



Samuel Neaman Institute

FOR ADVANCED STUDIES IN SCIENCE AND TECHNOLOGY

NATIONAL ENVIRONMENTAL PRIORITIES OF ISRAEL



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For Advanced Studies in Science and Technology
Technion, Israel Institute of Technology**

In Cooperation with
LIFE and Environment

NATIONAL ENVIRONMENTAL PRIORITIES OF ISRAEL

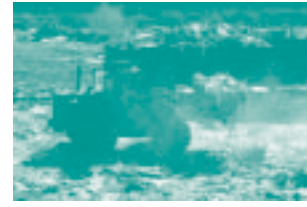
JULY 2001

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INTRODUCTION

In 1999, S. Neaman Institute has published the first **National Environmental Priorities** document (see full text on our web site <http://www.neaman.org.il>). One of our recommendation and commitment is to update, judge and adopt new technologies and new solutions to improve the environmental situation in Israel.

The following are the main points adopted following the deliberations of the different professional teams, meetings with Ministry of the Environment (MoE) representatives, other national bodies and public figures.

Taking the **National Environmental Priorities, 1999** report into account and following a series of meetings we held with various teams as well as with MoE representatives, we first tried to see what we could learn about our recommendations and ourselves.

We saw that there is no gain in making generalized and sweeping recommendations. In the framework of our proposals for prioritizing environmental issues we included general statements (for example, there is a need to safeguard the Sea of Galilee's water quality), which do not constitute viable recommendations. To be sure, it is difficult to avoid setting a meta-objective, yet it is important to distinguish between broad objectives (goals for which there is a general consensus) and short-term targets or recommendations for prioritizing specific activities. Another critique of our previous report concerned its numerous recommendations. Without a doubt, a multiplicity of recommendations, no matter how justified they all are, hampers focusing and targeting.

It must be noted that no criticism was, in fact, voiced regarding the contents of the previous policy statement. Moreover, it turns out that in some of the instances where we advocated views contrary to popular opinion, these have now become part of today's accepted positions.

The following sections discuss the different issues with which our previous, as well as present, report deals. For each area we present the key results of the implementation analysis in addition to our principal recommendations for the near future.

It is our opinion that tracking the implementation of the professional teams' recommendations is an important part of the public debate on the environment (and perhaps in other areas as well). We consider professional and responsible criticism to be an important part of Israel's democratic system. We hope that the assessment offered here will lead to a beneficial discussion on what



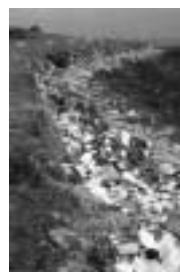


has been done (or not done) in the past, and to conclusions as to what still needs to be completed and, if necessary, where to change direction. A mechanism for public criticism and professional debate will add an important dimension to the state's existing review process. This process was warmly welcomed by the State Control Committee of the Knesset, the Prime Minister's Office and personnel in the MoE.

The priorities we recommended in the first document were intended to be executed within a period of about five years (approximately an administration's term of office) and would not require the state to make investment beyond its financial capabilities. The present document is based on those recommendations and examines their implementation during the past two years.

The work method here was similar to that used in preparation of the first document. Background material was made available to teams of professionals, each of which included a central figure in the area from the MoE. The background material was discussed both in writing and verbally. The editors of this publication summarized the teams' work, returning it to them for their comments and final touches, before preparing it for publication.

Regrettably, we must note that in numerous areas no progress was made and the requisite actions were not carried out. Lack of progress in the area of environment usually means regression and sometimes - irreversible retreat.





PART 1

FOLLOW-UP, EXAMINATION, CRITIQUE AND UPDATES

Subjects discussed in Part 1:

- Open spaces and urban environment
- Transportation
- Water and wastewater
- Air quality
- Hazardous substances
- Solid wastes

Open Spaces and Urban Environment

The subject of land-use, open spaces and urban environment was defined in the **National Environmental Priorities, 1999** report as one of the most major areas requiring action in order to preserve Israel's environment, and prevent irreversible damage to it. Israel, one of the most densely populated countries in the western world, must view land resources as limited and essential commodities, even more so than its water resources.

