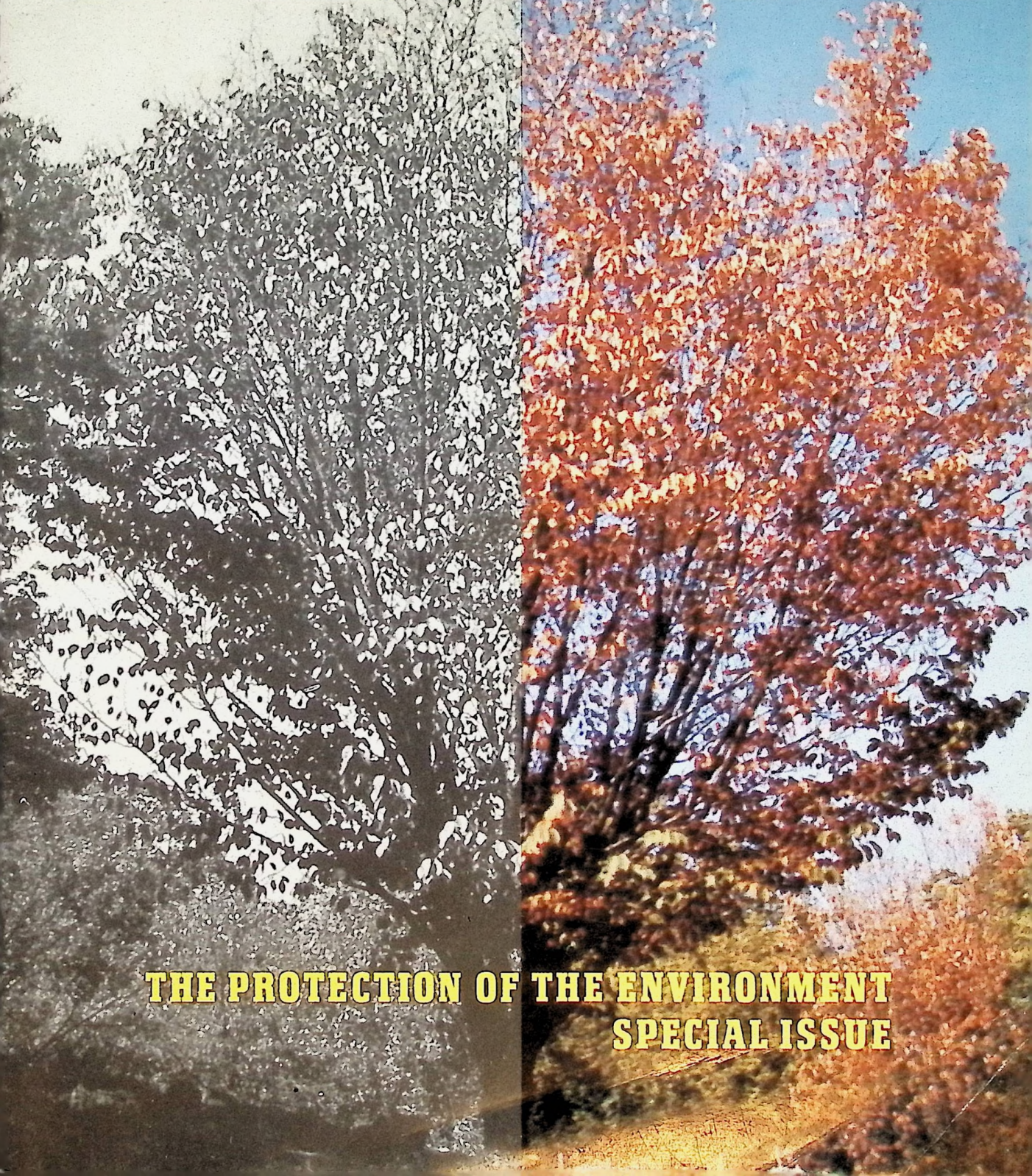


WORLDYOUTH

1987
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**THE PROTECTION OF THE ENVIRONMENT
SPECIAL ISSUE**



The Land Regained

The seemingly dead landscape, caused by the open-cut brown-coal mine supplying the power station with raw material, after amelioration works and recultivation is capable of growing vines on huge areas. (Visonta, Northern Hungary)
Photos: Mária Horváth



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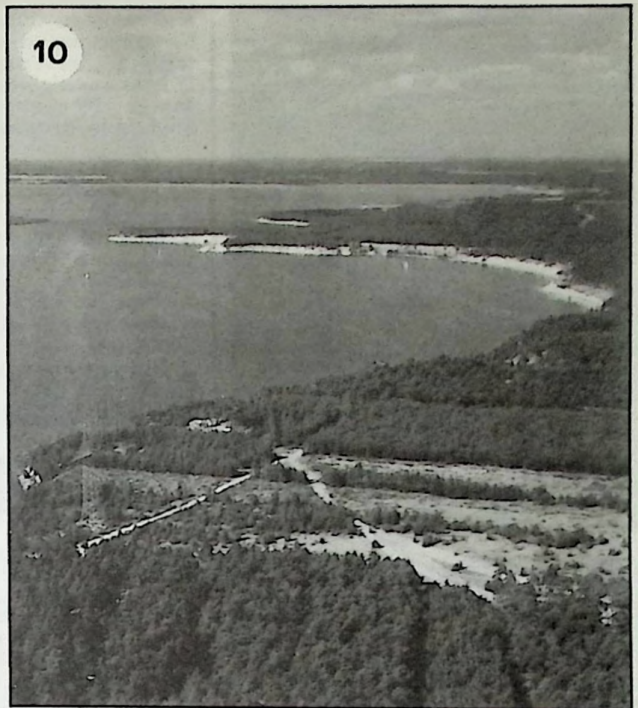
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A prerequisite for man to survive on earth is that there must be continuous suitable environmental conditions. But a vast body of facts from news reports and scientific research tells us that today we are in the process of eliminating these prerequisites and consequently of destroying our chances for future survival. To avoid this we must change the ways we use and exploit nature.

First, we must consider how dependent the human being is on the environment. All our material needs are derived, through a number of intervening steps, from nature. As a biological organism we must ensure that the abiotic (non-biological) environment remains suitable for living, e.g. that climate does not change, that ultra violet radiation from space remains on a low level, that the composition of gases in the atmosphere does not change drastically, and as consumers in the ecological systems we are dependent on the producing capacity of green plants through photosynthesis. This dependency is not merely restricted to food. Products of photosynthesis have an enormous importance in today's society as fuels, e.g. wood, coal, oil, peat, natural gas, as building materials, as raw material for paper production, etc.

Then we must be aware of the

Schematic diagram showing the human use of resources

For the line to indicate the beginning of human history it would have to start 50 m to the left of this diagram. Alternative A indicates a still increasing use, which is impossible, alternative B a continuation on today's level which will soon create major problems and alternative C a somewhat decreased level. This is the only alternative which is possible in the long run.

MAN - DEPENDENT ON NATURE

limitations of our environment. Natural resources are not endless. Some of them are renewable, e.g. wood, energy from wind and water, but they are limited in other ways. The areas that can be used for forest production are limited, only certain places are suitable for windpower production and a great part of the potential capacity for hydroelectric power is already being used.

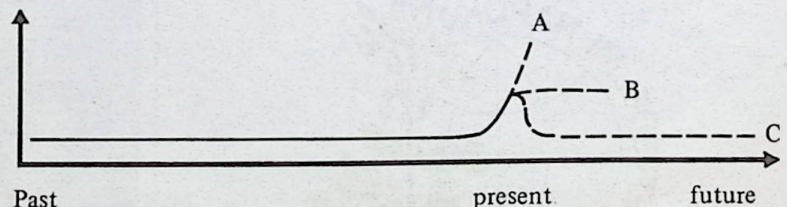
If we regard the use of renewable resources as that we live on interest, then the use of non-renewable resources is the equivalent of spending the capital that generates the interest. These non-renewable resources include oil, coal, metals and some fertilizers. The use of these materials also means that they and their contaminants are released into ecosystems causing pollution problems such as acidification, ground water poisoning, smog problems and an increased

level of carbon dioxide in the atmosphere. Nature, as a limiting factor for mankind, has been overlooked by the social sciences and political and economic systems. The phase of further increasing growth and exploitation can by necessity be continued for only a short while longer.

The environmental crisis means that it is no longer our technical knowledge that limits our exploitation of natural resources, but instead, it is nature that show sign of limiting further increase in the use of energy and raw materials. The capability of nature to resist stress is limited and this means that the human capability is limited as well because the human being is a biological organism.

Environmental problems are intimately connected with other major problems of society. The increasing population density, the ruthless exploitation of third world

Use of resources



After Hubendick, Människoekologi. 1985.

countries by multinationals, the distribution of limited resources between and within nations all play key roles in these problems. Solving them is more a political problem than a problem of knowledge. It is a necessary task for political organizations to raise and discuss these issues and to struggle for their solutions.

Barry Commoner, an American biologist and ecologist stated in his book «The Closing Circle» that one of the laws of ecology is «There are no free lunches». He meant that nothing can be taken out of nature without paying it back in some way. Exploitation today means great costs tomorrow and if we want to avoid future costs it is necessary to start acting today. Youth, who is going to inherit this world, has a special interest in avoiding these costs and has every right to demand action now.

