environmental plans in the counties and the capital, support sectoral administrative department - dealing with environmental problems, as well - of executive committees of local councils.

d) Councils of their sectoral administrative departments (usually technical or building) act as authorities in certain environmental questions, e.g. in some local water management questions, in protection of air and man-built environment.

In spite of these possibilities councils rarely work efficiently in environmental management. They and their sectoral administrative departments have many other local tasks, so the interest of environmental protection has but secondary importance for them. Sometimes the lack of appropriate knowledge also prevents them carrying out their environmental aims. But it is due mainly to the councils' economic and political status that they fail to achieve considerable results in the protection of the environment.

Figure 1 Organizational structure of environmental management in Hungary

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# 3. ENVIRONMENT DECISION-MAKING PROCESS

## 3.1. The actors of environmental protection

In socialist countries - so in Hungary, too - environment protection is declared to be one of the state tasks. However, decisions on environmental use are made not only by state organizations, producers but by councils and citizens as well. The decisions of these actors are affected by different interests which determine fundamentally the possible aims, means and the efficiency of a strategy for environmental policy.

### 3.1.1. The state

Since the environmental protection has not been integrated into the reproduction process util now, the state endeavours the socio-economic practice to admit and observe environmental protectional values and norms of social consensus through different means.

a) Political and government decisions

The program of the 11th Congress of the Hungarian Socialist Workers' Party (1975) expressed the recognition of the importance of the environmental protection and development policy, which, speaking of our tasks to better the circumstances of living, declared: "We intend to establish a system of environmental protection which is able not only to stop the harmful processes, but to ensure development as well." This basic principle has been reinforced and developed by the act on the 5th five-year economic plan (1976-1980), by the act on environmental protection and the government decision about the execution of the act on environmental protection. The government decision of 1980 about the national conception for environmental protection and its set of demands was an important stage in the development of environmental policy. This decision states,that the protection of the environment must become an organic part of

the economic activities and planning, and that stress has to be laid on the environmentally sound tehcnologies. It specifies the twofold task of eliminating all the existing sources ot pollution and of preventing harmful pollution. Finally, it provides that no new investment, development or reconstruction should take place without investigation of its effects on the environment. But this type of law is obligatory only for some ministries, and no great effect can be expected, unless further public measures are taken. To indicate the intentions of the government, the enactment of some further laws can be expected, giving way to the environmental point of view within the economy to a greater extent.

b) National economic plans

Among the goals of the 6th five-year plan (1981-1985), environmental strategies were designed in accordance with an economic policy that intended to meet the requirements of the difficult economic situation, and with a long-range conception for environmental protection. A slower increase of investments was expected, as compared with the earlier plan period. Consequently, the environmental policy was planned to stop the growing pollution of the environment and allow no more destruction of the present quality of the environment. Financial resources were concentrated in the most endangered areas (the Balaton region, Budapest and its agglomeration, the Northern- and Middle-Transdanubian industrial areas, the Pécs-Komló region).

In the 7th five-year plan (1986-1990), again, the productive sectors of the economy get absolute priority. Thus, only the most urgent environmental problems can be solved, there is no economic possibility for a long-term, preventive environmental development. This five-year plan is less optimistic than the previous one: it forecasts further environmental

deterioration by 1990 - although environmental investments will be more important than ever. It intends to start diminishing $SO_2$ emissions (according to the international commitment of Hungary) and to keep surface water quality at the present level. The comprehensive program for the treatment of hazardous wastes will actually start in the coming years. In many cases (the pollution of groundwater, the acidification of soils, etc.) the plan forecasts but the diminishment of the rate of deterioration.

Both five-year plans accepted the principle that environmental protection is financed from the central budget "by the capacity of the economy". This conception indicates that the financial means for the environmental protection are drawn off from the development. Thus, when economic resources are limited, environmental interests have but restricted importance even in the national five-year plans of the economy.

c) Legal and economic means[+]

Basic rules in special fields of environmental protection are determined by acts in most cases, while in case of air protection, noise control this role is played by the Council of Ministers' order. They express the most important principles, norms of the given protected field, prescribe the permitted pollution standards and types of sanction.

National standards prescribing technical requirements for equipment, products in the interests of life-, health-, property-, and human environmental protection are of great importance in environmental protection.

Licences given by authorities have also a prominent role. There are activities that should get permissions from environmental management authorities, e.g. every water construction

[+] The division is relative only, because all economic means are incarnated in legal measures.

should be approved by the National Water Aughority. Non expressly environmental protection licences - in building, land utilization, housing, and traffic licences of motor cars - have an important role in preventing harmful pollution of the environment.

If environmental rules are broken the following sanctions can be imposed by environmental management authorities:
- restriction or prohibition of the polluting activity;
- compensation for damages;
- criminal law procedures;
- environmental fines.

As by the Act on the protection of human environment, 1976 enacted, the payment of fines does not release producers from criminal responsibility and obligation of establishing appropriate protection equipment or prohibition of activity. Until now, however, authorities hawe seldom applied the first three types of sanctions; fines are considered ad the most effective sanction.

Environmental fines are the most important type of economic means. They are aimed at forming the appropriate behaviour of producers by punishing the harmful pollution activity beyond the permitted standards. Their second - but more successful - task is to establish central funds for promoting environmental investments.

Besides the Water Management Fund and Air Protection Fund originated from waste-water and air pollution fines, started with the 5th five-year plan (1976-1980), the National Environmental Protection Fund has also been established from the central budget. Government supports environmental investments from it.

Sectoral ministries can promote the enforcement of environmental interests by tax- and price allowances granted to producers.

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Environmental Impact Assessment is rather new in Hungary. A regulation of the Council of Ministers corrected several times since 1974 gives orders for the process of investment: every investment decision must be based on an inquiry with proper economic and technical documentation, with its content and elaboration matching the demands of the various investment categories (state, non-company, company, cooperative). Every investment has to be based on the demand of environmental protection as well as the settlement planning. The recent regulation of the National Council for Environment Protection and Nature Conservation (1983) expressed the Council's intention to make it obligatory for the planning of every productional investment to inquire about its environmental effects. A government order is to be expected soon upon this.

These regulations could only force the largest state investments to forecast their possible effects on the environment so far, and when they mention environmental effects they usually cover only the technical aspects and neglect the related economic questions.

1) Education

The Hungarian educational system started to carry out a systematical environmental education in 1974. The general reform of public education in the middle of the 1970s, was mainly concerned with the transformation of the structure and material of the subjects. This made it possible to include environmental studies and principles in education. In the very first year of the primary school a subject called "the study of the environment" is included in the education, which deals with natural processes on the whole, and the parallel study of the subject called "technics" teaches the children the relationship of man and nature. In the higher grades of the primary school and later in secondary schools, subjects about natural sciences (biology, geography, physics, chemistry) provide the students

with further environmental knowledge. In higher education, first of all at the agricultural and technical universities as well as at faculties of natural sciences at universities special subjects are taught, with a specifically environmental material.

The training of specialized environmental engineers started in 1974 at the University of Agricultural Sciences and at several technical universities, and in 1976 in the field of sylviculture. Among the various forms of the education, the most significant is the post-gradual training of specialized engineers. But the educational system of Hungary cannot yet provide properly skilled environmental specialists in every science referring to the matter. In our country, there is a shortage of experts in the fields of law, economy and other social sciences.

3.1.2. Producers

At present, among all producers, state enterprises can be said to be the worst pollutors of environment.

Since the interests of producers are frequently contradictory to environment protection, the state tries to force enterprises to consider the aspects of environment protection through various means and methods. It is in the peculiarities of state property and the economic mechanism that the reasons of these conflicting interests and the deficiency of efforts to overcome them can be looked for.

As a matter of fact, when a socialist state intends to put into force sanctions against enterprises, it means that its own 'children' should be punished. In such a situation, fines are to be imposed many times but without an overstrict approach of the state.

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The traditional central planning is of sectoral nature, that's why, for example, industrial planning sets first and foremost production targets; the planning of infrastructural development (e.g. sewerage) is independent of it. Over industrial enterprises as state enterprises rights of state ownership are practised by relevant ministries which stipulate production tasks, provide enterprises with investment goods, incl. environmental protection investments as well. First of all the performance of production tasks is expected by the ministries, it is mainly for this purpose that the means of investments are put at the companies' disposal. Thus, enterprieses cannot be blamed if environmental investments fall behind.