The **National Environmental Priorities, 1999** main recommendations of the teams dealing with open spaces and urban environment included, among others:

- Legislation and administrative procedures for enforcing existing restrictions preventing intensive and unplanned land exploitation;
- Strengthening the bodies charged with planning and land preservation;
- Preserving agriculture as an economic, settlement, cultural and environmental value;
- Preventing the establishment of new settlements and limiting the process of suburban sprawl;
- Strengthening and rehabilitating city centers;
- Developing public transportation as an essential tool for environmental management;
- Intensifying public participation and involvement in the planning of residential areas and the overall planning of land use in Israel.

Assessment of activities in this field reveals a rather gloomy picture

Over the past two years there has been no progress whatsoever in the area of legislation or strengthening of the existing mechanisms for land use and planning. Neither has there been any movement toward regulating the misuse of land resources. On the contrary, the process of suburban sprawl has continued and even intensified, and restrictions on inappropriate uses of the scarce open spaces still available in



areas of demand have been removed. The different planning authorities have not implemented the various available plans (such as National Planning Outline # 35), and there is real danger of regression in this area. Pressure by interest groups, accompanied by strong lobbies backed by deep financial resources, are leading to a sense of helplessness on the part of planning and licensing authorities, as they themselves admit. These feelings are in turn giving rise to a sense of surrender, even though the issue concerns a real and irreversible threat to Israel's environment - which, if allowed to continue, will seriously harm the very essence of life in Israel. **It is regrettable that the MoE and even central environmental organizations have not acted decisively to counter these trends.**

During the last two years a few bright spots have been visible. The MoE in cooperation with civic and environmental non-governmental, environmental organizations (NGOs) campaigned against plans to build a military base in Shaked Forest. It appears that when the MoE acts decisively and determinedly, it can succeed, even against the Ministry of Defense's position.

Another very encouraging development is the intensified activity of citizens' groups struggling to safeguard their right to a healthy environment. The establishment of Derech Haifa (The Haifa Way) in which ten public organizations for environmental quality in Haifa have joined forces is a noteworthy example for others. This important area, reviewing the activity of environmental organizations in Israel, is discussed in Part III of the full report¹.



¹ The full report is in Hebrew



OPEN SPACES AND THE URBAN ENVIRONMENT

NATIONAL ENVIRONMENTAL PRIORITIES 2001

- The MoE and public environmental organizations must mobilize to enlist public support for the prevention of wasteful and inappropriate use of land resources: preventing the establishment of new cities, limiting suburban sprawl, and the use open spaces, wooded areas and urban open spaces for building purposes.
- The MoE must act to strengthen the public mechanisms responsible for land preservation, through legislation or administrative support.
- The Trans-Israel Highway (Road No. 6) is an indisputable fact. Suburban sprawl and building in the sphere of the road's vicinity must be prevented. This control must be anchored in regulations, legislation and administrative decisions.
- Rehabilitation and development of city centers must be encouraged. It is recommended that over the next two years the planning for the rehabilitation of several neighborhoods in a number of cities be advanced and financed. This will encourage private capital to finance the rehabilitation activities.
- Cities in the periphery should be strengthened, especially cities and towns in the south of the country.
- The MoE should encourage citizens' campaigns to maintain a decent living environment.
- The central environmental organizations should intensify their public activities and lead the public struggle in the area of land use.

(There is, naturally, some overlapping of the sections dealing with transportation, sea and shores and agriculture).

Transportation

The **National Environmental Priorities, 1999** recommendations called for advancement of public transportation and for taking various steps, mainly economic, to reduce the use of private cars. It was also recommended that action be taken to reduce vehicle emissions. The progress in areas pertaining to transportation over the last two years has been positive and hopefully bodes well for the future.