Air Pollution

The use of the atmosphere as a sink for pollutants was not questioned in the early stages of industrialization. The atmosphere seemed vast and endless. Nevertheless, problems arose quite early in the neighbourhood of factories. This problem was solved by a simple and ingenious idea. Chimneys were built somewhat higher and the pollutants were more widely spread and diluted in the air. Unfortunately, there has been little development since then. The use of fuels for heating also caused troubles and is still one of the major factors in air pollution. As industries and dwellings became concentrated in space, so did the emissions of air pollutants. Under certain weather conditions the pollutants accumulate close to the surface of the ground. This is a serious hazard to human health. The 1952 London smog caused the death of 4000 people under such circumstances.¹ Almost all big cities and industrial centers suffer today from these problems.

The main sources of air pollution today are industry, transport and the burning of fossil fuels for heating and electricity production. These activities are mainly concentrated in the urbanized and industrialized region of the northern hemisphere. As an example, it can be mentioned that the USA, which covers 5.2 per cent of the world's land surface is responsible for 1/3 of the carbon monoxide, 3/8 of the sulphur oxides, 1/4 of the carbo-

hydrates, 1/6 of the nitrogen oxides and half the amount of soot that mankind sends into the atmosphere.² Air pollutants can be present in the lower atmosphere during quite long periods and this means that they can be carried over long distances.

Polluted air from Great Britain and Central Europe containing sulphuric and nitric acids, heavy metals, soot and organic compounds is washed out over Scandinavia causing acidification and the death of lakes, damage to forests and increased corrosion. In the same way, air from eastern USA transports pollutants to Canada and even Greenland.

These problems can be said to be regional but there are also global air pollution problems.

Sunburnt to death?

Sunlight contains energy-rich short-wave ultra violet radiation, which is dangerous to living organisms. A great part of this (99 per cent) is absorbed by the ozone layer in the stratosphere 15-40 km above the earth. Even if this layer seems to have a very broad vertical distribution it contains quite small amounts of ozone. If it were concentrated around the surface of the earth the thickness would not be more than 3 millimeters. Land-living organisms are adapted to the present level of ultra violet radiation. If all ultra violet radiation reached the earth, life on land would probably be impossible. A somewhat raised level would probably cause an increased incidence of skin cancer, eye illnesses and decreased agricultural production.

Some air pollutants react with ozone when they reach the stratosphere and thereby disturb the sensitive balance between the formation and breakdown of ozone. The most important of these are the freons, a group of chemicals which are used in atomizers, cooling systems, air conditioning aggregators and in the production of styrenes. Even though there have been some international regulations against the use of freons, production is still increasing. In the USA it is expected that by 1990 the use of freons will be double the 1976 level.³ Other threats against the ozone layer are nuclear tests in the atmosphere, supersonic aircraft and an increasing use of nitrogen fertilizers. All three factors will lead to an increased level of nitrogen

oxides in the stratosphere where they will react and decrease the amount of ozone. There is still some doubt about what will happen to the layer of ozone. New measures of this layer have showed a decreased amount of ozone above the poles.³

Greenhouse effect

Another global air pollution problem is the increased level of carbon dioxide (CO₂) in the atmosphere. Since 1850 the level has increased 17-26 per cent and the rate is accelerating.⁴ A higher level of CO₂ will result in decreased heat radiation from the earth and thereby cause a higher average temperature. This is called the «greenhouse effect». This leads to great changes in climate e.g., a different distribution of rain, melting of ice in the Arctic, Greenland and the Antarctic causing the sea level to raise. If all this ice melted, which is hardly conceivable, the sea level would rise 70 m! Even a few meters would be a tremendous catastrophe with great losses of arable land.

Necessary measures

It is quite clear that there is a need for action to diminish the problems of air pollution. The measures must be taken include:

- Major efforts to reduce smoke from industry and power plants. The technology is available. It is a question of priority.
- Introduction of emission-free public transport.
- Restrictions on private car and lorry traffic.
- Elimination of fuels with a high content of contaminants.
- Restrictions on the use of dangerous chemicals with long-term effects, as for example freons.
- A concentration on energy-saving in all fields of society.

Air pollution is an international problem. Support must be given to international cooperation and the transfer of knowledge and technology.

Life-giving water

Water is essential to all forms of life. A human being can survive with an intake of 0.75 litres per day. The real need is much greater. According to WHO there is a need for 150 litres per person per day to maintain a satisfactory hygienic standard. The access to fresh water is unequal. It is dependent on both the climate and the possibilities of managing existing water resources. An even greater problem than the unequal distribution is the bad quality of water in some parts of the world. According to WHO, in 1983 50,000 persons per day (!) died from water-borne infections in developing countries.⁵ Most of them were children.

The major cause of this bad quality is the lack of sanitary facilities. 75 per cent of the population in developing countries lives today without such facilities.⁶ The need for fresh water is not restricted merely to the biological needs of the human being. All kinds of activities need a big input of water.

The resources of fresh water differ from one country to another and an average picture of needs compared to resources cannot possibly be given here. However, it is quite clear that many countries, even in areas where rainfall is sufficient, have big problems with maintaining their fresh water resources at a sufficient level and quality.

Water quality and infant mortality

Nation	Part of the population in per cent with:		Infant mortality in per cent:
	clean drinking water	sewerage	
Ethiopia	16	14	15
India	42	20	12
Brazil	55	25	8
Costa Rica	72	97	2.7
USA	99	99	1.2

Source: *World Environment Report 8/8 1984*, p. 125

Water is lost ...

Human activity is destroying the possibilities for using fresh water as a renewable resource in three main ways. Firstly, water can be taken out from the natural cycle, e.g. for irrigation purposes, and thereby causing the loss of large quantities of water, for example through evaporation. Secondly, the natural cycle can be disturbed so that areas lose their water-retaining capacity, e.g. by deforestation and drainage and thirdly, water can

be polluted by human activity. An eloquent example of the first mentioned of these influences can be taken from the Soviet Union. In 1960 15.27 km³ of water was taken from the Volga for irrigation. 11 km³ of this was lost, mainly through evaporation, and only 4 or 5 km³ returned to the river. Since 1950, the losses from irrigation have increased by 80 per cent.⁷ This, as well as water used in cities and for industrial purposes, has diminished the influx of water to the Caspian Sea, the biggest lake in the world, so that it is losing 37 km³ of water per year. The surface has diminished by 10 per cent or 40 000 km² and the surface level is today 2.7 meters lower than it was in 1930.⁸

... runs away ...

Where the soil is covered with vegetation the energy from raindrops is checked, the surface runoff is reduced and the water-retaining capacity of the soil is increased. Where the vegetation cover is reduced or completely lost in the upper parts of the area where a river rises, the raindrops cause erosion and the water rapidly flows downhill. Sudden short high water periods alternate with low water levels. These rapid changes cause problems with flooding and landslides and a lot of water leaves the area without reaching the groundwater. The big need for firewood among the growing population in the countryside of Nepal has caused

Production of one metric ton of:	Water requirement, in metric tons:
newsprint	960
steel	160—260
synthetic rubber	2 640
coal	2 500
wheat	300—500
rice	1 500—2 000
milk	10 000
beef	20 000—50 000

After: Hubendick, 1985

a considerable deforestation and serious problems with landslides and erosion. The living conditions for these people are rapidly deteriorating as the problems become aggravated.

... or polluted ...

As for air pollution, concentration and urbanization causes big water pollution problems. The lack of sanitary facilities has already been mentioned. It must be stressed that the creation of these facilities often has a tendency to move the problems somewhere else. An example from China can make this more clearer. In Shanghai more than 5 millions m³ of waste water per day are discharged into the river Huangpu. Only a few hundred thousands of these are purified. The Huangpu is today one of the biggest "draining ditches" in the world. Despite this, the river is the main raw water supply for Shanghai. The proportion between the water coming with the Huangpu and the discharged waste water is 6:1, and 4:1 during summer when the water level is low.⁹ The waste water pollutants can be roughly divided into two main groups, organic wastes and substances toxic to living organisms. The first group which is mainly wastes from households causes overgrowth in aquatic ecosystems, depletion of oxygen and as a consequence, the production of toxic substances from oxygen-free degradation. This waste can, if properly purified and handled, be returned into the ecosystems and for example, be used as fertilizer in agriculture. A prerequisite for this is that it is not mixed with the second group, which consists mainly of wastes from industry. Among these pollutants we find the whole range of polluting agents causing different threats to living organisms. Their discharge must be kept as low as possible and wastes from the purification of industrial effluents must be deposited safely.

