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# Worldwide Report

ENVIRONMENTAL QUALITY

No. 383

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17 January 1983

WORLDWIDE REPORT  
ENVIRONMENTAL QUALITY

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ANTI-POLLUTION PROGRAMS GAINING ATTENTION IN OIL PRODUCING COUNTRIES

Riyadh AL-YAMAMAH in Arabic No 723, 27 Oct-2 Nov 82 pp 54-55

[Text] Last September, OAPEC held a conference on protection of the environment from pollution by the oil industry in light of the requirements dictated by current conditions in the Arab world. The conference achieved positive results aimed at action to protect the environment from pollution rather than concentrating on technological treatment that is high in cost and whose results are not guaranteed. AL-YAMAMAH met with the general director of the Tunisian Organization for Petroleum Activities, al-Habib al-Azraq, and the senior engineer in the Iraqi refining complex, Ahmad Hasan. These two men participated in the conference and put forward constructive opinions. They clarified for us some important points concerning the subject of the conference.

The participating countries have begun to feel an urgent need to attack the worsening problems resulting from pollution by the petroleum industry and the threat this pollution poses to the health of man, plants, and animals. In view of this need, these countries called the conference on the protection of the environment from oil industry pollution. The conference takes on particular importance because it is being held for the first time.

It was brought out during the meeting that there are evident differences among the various efforts being made in the Arab states to curb the threats to pollution arising from the petroleum industry and petroleum use. Therefore, at the conclusion of their activities, the participants stressed that OAPEC should give the matter of petroleum pollution the necessary attention within the framework of one of its organizations after the pattern established by the advanced industrial states with the American Environmental Protection Agency and the (COCAO) group.

One of the main problems that claimed the attention of the Arab experts was the problem of lead compounds added to automobile gasoline. These are considered among the most dangerous environmental pollutants to say nothing of their tremendous danger to human health as established by a number of studies presented to the conference.

The participants in this field asserted that the Arab states' adoption of plans to guarantee the reduction of the quantity of lead compounds in gasoline is based on a desire to gradually reach the standard for lead compounds adopted by the advanced industrialized states.

Most of the Arab states border on closed bodies of water and thus their coasts suffer from pollution caused by transport vessels and refineries. This pollution results in unacceptable changes in water quality. For this reason, the participants feel that the Arab states should take measures to prevent the dumping of polluted water in the seas and reduce the discharge of wastes from chemical plants and refineries. The Arab marine companies that transport hydrocarbons could expedite the outfitting of their transport vessels with equipment to separate oils from polluted water in accordance with international agreements.

The participants also called for adoption of several measures, the most important of which are as follows:

1. Drafting of legislation to fight environmental pollution allowing for the requirements of economic development as well as the decisions and recommendations issued by the international organizations.
2. Drafting of a pan-Arab plan to prevent the occurrence of accidents caused by the petroleum industry in order to protect the environment from pollution.
3. Drafting of a set of regulations concerning the monitoring of pollutants produced by the main petroleum sources in some Arab areas in order to determine their regional effects and limit them through the creation of pollution level controls.

In connection with the conference, we contacted a number of experts who participated in the meeting. These included Hamad Ahmad Hasan, the senior engineer at Iraq's Salah-al-Din oil refining complex. He made the following statement:

"The main idea behind the holding of the conference for the protection of the environment from pollution is to exchange expertise and views with regard to OAPEC, to study the problems, and to formulate appropriate solutions to these problems.

"Pollution of the environment is one of the most important issues that must be dealt with by the Arab countries, particularly those which produce and export petroleum.

"It is worth mentioning that these problems that confront these countries are familiar in various other parts of the world, including the industrially advanced countries, especially Western Europe, the United States, and Japan. These problems have advanced practical and technical solutions that we--the Arabs--are trying to keep up with.

"We must not forget that the Arab countries are among the largest oil producing countries in the world and have a lack of water--especially water suitable for drinking.

"This dictates that we deal with the problem of water pollution as a first priority and air pollution as a second priority."