First, rail transportation has been revolutionized. Israel Railways completed laying double tracks for its central lines, permitting the operation of a modern and efficient rail system. Israel Railways increased train frequency, comfort and speed in existing lines and developed a number of needed



suburban lines. Contrary to popular apprehensions, including firm assertions that there was no chance that the public would respond to the advancement of public transportation by switching from the use of private cars to public transportation, it seems that the public has voted with its feet in favor of public transportation, especially railways. Traveling by train means no traffic jams and contributes to a real reduction in road congestion.

In addition to this progress, a number of important decisions were made regarding the establishment of an urban public transportation system. In Jerusalem a tender was issued for construction of a light rail line; in Tel Aviv, it seems that the plans for an urban train are actually going to be implemented (an international tender has been issued). Work has begun on building the railway line to Ben Gurion International Airport, and a transportation master plan has been prepared, as well.

Very positive mention should be made of the MoE's decision to act decisively towards improving the quality of fuel used by buses, especially those operating within city areas. In view of past negligence in this area, and considering its environmental and economic importance, it is imperative to continue in this manner!

It should be stressed that some of the recommendations included in the **National Environmental Priorities, 1999** report were long-range recommendations for decreasing polluting vehicle emissions. For example, there were recommendations for appropriate development of transportation routes, from bicycle lanes to additional development of public transportation infrastructure. Nonetheless, planning and feasibility studies should be started right away.

Transportation - National Environmental Priorities, 2001

- In the past as well as today the tendency is to prefer investments for the good of private vehicle transportation. In view of the success of recent steps, now more than ever a clear government resolution calling for preferential and affirmative actions in the development of public transportation is needed.
- Sufficient resources must be allocated for continued development of rail transportation in urban and interurban networks.
- Action must be taken to promote coordination between rail and bus systems.



- It is recommended that purchase taxes on private vehicles be reduced while simultaneously raising fuel taxes. This should help achieve a number of objectives: traffic volume will decrease with minimal adverse impact on citizens, the share of old vehicles, responsible for severe air pollution, will decrease, while road safety will increase. This can be accomplished without reducing government revenues from vehicles.
- The structure of Israel's wage scale is regressive from the point of view of influencing traffic volume by economic means. Drastic steps must be taken to reduce the number of company allocated cars and the linkage of certain parts of salaries to the price of gasoline.
- The number of pay parking lots should be increased (including parking at places of employment), thereby encouraging the use of public transportation.

The MoE's policy for improving fuel quality should be continued.

Water and Wastewater

In the **National Environmental Priorities, 1999** report we estimated that the state of the country's aquifers, from the aspect of water quality, was deteriorating. We recommended fixing clean areas and setting up water protection parks on top of them to prevent further contamination. During the past two years an ever-increasing number of aquifer water pollution cases have been uncovered, especially in the coastal aquifer, along the shore of the country. We also recommended continuing to act to reduce the introduction of salts into the aquifers, to protect them from drillings and intensify underground water monitoring.

On the issue of sewage treatment and use of wastewater there was a central recommendation for urgent and comprehensive planning of the system, from the point of the water's outlet and all the way back through to the conduction lines, to the purifying plants and the reservoirs. A call was issued to examine the system in order to achieve maximum use of wastewater, based on the assumption that some 200 million cubic meters of wastewater are not being utilized. We also raised the urgent need for solving the sewage sludge problem.

The issue of using economic incentives for rational management of both the water and wastewater systems was raised. The need to charge all consumers the full cost of the water and charge the sewage producer the full cost of the sewage treatment, including differential costs respective to the quantity of contaminants in the sewage released by the consumer, was also raised.



The need for coordination between the authorities involved in water treatment was noted in the **National Environmental Priorities, 1999** policy paper.

After examining what has been done over the past two years it seems to us that we are actually retreating - pollution has increased and the overall water system is on the verge of collapse. No clear policy was set for the prevention of water pollution and the MoE is fighting polluters one by one. No clean areas with higher priorities for preventing pollution have been designated.

The MoE continues, with commendable success, its activities to decrease the intrusion of brine into the sewage.