The poisoning of groundwater is a special problem. Leakage from industry, agriculture and acidification can cause serious problems. In intensive agriculture the use of fertilizers is very inefficient. About 50 per cent of the nitrogen applied is not used by plants and leaves the soil ecosystem. Sooner or later some of it appears in the groundwater as nitrate. Water containing more than 50 ppm (parts per million) of nitrate can be dangerous to

the health of children less than 2 years old. When it is broken down to nitrite it can affect the oxygen-carrying capacity of the blood. Nitrite can also change into nitroamines which have been shown to be carcinogenic. If the groundwater becomes acidified by the accumulation of air pollutants, poisonous metals may be released from the ground. Acidified water can also release metals from water pipes. Lead and copper release is a growing problem in areas suffering from acid rain. According to reports from Great Britain there are 5 million inhabitants living in households where the water is suspected to be poisoned by lead from old waterpipes. Some of these reports have been kept secret by order of the British government.¹⁰

Save the waters

The need for hygienic facilities is obvious. The WHO estimates that 90 per cent of infant mortality could be avoided simply by providing fresh and clean water. Where these facilities are provided, there must also be purifying plants. A proper recycling of the organic waste in society would diminish the threats to water resources of all kinds and would also reduce the need for fertilizer production.

There are many possibilities to solve problems created by discharges from industry. Closed water systems, i.e. a very low input and output of water from industrial processes can be installed. Avoiding the use of dangerous chemicals and purifying plants already existing in industry are other ways. Losses of chemicals from agriculture, both fertilizers and pesticides, must be kept on a very low level. This can be achieved by changing cultivation systems and, of course, with a decreased input.

Energy – a central role

The use and availability of energy has been one of the crucial factors in the development of society. The enormous stream of energy that was released in connection with the industrial revolution and which is still increasing has created possibilities for a vast exploitation of natural resources and rapid industrial expansion. It is mainly the

use of fossil fuels that has made this possible. This coal and oil epoch has created the necessary conditions for a higher standard of living for some people, but has also caused serious problems.

The control of energy resources, today mainly exercised by transnational companies, gives a strong influence over today's society and is one of the most profitable businesses. As a consequence of this, the use of energy is unfairly distributed. An average person from the 36 poorest nations uses less than 1 per cent of the energy consumed by the average person in the 20 richest nations.¹¹ The same pattern can be seen within nations. Use of energy also plays a crucial role in environmental problems. The production, or more correctly the transformation, of energy creates some of the most serious environmental problems we have to face. Among these can be mentioned acidification, the increased level of carbon dioxide in the atmosphere, production of nuclear waste, pollution of seas and air. An abundant supply of energy also means possibilities for exploitation of natural resources and thereby endangers the environment. This can be seen, for example, in modern agriculture. During the last thirty or forty years, much human labour and limiting factors in agriculture have been substituted by inputs of energy, mainly from fossil energy resources. Human labour has been mechanized, fixation of nitrogen for fertilizers is an energy-intensive process, irrigation and pesticide production are not possible without a high input of energy.

Modern agriculture increases yields but diminishes efficiency in energy use. The proportion between output and input of energy in traditional maize growing in Mexico is 30.6. The same figure for modern maize growing in the USA is 2.58, for yields of 184 and 481 kg protein per hectare respectively.¹²

This heavy input of energy has caused several environmental problems. Groundwater poisoning by nitrate and pesticide residues, soil packing by heavy machinery, pesticides dangerous for both environment, producers and consumers, increasing transport demands, etc. This tendency can also be found in other activities in society.

As mentioned before, energy sources can be divided into finite and renewable sources. Among the finites, which today account for approximately 80 per cent of energy used, we find coal, oil, peat, natural gas, and uranium for nuclear

power plants. The use of these can only be a parenthesis in human history and most of them involve very serious environmental problems. The air pollution problems connected with the burning of fossils have already been mentioned. Mining, extracting and transporting these fuels create other serious problems.

Using nuclear power for producing electricity was a spinoff effect from the development of nuclear weapons. During a short period it was thought to be the final solution of energy problems and it was described as a clean and cheap energy source. Today there is reason to be more sceptical. Mining uranium and purifying the fuel results in problems with slag, release of heavy metals and low radiation in the neighbourhood. Nuclear power plants are great potential risks for the environment and humans. After Harrisburg and Chernobyl no one can say that an accident is improbable. The spent radioactive fuel must be kept safe for tens or hundreds of thousands of years. This will create great costs in future and nobody can guarantee what will happen during such a long period. This fuel can also be used as raw material for making nuclear weapons. A spread of nuclear technology will result in a spread of material and ability to make nuclear weapons.

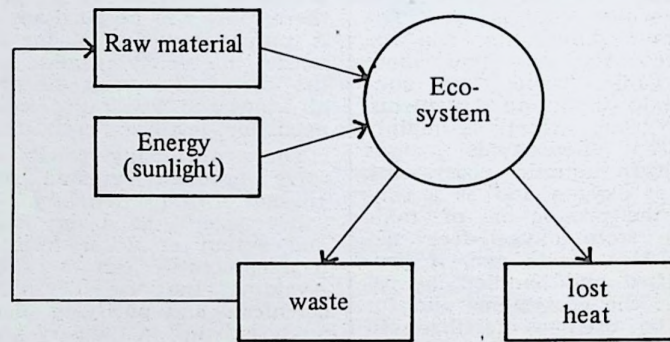
On the other hand there are the renewable energy resources. Solar energy, wind energy, hydroelectric power, wave and tide energy, biomass as a fuel and geothermal energy have great potentials but there is a need for technological development. The most widely used of these today is biomass. It can be used directly for burning as fuel or be transformed into biogas or liquid fuels. Alcohol produced from sugarcane is today widely used in Brazil as a fuel for cars. The big need for firewood in some parts of the world has created serious problems with deforestation and the degree of efficiency when it is burnt is often very low. Regrowth of forests must be guaranteed and simple but efficient stoves must be available. The production of biogas from organic waste can be an alternative to using firewood. It has been introduced in both China and India with good results. Together with solar and wind energy, biomass has the advantage of being widely spread and there is no need for extensive and expensive distribution networks.

From fossils towards renewable energy sources

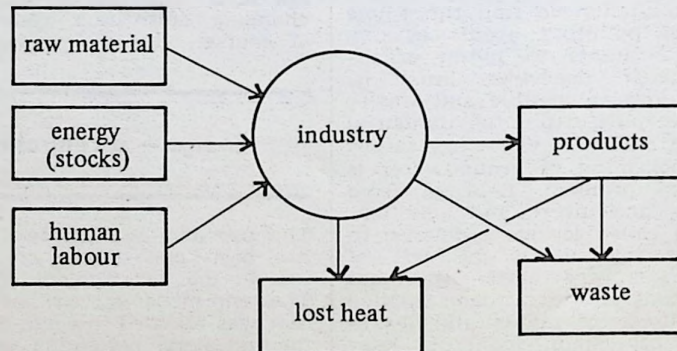
In future it will be necessary to change from using fossil fuels and nuclear power towards renewable energy resources. The sooner we can achieve this, the lower will be the price for environmental problems in the future. A big task is to save as much energy as possible. New technology provides us with excellent tools for this. Heat lost from industrial processes must be used for heating or electricity production. Old, inefficient machines must be replaced by new ones with a high degree of energy efficiency. Transport must be done with a low use of energy, e.g. by ship and railway, and public transport must be developed in and between cities, reducing private road traffic. A low and efficient use of renewable energy puts little strain on the environment and human health and every step towards this goal is important.

A closed system

This world can, when it is a question of materials, be considered to be a closed system. The existing mineral resources can therefore be looked upon as stocks. In this way they are, of course, limited. It is true that many of them exist in enormous amounts and the limiting factor is not the quantity but the low concentration. This makes it almost impossible to use them, because of the high input of energy that would be necessary to process them. Another limiting factor should be the environmental problems that mining and purifying generally cause. The best deposits have already been used and we are forced to use poorer and poorer deposits with a lower content of the desired material. The use of these minerals in society is mainly linear. When the product is used and thrown away there is normally no system to recycle it.



Nature's principle. Waste is recycled.



Principle of the industrialized society. Note the linear path from raw materials to, ultimately, waste. From: Hubendick, Människoekologi. 1985.

Metals which may be in short supply in the near future are lead, zinc, tin, gold, silver, platinum and copper. Other minerals of great importance to mankind that are available in limited quantities include phosphorus which is needed as a fertilizer in agriculture and cannot be substituted by any other material.

The need for recycling cannot be overestimated. Recycling must be planned already when a production starts. Many products that are deposited today are impossible to recycle because of the high costs of purifying the wanted materials. Another important step is, naturally, to make products of a high quality and with a longer useful life.

Endangered flora

An increasing problem practically everywhere in the world is the effect of human activities on vegetation. Cause and effects differ but the result is the same. The amount of vegetation is decreasing in a world where the need for this vegetation increases.

Disappearing forests

Tropical rainforests are the most complicated ecosystem on earth. Thousands of different plant and animal species can be found even in very limited areas. It is surprising that these forests grow on very poor and infertile soils. The solution is a perfect recycling system in which every nutrient is efficiently recycled and no losses are allowed. These forests exist in a green belt around the Equator and they are threatened by different activities. Overpopulation and lack of arable land force people to try using the forest area by burning. Burning on a massive scale means that there is no time for the forests to recover and areas soon turn into almost infertile land and cannot be used for food production. In the middle of the seventies it was estimated that 140 million settlers lived in tropical rainforests.¹³ These effects are mainly due to the fact that responsible governments have not undertaken necessary decisions on land reforms.