In Hungary, the system of direct plan orders ended by 1968, sectoral plans are not prepared either. Nevertheless, sectoral ministries practised rights of state ownership over state companies until 1985. They wished to assert production goals not through plan orders but by financial regulations of management and informal connections (formed among the leaders of the ministry and the enterprises). Since 1985, the majority of state industrial enterprises have changed over to the system of self-administration, the state has assigned the rights of ownership to the collectivities of employees of the enterprises. The much stronger profit-interests and management independence of state enterprises create a situation similar to market economy: costs of environmental protection can undermine the market position of the enterprise. The general scarcity of capital can also make nonproductive investments more difficult.

a) Due to the <u>income distribution</u> of companies to pay environmental fines is more favourable than to make environmental investments. To pay environmental fines would mean hardly any change in the development funds whereas investments and developments carried out in previous years are heavy burdens for the development funds. What is more, before

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1980 the the price-system allowed companies to charge the environmental fines to expenses.

b) As stipulated in orders concerning the interests of company leaders, the comprehensive evaluation of the activity of top level officials belongs to the tasks of the supervisory authorities. Whether a leader is worth rewarding and the amount of rewards must be calculated on the basis of the complex activity of the enterprise, incl. developments, structural transformation, foreign trading activity, supply of population ect. but excluding environment protection. The majority of company leaders are not concerned with the consideration of environmental protection aspects and are not interested in it, what is more, managers do not make easily investments diminishing the profit, if they want to be re-elected in the self-management system where managers are elected by employees for a period of 5 years.

In an organizational-institutional system of peculiar hierarchy in which informal channels and shadow mechanisms of state property operate, the responsibility of enterprise managers and that of central management cannot be separated perfectly.

3.1.3. Local councils

Even after the economic reform of 1968 councils have restricted independence, limited economic and political power, despite the declared principles of local self-government. Their main declared tasks are the execution of state economic policy and the coordination of infrastructural supply of the population.

The main targets of regional development plans are still elaborated in sectoral natural indices by the central planning authorities. On the basis of this, county and local councils prepare their own five-year and one-year plans by way of special coordination talks with the higher authorities. The financial means are centrally planned, too. So, local resources are strongly centralized and redistributed among counties and later in settlements.

In these conditions local councils have got limited resources for development from the central budget. So, on the one hand, they can hardly solve themselves the environmental problems originating from the lack of appropriate infrastructure (e.g. sewage system). But the more important result of this situation is that the relationship of councils and producers forces the councils to make unfavourable compromises in matters of environmental protection. As they need the employment opportunities, financial means and other help voluntarily offered by local producers they often have to give up the environmental interests of the settlement. What is more, for decades the industrialized counties and settlements have been in a more advantageous situation as to the distribution of the central budget. Thus, though councils have the right within their own territory to regulate the activity of producers from the point of view of environmental protection, they seldom practise it because of being strongly interested in the industrial development of their area.

Nevertheless, great changes have been introduced in financing settlement development since January 1, 1986. First of all, the importance of centralized redistribution will diminish, local financial resources (taxes) will gain importance. Local authorities will decide more freely about the utilization of their financial resources.

They are expected to express and follow better the local interests.

3.1.4. Citizens

Efficient environmental protection is unimaginable without social pressure and the participation of citizens. Except for a few pollution affairs which created a scandal (e.g. Lake Balaton), there are no institutional frameworks for environmental protection by citizens in Hungary.

Citizens' approach to environmental protection problems is characterized by two peculiarities. On the one hand, problems of environmental pollution become increasingly evident, important - in some settlements even tangible - for everyone. On the other, problems of environmental pollution are still considered to be solved by the state and the enterprises due partly to misinterpretations on the part of the mass media.

An essential condition to change this situation is that social organizations integrated into the hierarchical socio-political relations should start tending towards democracy. Although trade unions, communist youth organizations, the People's Front and the like have environmental protection programs, they have not changed the quality of citizens' participation.

The Constitution declares the right to a clean human environment, but there are very few legal means in the hands of those concerned. Individuals have no other right but to announce their experiences of offences against environmental laws or regulations. It is up to the authorities whether they chose to sanction the trespassing or put a stop to the damage. The authorities' decisions are legally incontestable.

Nowadays, it is for the first time in Hungary that a debate hopefully aiming at the enforcement of citzens'

interests has emerged in connection with the establishment of an incinerator of waste next to a small town, Dorog (N-Hungary). After longer coordination talks, the local council and other local state organizations approved to start planning it but the equipment is allowed to be built and put into operation - mainly due to citizens' pressure - if it complies with the environmental protection conditions of the council. Besides, one of the terms of the consent was central state financing for other environmental protection investments.

## 3.2. Policy implementation in special fields of environmental protection

### 3.2.1. Land and soil

The 6th Act on Land Protection of 1961 regulates the most important questions of land-use protection. For a long time it remained but a principle, until it was given a regulative force in 1977 in order to achieve effective results.

Agriculture provides 20 % of the total national income, and 40 % of the country's hard currency income is given by food export. In spite of the great economic significance of agriculture, the continuous decrease in the agricultural land is going on. Between 1935 and 1980 the agricultural land lost 1 million hectares, half of which was used for afforestation, the other half for construction.

Agricultural land tends to decrease in every developed country, but Hungary appears to be wasteful in this respect. For a very long time state investments for industrial or settlement buildings used agricultural lands practically free of charge. There was an alarming increase of territories taken away from agricultural cultivation in the 1970s. While between 1962 and 1975 the arable land became smaller with

12,000 hectares every year, between 1975 and 1980 it diminished by 41,000 hectares yearly.

The conditions of using agricultural lands for industrial or settlement investments were made stricter again in 1981. Besides the actual price, the buyer has to pay a considerably high fee to the county council. The fee is meant to protect lands of better quality by progressivity depending on the quality of the land.

In 1981, when the permission was first combined with this high fee, there was an 18,000 hectares increase of land taken away from agriculture; more than what was planned beforehand. 2,200 hectares were taken away from agriculture without permission. 20 % of the territories taken away was land of good quality. This law does not provide a uniform frame for land-use protection. It intends to slow down the diminishing of agricultural land, but it is hard to predict its real effect, whether the high charge for the utilization is able to stop the expansive constructors. It also regulates the recultivation of unused mining areas, which speeded up recently.

An important part of land protection constitutes protection of soil from natural forces and harmful effects of human intervention. Orders of the Ministry of Agriculture and Food restricting utilization of chemicals and permitting the output of properly tested materials, serve the prevention of harmful effects of pesticides and artificial fertilizer utilization which grow significantly. In allocating liquid manure from large-scale stock breeding farms, national standards have to be taken into consideration. In accordance with the land protection act land it is the users' duty to preserve land fertility but the Government supports complex amelioration - including soil improvement, soil protection and water management - by tax- and other allowances.

3.2.2. Water

The basic law for the protection of waters is the act No. 2 of 1964 which has been amended several times since then. Water management affairs belong to the National Water Authority, just a few tasks of local significance, concerning directly the population are within the competence of councils. Twelve regional water management boards of the Authority are operating in the country located according to hydrological features.

The economic use of available water reserve is destined to be promoted by financial regulators, e.g. fees for water reserve and use of drinking water.

Besides the water management act, different (e.g.shipping) regulations and orders of the Authority provide for water quality. Producers breaking water management rules can be punished to pay waste water fines and sewage fines. Producers discharging water - which contains pollutants over standards stated by rules - into rivers, lakes, subsurface waters, are obliged to pay waste water fines. Rules determine threshold standards for 18 polluting and 13 toxic materials for waters getting pollution. Fines are progressive depending on time. Water quality inspectorates make control serving as a basis for fines.

Producers discharging pollutants over permitted threshold standards into the consumal sewage system are obliged to pay sewage fines. Rules state threshold standards for 10 polluting and 17 toxic materials. Control is performed by Comminal Sewage Works.

To improve water management it is of utmost importance that a permission of the Authority is needed for water use, activities and constructions on water.

From the Water Management Fund originated from waste-water fines the President of the National Water Authority can support producers - completing their financial means - in their water quality protection investments, in the construction of common cleaning equipment. Producers can apply for this support by competition.

A special feature of Hungarian water protection is that 95 % of surface waters (98 % in August) enters Hungary from abroad in most cases already polluted first of all by the insufficient filtering of waste-waters. Therefore improvement can be expected only from international agreements. The Hungarian reach of our major rivers in moderately polluted, while a number of smaller rivers, especially in the industrial parts of Northern Hungary, are heavily polluted.

The problem of the pollution of groundwaters is on the rise. It is brought about by agricultural production, artificial fertilizers, chemicals and liquid manure from large-scale stock breeding farms, waste-water from village households (water filtering in villages being fairly underdeveloped). The country is situated over the lowest lying lands of the Carpathian Basin, where groundwater moves towards the lowest point of the basin (Southern Hungary), and that is where the pollution accumulates.

Some 6,000-7,000 water samples are taken regularly at 294 sites annually; these are analyzed for 20-30 components. So the country's water reserves are qualified by nearly 250 thousand data.

The water management organization is responsible for warding off the consequences of pollution accidents, the number of which is almost 200 a year.

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3.2.3. Air

An overall legislation for air pollution control started to develop in 1971. On the basis of the Act on the protection of human environment Hungary is divided into three protected areas.
Air pollution level and its changes are measured by regional pollution control stations of the Institute for National Public Health belonging to the Minister of Health.