There is as yet no comprehensive policy concerning the effluent system. As a result treated effluent flows into the sea (nearly 200 million cubic meters according to sources in the Ministry of Agriculture, and this during a period of drought!). Effluents of unsuitable quality reach streams, and while there are areas with a surplus of effluents, other areas in need of it do not receive treated wastewater. In spite of long deliberations there is still no water pricing policy or guidelines for imposing the costs on sewage producers.

Different government agencies involved in running the water system are even now not cooperating. Often one government agency will contradict another.

Two crises in the water system have recently surfaced, the result of many years of neglect. On the one hand, we have reached the bottom of our water reservoirs. On the other, numerous cases have arisen indicating that the water being pumped from our aquifers might be contaminated and contain substances unfit for drinking. The country's population is losing faith in the water system and many people are afraid to drink tap water.

Water and Wastewater - National Environmental Priorities, 2001

Drinking Water

- The public does not know what the quality of the water supplied to its homes is, and, to a large extent, does not believe that the water is potable. The public has the right to know. Local authorities or any other authority charged with the supply of water must inform the public about the quality of the water being supplied to their homes.



- There is no doubt that some of our water sources are contaminated. We are about to enter a period when water can no longer be supplied as is, but will need thorough treatment to remove contaminants. Now, while there is still time to do it intelligently and carefully, the proper systems must be installed. Planning of treatment systems and setting them up must begin immediately (Part III of the full report contains a survey concerning water treatment systems).

The Water System

- We live in a hot region with a growing population and an attendant increase in water consumption. Our lifestyle implies that we are blessed with an abundance of water, while in reality we are not. Reducing water consumption and wastage in agriculture, urban environments and at home might save hundreds of millions of cubic meters of water, quantities that constitute a significant share of our water deficit. The public as well as the authorities will have to develop **a culture of water consumption suitable for hot regions**. There is no reason whatsoever for not curbing our household water consumption, and there is no justification in cultivating gardens based on seasonal plants and water guzzling lawns. Gardens have to conform to ecological and esthetic principles - for instance, by planting indigenous Israeli species, which are adapted to this hot climate.
- It is imperative to plan, as soon as possible, **a different type of agriculture** - agriculture based on very intensive planting in small areas and vegetation that is not water guzzling spread over a large area. Agriculture must be based on vegetation that utilizes rainwater and on water efficient crops (such as vineyards, olives and the rest of the seven Biblical species with which the Land of Israel was blessed).
- An educational and informational system aimed at water saving should be promoted and maintained as well as a support system for the appropriate planning of gardens and installation of water saving fixtures. Legislation prohibiting wasteful water activities such as inefficient car washing is needed. This is done in countries far richer in water than ours. **The MoE and NGOs must cooperate in this effort.**

Sewage and Effluents

- As soon as possible standards for the level of effluents according to their post-treatment usage must be prepared, as well as a comprehensive and agreed upon plan for the utilization of effluents and an effluent supply system. Only with such a plan can sewage treatment plants and collection systems be designed intelligently and economically.



- All settlements still not a part of the sewage collection system must be hooked up. Prolonging the use of cesspools and the like leads to continued contamination of aquifers and waste of water.
- Progress must be made on the issue of sludge produced by sewage treatment plants.
- Standards have to be determined and quantities of treated effluents must be allocated to help in rehabilitating streams and rivers.

General

- It is imperative that the use of clear economic incentives be promoted both in the management of fresh water consumption as well as for the advancement and management of effluent use. Consumers should be charged with the complete real cost of bringing water to their homes, and pollutant producers should be charged with the total actual and overall cost of sewage treatment.
- The MoE and other environmental agencies must be full partners in dealing with all of Israel's water problems.

Air Quality

In Israel's city centers, the levels of air pollution constituting a genuine danger to public health are monitored. Cautious estimates indicate that over 1,000 people die every year from exposure to high levels of air pollution. The prime contributor to air pollution in city centers is vehicular traffic.

Recommendations of the **National Environmental Priorities, 1999** team stressed that vehicle-induced air pollution was the major issue requiring action. High priority activities included improving fuel quality (both diesel and gasoline), improving vehicle roadworthy tests and setting advanced standards for fuel and air quality. The **National Environmental Priorities, 1999** report also addressed itself to the need for better coordination between the various monitoring systems and for improving the availability of monitoring data to the public.