Another problem is exploitation by multinationals. Some of the trees are very valuable and in the in-

dustrialized western world there is a great demand for this timber. Between 1950 and 1980 these countries increased their import of wood from the tropics 15-fold.

Japan is the main importer, but Western Europe and the USA are important as well. This timber industry is often ruthless. It is common that only a few desired varieties of trees are taken away, but the damage is almost total. Out of 1700 tree species in Amazonas there are only 8 with a commercial interest.¹⁴ Some big companies from the US exploit the rainforests in Latin America and use the land for cattle breeding to supply their people with hamburgers.

The UN's environmental organization (UNEP), in cooperation with the agricultural organization (FAO), made an estimate in the beginning of the eighties of the decrease in the area of rainforests. If the rate of decline continues at the present level, the rainforests in the Brazilian part of Amazonas will disappear in 130 years. 11 per cent of the Asian forests will disappear by the year 2000. Countries where the tropical forests may disappear within 30 years are Costa Rica, El Salvador, Haiti, Paraguay, the Ivory Coast, Gambia, Nigeria, Nepal and Sri Lanka.¹⁵

The effects of this disappearance are difficult to predict. It will mean extinction of thousands of species of flora and fauna. A great number of them have not even been recorded yet. This advanced ecological system has been developed over millions of years and much valuable information will be lost forever. Edible plants, important medicinal plants and products for technical use will be lost when these forests disappear. Other effects will be erosion, changes in climate, loss of water-retaining capacity and a great loss of nutrients. These effects will have consequences in areas far from the forests that have been destroyed.

Earth becoming a desert

Desertification caused by human activity is a growing problem. It is mainly caused by an increasing utilization of areas with a low productivity. Overgrazing brings about desertification in dry areas. With increased population the amount of cattle increases and the

vegetation becomes insufficient for the cattle. When vegetation disappears, soil blows away. This process is aggravated by trampling by the cattle. The surface becomes compacted and water runs off it. An increased evaporation from the soil leads to a higher concentration of salt. Overgrazing is encouraged by production for export. In Botswana, cattle breeders cause desertification because of intensive meat production for export to Europe.¹⁶ Cash crops for export force native agriculture to overburden dryer areas more sensitive to erosion. During the dry period in the Sahel area in 1967-1972, the cotton production in Mali increased by 400 per cent and the peanut production by 60 per cent. During this period many people starved to death in the area.¹⁷ The UN's environmental organization has estimated that 35 per cent of the land surface on earth is threatened by desertification and one fifth of the population is living in these areas. 21 million hectares of agricultural land are lost every year. 135 million people live in seriously damaged areas.¹⁸ Desertification is a detrimental process on a vast scale. It brings about an ever decreasing biological productivity and base for human life. Halting desertification is one of the most important tasks for mankind.

A world-wide strategy is needed to solve the problems of desertification. Vegetation must be protected and new vegetation must be planted. Tree planting projects are of tremendous importance, as are alternative ways of supplying the native population with food and energy.

Another big threat to vegetation is the death of forests caused by air pollution. The unchecked development of transport and industry in Europe has caused great damage to forests. In West Germany in 1983 it was estimated that 34 per cent of the forests were damaged, dying or dead.¹⁹ In Czechoslovakia 45-60 per cent is directly damaged.²⁰ The whole of Central and Northern Europe is affected and the process continues to accelerate. The same type of problems are reported from the USA, Canada and Japan. If air pollution cannot be stopped these areas could develop into chemical deserts.

Desertification in future in million km ²				
Degree of risk	Africa	Asia	South America	Total
Today's deserts	6.2	1.6	0.2	8.0
Acute risk	1.7	0.8	0.4	2.9
Great risk	4.9	7.3	1.3	13.5
Moderate risk	3.7	5.6	1.6	10.9
Total	16.5	15.3	3.5	35.3
% of land surface	55	34	20	28

Source: FAO: *Agriculture. Toward 2000*

The chemicalized society

Chemistry is the branch of science achieving the fastest development in knowledge. It is estimated that 1000 new chemicals are synthesized and registered every day in chemical laboratories all over the world. Only a few of these chemicals are used for a particular purpose but the enormous amount of available chemicals has resulted in a rapid increase in the production and use of chemicals in today's society. Most of these chemicals are new and do not occur naturally. There is therefore no natural adaptation to these chemicals and little is known about their long-term effects.

These new compounds are used in many fields, such as pesticides in industry and agriculture, for almost all kinds of industrial purposes, as food additives and as new soluting agents. This increased use of chemicals has created many risks and environmental problems. The first crucial point in handling these chemicals is, of course, their production. A dangerous working environment can cause serious health problems and sometimes be lethal. The incidence of serious diseases, such as cancer and damage to the nervous system, is increasing. The real effects of today's chemicalization will remain undetected for some 20 or 30 years because of the long latency period of these illnesses. More and more evidence of the connections between chemicals in the working environment and different diseases is being found by medical science.

We are also facing the risks of accidents and careless handling during production and transport of these chemicals. Almost all villages in the industrialized society today have hidden «chemical bombs» because of the storage and production of dangerous chemicals. The development of a chemical for a certain purpose is often very expensive, requiring large amounts of capital and advanced technology. As a consequence, these chemicals are often developed and produced by multinational companies, totally irresponsible in their actions towards man and nature. The names of Minamata, Seveso, Bhopal and the Rhine are now identified with tragic accidents and ruthless chemical companies.

Dangerous production is often moved to developing countries which lack possibilities to control the production. Hazardous chemicals, for example different kinds of pesticides, the sale and use of which are prohibited in industrialized countries, are exported and sold in developing countries without any instructions for their use or any warning marked on them. And where these are provided, they are often in a foreign language although very few of the farmers or farm workers are able to read at all...

Every year more than 1000 people in the developing countries die because of misuse of pesticides.

Pesticides were introduced on a large-scale with the so-called «Green Revolution», together with new types of seeds and fertilizers. These new plant strains require pesticides, a high input of fertilizers and often irrigation. They are often sold together with fertilizers

and pesticides in packages «ready for use». At the same time the old types of seeds, adapted over thousands of years and not demanding the use of pesticides and fertilizers, are disappearing for ever. As a result, many farmers in the developing countries have become dependent on the multinationals producing chemicals.

The environmental problems are intimately connected with other problems and development tendencies in society.

Decisions in such areas as the planning of production, distribution of resources or land ownership, result in consequences for the environment. These consequences are rarely taken into consideration before these decisions are made. Future costs for cleaning or health effects are not included when costs are estimated. Decision-makers in industry and political organizations are often totally ignorant about the environment and the consequences of their decisions. Demands for better care of the environment are dismissed and said to be obstacles to development. There is a reason to ask: For whom is this «development» meant?

The capitalistic model is contradictory to better care for the environment. This becomes very clear on the international level. Imperialism can be said to bear great responsibility for the major environmental problems of the present time. In its constant efforts for expansion it is exploiting both man and natural resources. In the distorted society which imperialism has shaped with great inequalities between and within nations, ruthless exploitation becomes a rule and possibilities to solve the environmental problems are very limited. Even if it is impossible to derive an environmental problem from direct exploitation, it is mostly due to the social structure which is a prerequisite for imperialism. However, environmental problems exist even in socialist countries and some of them are very serious. Rapid industrialization and economic development have caused great pollution and exploitation of natural resources. Demands for measures against these problems have often been neglected. Environmental destruction is, just like a nuclear war, a threat to our possibilities to survive on this planet. The effects of this destruction can be seen everywhere. Every child that is born on earth today has, in his or her body, poisons produced and spread by man. These problems especially affect young people and create concerns about the future.

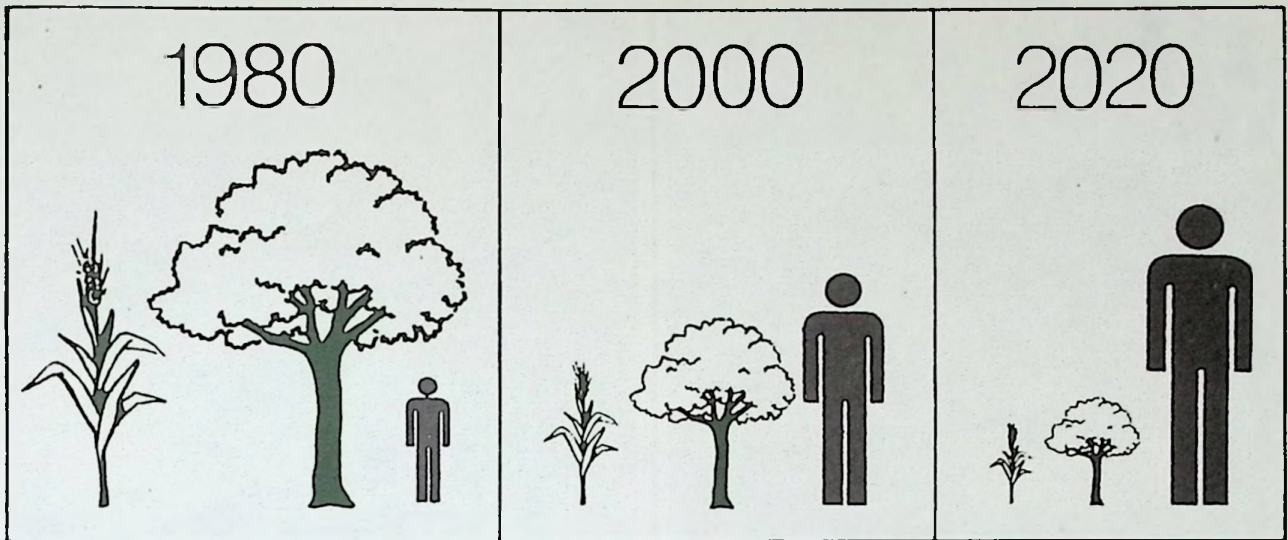


Chart indicating the proportion of forests and population if the present rate of decrease/growth continues.