Producers and citizens causing harmful air pollution, operating large heating equipment which have a fixed air pollution source, are obliged to declare their polluting output and to supply information.

Air pollution fines are to be payed according to the emission standards stated for 8 pollutants. Producers causing pollution carry out measures and declare the results themselves. It is possible that the National Authority for Environment Protection and Nature Conservation controls measures but it happens rarely. Budapest and 4 heavily polluted counties have Council Environment Protection Funds from half of air pollution fines coming from their regions. The funds promote local environmental investments and are controlled by the executive committees of county councils.

There are different, not expressly air protection regulations, too, which serve air protection, e.g. National Building Rules, traffic licences of motor cars ($CO_2$ contents).

The 1973 order of the Council of Ministers on air quality protection set up a list of the requirements of air quality protection in the case of 31 sources of pollution, whereas the real number of harmful naterials is much bigger. It only regulates layers below 150m, and is concerned only about the biosphere in the strict sense.

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In recent years, there has been an increase in the emission of the most common gaseous materials. The main pollutors are the industry, the heating in homes and traffic. 8% of the country's territory is fully covered by rather polluted air, places inhabited by 40% of the total population.

Since 1974, air quality and its changes have been examined by regional stations for measuring harmful pollution operating in the framework of Public Health Network belonging to the Ministry of Health. They carry out about 300,000 measurements yearly in more than 80 settlements.

Parallel with the self-control of air pollutors, an independent network for measuring emission also operates. Control measures are carried out by regional measuring stations of the Institute for Air Protection belonging to OKTH.

### 3.2.4. Dangerous waste substances

It was not legally regulated until recent times, the 1981 order of the Council of Ministers. Nowadays we experience the grave consequences of this failure. Since 1981, industrial enterprises have been ordered to deposit their harmful wastematerials, but the designation of territories for this use progresses too slowly. According to a programme adopted by the government steps have been taken towards establishing a network for the disposal of toxic wastes. The first establishment for the storage of such kind of wastes is expected to be put into operation by the end of 1985.

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3.2.5. Others

In the field of the regulation of noise control considerable progress was made in the 1970s. Steps towards the unification of legal regulations and the establishment of appropriate organizational frames have recently been taken.

A new Nature Conservation Act was adopted in 1982 and a long-term development plan of nature conservation has been worked out envisaging considerable landscapes and areas to be declared protected. At the end of 1981 the number of protected areas totalled 775, on a territory of 430 thousand ha. (4.6 percent of the country's territory). In 1985, the country has four national parks.

## 4. CONSTRAINTS AND CONFLICTS

The obstacles to the implementation of environmental protectional purposes can be looked for on theree levels:

a) The development, situation of the Hungarian national economy, politico-economic decisions

In the decades of forced industrialization and extensive economic policy little attention was paid to environmental concerns. Hungary - together with other lately industrialized European socialist countries - started to build up its comprehensive environmental protection policy at a misfortunate historical moment, when, in the early 1970s, the period of rapid economic growth ended. Although the government made serious efforts to expand environmental investments, there was no possiblitity to improve the quality of the environment under the difficult economic circumstances. The postponement of important investments involved the accumulation of harmful effects.

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In the early 1980s, Hungarian economy had a remarkable achievement: it could maintain its international monetary liquidity, it succeeded in diminishing debts and paying back with accuracy all due interests and credits in time. But we had to pay a price for this success: the standard of living began to decline, there were serious restrictions in investments and imports. The scarce investment resources were focussed on modernizing the energy economy and introducing new technology, but sources for infrastructural and social welfare development became strongly limited. The general economic situation was not favourable for environmental protection. Despite some progress achieved in certain fields - e.g. decrease in dust pollution, the halt of further surface-water deterioration - the basic goal of the plan was not fulfilled: the quality of the environment has still been worsening since 1980.

Various politico-economic alternatives are being shaped for the Hungarian economy to get out of the crisis, which have different effects on the condition of environment and possibilities to enforce environmental policy. In debates concerning development alternatives, however, the issues of environmental protection are not of primary importance.

b) Structural features of socialist societies

In East-European socialist countries the state undertook the enforcement of environmental protectional interests in socio-economic practice.

The scarcity of development resources - both at state level and in enterprises - the hunger for investments are permanent characteristic features of socialist economies. The fundemental reason is not the poverty of these countries

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(there are both poor and strongly industrialized socialist countries), but - in Kornai's terminology - the 'softness' of budget limits. In the interest of growth, state enterprises can always draw money off the central budget, therefore the investment part of the budget is never big enough. It seems that the great problem of the distribution of central development funds is that non-productive - incl. environment protectional - investments would, indeed, reduce the financial means needed for the development of the national economy The state is in a contradictory position when intending to enforce enterprises as the operators of state property to adopt a certain behaviour because the state always wants to protect the enterprises. It frequently happens that sectoral ministries are at the same time responsible for the protection and utilization of certain natural endowments, resources. In such a way, the protection of environment is merely a moderately strict requirement among the expectations outlined for enterprises through formal regulations and informal channels.

As the producers' behaviour is governed by the expectations outlined, their environmental attitude is subject to maintenance- and growth-oriented basic interests.

Councils as self-governmental bodies cannot solve effective environmental protection interests in certain regions or settlements because due to their socio-economic status they are forced to make unfavourable compromises with the producers.

The existing channels for social control and enforcement of interests do not provide a large scope for citizens' participation in environmental decision making so their responsibility remains also limited.

c) Economic approach of modern economies

A special economic aspect is characteristic of the socio-economic practice of modern economies (both market and planned economies). Economy is equivalent to commodity producing economy and only activities statistically measurable in national income can belong to the sphere of economy. So natural resources (similarly to human-intellectual resources) are external capabilities to acquire freely and are destroyed by the harmful effects of the economy.

The present management systems of modern economies are too unbalanced to serve as incentive frames for the discovery and utilization of new way of development which are raised by ecological problems.

Modern economies try to assure the maintenance of environmental pollution within limits tolerable from the viewpoint of the population and short-term future development through environment protection which has not been integrated into the reproduction process.

The three levels can be distinguished only relatively and in theory, in reality the most general level is determinant in the hierarchy of causes. It means that after all the limits of environmental policy can be found in the economic approach of modern economies.

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The Hungarian case demonstrates, at the same time, that in a small country efficient environmental protection depends largely upon international cooperation. Since Hungary is not especially a small state (the territory of fifteen European countries is smaller than that of Hungary; Hungary's population exceeds that of twenty countries out of thirty-

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three European countries), we can state generally the utmost importance of efforts aiming at a unified European environmental strategy. The mutual interests are so clear in this respect that crossing the borders set up by ideological, political and security considerations seems to be possible.

## APPENDIX

### The management system of the special fields of environmental protection

The management system of the special activities indicated in the act on environmental protection has the following structure:

1. a) the Minister of Agriculture and Food controls the protection of the
   - soil
   - natural flora and fauna not declared protected, cultivated plants, huntable and fishable species of game and fish not under protection from the point of nature conservation, domesticated animals and their genetic reserves,

   as well as, in agreement with the Minister of Health
   - microorganisms

   and, in agreement with the President of the National Authority for Environmental Protection and Nature Conservatic
   - partially huntable and fishable protected species of game and fish
   - disappearing domesticated species of animals
   - landscape declared to be protected from the point of nature conservancy

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b) the Minister of Building and Urban Development controls the protection of
   - man-built environment

c) the President of the National Water Authority controls
   - amelioration
   - the protection of quantity and quality of subsurface and surface waters

d) the President of the National Authority for Environmental Protection and Nature Conservation controls the protection of
   - air
   - nature

e) the Minister of Industry, through the Presiden of the Central Geological Office, supervises the activities to protect the
   - rockbed
   - mineral resources.

2. The President of the National Authority for Environmental Protection and Nature Conservation is responseible for the management of activities concerning the production and neutralization of waste materials that are harmful for human beings and the environment, in agreement with the Minister of Health and the Minister responsible for the production.

3. The activity concerning the reduction of harmful vibrations, especially noise, is controlled by the President of the National Authority for Environmental Protection and Nature Conservation, in agreement with the Minister of Health.

4. The Minister of Health is responsible for the determination of permissible limits of harmful effects of chemical, physical, biological materials polluting the environment, and for the examination of their effects.

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DISCUSSION PAPERS

No. 2

# Environmental policy in Hungary

by

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# 1. INTRODUCTION AND BACKGROUND

## 1.1. Geography

Hungary is a small country, even by European standards - 93,030 square kilometres. From the thirty-three countries of our Continent the territories of fifteen countries are smaller than that of Hungary. Hungary lies in the geographical center of Europe: Budapest is located 3,000 km from Europe's easternmost point in the Urals and 2,500 km from the westernmost point on the seacoast of Portugal. In the north-south direction Hungary is much closer to the southern edge of Europe than the northern one on the Scandinavian peninsula. The location between Eastern and Western Europe is reflected in the fauna as well as the climatic and soil conditions, and as a result, there is a great variety of landscapes within the small country.