The MoE's prioritizing and consistency in handling the prevention of air pollution must be commended. The Minister recently issued decrees forcing bus companies to use improved fuel, and at the same time ordered the oil refineries to produce such fuels. The positive developments arising from the pact between Israeli industry and the MoE, which calls for joint steps to reduce the emission of industrial air pollutants also must be noted (details of the pact are presented in Part III of the full report - Industry and Environmental Quality).

There has been some improvement in standardization.



Air quality - National Environmental Priorities, 2001

- The following objectives must be reached as soon as possible: coordination of the different monitoring systems, synchronized instrument calibration, a unified data processing system, and a system for making the information available to both professionals and the public in an easy and accessible form.
- Small particles (PM2.5) standards have to be advanced and a NO2 level indicator introduced.
- Environmental oversight is needed in the area of organic gas emissions. Suitable monitoring instrumentation should be introduced alongside establishment of appropriate measuring methods. Standards should be determined for organic gas levels (such as benzene and toluene) while reducing their emission into the air from gas stations and other sources.
- Improvement of fuel quality must continue.
- All the requisite legal tools for inspecting vehicle pollutant emissions are in place. Inspection methods should be expanded but primarily, the enforcement of regulations must be assured.
- Progress is required in checking pollution in urban areas, and developing models for analysis and forecasting.
- The MoE prepared a policy document for the reduction of greenhouse gas emissions. The policy has not yet been implemented and the subject should be emphasized and brought to the attention of the public and decision-makers.

Hazardous Substances

The **National Environmental Priorities, 1999** report emphasized the need for establishing a single governmental authority for handling hazardous substances. There are 12 government bodies dealing with hazardous substances. Parenthetically, even the definitions of hazardous substance and hazardous waste are not clear or quantitative. The **National Environmental Priorities, 1999** report stressed the necessity of increasing the number of professionals working in this field on behalf of the MoE. The need was raised for opening the field of treatment of hazardous substances to additional firms and technologies, while emphasizing action, as far as possible, in the area in which the hazardous substances are first created. The report highlighted the need for better coordination between the MoE and industry in the area of hazardous substances and wastes, in order to achieve a concentrated effort in the more crucial parts.

Some positive changes have taken place during the past two years. The Ramat Hovav (the only authorized site in Israel for hazardous wastes disposal) issue has been resolved and in contrast



what was going on before, the plant is now functioning on a better professional and organizational level. The MoE and industry are more coordinated and as a result, there has been a significant improvement in dealing with the issue. Nevertheless there has been no change regarding the matter of establishing a Hazardous Substances Authority. There are still numerous agencies dealing with the subject without the coordination called for in such a sensitive area. There has been an improvement in industry, both as a result of its pact with the MoE, and because more and more plants are adopting orderly procedures in the framework of establishing environmental management systems (such as ISO 14000 and the operation of safety systems such as ISO 18000).

Hazardous Substances - National Environmental Priorities, 2001

- Alternative solutions for the treatment of hazardous substances must be developed and adopted. Such solutions include regional centers for treatment of industrial wastes, transfer of inflammable wastes to the furnaces of the cement industry, and the like.
- More attention should be paid to the treatment of wastes from small industries. The example of collecting industrial sewage at SHAFDAN (the wastewater treatment plant of the Tel Aviv region) indicates the importance of the issue and the feasibility of dealing with it.
- The public must be informed about the presence of hazardous substances at different sites. This is an accepted procedure in developed countries and it is in industry's best interest to resolve the issue properly.
- The subject of hazardous substances collection and control at universities and research centers must be advanced.
- Solutions have to be found for hazardous substances being used and disposed of in private households.