[Question] At this point we would like you to answer some questions pertaining to the conference and what happened during it.

This was the first time that such a conference has met. Does this mean that the problems of oil pollution have only recently reached critical proportions in the Arab states?

[Answer] This was not the situation. The problems of pollution in the Arab countries that are deeply rooted in the field of oil production have been dealt with for a long time. The purpose of holding this conference was to bring together Arab specialists and exchange expertise among them--especially with regard to the countries that are relatively advanced in this field.

[Question] What measures came out of the conference concerning the role that the peoples of the area must play in the fight against environmental pollution?

[Answer] There is a recommendation we arrived at in the conference concerning the role of media organizations in alerting the masses in all the countries of the Arab homeland to the problems of pollution so that they can play their role in preventing the spread of this epidemic, working at the same time to discover the means to ensure that pollution is combatted.

[Question] Many of the participants believe that the establishment of an Arab organization concerned with pollution problems has become an inevitability. What is your opinion?

[Answer] There was one proposal among the recommendations to form a committee composed of representatives of the member states under the auspices of OAPEC. This committee would study the potential for establishment of a specialized Arab agency to apply advanced technology to achieve sufficient protection. It will naturally call upon the expertise of the foreign states that have preceded us in this field.

[Question] They say, "Prevention is better than treatment." Did you arrive at positive results with regard to protection of the environment from petroleum pollution during the course of the conference?

[Answer] During the conference, we talked at length about means of protection and especially those related to the new projects that are being established in some Arab oil producing countries.

One of the resolutions that was agreed on calls for including the added cost of high technology equipment within the costs of the project on the condition that this equipment guarantee removal of the pollutants to an acceptable degree.

We also contacted al-Habib al-Azraq, general director of the Tunisian Petroleum Activities Organization and Tunisia's representative at the conference. He put forward several constructive views, in which he said the following:

The holding of this conference for the first time in the Arab world does not mean that the Arab world has been unaffected by the problems of petroleum

pollution. But as you know, our Arab countries are experiencing a struggle between the desire to achieve high levels of economic growth and the need to protect the environment at the same time. It has become clear to the Arab states since they made the first efforts toward industrialization in the oil field that the petroleum industry has some negative aspects in addition to its positive aspects. Most of these negative aspects relate to pollution.

There has, in fact, been an awareness of the problems of pollution. However, the Arab states have probably preferred to make progress in the field of industrialization before attending to problems of pollution. Moreover, the studies that the countries conducted in this field revealed one after another that current technology has the potential to allow those countries that desire to check pollution to remedy this problem through the introduction of modern technology. However, this is a tremendously expensive undertaking. There are several factors that led to the convening of this conference, including the existence of the problem known as the "pollution problem."

In addition to this, there remains the technology of the industrialized countries that can be introduced in the Arab countries to eliminate this pollution.

[Question] Do you feel that the establishment of an Arab organization or agency devoted to fighting pollution is an inevitability made necessary by current conditions?

[Answer] As a matter of fact, this idea was put forward and discussed during the conference. However, we did not feel that it was necessary to establish a special organization responsible for environmental protection because there is an organization charged with this task in OAPEC.

[Question] But has this organization really played an active role in this field?

[Answer] No, it has not. But it has legal existence and is viewed as a practical central agency whose functions include gathering information pertaining to pollution in the member states, working to bring in appropriate advanced technology to eliminate this problem, and acting at the same time to bring about an exchange of expertise among the Arab states and coordination of efforts made in these states in order to achieve integration in the environmental protection field.

[Question] In view of the fact that the acquisition of technology to remedy the problem is tremendously expensive, what preventive means of fighting pollution did you come up with?

[Answer] This matter was discussed extensively. The final opinion was that fighting pollution is not just a matter of technological treatment but also includes the avoidance, as much as possible, of plants and technical means that have negative consequences. It is also proposed that the external effects of the projects be included in the economic benefits and the added value.