The number of population of Hungary is 10.7 million, and is slightly declining. The population density (114 people per square kilometer) is higher than the European average. When compared by population density, Hungary is ninth among the European countries and the second (after the GDR) among the European socialist countries. There are no striking differences in the territorial distribution of the population. The Budapest agglomeration is the area of highest density (170 people per sq. km).

The physical geographical features of the country can be summarized as follows:

a) The main feature of the surface is its lowland character. In fact, only 15 percent of the country's area rises to more than 200 meters above sea level, and only 2 percent is higher than 400 meters. Thus, the landscape is very favourable for agriculture.

b) From the physiographic point of view, Hungary belongs to the Carpatho-Balkan-Dinaric subcontinent, or more precisely, to

the Carpathian Basin. The country can be divided into six macroregions, of which the largest unit is the Great Plain, which occupies 56 percent of the total area.

c) The climate of Hungary is temperate. The country lies in the narrowing western part of the Eurasian continent, relatively close to the Atlantic Ocean and the Mediterranean Sea. This position results in the predominance of western air masses of oceanic origin, so the winter weather is rather temperate. Consequently, the average annual mean temperature of the country is 2 °C higher than its geographic position would otherwise justify. The Alps deflect the westerlies carrying precipitation, and therefore the climate has a droughty character. The low degree of cloudiness provides the area with considerable solar radiation.(Average annual temperature is +10 °C) Precipitation averages 550 mm annually, and fluctuates considerably from year to year and from region to region.

d) Hydrography. The entire territory of Hungary belongs to the catchment area of the Danube, as the second largest river, the Tisza, also flows into the Danube (in Yugoslavia).

The Danube, The Tisza and their tributaries flow across the Great Plain in shallow beds without cut-in valleys. Before flood control measures were introduced, the floods had extended over a wide area, and the rivers, particularly the Tisza, changed their direction of flow several times. The fertile land reclamed by flood control amounts to 20 percent of the country's arable land and to about 30 percent of the territory of the Great Plain.

The largest Hungarian lake, Lake Balaton, is one of the largest standing waters of Europe. The 70-kilometer-long southern shoreline is the longest continuous lakeshore beach in Europe.

Hungary's water resources are limited. The surface river network is poor, and only the Danube carries water of significant quantities. The ground water table, mostly in the Great Plain is close to the surface, and it is usually heavily polluted. Deep thermal waters can be found in great abundance along geological fault lines. Many of these waters are reputed to have curative effects.

An important feature of the Hungarian water budget is that water resources originating within the national boundaries comprise only 4 percent of the surface waters. Thus, both water utilization programs and protection against water pollution can be realized only by international cooperation.

e) Major environmental concerns are as follows:

- soil erosion in the hilly and mountanous areas. The quantity of eroded soil is about 65 million cubic meters. Supposing a humus content of 2.2 percent, the annual humus loss is about 1.43 million tons. The annual loss in decreased food production can be estimated at about 8 to 10 million tons of grain.
- irrigation systems have unsolved problems with the draining off of superfluous irrigation water, as well as the uncovered irrigation canals may cause further alkali soil formation.
- continuous ground water and soil pollution be untreated sewage of settlements. Sewage treatment lags behind the development of running water systems and domestic and industrial water consumption. Small rivers are heavily polluted, the Danube's pollution is medium level, Lake Balaton has also eutrification problems.
- air pollution causes serious problems in the Northern industrial regions and in the capital city. There are some improvements as to dust pollution. We are witnessing a growing effect of acid rains.

## 1.2. Economy

Hungary is a medium industrialized country with an important agricultural sector. The post-war development was characterized by a rapid industrialization. Although the high growth rate of forced industrialization in the 1950s slowed down later, nevertheless, it achieved a 6 to 7 percent yearly growth between 1950-1980, putting Hungary among the most rapidly industrializing nations. The gross industrial product increased eightfold and the per capita industrial production brought Hungary among the thirty most industrialized nations in the world. In 1980, the industry employed 40 percent of active population (15 percent agriculture, and 45 tertiary sector). There have been important structural changes within the industry during the last three decades. Engineering and chemical industries have become leading sectors. This quantitative growth was not accompanied by adequate development in technology, and the improvement of capital efficiency.

In the industrial sector, the share of heavy industry and that of energy consuming branches is oversized. Since coal-heated central power stations produce the majority of electricity, this industry is a heavy pollutor. (Hungarian brown coal and lignite have a high sulphur content.) One fifth of the electricity consumed in the country is imported through the CMEA unified energy system. Since the energy import runs into difficulties from CMEA, Hungary has to develop its own energy producing capacity, either by increasing the relative amount of nuclear energy, or by opening new lignite deposits.

In the last fifteen years, the Hungarian agriculture has performed well. Its gross production growth in the 1970s was second to Holland in the world. There has been a spectacular growth in yields, and now the country produces substantial food surplus for exportation. Meantime, the number of agricultural population dropped by 60 percent. Massive use of chemicals (frequently

overdosed) in agriculture and the liquide manure of industrial feeding lots have become dangerous pollutants of the environment.

Motorization started late in Hungary and is developing slowly. The government gives priority to mass transportation. Only half of the Hungarian families have a car. The only heavy concentration of cars is in Budapest, where the pollution (incl. smogs in early winter) is serious. The high proportion of outmoded models contributes to the problem.

Structural and technological changes in production are among the main economic concerns of the government. There are some promising successes in the reduction of energy used per units of production, and in the more rational use of agricultural chemicals. The priorities given to the technologically more advance industries will reduce the harmful environmental impact. Because of the lack of capital, spectacular progress in this respect cannot be expected.

## 1.3. The historical background of environmental policy and legislation

It was only in the late 1960s, that an overall policy for environmental protection started to develop in Hungary. The formulation of an environmental policy was made necessary by the following factors.

a) The rapid deterioration of the environment in countries with a highly developed industry and the shock, brought about by several environmental catastrophes, turned public and governmen attention to environmental problems in the developed countries. Wide concern about the environment was expressed at the UN Conference on Human Environment held in Stockholm in 1972, where a new specialized UN Organization, the UNEP was establish At that time, Hungary still hoped that the pollution in the

country, having reached a much lower level than in Western Europe or Japan, could be stopped and reversed.

b) The Hungarian economy at the end of the 1960s and the beginning of the 1970s can be characterized by prosperity combined with a rapid rise in the living standard. This was the first time that the rapid economic development was restricted by the environment, first of all, by the scarcity of water. And also for the first time, the rise of the living standard enabled the government to extend its program for the increase of consumption to the improvement of the quality of life as well. This program contained the demands for the quality of the environment.

The overall policy for environmental protection combined three approaches into one single system.

The first one is the protection of the precious element of natural environment, that has been legally guaranteed since the 18th century.

The second is the protection of the population from the damage caused by industrial civilization, which was stated in Hungarian legislation after the urban and industrial development of the 19th century.

The third is the concept of the planned development of the environment, which quit the former idea of a reactive and defensive environmental protection, and which started to develop only in the 1970s.

During the above mentioned period, the very concept of environment gradually grew wider, containing natural, as well as man-made, and occasionally, social elements (e.g.typical social problems created by the size and the social structure of great cities).

The first signs of a relatively overall legislation can be found in some 18th century laws for the protection of various precious elements of the natural environment, like forests and

waters. The first law which tried to protect the environment from the unfavourable consequences of natural processes was the one about the prevention of damage caused by drift-blown sand. In the second half of the 19th century, as a result of the industrial revolution, a socalled industrial act was passed. This law provided for the prevention of environmental damage caused by industry.

Among environmental laws from the period between the two world wars, the most important is the No. 4 Act of 1935 about forests and the protection of nature, containing modern ecological ideas. Compared with earlier laws, this one determined a wider range of objects to come under environmental protection, introduced the notion of nature conservation areas and landscape protection areas, as well as ordained the establishment of the National Council for Environment Protection. Laws protecting the environment of settlements were of little effect. They failed to state whose duty it was to take measures, nor did they indicate limit values of pollution for the authorities.

For a long time after the second World War the primary political goal was the economic development, while no attention was paid to the environmental restrictions and consequences of this development.

Of all environmental media it was the protection of the quality of surface waters that was firstly and most frequently regulated. Since the 1950s, several laws have ordained that factories producing waste-water should use sewage-filtering equipment. The No. 4 Act of 1964 introduces finally a new type of administrative sanction: the waste-water fine. It prescribes quantitative standards of pollution and determines the fine according to them. The progress of the changes was made stricter by later laws, one of which introduced the sewer fine as well. In the early 1960s, more sectors of environmental protection became regulated. Acts were issued about the protection of agricultural land, waters, forests and wildlife, as well as

about a regulation of the protection of nature. Before the beginnin of the 1970s, some important laws were introduced concerning the construction about the use of chemicals in plant protection and about public health. They all contain several elements that refer to environmental protection.