Solid Wastes

The **National Environmental Priorities, 1999** report included a recommendation for the closure of non-standard refuse dumps and the upgrading of landfills. There were also several recommendations concerning decreasing the amount of waste, especially in the industrial and commercial sectors, but also in private households, mainly by encouraging homeowners to set up their own home composting facilities. The recommendations covered the economic-administrative aspects: starting with the need to privatize waste treatment and creating a closed financial system, all the way through to the need for improved waste treatment by demanding payment for attendant environmental costs



(as in the case of a landfill levy), or by a rebate to the recycling entrepreneur through reducing his/her company's environmental costs.

It should be noted that the Department of Solid Wastes in the MoE significantly advanced the subject of solid wastes treatment. Although in general in Israel, waste arrives at standard landfills, there is still need to enhance the level of landfill treatment (leachate and gas treatment). Collection and treatment of garden and tree trimmings as well as bulk refuse has also improved. Over the last two years we have moved forward, both in execution and in the understanding of the public, industry and authorities. We have gone from a typical third world handling of the situation to one consistent with a developed country. Perhaps this is an example that demonstrates that attitudes can be changed if a consistent policy is implemented.

There is still no progress in the area of privatization of waste collection and treatment. This is a complicated subject and mainly in the purview of local authorities.

In several instances the MoE took a stand regarding the technical specifications of the refuse treatment system in one particular settlement or another.

The **National Environmental Priorities, 2001** professional team is of the opinion that by doing so the MoE exceeded its responsibility. The Ministry's role is to fix the needed criteria and supply the authorities with an objective examination of the opportunities open to them. The decision as to which technologies best meet the requirements and should therefore be chosen must be left to the authority responsible for providing the solution. There is also the problem of decisions whereby the MoE provides financial assistance to enable selected authorities to implement its own detailed recommendation for certain technologies, but which are not allocated in accordance with clear criteria. It seems that in spite of good intentions the MoE is exceeding its duties and acting contrary to acceptable procedures.

Under present circumstances, with the cost of refuse treatment exceeding that of dumping waste in a nearby creek, recycling is becoming expedient. One of the obstacles to achieving this goal is the difficulty of closing the recycling circuit and the need to develop uses for recycled material. The **National Environmental Priorities, 2001** team believes that even if, in principle, market forces



should determine recycling trends, the market generally, at the beginning, fails to do so. The government must intervene - economically or administratively - and fix clear and unequivocal criteria that will determine the extent of government support.

Solid Waste - National Environmental Priorities, 2001

- The MoE must concentrate on developing criteria for waste treatment and create the necessary economic and legislative climate. It should refrain from fixing technical specifications, which is the responsibility of local authorities.
- The MoE's financial support for waste treatment and retrieval must be carried out in strict observance of precise criteria and public accountability.
- Establishment of a closed financial system for the treatment of waste will provide an incentive for economic efficiency. At present there is a 1:7 difference in the expenditures of different urban settlements on waste collection - from about NIS50 per ton up to NIS350. Even allowing for these differences arising from the constraints of labor agreements, passing the cost on to citizens should encourage greater efficiency.
- It has been proven, environmentally, technologically, socially, and economically that separating waste at the source into dry and wet fractions is possible and worthwhile. It is recommended that local authorities be encouraged to move to this collection method. This will save money for the local authority and the country.
- Weight linked payments by industries and commerce for their waste collection should be encouraged.
- A refund to entrepreneurs who reduce environmental costs by recycling should be used as a carrot to encourage recycling, while the stick should be a charge for environmental costs such as a landfill tax. The rebate for reducing waste quantities must be defined by clear criteria.
- Action must be taken to create markets for recycled products; for example, compelling government offices and public institutions to use recycled paper for any purpose, using surplus glass as raw material for roads, intensifying the use of recycled plastics (while determining standards for recycled plastic fixtures for the building industry), etc.





PART 2

EXPANDED DISCUSSIONS

Agriculture and Environment

Aside from providing food, agriculture serves other purposes as well, and should not be regarded as just another economic sphere of the national economy. Agriculture preserves open spaces, is an important factor in shaping regions and in conserving our heritage, culture and landscape. National Master Plan #35 recommends a plan for commercial-landscape agriculture .