According to a survey among Swedish youth, environmental problems were given as the main reason for being concerned about the future. It is natural that youth have intentions to change this development and solve the problems.

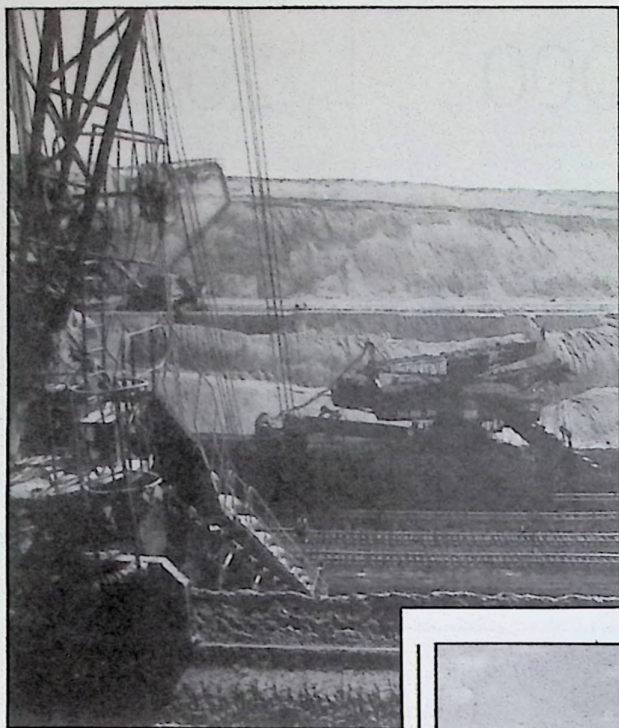
Therefore, youth organizations have a special responsibility to spread information on and struggle to solve the environmental problems. These problems are international and need international solutions. It is crucial and necessary that they be discussed and it is common interest to raise demands for their solution. This interest is not limited to political organizations. Environmental organizations exist almost all over the world and a dialogue and cooperation between political and environmental organizations will be mutually beneficial.

There is a need to educate and inform members about how serious these problems are and to encourage them to take part in the struggle for the solution of these problems. Knowledge about the international situation is important. Joint seminars, courses and camps can bring about something of this. International actions on different themes to increase awareness of environmental problems are necessary. International unity will also give weight to our arguments for acting against environmental pollution in our own countries.

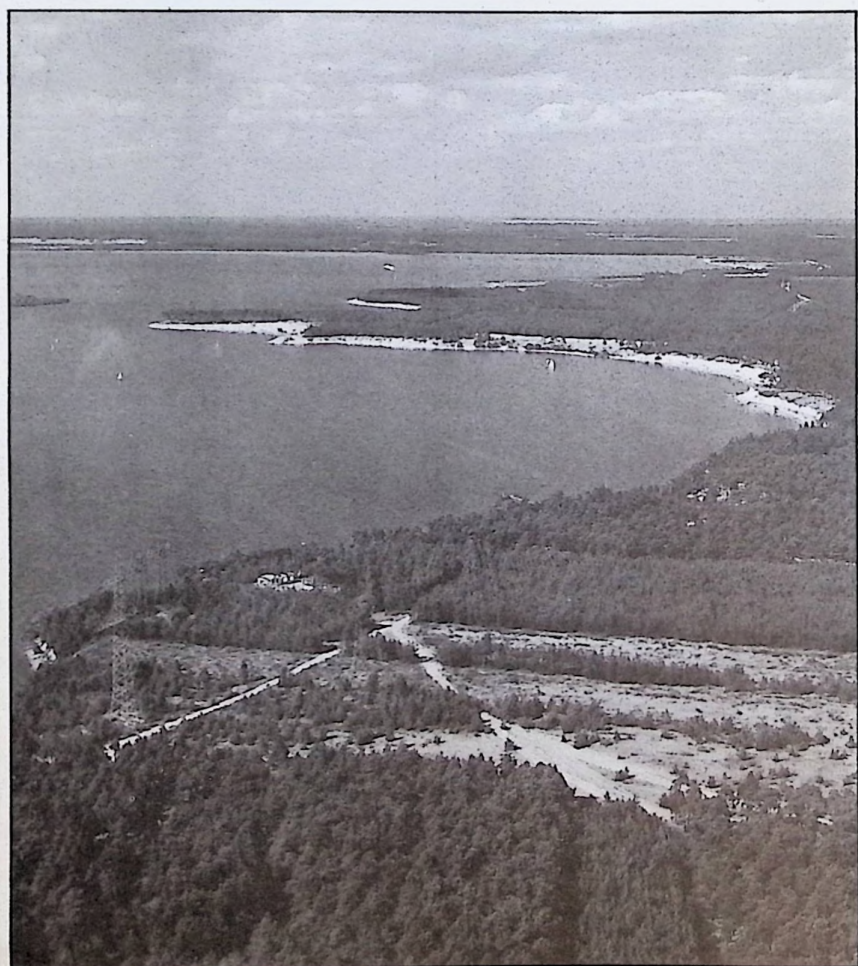
Written by Eric Carlton
(KU, Sweden)

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A brown-coal open-cut mine
in the GDR



Worked out brown-coal
open-cut mines are turned
into amenity areas.

The realization of the need for environmental protection is leading youth to take part in the ecological movement, expanding its content and introducing new forms. But it is quite obvious that the vast educational and natural protection potential is being used only partially. The protection of the environment does not tolerate half-measures and amateurishness; the efforts aimed at its protection must be pooled and coordinated, because the relationship between nature and society has reached a critical situation in which knowledge is required of the special socio-ecological laws, «inexorable» as the laws of the classical natural sciences. The laws of the systematic integrity of the natural environment are the most important discovery of our days from the viewpoint of science and ecology — they call for a new thinking, new knowledge, new environmental protective practices and tactics.

* * *

During the work of the Ecological Centre of the 12th World Festival of Youth and Students, as a result of the meetings and discussions with the colleagues from 115 countries, we came to the conclusion of how vast was the field of our ecological activity and how little we have done so far... We have made a special discovery for ourselves concerning the extent to which young people have been united around the concrete goals and tasks, big and small: applying their own efforts to clean rivers and lakes, take care of the forest paths, land reclamation, collecting wastes in the woods and many others, believing that concrete actions are the best form of propaganda for the ideas of protection and resurrection of nature.

Members of our generation are also coming out against the construction of ecologically harmful facilities, paying special attention to the esthetics of the environment, revival of the beauty of nature, which is inseparably linked with Man's spiritual world. If we want to be beautiful, spiritually rich, interesting to ourselves and to each other, we must be surrounded by healthy nature, which in our aggressive and machine age can be preserved only through the most serious efforts.

The experience which was accumulated by the young people of Moscow during the Festival, had an effect on everything, including the organization of new ecological clubs,

On the Development of the Youth Ecological Movement

which are mostly led by the specialists who took part in the work of the Centre. And today, when we get together, many of us ask one and the same question: how should we plan our future work so that it is interesting and pays dividends in terms of genuine environmental protection?

If the youth ecological movement of the 1950s-1970s was mainly engaged in the issues of protecting living nature, then starting from the 70s the social orientation of the movement has been continuously growing and attempts to consider ecological problems in the context of the economic, cultural and historical heritage.

The ecological movement in the USSR does not regard its activity as an alternative to the formal structures of ecological education and upbringing, but instead it tries to complement and expand them, employing for this purpose new forms, tackling the solution of new meaningful tasks.

A prerequisite for the consolidation of the efforts of formal natural environmental protection organizations and informal structures and the basis of many practical initiatives is the principle of continuity in the system of popular education at all its levels — at pre-school establishments, at general educational and vocational and technical schools, at specialized secondary and higher educational institutions, in the system of retraining and further training for specialists.

With every passing year this principle is being applied more and more in the organization of education and upbringing in an awareness of the natural environment, not only among youth, but also among the broad strata of the population. And this is

understandable, because the preservation and increase of the country's natural wealth is a major task of all Soviet people, part of the creation of better living standards.

At the present stage of the country's development it is important to assess the entire accumulated positive experience in environmental protection. No less important is the task of deploying new efforts and directions, creative initiatives for the protection of the natural environment and nature by young people. It is simply not sufficient to launch mottos of environmental protection for moulding a creative attitude to the world: it is important not only to carefully safeguard our natural and cultural heritage, but also to contribute to the formation of a healthy and valuable environment of life and activity for both present and future generations.