The 1972 revision of the constitution was an important stage in environmental legislation. Environmental protection through whicl the basic civil right of the protection of human life and health has to be realized, was included in the constitutional law. The first two laws that mentioned the notion of environmental protectio though not yet in its full complexity, were the 1971 act about the principles of the development of settlements, and the one of 1972 about the questions of the protection of man's natural environment. The National Council for Environmental Protection was founded in 1974 to serve as a direct advisory body of the government. The Council was established in order to coordinate the environment protectional activity carried out earlier by different ministries. These events that were followed by three years of preparatory work which led to the formulation of the Act of 1976 on the Protecti of the Human Environment.

The Act No. 2 on the protection of the human environment was enacted on the 1st April, 1976, providing for a comprehensive regulation of the basic question of environmental protection. The act synthetized all the results of environmental legislation forming an integral part of the existing law but, at the same time, set the whole of environmental legislation in a system of independent and new structure and inherence. According to the act, environmental protection has a double meaning: protection against dangerous phenomena already existing, and the planned development of the environment. These two areas are only relatively separated.

The Act indicates the basis and the various areas of the system of legal demands concerning environmental protection, as well as the complex general legal regulation for the main special fields.

The second section of the act indicates the parts of human environment to be protected legally, the main ideas of the protection and its basic regulations. The main groups of the elements of legally protected human environment are: 1. land[+], 2. water, 3. air, 4.biosphere, 5. landscape[++], 6. man-built environment. The act sets up a general rule about the prohibition to cause any pollution, damage or other unfavourable effect to the protected elements of human environment, thus altering their natural characteristics for the worse or spoiling the conditions of human life. The elements of the environment are to be protected against the damage brought about by natural forces as well. The detailed regulations of the act provide a positive form of this general rule for each group of environmental elements.

[+] 'Land' is a piece of earth surface which is utilized by agriculture, forestry, residential area etc.

[++] 'Landscape' is the total surrounding natural environment, percepted and evaluated by men.

## 2. MANAGEMENT AND ORGANIZATIONAL STRUCTURE OF ENVIRONMENTAL PROTECTION

### 2.1. The nationwide management system of environmental protection

With the establishment of new institutions and the reorganization of the old ones, the formulation of a uniform nationwide system of environmental protection was completed by the end of the 1970s. The system falls into two subsystems: a general management system covering the whole of environmental protection and the management system of the various special fields. The two subsystems are closely connected and complementary to each other.

The main elements of the general management system are the following:

a) The Council of Ministers

According to the Act on environmental protection, it is the Council of Ministers that is responsible for the management, control, coordination and development of the whole environment protection activity.

b) The National Council for Environmental Protection and Nature Conservation (OKTT)

Till the end of 1985 it was one of the eight government committees. It was a consultative, advisory and controlling body of the Council of Ministers in the field of environmental protection, as it prepared, gave advice on decisions of the Council of Ministers and controlled their execution. The activity of the Council was carried out by

- the representatives of the most important national administrative authorities,
- the representatives of non-government organizations,
- scientists and experts invited by the President of the Council.

The Council had sessions two times a year. It made proposals for the environmental protection tasks of the national economic plan; initiated the issue or modification of environmental laws; designated the main direction of environmental protection and the use of environmental funds.

These tasks will be devided among OKTH; its advisory body and a new parliamentary committee (see point "D"), but the appropriate manner of it is to be elaborated.

c) The National Authority for Environmental Protection and Nature Conservation (OKTH)

It is an independent ministerial authority which has tasks in two areas:

- it coordinates and controls the whole environmental protection activity;
- it controls directly some special fields of environmental protection.

A new advisory body of the President of the Authority is planned to be set up for giving advice, suggestions on the conceptual questions of environment management. The majority of members are planned to be invited from among scientists.

d) Parliamentary Committee for Settlement Development and Environmental Protection

After the dissolution of the OKTH this committee was established. By its regular activity - it listens to the ministers' reports, prepares the work of the Parliament - it will take over some tasks of the OKTH.

The detailed management system of the special fields of environmental protection is given in the Appendix. The different elements of natural endowments and human environment are controlled by different ministries or nationwide authorities, e.g. the land and forests by the Ministry of Agriculture and Food; the waters by the National Water Authority; the air by the OKTH.

To summarize the activities of this nationwide management system, it must be stated that in its present form it has not got

the sufficient political force to fight for the interests of environmental protection against other sectoral interests. There is no designated control authority in some special environmental fields (e.g. protection of mineral and medicinal waters, treatment of non-dangerous agricultural and industrial wastes). The burning issue of environmental protection in Hungary is the protection of water and soil, but these elements are not covered by the authority of the National Authority for Environmental Protection and Nature Conservation. Sometimes, ministries controlling special environmental field should represent both their own sectoral and environmental interest; they should promote the frequently contradictory activity of increasing production and environmental protection.

## 2.2. Local management of environmental problems

As the environmental pollution problems are usually of local feature local management has an important role in the general management of environmental protection and in the control of special environmental fields.

Councils - being at the same time self-governmental bodies and the local authorities of state administration, as well - operate in a two-level system:

a) county councils in 19 counties and in the capital;
b) local councils in villages, towns and districts of the capital.

Councils have the following possibilities and ways to participate in environmental management on their own territory:

a) Executive committees of county and local councils can make environmental regulations, which cannot contrast with laws of higher level.
b) County Committees for Environmental Protection and Nature Conservation were established in order to coordinate local environmental protection. These committees are consultative,

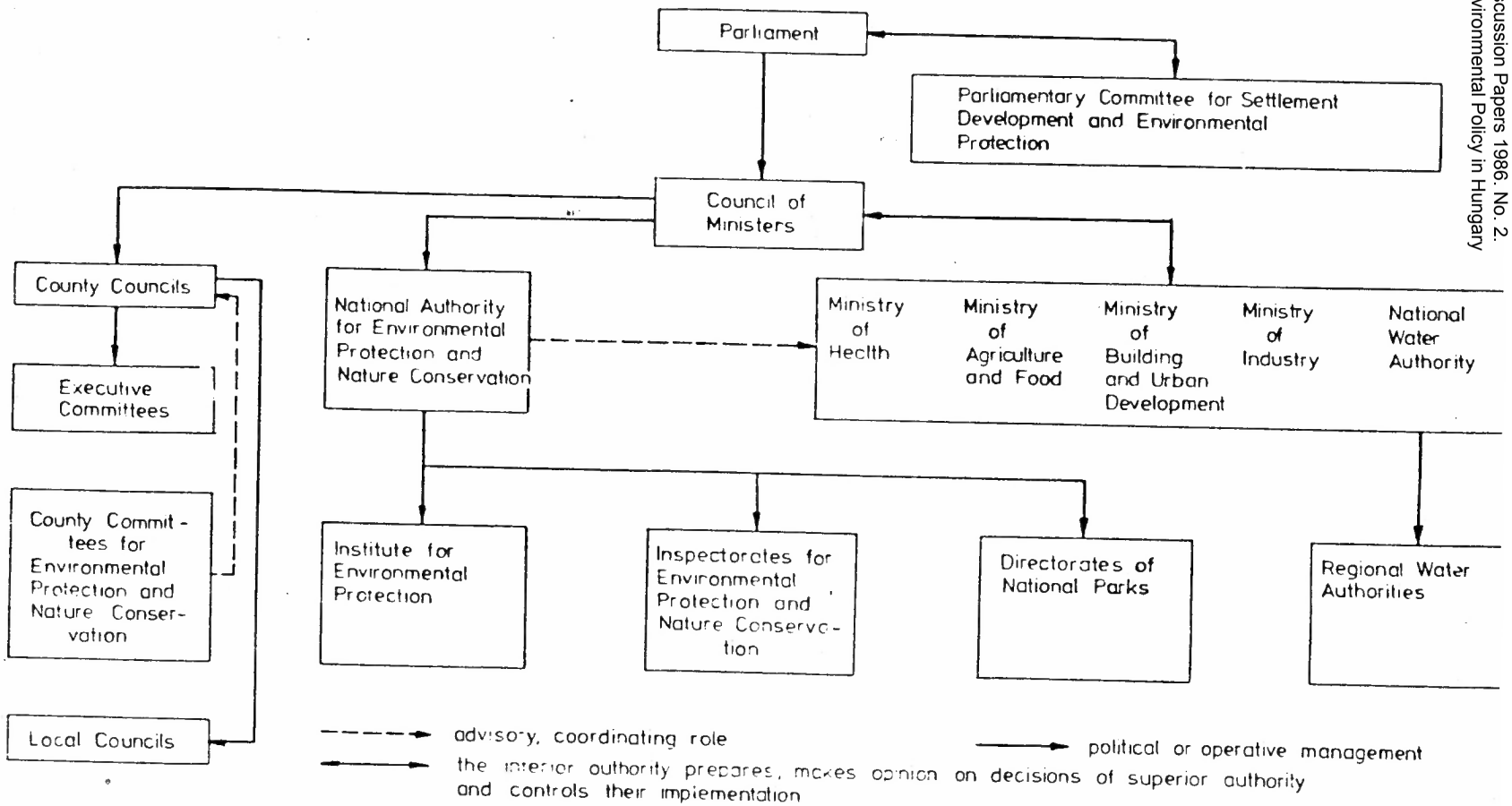
advisory bodies of the executive committees and control the execution of councils' environmental targets.

c) The County Secretaries of Environmental Protection and Nature Conservation work within the executive committees of county councils for continuous control of environmental protection. They follow with attention and promote the formation of environmental plans in the counties and the capital, support sectoral administrative department - dealing with environmental problems, as well - of executive committees of local councils.

d) Councils of their sectoral administrative departments (usually technical or building) act as authorities in certain environmental questions, e.g. in some local water management questions, in protection of air and man-built environment.