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## REVIEW OF ANTIPOLLUTION LEGISLATION, CONTROLS

Kuala Lumpur BUSINESS TIMES in English 13 Nov 82 pp 12, 13

[Article by Charles Chan]

[Text]

THERE is a growing awareness among the public, the private sector and the government of the need to strike a balance between economic development and preservation of the environment.

This is clearly evident from the rising tide of complaints from concerned citizens and organisations like the Environmental Protection Society of Malaysia (EPSM), Sahabat Alam Malaysia (SAM) and consumer associations on the pollution dangers posed by certain projects such as the Tembeling Dam.

The government has gazetted certain laws to cope with environmental problems caused by the discharge of effluents into streams by rubber and palm oil mills and pollution of the air by manufacturing industries in various parts of the country.

The problems of environmental pollution will become more acute in the years to come in view of the government's commitment to step up industrial development, with emphasis in greater processing of natural resources and the promotion of heavy industries.

The approval of new in-

dustrial projects will therefore require applicants to include in their plans measures to cope with pollution of the air, water and the cities in general.

This will inevitably increase the capital investments and perhaps keep away certain foreign companies which might have selected Malaysia to site their offshore ventures. But the country is now in a position to be choosy about the types of industries it wants unlike the years preceding independence when industrial development took place with very little restrictions.

### Arsenal

At a recent seminar on joint ventures, a Japanese businessman suggested that the government should provide certain incentives to companies that instal anti-pollution measures in their factories.

This proposal has not received any immediate government response but there is no doubt that as environment-related pressures build up, the government will review existing legislation and consider new options to ensure that its industrial development programme does not lead to a breakdown of the ecology.

Existing pieces of legislation dealing with the environment comprise the Environmental Quality Act 1974 and its subsidiary legislations, e.g. The Environmental Quality (Prescribed Premises) (Crude Palm Oil) Regulations 1977, the Environmental Quality (Prescribed Premises) (Raw Natural Rubber) Regulations 1978, the Environmental Quality (Sewage and Industrial Effluents) Regulations 1979.

The Environmental Quality (Clean Air) Regulations 1978, Motor Vehicles (Control of Smoke and Gas Emissions) Rules 1977 and the Pesticides Act 1974 more or less complete the arsenal of legislative weapons at the disposal of the government to deal with pollution of water (rivers and seas), air and general surroundings of the various cities.

### Water Pollution:

Sources of water pollution can be classified into those from the industrial sector and those from the domestic or household sector. While the former can be further categorised into effluents from palm oil mills, rubber factories and other manufacturing industries, the latter consists of domestic sewage and sillage.

The Environmental Quality (Prescribed Premises) (Crude Palm Oil) Regulations 1977 came into force on July 1, 1978. This requires palm oil mills to meet a Biochemical Oxygen Demand (BOD) of 5,000 milligrams per litre in their effluents during the first year of enforcement. This requirement will be progressively reduced to a BOD of 250 milligrams per litre by July 1982.

The enforcement of this BOD level has had the required effect of reducing the discharge of effluents in terms of BOD substantially to 19 tonnes per day from 222 tonnes per day in July 1978.

By Jan. 1, 1984, the palm oil mills are required to reduce the BOD in their effluents to 100 milligrams per litre which means that the BOD discharged to watercourses from palm oil mills is expected to be less than five tonnes per day.

According to the *Treasury Report 1982/83*, a total of 163 palm oil mills throughout the country was required to meet the BOD parameter limit of 500 milligrams per litre.

A total of 116 mills complied with the requirement, while of the balance, 15 were found to

warrant prosecution in court.

That the regulations had been fairly effective was reflected in the finding of a survey conducted in 1980/81 by the Palm Oil Research Institute of Malaysia (Porim). It was found that 45 per cent of the 40 representative mills surveyed had already achieved a BOD limit of less than 100 milligrams per litre while 75 per cent had already achieved limits of less than 200 milligrams per litre.

SAM reported several cases of how effluents discharged by palm oil mills could cause misery to people affected by the discharge. In Kuala Sungai Benut, Johore, for example, pollution of the river by a palm oil factory killed off the fish resulting in fishermen's earnings plummeting from between \$500 and \$600 a month to \$100 a month. Prawns and lobsters were found dying by the hundreds.