Everything begins with small things and, first of all, with Man himself. Each representative of the country's younger generation should develop the ability to coordinate their actions with the actions of other people. Such «self-construction», «self-education» in the course of participation in improving life at school, the immediate and wider environment contributes to the formation of an ecological viewpoint, the achievement of an ecological approach to life and various spheres of activity, the creation of a new quality of social life.

The formation of such «ecology of our home», as one of the major directions of the youth ecological movement of the 80s, is inseparably linked with the tasks of continuous ecological education and upbringing. Here it is possible to speak about the

education of an «ecological» man — a man taking an «ecological approach» in all manifestations of his life and activity, a man capable of defending the ecological viewpoint. This task predetermines the necessity of joint actions of various age groups of the population. It is the young people in particular who are able to assume the role of the initiator of local ventures, involving the young and providing them with experience and skills in environmental and creative activity.

Well-known in this direction is the work of the stations of «young naturalists», «friends of nature», «young forest wardens» school and student teams in environmental protection. At present in the USSR there are nearly 100 student teams, which have already marked the 25th anniversary of their activity. They are busily engaged in the improvement and expansion of the forms and fields of activity of such organizations of youth.

Speaking about the tasks of launching the youth ecological movement, we believe that it is insufficient to confine the activity to «small» affairs only. Each young man or woman on the job has to tackle «big» ecological problems — various consequences of man's irrational influence on nature.

Therefore the moulding of an ecological viewpoint is also necessary for a professional attitude to work. The complexity of many problems conditions the launching of the creative initiative of young people to set up interprofessional associations, various separate professions of groups of youth aimed at jointly resolving various problems (social, economic, technological and others which bear on the solution of ecological problems), the implementation of various programs aimed at tackling these problems.

It is in the process of implementation of these programs that not only ecological awareness may be formed, but also a new type of ecological thinking. Consequently, people with organizational and management skills will emerge making it possible not only to control the ecological harm caused, but also to avoid further damage. Only in this way will it be possible to intensify the economic life and the further development of Soviet society, development without negative ecological consequences.

Thus the present-day youth ecological movement in the country embraces natural environmental and creative initiatives to tackle «small» and «big» ecological problems. A new component of the ecological movement has predetermined the appearance of new forms of ecological initiatives. They include the creation of the Centre of the Youth Ecological Movement in Moscow in 1987.

It is a public organization and is called on to contribute to the promotion of the socially useful initiatives and activity of the young people living in Moscow and Moscow region, mobilization of their creative forces for an all-round scientific and practical activity to tackle topical ecological problems, formation of a civic stance of the young men and women, their all-round ecological education and the shaping of ecological awareness in the young generation.

The Centre is called on to contribute to the creation and unification of youth ecological clubs, teams, blue and green patrols, circles and schools of ecological knowledge (at enterprises, institutions, higher educational establishments, schools, vocational technical schools, and also at the place of residence), to give these clubs ac-

It is very important to select concrete projects which could unite and orient the young people of Moscow. In our view, the most suitable undertaking in this respect is the work carried out to establish the «Losinki Ostrov» national park, which is still in its initial stage. Work can be found for everyone here — young scientists, project designers, builders, those who are fond of handicraft work. There are many things that should be done. A beginning has been made. But the master plan has not yet been drawn up. Young architects and town planners are preparing to hold an open contest for the best master plan of the entire 11,000 ha territory of «Losinki».

At the same time they have also planned to carry out other contests on separate sectors, hydroparks, ethnographic trees, museums, of architect-

Discussion on questions of the environment during the Moscow Festival, 1985



tive support, consultative and practical aid.

Work aimed at ecological education and at amateur associations and clubs catering to special interests and youth leisure centres is being stepped up. Special attention here is devoted to the ecological education of «difficult» young people, and the involvement of the informal groups and associations of youth in the practical work to safeguard nature, preserve and restore natural sites, for the improvement of territory and the creation of favourable living conditions.

The existing organization must in no way duplicate the work of other organizations — otherwise, this will be another short-lived campaign.

ture and everyday life, entrances and buildings, such as mills, smithies, stables and barns.

Of no less importance are smaller architectural forms — sheds, benches, bridges, wells, carts.

Everything must be unique here, everything must bear national traits. For example, the construction of a museum of bee-hives, smith work, pottery, glass-making would attract many interesting people who are capable of setting the pace of work here.

Let us take, for instance, the Kuibyshev Engineering and Building Institute in Moscow, which is located on the Yaroslavl Highway, near the forest in «Losinki». Thousands of students study here and they are ashamed

ed when they go through a waste land, which looks as unattractive as all waste land does. It won't be a nice vestibule to the national park.

And we believe that this is the place to make a fitting and decorative entrance to a major national park of Russia. We would like it to be designed by the MISI students who live and study here, so that they can create a tradition in the future of "taking care" of part of the forest in "Losinki". And if they decide, shall we say, to make an evergreen memorial park, let them design and build it — not concrete, not cold monuments, but living things — flowers, trees, awakening inside us the same live feeling of memory and continuity of generations. In the winter time, a climation could serve the same purposes.

The first step towards putting all these beautiful ideas into practice was cleaning up the rubbish. The edges of the national park have unfortunately been turned into a dump. It is not a bulldozer, but human hands that can bring back cleanliness to the forest. There are no secondary matters in the protection of nature. There are no measures that can be done half-way or postponed for "later". This applies to "Losiny Ostrov", as well as to excessive gas content in the city air, the creation of pedestrian zones, the restoration of old town gardens and parks, the construction of new ones, cleaning the River Yauza, the construction of roller skating and cycling areas, hiking paths and many other things.

The Youth Centre will teach others and will impart the most important wisdom of nature preservation, which nature teaches us.

As regards plans in the field of "big ecology", it is envisaged to step up and expand specific ecological activity of the working, scientific, creative and student youth, workers and state and public organizations, to increase the role of youth in the solution of the concrete problems of environmental protection, safeguarding natural and cultural values. In this respect it will be important to render support to various initiatives of the young people to take part in the solution of ecological problems, for the establishment of control over the observance and application of the proposals of the public by the state and public organs, for the creation of the "fund of youth ecological initiatives".

The Centre envisages the study and analysis of public opinion on ecological issues, reflection of the principal ecological problems of Moscow and Moscow Region in the press, generalization of the specific proposals made by the public, the creation and holding of public inspections of the preservation nature, the provision of

comprehensive ecological expertise for projects.

As a major task, it has been proposed to provide assistance toward establishing interdisciplinary scientific-practical collectives aimed at resolving comprehensive ecological problems of Moscow and Moscow Region.

As regards the forms of work of the Centre for the Youth Ecological Movement, they will be sufficiently diverse. They will include a broad spectrum of scientific and scientific-practical conferences, seminars and discussions to discuss ecological problems and tasks of the youth ecological movement in their solution. Much place in the work of the Centre will be devoted to lecturing, propaganda and consultative work. There is a vast program of practical activity of the young people in the field of environmental protection — control inspections, checks on respect of the legislation on the natural environment, ecological expeditions and scientific voyages, concrete work to protect nature, the holding of ecological camps of voluntary work and so on.

In order to publicise the activity of the Centre it is planned to publish methodological materials, publicity and information materials, participate in the making of films, videofilms, theatre productions and concert programs on ecological topics, participate in holding musical and film festivals, festivals of folk art, exhibitions and so on.

In this way the Centre for the Youth Ecological Movement in Moscow will be another factor in bringing closer together the ecologically motivated people, to mould an ecological awareness among the population, especially among the young people. We believe that although they are of a local character, in view of their importance the new initiatives will go far beyond the limits of the local community, because the solution of even global ecological problems will be largely determined by the actions on a regional and local level. In other words, one should think in global categories, and act locally.

In the realization of the complexity of ecological problems, youth ecological organizations stand at the level of considering global ecological problems and voice solidarity with the environmental organizations in other countries to establish international cooperation in the solution of ecological problems. Among the international forums in which Soviet representatives not only actively participated, but also sponsored, we should first of all note the Intergovernmental Conference on Education in the Field of the Environment (Tbilisi, 1977) which considered the Strategy of Education in the Field of the Environment on a national level.

Delegates from different countries

participating in the 12th World Festival of Youth and Students in Moscow in 1985 were given broad opportunities to become acquainted with the organization and development of the environmental protection activity in the USSR, to hold talks with representatives of state bodies, scientific and planning organizations and participants in the ecological movement. Discussions in the course of the work of Centre No. 10 "Environmental Protection" made it possible for the delegates to exchange experiences gained in their work, to evaluate each other's achievements and discuss prospects of cooperation.

In this context the Festival was a strong catalyst for developing the ecological movement at an international level, turning it into a powerful democratic force of our time, making a tangible contribution to the solution of the chief problem of mankind — prevention of a nuclear catastrophe and maintaining peace on Earth.

It is with these purposes that Soviet delegates put forward the idea of elaboration of the Strategy of the International Youth Ecological Movement which was supported with enthusiasm by the delegates from many countries.