In spite of these possibilities councils rarely work efficiently in environmental management. They and their sectoral administrative departments have many other local tasks, so the interest of environmental protection has but secondary importance for them. Sometimes the lack of appropriate knowledge also prevents them carrying out their environmental aims. But it is due mainly to the councils' economic and political status that they fail to achieve considerable results in the protection of the environment.

Figure 1 Organizational structure of environmental management in Hungary



## 3. ENVIRONMENT DECISION-MAKING PROCESS

### 3.1. The actors of environmental protection

In socialist countries - so in Hungary, too - environment protection is declared to be one of the state tasks. However, decisions on environmental use are made not only by state organizations, producers but by councils and citizens as well. The decisions of these actors are affected by different interests which determine fundamentally the possible aims, means and the efficiency of a strategy for environmental policy.

#### 3.1.1. The state

Since the environmental protection has not been integrated into the reproduction process util now, the state endeavours the socio-economic practice to admit and observe environmental protectional values and norms of social consensus through different means.

a) Political and government decisions

The program of the 11th Congress of the Hungarian Socialist Workers' Party (1975) expressed the recognition of the importance of the environmental protection and development policy, which, speaking of our tasks to better the circumstances of living, declared: "We intend to establish a system of environmental protection which is able not only to stop the harmful processes, but to ensure development as well." This basic principle has been reinforced and developed by the act on the 5th five-year economic plan (1976-1980), by the act on environmental protection and the government decision about the execution of the act on environmental protection. The government decision of 1980 about the national conception for environmental protection and its set of demands was an important stage in the development of environmental policy. This decision states,that the protection of the environment must become an organic part of

the economic activities and planning, and that stress has to be laid on the environmentally sound tehcnologies. It specifies the twofold task of eliminating all the existing sources ot pollution and of preventing harmful pollution. Finally, it provides that no new investment, development or reconstruction should take place without investigation of its effects on the environment. But this type of law is obligatory only for some ministries, and no great effect can be expected, unless further public measures are taken. To indicate the intentions of the government, the enactment of some further laws can be expected, giving way to the environmental point of view within the economy to a greater extent.

b) National economic plans

Among the goals of the 6th five-year plan (1981-1985), environmental strategies were designed in accordance with an economic policy that intended to meet the requirements of the difficult economic situation, and with a long-range conception for environmental protection. A slower increase of investments was expected, as compared with the earlier plan period. Consequently, the environmental policy was planned to stop the growing pollution of the environment and allow no more destruction of the present quality of the environment. Financial resources were concentrated in the most endangered areas (the Balaton region, Budapest and its agglomeration, the Northern- and Middle-Transdanubian industrial areas, the Pécs-Komló region).

In the 7th five-year plan (1986-1990), again, the productive sectors of the economy get absolute priority. Thus, only the most urgent environmental problems can be solved, there is no economic possibility for a long-term, preventive environmental development. This five-year plan is less optimistic than the previous one: it forecasts further environmental

deterioration by 1990 - although environmental investments will be more important than ever. It intends to start diminishing $SO_2$ emissions (according to the international commitment of Hungary) and to keep surface water quality at the present level. The comprehensive program for the treatment of hazardous wastes will actually start in the coming years. In many cases (the pollution of groundwater, the acidification of soils, etc.) the plan forecasts but the diminishment of the rate of deterioration.

Both five-year plans accepted the principle that environmental protection is financed from the central budget "by the capacity of the economy". This conception indicates that the financial means for the environmental protection are drawn off from the development. Thus, when economic resources are limited, environmental interests have but restricted importance even in the national five-year plans of the economy.

c) Legal and economic means[+]

Basic rules in special fields of environmental protection are determined by acts in most cases, while in case of air protection, noise control this role is played by the Council of Ministers' order. They express the most important principles, norms of the given protected field, prescribe the permitted pollution standards and types of sanction.

National standards prescribing technical requirements for equipment, products in the interests of life-, health-, property-, and human environmental protection are of great importance in environmental protection.

Licences given by authorities have also a prominent role. There are activities that should get permissions from environmental management authorities, e.g. every water construction

[+] The division is relative only, because all economic means are incarnated in legal measures.

should be approved by the National Water Aughority. Non expressly environmental protection licences - in building, land utilization, housing, and traffic licences of motor cars - have an important role in preventing harmful pollution of the environment.

If environmental rules are broken the following sanctions can be imposed by environmental management authorities:
- restriction or prohibition of the polluting activity;
- compensation for damages;
- criminal law procedures;
- environmental fines.

As by the Act on the protection of human environment, 1976 enacted, the payment of fines does not release producers from criminal responsibility and obligation of establishing appropriate protection equipment or prohibition of activity. Until now, however, authorities hawe seldom applied the first three types of sanctions; fines are considered ad the most effective sanction.

Environmental fines are the most important type of economic means. They are aimed at forming the appropriate behaviour of producers by punishing the harmful pollution activity beyond the permitted standards. Their second - but more successful - task is to establish central funds for promoting environmental investments.

Besides the Water Management Fund and Air Protection Fund originated from waste-water and air pollution fines, started with the 5th five-year plan (1976-1980), the National Environmental Protection Fund has also been established from the central budget. Government supports environmental investments from it.

Sectoral ministries can promote the enforcement of environmental interests by tax- and price allowances granted to producers.

Environmental Impact Assessment is rather new in Hungary. A regulation of the Council of Ministers corrected several times since 1974 gives orders for the process of investment: every investment decision must be based on an inquiry with proper economic and technical documentation, with its content and elaboration matching the demands of the various investment categories (state, non-company, company, cooperative). Every investment has to be based on the demand of environmental protection as well as the settlement planning. The recent regulation of the National Council for Environment Protection and Nature Conservation (1983) expressed the Council's intention to make it obligatory for the planning of every productional investment to inquire about its environmental effects. A government order is to be expected soon upon this.

These regulations could only force the largest state investments to forecast their possible effects on the environment so far, and when they mention environmental effects they usually cover only the technical aspects and neglect the related economic questions.

1) Education

The Hungarian educational system started to carry out a systematical environmental education in 1974. The general reform of public education in the middle of the 1970s, was mainly concerned with the transformation of the structure and material of the subjects. This made it possible to include environmental studies and principles in education. In the very first year of the primary school a subject called "the study of the environment" is included in the education, which deals with natural processes on the whole, and the parallel study of the subject called "technics" teaches the children the relationship of man and nature. In the higher grades of the primary school and later in secondary schools, subjects about natural sciences (biology, geography, physics, chemistry) provide the students

with further environmental knowledge. In higher education, first of all at the agricultural and technical universities as well as at faculties of natural sciences at universities special subjects are taught, with a specifically environmental material.

The training of specialized environmental engineers started in 1974 at the University of Agricultural Sciences and at several technical universities, and in 1976 in the field of sylviculture. Among the various forms of the education, the most significant is the post-gradual training of specialized engineers. But the educational system of Hungary cannot yet provide properly skilled environmental specialists in every science referring to the matter. In our country, there is a shortage of experts in the fields of law, economy and other social sciences.

3.1.2. Producers

At present, among all producers, state enterprises can be said to be the worst pollutors of environment.

Since the interests of producers are frequently contradictory to environment protection, the state tries to force enterprises to consider the aspects of environment protection through various means and methods. It is in the peculiarities of state property and the economic mechanism that the reasons of these conflicting interests and the deficiency of efforts to overcome them can be looked for.

As a matter of fact, when a socialist state intends to put into force sanctions against enterprises, it means that its own 'children' should be punished. In such a situation, fines are to be imposed many times but without an overstrict approach of the state.

The traditional central planning is of sectoral nature, that's why, for example, industrial planning sets first and foremost production targets; the planning of infrastructural development (e.g. sewerage) is independent of it. Over industrial enterprises as state enterprises rights of state ownership are practised by relevant ministries which stipulate production tasks, provide enterprises with investment goods, incl. environmental protection investments as well. First of all the performance of production tasks is expected by the ministries, it is mainly for this purpose that the means of investments are put at the companies' disposal. Thus, enterprieses cannot be blamed if environmental investments fall behind.