**Rubber Factory Effluent Control:** Since the regulations concerning rubber factories came into force in April 1979, a total of 223 factories comprising 44 latex concentrate and 179 SMR and conventional grade rubber factories were required to reduce their BOD limits.

For SMR and conventional grade factories, the reduction level was from 300 milligrams per litre in April 1979 to 50 milligrams per litre in April 1981. In the case of latex concentrate factories, the level of BOD reduction in the effluent was from 450 milligrams per litre in April 1980 to 200 milligrams per litre in 1982 and 50 milligrams per litre in April 1983.

Again, there was some improvement. By April 1982, the pollution load discharged by rubber factories was reduced to less than eight tonnes per day from 98 tonnes per day in 1979. By 1983, this is expected to be reduced to less than five tonnes per day.

As of April 1982, a total of 180 of the rubber factories complied with the regulations while 43 did not. Seven of the latter were found to warrant prosecution in court.

What can possibly happen when a rubber factory indiscriminately discharges effluents with excessive BOD content?

The consequences can best be illustrated by the complaints raised last year by the residents of Kampung Sungai Tok Pawang near Sungai Patah which became polluted by effluents discharged into the river by a rubber factory set up nearby in 1975.

The residents alleged that the water from the river which they depended on for drinking purposes caused many to become ill.

The high acid content from the industrial wastes killed most of the fish, denying the residents of a source of protein. Vapours emitted by the factory not only became a health hazard but, also corroded zinc roofs and turned metalware and jewellery in the homes rusty and black.

**Other Manufacturing Industries:** The regulations dealing with pollution by manufacturing industries came into force on Jan. 1, 1979, covering only new factories but on Jan. 1, 1981, they were backdated to cover factories established before 1979.

## Destroyed

Some 3,600 factories — 60 per cent of industrial premises in the country — came under the purview of these regulations. The total BOD load generated by these factories is estimated at 124 tonnes per day.

After meeting effluent standards stipulated in the regulations, the BOD load discharged into watercourses has been reduced to an estimated 50 tonnes per day in 1982. To date, a total of 36 factories has been prosecuted in court for not complying with the rules.

The ravages of industrial pollution are just as deadly as those of palm oil or rubber factories. According to SAM, many

communities have been adversely affected by factories which indiscriminately discharge industrial wastes into the rivers.

In Kampung Padang near Alor Star, chemical wastes discharged by a fertiliser factory located in the middle of padi fields destroyed crops, resulting in severe economic losses to farmers.

Fish catch from the Sungai Batu Enam, Sungai Padang and Sungai Perapit also dwindled. The cause of this was traced to chemicals leaked into the padi fields from drums kept in the factory's compound.

Pesticide effluents from the drains also flowed into the irrigation canals for the fields, the potent chemicals contaminating the soil as well as the padi crops and fruit trees. Chickens and ducks which drank from the canals also perished and farmers who bathed there also came down with rashes and skin diseases.

The widespread use of pesticides is a cause of concern to concerned bodies like the Consumers Association of Penang (CAP) which claims that the Pesticides Board and Pesticides Act of 1974 was not effective enough in regulating the registration and sale of pesticides in Malaysia.

In a memorandum sent to the government, CAP alleged that almost any pesticide, whether toxic and hazardous, have been allowed registration by the board. It also claims that pesticides that are banned or highly restricted in the countries of origin are allowed to be imported or sold in Malaysia.

Whether CAP's allegations are justified is beside the point. The important thing is that enforcement of the Act should be stepped up to ensure that harmful chemicals are not sprayed by farmers who have been duped by un-

scrupulous racketeers selling imitation pesticides.

Pharmaceutical firms are aware of the problems caused by the widespread sale of imitation products and have rightly urged for more intensive measures to stamp out the malpractices.

**Air Pollution:** The problems of air pollution have assumed greater significance in recent years in the wake of the country's accelerated industrialisation, urbanisation and infrastructure development, says the *Treasury Report*.