The implementation of this idea was started one and a half months later after the Festival at the International School Workshop for the leaders of the international environmental protection movement "Environmental Protection Education for Youth: Contribution to the International Year of Youth". The School Workshop was organized within the framework of the UNEP by the Centre of International Projects in the USSR assisted by the International Union of Natural Protection and the International Youth Federation to Study and Protect the Environment. The participants in the Workshop outlined certain principles of the international ecological movement, their interconnection with the existing principles in natural protection, and discussed the possible forms and methods of activity and contacts.

The further promotion of the ecological movement in the country also envisages certain new forms of contacts and cooperation with the international ecological movement. The idea of setting up summer international camps of voluntary work, now being implemented, is very promising: it is seen as one of the interesting and productive forms of the international youth movement, which has become part of the movement for environmental protection. The Centre for the Youth Ecological Movement is planning to contribute actively to such measures.

T. Bochkareva and
V. Gorokhov

Youth and the environment

As far as its area is concerned, Czechoslovakia is not a large country and represents only one thousandth part of the land surface of our planet. At the same time, it is a state with high level of economic activity. Its natural resources have been exploited for centuries and simultaneously enriched and improved. Due to its geological structure and situation in the centre of Europe, the Czechoslovak Socialist Republic has a great quantity and richness of plant communities. 41,000 species of fauna and over 2,500 species of higher plants can be found there. All European types of landscape are represented on its territory. The environment cannot be, however, limited merely to nature. It is nature plus everything else that surrounds man, it is a place where man lives, works, rests and regenerates his working power, where his personality is harmonically developed in all its aspects.

The care for the environment and rational exploitation of natural resources is closely connected with the theory and practice of the construction of socialist society. Its further development depends not only on the extraction but above all on renewal of the resources of the biosphere — water, land, air and, in case of non-renewable resources, their rational exploitation. This is why the society is logically interested in the protection of nature and rational exploitation of its re-

sources as well as in the creation of a good environment for man.

In the document «Main directions of economic and social development of the Czechoslovak Socialist Republic for the years 1986 — 1990 with perspectives up to 2000», as approved by the 17th Congress of the Communist Party of Czechoslovakia, great attention is paid to the questions of improvement of the natural environment. Tasks of the protection and formation of the environment are put among key questions of raising the standard of living of the population as an integral part and basic prerequisite of the social care of man.

The government of the Czech Socialist Republic together with the Central Committee of the National Front of the Czech Socialist Republic adopted an appeal for implementation of the Program of Care for the Environment in the Czech Socialist Republic in the years 1987-1990. This appeal aims at mobilising all citizens, members of organizations forming the National Front and other social organizations, enterprises, institutions and schools to step up their activities for the further improvement of the human environment.

The share of the Socialist Union of Youth (SSM) in the creation and protection of the environment is not an accidental matter but a demonstration of the efforts of the younger generation to establish a

healthy environment corresponding to the contemporary conditions of a mature socialist society. Organized education of the younger generation towards these aims is being carried out through the participation of youth in the execution of specific tasks entrusted to the young people and has been carried out since the campaign called «Environment Creation and Protection Years», started by the Czech Central Committee of the Socialist Union of Youth in 1974. The aim of this campaign is the orientation and co-ordination of the previously uncoordinated activities of SSM members and young pioneers in this sector, giving it a general concept and finding new and more effective forms of participation of youth in care for the environment on a mass scale. Activities of the SSM in this sphere are known in the Czech Socialist Republic under the name of «Brontosaurus Movement» and in the Slovak Socialist Republic under the name of «Tree of Life», which started some years later.

In order to ensure the successful fulfilment of tasks arising from the decisions of the SSM governing bodies, special commissions on creation and protection of the environment attached to territorial bodies of the SSM were set up. They have an important role to play in the sphere of organisational and methodological work and in the sphere of cooperation with other bodies and organizations. In the sphere of ideological and educational work among young people, they are acquainted with the importance of their active part in the creation and protection of the environment, through training courses and seminars and also in the system of political education of SSM members with the aim of informing young people about the entire problem and, first of all, of winning them for an active participation in the creation and protection of the human environment.

An all-round development of initiative and activity of members of SSM and of the Pioneer Organization as well as of other young people in the frame of creation and protection of the environment is being provided for by a series of competitions like the «Brontosaurus Prize», organized by the Czech Central Committee of the SSM in cooperation with the government of the Czech Socialist Republic, the



Czech State Savings Bank and the weekly magazine «Mladý svět». A similar competition is being held in the Slovak Socialist Republic under the name of «Tree of Life». The initiative of members of the SSM and its Pioneer Organization is being oriented first of all to the following aims:

- active participation in spring and autumn voluntary work organized by the National Front,
- protection and rational exploitation of water resources,
- protection of the atmosphere,
- protection and exploitation of land,
- care for vegetation,
- care for woods and forests,
- construction projects for ecological programs,
- recycling and liquidation of waste,
- protection of nature and the landscape,
- working environment,
- care for cultural monuments.

An attempt to mobilise young designers, students of faculties of civil engineering and architecture and young people working in the building industry has been made in a national competition called «Looking for Perfect Projects» and organized every year by the Centre for Science and Technology of the Central Committee of SSM and the youth magazine «Mladý Svět». The aim of this competition is to find the most suitable projects for construction of agricultural and industrial plants not causing damage to the environment, for construction of children's playgrounds and of installations for leisure-time activities, projects harmonizing green areas and residential areas, transportation and landscape, reconstruction of old homes and production sites. During twelve years, 1300 designers and groups have participated in this competition and 250 of them have been awarded prizes. Over 60 per cent of the projects approved have been executed.

A national competition of amateur films on protection of the environment called «It is Also Your Affair» and a photography competition bearing the same name, held for the 11th year in the town of Uherské Hradiště, are oriented to the education of young creative artists. The most successful films are used in youth clubs for thematic lectures, courses, as a methodological aid in schools, etc. Amateur cartoonists can enter their cartoons on ecological themes in the compe-



tion called «Ecofór» held in the town of Brno. The SSM Committee in the City of Prague has a now traditional competition for posters with ecological themes under the name «Town — a Place to Live In». In addition, many regional and district committees of the Socialist Union of Youth organise, through their commissions for creation and protection of the environment, many other specific activities for young people dealing with these themes.

In 1978 youth collectives began to help the national committees and forestry enterprises in afforestation projects, maintenance of forest paths, care for parks and public verdure and public spaces in towns and villages, restoring castles and other cultural monuments, skansens of folk architecture etc. Voluntarily and without pay, these young people work here only for food, accommodation and fares. Over the past nine years these summer camps called «Holidays with Bron-tosaurus» have become a tradition which is steadily increasing in popularity. In 1986, over 500 such camps were organized in Czechoslovakia. Among the most important of these projects in which young people have participated in this form are the restoration of the

120-hectare park of the institute for rehabilitation of the disabled at Kladruby near the town of Vlasim, reconstruction of the castles of Zvířetice, Helfstyn and the Spis Castle. Intensive work is being carried out in the reconstruction of the narrow-gauge forest railways in the valley of Černý Hron, as well as on many other projects of ecological character and importance.

To conclude, we can say that the Socialist Union of Youth as a representative of the younger generation makes an important contribution to the preservation of natural monuments and a healthy environment in our republic. However, it is quite clear that in our time it is essential to intensify international cooperation in this sphere among the states in Europe and in the whole world. Not only governments of individual countries but also political and social organizations must deal with the questions of a healthy environment. In this we must all be guided by the fact that mankind can safeguard a suitable environment for its future development only under the condition of life in peace in a world without wars.

(SSM)

Amateur Film-makers for the Environment



Kazincbarcika. An industrial town in Northern-Hungary, one of the most industrialized regions of the country. For decades industrialization was accompanied by environmental pollution. This town too, was for long one of the most polluted towns in Hungary.

Now hardly any of the chimneys of the Chemical Works of Borsod – one of the biggest plants of the Hungarian chemical industry – emit smoke, gas or nitrogen dioxide, as the change in the attitude towards the environment in recent years and the heavy fines amounting to millions of forints have compelled the works to apply filters. The few stacks still emitting smoke will stop polluting the air from next year as a result of the environment protection programme to be implemented by 1988. The programme included investments for the further processing of by-products and production wastes, for the purification of the water taken from the Sajó river (today more than 30,000 cubic meters of purified water is daily returned to the river) and for the safe disposal of dangerous wastes.

Kazincbarcika. On 14-15 May this year the town hosted for the second time young amateur film-makers from all over the country who came to show films and videos on environmental protection and have discussions in this field in order to contribute to the creation of an atmosphere in the country where the protection of our natural environment and the sense of responsibility for the coming generation's living-space become a natural thing.