This policy advances the commitment to safeguard environmental quality. At a time when demand for land and water is so strong, it is unreasonable, and perhaps even somewhat immoral, that agriculture should be entitled to a lion s share of these resources under cover of landscape policy declarations, while at the same time damaging and polluting them through excessive fertilization, insecticides, faulty cultivation practices, etc.

Different branches of agricultural activity can prevent or reduce environmental damage. Agriculture can even provide solutions to environmental problems, occasionally attaining a profit from them. Even initial calculations show that agricultural environmental services add a significant value to the environment. In order to successfully protect the environment, a wide-ranging perspective encompassing all aspects, obstacles and possible dangers is needed. The vision must also embrace possible contributions to the protection and cultivation of the environment. It seems that this is the inevitable challenge of agriculture in whatever direction it moves or develops. It must (and can) protect these resources.

The details of the agriculture report and the requisite recommendations are presented in Part II of the full report.

Agriculture - National Environmental Priorities, 2001

- Planning of a different type of agriculture must begin as soon as possible both because of environmental needs and the integration of agriculture as a supplier of these services, and especially, due to the Israel s water dilemma. This sort of agriculture must stress environment and landscape values and be based on crops that do not require intensive irrigation (more details can be found in the section on water in Part I and in the section on agriculture in Part II of the full report). Assistance must be extended to farmers who switch to this kind of agriculture.
- Agriculture planning in Israel must be reassessed as soon as possible, both as regards regional crops planning and for planning the administrative and financial relations between farmers and the administration.



- Agricultural land must be protected through strict adherence to correct planning and resisting real estate pressures.
- The country must shift to using of effluents instead of fresh water. Strict measures to prevent them from causing damage to the soil and underground water is required.
- It is imperative to prevent and repair damage cause by spraying and insecticides; quantity of toxins must be reduced; agriculturalist must switch to eco-friendly disinfecting methods, protecting crops and the environment; the damage caused by cowsheds and various livestock farms must be prevented and where necessary repaired.
- The required changes in agriculture, the need to develop an agriculture plan in accordance with environmental considerations and one that does not cause the depletion of land and water resources are all steps that will determine the quality of the environment in Israel. The MoE and the other environmental organizations must be partners in guiding these activities.

Sea and Coasts

The subject of preserving sea and shore quality were only partially presented in the **National Environmental Priorities, 1999** report. This year we added two documents, which are presented in Part II of the full report. One of them deals with criteria for examining the possibility of flushing wastes into the sea, and the second discusses the need to preserve the coastline. The subject of preserving the seashore for the public is in line with what is said in the section on agriculture and land protection.

Sea and Coasts - National Environmental Priorities, 2001

- The media is bringing the problem of river contamination and sludge on the seabed to the public s attention. In order for the public and professionals to respond properly, they must be given comprehensive and balanced information. It is suggested that the MoE coordinate all the data and periodically publish a report on the state of the beaches, the sea and the river estuaries.
- In order to formulate policies and measures for dumping wastes into the sea, deliberations in which national and public factors will participate must be initiated. Leaving this issue unresolved is likely to cause long and unnecessary delays in very necessary activities such as stopping brine dumping into the sea or implementing the plan for a sea outlet for treated wastes from industrial plants in the Haifa Bay area.
- The MoE and national and public institutions battle unremittingly for the preservation of the coasts for the public s benefit.



Economy and Administration

The **National Environmental Priorities, 1999** report emphasized the need for developing suitable economic incentives for oversight of environment issues such as air pollution problems and regulating the water system. There was a need to incorporate external costs into the prices of products and services, as a rational and objective tool for regulating environmental quality issues. Despite making a few beginnings, such as the understanding between the Ministries of the Environment and Finance that external costs should be included in the price of waste disposal, this is not, as yet, the guiding line in governmental procedures in Israel.