It has been reported that the Klang Valley has the highest level of air pollution in the country, two or three times higher than that of some major US cities.

A major factor contributing to this is the sharp increase in the number of motor vehicles in use, resulting in greater emission year by year of carbon monoxide, nitrogen oxide and hydrocarbons into the atmosphere and posing serious health hazards.

## Concern

Under the clean air regulations, industrial establishments are required to comply with pollution control measures. In 1981, 38 trade premises were issued with written warnings by the Department of Environment for offences committed under the regulations while 35 others had their offences compounded for a total sum of \$19,000.

Six other cases involving repeated offences were brought to court and, upon conviction, were fined a total of \$5,350.

In an effort to speed up compliance with the regulations, 35 written directives were issued in respect of premises found wanting in implementing appropriate pollution control measures.

By the end of 1981, a total of 301 air quality mon-

itoring stations had been set up by the DOE especially in the main industrial areas and town centres.

There are 44 suspended particulate monitoring stations, 161 dust deposition gauges to monitor dustfall, two stations for sampling sulphur dioxide and 10 stations for monitoring total acidity while 79 stations have been set up for estimating sulphur dioxide, along with two carbon monoxide continuous monitors and two ozone continuous monitors.

**Noise Pollution:** Noise from a variety of industrial sources, especially those from wood-based plants, continued to pose serious concern. Haphazard location, the lack of control measures and out-of-date machinery contributed to this state of affairs.

A National Noise Control Committee is actively involved in studies of noise from industrial, traffic, community and airport sources and appropriate regulations for noise control are being developed.

Meanwhile, zoning techniques are being applied and noise control specifications imposed on equipment and industrial buildings.

The problem of noise pollution is also serious in new housing estates where rows upon rows of thin-walled houses are located, offering occupants little insulation from noise. A hi-fi or television set tuned on at full blast is generally heard by occupants next door.

**Marine Pollution:** The Straits of Malacca is one of the busiest sea lanes in the world and is therefore extremely vulnera-

ble to pollution especially from oil spills by tankers. In 1981, 21 cases of oil spills were reported in Malaysian waters of which about 62 per cent represented deliberate discharges.

Action against polluters was confined to the recovery of clean-up costs but since the beginning of 1982, the DOE has commenced prosecution against those who deliberately discharged oil.

The first of such cases was the successful prosecution and conviction in Malacca on April 15, 1982, of the vessel *M.V. King Bird* for the deliberate discharge of oil whereupon a fine of \$5,000 was imposed.

The government has also improved its state of preparedness to deal with any oil spills in Malaysian waters. The National Contingency Plan for the mitigation and control of oil spills has been implemented in stages since 1976 by the DOE in conjunction with the Marine Department.

With an initial allocation of \$23 million which was subsequently increased to \$35 million, the government was able to acquire the necessary equipment to deal with any such contingency.

The implementation of the Traffic Separation Scheme from May 1, 1981, to ensure safety in the

Straits of Malacca has resulted in a lower frequency of accidents in the straits.

The DOE is in the process of formulating regulations for the control of oil discharges and disposal of wastes from ships in line with the Environmental Quality Act 1974 and the provisions of

current international conventions to supplement the various regulations formulated under the Environmental Quality Act 1974 to control the discharges from land-based sources into the marine environment.

## Structural

The DOE also undertakes baseline studies and monitoring programmes of coastal areas with the aid of 108 priority stations established throughout Peninsular Malaysia.

In 1981, a total of 3,789 marine samples and 29 estuarine samples were taken for physical, chemical and biological analysis, while 28 beach tar stations were surveyed to assess the extent of pollution in recreational beaches by oil residues.

The results showed that sewage was the major source of marine pollution, particularly in the West Coast.

**The Future:** The problem of environmental pollution cannot be tackled by legislation and penalties alone. An integrated approach must be adopted, requiring forward planning in the whole spectrum of environmental as well as development-related activities.