In Hungary, the system of direct plan orders ended by 1968, sectoral plans are not prepared either. Nevertheless, sectoral ministries practised rights of state ownership over state companies until 1985. They wished to assert production goals not through plan orders but by financial regulations of management and informal connections (formed among the leaders of the ministry and the enterprises). Since 1985, the majority of state industrial enterprises have changed over to the system of self-administration, the state has assigned the rights of ownership to the collectivities of employees of the enterprises. The much stronger profit-interests and management independence of state enterprises create a situation similar to market economy: costs of environmental protection can undermine the market position of the enterprise. The general scarcity of capital can also make nonproductive investments more difficult.

a) Due to the income distribution of companies to pay environmental fines is more favourable than to make environmental investments. To pay environmental fines would mean hardly any change in the development funds whereas investments and developments carried out in previous years are heavy burdens for the development funds. What is more, before

1980 the the price-system allowed companies to charge the environmental fines to expenses.

b) As stipulated in orders concerning the interests of company leaders, the comprehensive evaluation of the activity of top level officials belongs to the tasks of the supervisory authorities. Whether a leader is worth rewarding and the amount of rewards must be calculated on the basis of the complex activity of the enterprise, incl. developments, structural transformation, foreign trading activity, supply of population ect. but excluding environment protection. The majority of company leaders are not concerned with the consideration of environmental protection aspects and are not interested in it, what is more, managers do not make easily investments diminishing the profit, if they want to be re-elected in the self-management system where managers are elected by employees for a period of 5 years.

In an organizational-institutional system of peculiar hierarchy in which informal channels and shadow mechanisms of state property operate, the responsibility of enterprise managers and that of central management cannot be separated perfectly.

3.1.3. Local councils

Even after the economic reform of 1968 councils have restricted independence, limited economic and political power, despite the declared principles of local self-government. Their main declared tasks are the execution of state economic policy and the coordination of infrastructural supply of the population.

The main targets of regional development plans are still elaborated in sectoral natural indices by the central planning authorities. On the basis of this, county and local councils prepare their own five-year and one-year plans by way of special coordination talks with the higher authorities. The financial means are centrally planned, too. So, local resources are strongly centralized and redistributed among counties and later in settlements.

In these conditions local councils have got limited resources for development from the central budget. So, on the one hand, they can hardly solve themselves the environmental problems originating from the lack of appropriate infrastructure (e.g. sewage system). But the more important result of this situation is that the relationship of councils and producers forces the councils to make unfavourable compromises in matters of environmental protection. As they need the employment opportunities, financial means and other help voluntarily offered by local producers they often have to give up the environmental interests of the settlement. What is more, for decades the industrialized counties and settlements have been in a more advantageous situation as to the distribution of the central budget. Thus, though councils have the right within their own territory to regulate the activity of producers from the point of view of environmental protection, they seldom practise it because of being strongly interested in the industrial development of their area.

Nevertheless, great changes have been introduced in financing settlement development since January 1, 1986. First of all, the importance of centralized redistribution will diminish, local financial resources (taxes) will gain importance. Local authorities will decide more freely about the utilization of their financial resources.

They are expected to express and follow better the local interests.

3.1.4. Citizens

Efficient environmental protection is unimaginable without social pressure and the participation of citizens. Except for a few pollution affairs which created a scandal (e.g. Lake Balaton), there are no institutional frameworks for environmental protection by citizens in Hungary.

Citizens' approach to environmental protection problems is characterized by two peculiarities. On the one hand, problems of environmental pollution become increasingly evident, important - in some settlements even tangible - for everyone. On the other, problems of environmental pollution are still considered to be solved by the state and the enterprises due partly to misinterpretations on the part of the mass media.

An essential condition to change this situation is that social organizations integrated into the hierarchical socio-political relations should start tending towards democracy. Although trade unions, communist youth organizations, the People's Front and the like have environmental protection programs, they have not changed the quality of citizens' participation.

The Constitution declares the right to a clean human environment, but there are very few legal means in the hands of those concerned. Individuals have no other right but to announce their experiences of offences against environmental laws or regulations. It is up to the authorities whether they chose to sanction the trespassing or put a stop to the damage. The authorities' decisions are legally incontestable.

Nowadays, it is for the first time in Hungary that a debate hopefully aiming at the enforcement of citzens'

interests has emerged in connection with the establishment of an incinerator of waste next to a small town, Dorog (N-Hungary). After longer coordination talks, the local council and other local state organizations approved to start planning it but the equipment is allowed to be built and put into operation - mainly due to citizens' pressure - if it complies with the environmental protection conditions of the council. Besides, one of the terms of the consent was central state financing for other environmental protection investments.

## 3.2. Policy implementation in special fields of environmental protection

### 3.2.1. Land and soil

The 6th Act on Land Protection of 1961 regulates the most important questions of land-use protection. For a long time it remained but a principle, until it was given a regulative force in 1977 in order to achieve effective results.

Agriculture provides 20 % of the total national income, and 40 % of the country's hard currency income is given by food export. In spite of the great economic significance of agriculture, the continuous decrease in the agricultural land is going on. Between 1935 and 1980 the agricultural land lost 1 million hectares, half of which was used for afforestation, the other half for construction.

Agricultural land tends to decrease in every developed country, but Hungary appears to be wasteful in this respect. For a very long time state investments for industrial or settlement buildings used agricultural lands practically free of charge. There was an alarming increase of territories taken away from agricultural cultivation in the 1970s. While between 1962 and 1975 the arable land became smaller with

12,000 hectares every year, between 1975 and 1980 it diminished by 41,000 hectares yearly.

The conditions of using agricultural lands for industrial or settlement investments were made stricter again in 1981. Besides the actual price, the buyer has to pay a considerably high fee to the county council. The fee is meant to protect lands of better quality by progressivity depending on the quality of the land.

In 1981, when the permission was first combined with this high fee, there was an 18,000 hectares increase of land taken away from agriculture; more than what was planned beforehand. 2,200 hectares were taken away from agriculture without permission. 20 % of the territories taken away was land of good quality. This law does not provide a uniform frame for land-use protection. It intends to slow down the diminishing of agricultural land, but it is hard to predict its real effect, whether the high charge for the utilization is able to stop the expansive constructors. It also regulates the recultivation of unused mining areas, which speeded up recently.

An important part of land protection constitutes protection of soil from natural forces and harmful effects of human intervention. Orders of the Ministry of Agriculture and Food restricting utilization of chemicals and permitting the output of properly tested materials, serve the prevention of harmful effects of pesticides and artificial fertilizer utilization which grow significantly. In allocating liquid manure from large-scale stock breeding farms, national standards have to be taken into consideration. In accordance with the land protection act land it is the users' duty to preserve land fertility but the Government supports complex amelioration - including soil improvement, soil protection and water management - by tax- and other allowances.

3.2.2. Water

The basic law for the protection of waters is the act No. 2 of 1964 which has been amended several times since then. Water management affairs belong to the National Water Authority, just a few tasks of local significance, concerning directly the population are within the competence of councils. Twelve regional water management boards of the Authority are operating in the country located according to hydrological features.

The economic use of available water reserve is destined to be promoted by financial regulators, e.g. fees for water reserve and use of drinking water.

Besides the water management act, different (e.g.shipping) regulations and orders of the Authority provide for water quality. Producers breaking water management rules can be punished to pay waste water fines and sewage fines. Producers discharging water - which contains pollutants over standards stated by rules - into rivers, lakes, subsurface waters, are obliged to pay waste water fines. Rules determine threshold standards for 18 polluting and 13 toxic materials for waters getting pollution. Fines are progressive depending on time. Water quality inspectorates make control serving as a basis for fines.

Producers discharging pollutants over permitted threshold standards into the consumal sewage system are obliged to pay sewage fines. Rules state threshold standards for 10 polluting and 17 toxic materials. Control is performed by Comminal Sewage Works.

To improve water management it is of utmost importance that a permission of the Authority is needed for water use, activities and constructions on water.

From the Water Management Fund originated from waste-water fines the President of the National Water Authority can support producers - completing their financial means - in their water quality protection investments, in the construction of common cleaning equipment. Producers can apply for this support by competition.

A special feature of Hungarian water protection is that 95 % of surface waters (98 % in August) enters Hungary from abroad in most cases already polluted first of all by the insufficient filtering of waste-waters. Therefore improvement can be expected only from international agreements. The Hungarian reach of our major rivers in moderately polluted, while a number of smaller rivers, especially in the industrial parts of Northern Hungary, are heavily polluted.

The problem of the pollution of groundwaters is on the rise. It is brought about by agricultural production, artificial fertilizers, chemicals and liquid manure from large-scale stock breeding farms, waste-water from village households (water filtering in villages being fairly underdeveloped). The country is situated over the lowest lying lands of the Carpathian Basin, where groundwater moves towards the lowest point of the basin (Southern Hungary), and that is where the pollution accumulates.