Economy and Administration - National Environmental Priorities, 2001

- Contrary to other systems in which the Ministry of Finance objects to earmarking funds, there is room for such special arrangements in the area of the environment. In this area collecting money implies a commitment to repairing environmental damage. For instance, today's suggested landfill tax is intended to minimize environmental damage; in the future the money will be used for site restoration, by rehabilitating the landfill. The MoE and environmental organizations, including academia, must endeavor to persuade the Ministry of Finance that here this practice is warranted (this subject is presented in detail in the survey of environmental funds in Part III of the full report).
- The pact between the MoE and industry is a welcome achievement (discussed in detail in the survey on industry in Part III of the full report). It does, however, leave room for concern about unacceptable arrangements being made. It is therefore imperative that any arrangement undertaken in the framework of this pact be brought to the public's attention.
- The effort to incorporate external expenses in the price of products and services must continue.

Environmental Education and Public Participation

In the **National Environmental Priorities, 1999** report the subject of environmental education and public participation was given uppermost priority. Without an alert and active public there is no chance of advancing environmental issues. It is imperative to promote this subject.

It should be noted that the public's involvement in the area of the environment has increased. This is due mainly to the parallel civic awakening as a result of information and educational activities, and the assistance of state and NGOs (detailed in the section on environmental organizations in Part III of the full report).



PART 3

The editors of this document are proud to report on progress in the area of increased environmental awareness and public participation in the framework of the "Green Campus" project at the Technion (<http://techunix.technion.ac.il/~greenweb>). This project comprises a set of activities aimed at involving the Technion community (a residential area of 15,000 people) in a comprehensive environmental activity. In addition the project also serves as a tool for shaping our future engineers. The project will raise their awareness of environmental problems and of the need to minimize, as much as possible, any damage to natural resources.

Environmental Education and Public Participation - National Environmental Priorities, 2001

- Citizens must be encouraged and helped to participate in environmental activities. It is suggested that each of the MoE s districts serve as a base for guiding civil organizations, giving legal advice and even financial assistance for specific projects.
- It is proposed that residents representatives be part of local planning committees. It would be prudent for the MoE to guide neighborhood representatives, volunteer lawyers and others towards such activity.
- There is room to expand the "Green Campus" project to all academic institutions in Israel, with the backing of the MoE and academia.
- Environmental education in the educational system should be intensified. Besides the importance of environmental education in itself, education towards environmental involvement constitutes an appropriate lesson in civic activity in each and every subject.
- Environmental education should be intensified among students of science and engineering; for instance, by compelling the students to take at least one basic course in the environment as part of academic degree requirements.





CONTINUING ACTIONS FOR DETERMINING PRIORITIES & OVERSIGHT OF EXECUTION IN THE AREA OF THE ENVIRONMENT

It is the intention of the initiators and operators of these activities to carry on.

There is a need for an ongoing examination of the priorities in the area of the environment, and of course, there is need for continual oversight of how recommendations and suggestions are being implemented.

Control in Israel focuses mainly on areas involving proper administrative management. Within the present system, established by S. Neaman institute in cooperation with an environmental organization, professional oversight examines what has or has not been accomplished. We believe that such professional examination, indicating both progress and correct execution or failure to execute or faulty professional execution, would help in guiding activities in the area of the environment, or, for that matter, the quality of government, in the right direction.

This document presents the first results of such a system, taking into account that we have made quite a few mistakes in the course of our work. We hope that in the future our oversight will improve and become more effective.

In summation we wish to quote, verbatim, the closing words of the **National Environmental Priorities, 1999** report:

In this report recommendations for environmental actions over the next five years are presented. We are aware that the available resources in Israel are limited, perhaps more than in other developed countries. This constraint was considered in formulating the set of present priorities.

It is important to emphasize that a large part of the recommendations presented require assertive decision-making and not only limited financial support from the national treasury.

The recommended activities include increased public awareness and environmental education, legislating a land law; planning the use of land and environment and urban centers; solutions to improve public transportation by providing for bus lanes and using existing railway tracks, etc. All these and others can lead the way to a breakthrough in the environmental conditions in Israel, without demanding large budgetary expenses.

A large portion of these recommendations and the steps required for their implementation depend on the recognition of their importance as well as the ability of policy makers to make decisions and set clear cut policies in Israel.

We expect them to do it".

We are still waiting!