This festival was announced a year ago together with scenario competition, and material assistance was provided for the realization of the most successful entries. This May the resulting films were presented for evaluation by the public, the makers and the jury. The organizers, the

National Youth Environmental Protection Council of Hungary attached to the Central Committee of the Communist Youth Union of Hungary (KISZ), the local Committee of KISZ and the Chemical Works of Borsod provided excellent conditions for the two-day event. Compared to the festival held two years ago, the emphasis has shifted from traditional films to video-programmes, indicating the growing spread of video, though as yet the technical possibilities offered by video are not used to full advantage. This is understandable, if we take into account that, compared to conventional film editing that requires only scissors and some glue, editing video film calls for costly technological equipment. Some visual imperfection could

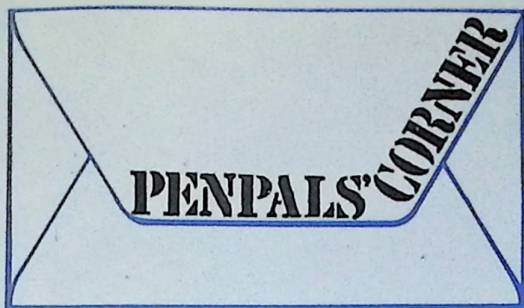
be made up for by a better sound technique which was difficult to achieve with the earlier Super-8 films.

Beyond technical concerns, the amateur producers had some profound exchanges of views among themselves and with the members of the jury about environmental protection at the friendly meeting which followed the screening. The often impassioned contributions radiated a concern for nature, pure air and water and a well-kept human environment.

György Kárpáti, film director, president of the jury said in his summing up that the major value of the films was that they assumed the task of interpreting the alarming phenomena experienced in our immediate environment, often with the aim of mobilizing people, shocking them or making them think, but always guided by the intention of improvement.

After two successful festivals, the organizers are already preparing for the third one. The next meeting, to be held in two years could go beyond the national framework, enriching its programmes by the presence of foreign guests, since environmental protection is an international, indeed a global problem. Our Magazine would be happy to act as a connecting link between foreign amateurs shooting films for their environment, and the festival organizers. World Youth looks forward to receiving letters from those interested in this theme.

(UTI)



Mr. Pablo Elviro Borroto Gonzalez, Gaveta Postal 160, Camaguey, CUBA. 25 years old, in English, Portuguese and Spanish.

Mr. Kazuko Hayashu, Tokyo Suginameku, Shimata-kaido 4-9-4, Yshida Kata 201, Tokyo 166, JAPAN. 20 years old, in English.

Mr. Alex Tor Ah Hung, 34 Conghat Mindden, Jalan 16, Minden Heights, Penang, MALAYSIA. 20 years old, in English.

Mr. Atef Mostafa, 4 Soufany St., El Zyton, Cairo, EGYPT. 20 years old, in English.

Mr. Bagaa Abdellkader, 46 rue Memmi Hamad, Kasar-el-Boukhari, ALGERIA. 30 years old, in French, German and English on trips and music.

Miss Regina Kubinecz, ul. Kománnonská c. 1303, Vojnice 94634, Komárno, CZECHOSLOVAKIA. 14 years old, in Russian.

Mr. Yevo Charles, Church of Christ, BP. 6017, Accra, GHANA. In French.

Mr. Emmanuel Yaw Sarfo, P.O. Box M53, Accra, GHANA. 28 years old, in English on music and trips.

Miss Catherine Psyllaki, Kontopoulou 9, 172 36 Hymettus, Athens, GREECE. 20 years old, in French and English.

Mr. Rabah Mohamad, Flat 447, Althreer, Baqubeh, Diala, IRAQ. 19 years old, in English, German and

Arabic, on sports and music.

Mr. Mahmoud Shamel Abdi, No 23, Azimi Alley, 10, Metri Farhang, Khazaneh Ave, Tehran 11876, IRAN. 22 years old, in English on stamps and post-card collection and music.

Miss Vida Toulabi, No 98, Mina Street, Opposite of Dr. Masoudnia Pharmacy, Mehran Square, Azimieh, Karadj 31557, IRAN. 21 years old, in English on poster collection, stamps, dolls.

Miss Boumeeggouti Naima, Rue 44, No 22, Sidi Kacem, MAROCCO. 16 years old, in French and Arabic, on postcards, stamps and books.

Mr. Williams J.D.Obi, P.O. Box 4, Amaraku, Mbano L.G.A. NIGERIA. 20 years old, in English.

Mr. Paulo Jorge, c/o Mr. Cupido Rodrigues, L.A.M. — P.O.Box 219, Nampula, MOZAMBIQUE. 16 years old, in English on music and sports.

Mr. Henry Corr, A. Ugarte No 398, Ingenierio, Lima-31, PERU. 22 years old, in Spanish, English, Italian and Portuguese on postcards, stamps, coins, records, trips, scientific books on Medicine and Space.

Mr. Janusz Kolemba, ul. ZPK 15/49, 35-310 Rzeszow, POLAND. 19 years old, in Russian, German, English and Swedish on sports, music and movie.

Miss Dorota Mlczuga, Choloczka Wielka 21, 62-300 Wrzesnia, POLAND. In Russian.

Miss Carolayn Tank, Karl Liebknecht str. 1, Eberswalde-Finow 1, 1300, GDR. 20 years old, in German.

Miss Marén Rohark, Heinrich Heine str. 22, Riesa 8400, GDR. 19 years old, in Russian, English and German on music and ornithology.

Miss Kerstin Dartsch, Langer Grund 53 a, 1200 Frankfurt (Oder), GDR. 20 years old, in English and German on postcard and stamp collection, trips, music, animals, nature and movie.

Miss Tankini Ganawardena, No 15/112, Puttlam Road, Kurunegala, SRI LANKA. 16 years old, in English on music.

Miss Lise-Lott Backström, Berggattan 16/Cm 7330 Sala, SWEDEN. 15 years old, in English on music and animals.

Mr. Emmanuel Mhamba Luhumbicah, P.O.Box-1132, Mwanza, TANZANIA. 33 years old, in English, on stamps, music and photography.

Mr. Nikolai Masmokov, 195279 Leningrad, Industrialni pr. 36, kv. 321, USSR. 35 years old, in Russian and German on photography.

Miss Kersti Zopp, 202710 Võrv, Kooli tee 1-47, Estonia, USSR. 17 years old, in English, Russian and German on sports, music and dogs.

Mr. Luxton Katsidzira, Manyau Pungwe Stere, P.O.Zindi, Mutare, ZIMBABWE. 24 years old, in English on music and sports.

Mr. Kibushi Noljate Wootte, P.O.Box 8332, Kinshasa I, ZAIRE. 30 years old, in French on theatre, sports, music, politics and movie.

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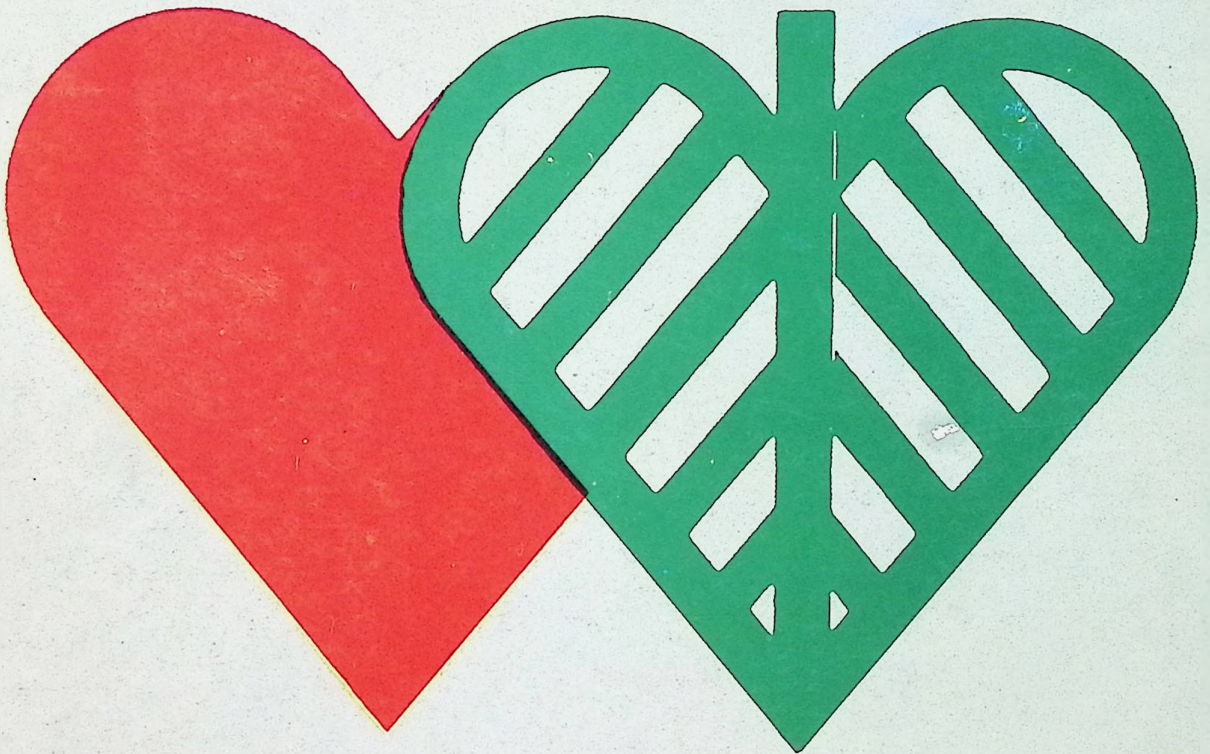
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