Some 6,000-7,000 water samples are taken regularly at 294 sites annually; these are analyzed for 20-30 components. So the country's water reserves are qualified by nearly 250 thousand data.

The water management organization is responsible for warding off the consequences of pollution accidents, the number of which is almost 200 a year.

3.2.3. Air

An overall legislation for air pollution control started to develop in 1971. On the basis of the Act on the protection of human environment Hungary is divided into three protected areas.
Air pollution level and its changes are measured by regional pollution control stations of the Institute for National Public Health belonging to the Minister of Health.

Producers and citizens causing harmful air pollution, operating large heating equipment which have a fixed air pollution source, are obliged to declare their polluting output and to supply information.

Air pollution fines are to be payed according to the emission standards stated for 8 pollutants. Producers causing pollution carry out measures and declare the results themselves. It is possible that the National Authority for Environment Protection and Nature Conservation controls measures but it happens rarely. Budapest and 4 heavily polluted counties have Council Environment Protection Funds from half of air pollution fines coming from their regions. The funds promote local environmental investments and are controlled by the executive committees of county councils.

There are different, not expressly air protection regulations, too, which serve air protection, e.g. National Building Rules, traffic licences of motor cars ($CO_2$ contents).

The 1973 order of the Council of Ministers on air quality protection set up a list of the requirements of air quality protection in the case of 31 sources of pollution, whereas the real number of harmful naterials is much bigger. It only regulates layers below 150m, and is concerned only about the biosphere in the strict sense.

In recent years, there has been an increase in the emission of the most common gaseous materials. The main pollutors are the industry, the heating in homes and traffic. 8% of the country's territory is fully covered by rather polluted air, places inhabited by 40% of the total population.

Since 1974, air quality and its changes have been examined by regional stations for measuring harmful pollution operating in the framework of Public Health Network belonging to the Ministry of Health. They carry out about 300,000 measurements yearly in more than 80 settlements.

Parallel with the self-control of air pollutors, an independent network for measuring emission also operates. Control measures are carried out by regional measuring stations of the Institute for Air Protection belonging to OKTH.

### 3.2.4. Dangerous waste substances

It was not legally regulated until recent times, the 1981 order of the Council of Ministers. Nowadays we experience the grave consequences of this failure. Since 1981, industrial enterprises have been ordered to deposit their harmful wastematerials, but the designation of territories for this use progresses too slowly. According to a programme adopted by the government steps have been taken towards establishing a network for the disposal of toxic wastes. The first establishment for the storage of such kind of wastes is expected to be put into operation by the end of 1985.

3.2.5. Others

In the field of the regulation of noise control considerable progress was made in the 1970s. Steps towards the unification of legal regulations and the establishment of appropriate organizational frames have recently been taken.

A new Nature Conservation Act was adopted in 1982 and a long-term development plan of nature conservation has been worked out envisaging considerable landscapes and areas to be declared protected. At the end of 1981 the number of protected areas totalled 775, on a territory of 430 thousand ha. (4.6 percent of the country's territory). In 1985, the country has four national parks.

## 4. CONSTRAINTS AND CONFLICTS

The obstacles to the implementation of environmental protectional purposes can be looked for on theree levels:

a) The development, situation of the Hungarian national economy, politico-economic decisions

In the decades of forced industrialization and extensive economic policy little attention was paid to environmental concerns. Hungary - together with other lately industrialized European socialist countries - started to build up its comprehensive environmental protection policy at a misfortunate historical moment, when, in the early 1970s, the period of rapid economic growth ended. Although the government made serious efforts to expand environmental investments, there was no possiblitity to improve the quality of the environment under the difficult economic circumstances. The postponement of important investments involved the accumulation of harmful effects.

In the early 1980s, Hungarian economy had a remarkable achievement: it could maintain its international monetary liquidity, it succeeded in diminishing debts and paying back with accuracy all due interests and credits in time. But we had to pay a price for this success: the standard of living began to decline, there were serious restrictions in investments and imports. The scarce investment resources were focussed on modernizing the energy economy and introducing new technology, but sources for infrastructural and social welfare development became strongly limited. The general economic situation was not favourable for environmental protection. Despite some progress achieved in certain fields - e.g. decrease in dust pollution, the halt of further surface-water deterioration - the basic goal of the plan was not fulfilled: the quality of the environment has still been worsening since 1980.

Various politico-economic alternatives are being shaped for the Hungarian economy to get out of the crisis, which have different effects on the condition of environment and possibilities to enforce environmental policy. In debates concerning development alternatives, however, the issues of environmental protection are not of primary importance.

b) Structural features of socialist societies

In East-European socialist countries the state undertook the enforcement of environmental protectional interests in socio-economic practice.

The scarcity of development resources - both at state level and in enterprises - the hunger for investments are permanent characteristic features of socialist economies. The fundemental reason is not the poverty of these countries

(there are both poor and strongly industrialized socialist countries), but - in Kornai's terminology - the 'softness' of budget limits. In the interest of growth, state enterprises can always draw money off the central budget, therefore the investment part of the budget is never big enough. It seems that the great problem of the distribution of central development funds is that non-productive - incl. environment protectional - investments would, indeed, reduce the financial means needed for the development of the national economy The state is in a contradictory position when intending to enforce enterprises as the operators of state property to adopt a certain behaviour because the state always wants to protect the enterprises. It frequently happens that sectoral ministries are at the same time responsible for the protection and utilization of certain natural endowments, resources. In such a way, the protection of environment is merely a moderately strict requirement among the expectations outlined for enterprises through formal regulations and informal channels.

As the producers' behaviour is governed by the expectations outlined, their environmental attitude is subject to maintenance- and growth-oriented basic interests.

Councils as self-governmental bodies cannot solve effective environmental protection interests in certain regions or settlements because due to their socio-economic status they are forced to make unfavourable compromises with the producers.

The existing channels for social control and enforcement of interests do not provide a large scope for citizens' participation in environmental decision making so their responsibility remains also limited.

c) Economic approach of modern economies

A special economic aspect is characteristic of the socio-economic practice of modern economies (both market and planned economies). Economy is equivalent to commodity producing economy and only activities statistically measurable in national income can belong to the sphere of economy. So natural resources (similarly to human-intellectual resources) are external capabilities to acquire freely and are destroyed by the harmful effects of the economy.

The present management systems of modern economies are too unbalanced to serve as incentive frames for the discovery and utilization of new way of development which are raised by ecological problems.

Modern economies try to assure the maintenance of environmental pollution within limits tolerable from the viewpoint of the population and short-term future development through environment protection which has not been integrated into the reproduction process.

The three levels can be distinguished only relatively and in theory, in reality the most general level is determinant in the hierarchy of causes. It means that after all the limits of environmental policy can be found in the economic approach of modern economies.

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The Hungarian case demonstrates, at the same time, that in a small country efficient environmental protection depends largely upon international cooperation. Since Hungary is not especially a small state (the territory of fifteen European countries is smaller than that of Hungary; Hungary's population exceeds that of twenty countries out of thirty-

three European countries), we can state generally the utmost importance of efforts aiming at a unified European environmental strategy. The mutual interests are so clear in this respect that crossing the borders set up by ideological, political and security considerations seems to be possible.

## APPENDIX

### The management system of the special fields of environmental protection

The management system of the special activities indicated in the act on environmental protection has the following structure:

1. a) the Minister of Agriculture and Food controls the protection of the
   - soil
   - natural flora and fauna not declared protected, cultivated plants, huntable and fishable species of game and fish not under protection from the point of nature conservation, domesticated animals and their genetic reserves,

   as well as, in agreement with the Minister of Health
   - microorganisms

   and, in agreement with the President of the National Authority for Environmental Protection and Nature Conservatic
   - partially huntable and fishable protected species of game and fish
   - disappearing domesticated species of animals
   - landscape declared to be protected from the point of nature conservancy

b) the Minister of Building and Urban Development controls the protection of
   - man-built environment

c) the President of the National Water Authority controls
   - amelioration
   - the protection of quantity and quality of subsurface and surface waters

d) the President of the National Authority for Environmental Protection and Nature Conservation controls the protection of
   - air
   - nature

e) the Minister of Industry, through the Presiden of the Central Geological Office, supervises the activities to protect the
   - rockbed
   - mineral resources.

2. The President of the National Authority for Environmental Protection and Nature Conservation is responseible for the management of activities concerning the production and neutralization of waste materials that are harmful for human beings and the environment, in agreement with the Minister of Health and the Minister responsible for the production.

3. The activity concerning the reduction of harmful vibrations, especially noise, is controlled by the President of the National Authority for Environmental Protection and Nature Conservation, in agreement with the Minister of Health.

4. The Minister of Health is responsible for the determination of permissible limits of harmful effects of chemical, physical, biological materials polluting the environment, and for the examination of their effects.

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