The people too must play their part and this can be done by incorporating environmental conservation as a subject in the education system. In other words, future generations must be brought up with concern for the environment ingrained in them.

There will inevitably be structural changes in the society of tomorrow that will either reflect the failure to cope with the

ravages of pollution or success in coming to terms with nature.

If Mr Gurmit Singh, president of the EPSM, has his way, the Malaysia of the future should be a society of small and decentralised communities as a means of countering the energy and environmental crisis.

In a paper on the *Element of a Green Future in Malaysia* submitted last year, he said living in decentralised communities would prevent destruction of the ecosystem and keep land wastage at a low level.

He visualised a town of about 150,000 people as the nucleus containing all recreational, knowledge and communication facilities, separated by a green belt from an industrial estate which would process the produce of the rural hinterland.

Residents could grow their own vegetables using as fertiliser sludge from the street biogas plants.

"In this way, the community would almost be self-sufficient in energy, buying if necessary small amounts of liquid fuels to supplement transportation and electricity generations," Mr Gurmit Singh said.

Only time can tell whether Mr Gurmit Singh's vision of the future can come true.

But what is certain is that the Kuala Lumpur Draft Restructural Plan does include measures to control pollution to ensure the orderly development of the federal capital.

It could be the start of a new age, especially when other cities and towns also come up with their own blueprint for the future.

FUNDS PROVIDED TO PREVENT REPEAT OF AMMONIA-UREA SPILL

Labor Minister's Statement

Wellington THE EVENING POST in English 30 Oct 82 p 44

[Text]

Funding has been approved to help prevent a repeat of the Kapuni ammonia-urea spill which polluted a stream and killed wildlife, the Minister of Labour, Mr Bolger, said in Parliament yesterday.

Spray irrigation to dispose of effluent was being used at the plant at the time, and money was being provided to prevent the run-off that occurred.

Answering questions, Mr Bolger said plans were made and incorporated in the design of the plant so it could cope with any discharge of

chemicals.

"There is a large effluent catchment base incorporated to retain all effluents requiring treatment and there is a further catchment base for retaining stormwater."

During the plant commissioning there had been an "unusually" large amount of effluent to dispose of and the effluent catchment base had leaked.

Spray irrigation was used as an alternative and the run-off had happened.

Mr Bolger said an urgent review was being carried out to consider the adequacy of the effluent controls.

Catchment Commission Report

Wellington THE EVENING POST in English 2 Nov 82 p 5

[Text]

NEW PLYMOUTH, Nov 1 (PA). — Effluent treatment and disposal systems at the Kapuni ammonia urea plant are being upgraded following an ammonia spill there last month, according to a report released today by the Taranaki Catchment Commission.

A separate report by Dr B Cowie of the Cawthron Institute, said a preliminary

examination of the stream showed continual long-term ammonia discharges would almost certainly kill off the most sensitive species in the lower Kapuni Stream.

The report, released by the commission, which is investigating the spill which caused pollution in the stream, was prepared by Natural Gas Corporation general manager Mr Ron

O'Callahan.

Mr O'Callahan said that since the spillage supervision of commissioning work at the plant had been tightened and effluent discharge kept to a minimum.

The plant was shut down for planned modifications, directed partially towards reducing the risk of further spillage.

## IMPROVING WELLINGTON'S SEWAGE DISPOSAL PLANT DISCUSSED

Wellington THE EVENING POST in English 2 Nov 82 p 8

[Text] Proposals to "clean up" the bulk of Wellington's raw sewage by improving facilities at Moa Point--which would involve destroying one beach and repairing another--came before the Planning Tribunal this week.

Wellington City Council officers, led by the city solicitor, Mr Ross Kerr, put their case to Judge W J M Treadwell and three other tribunal members, while Mr George Frederick Archer, for himself and on behalf of other residents from the 14 households that would be affected, outlined objections.

The tribunal reserved its decision.

Moa Point has a long history as the main sewage outfall, where untreated waste pours into a southern coastal area known as Lavender Bay at the rate of several tonnes a day.

### Millions

The expansion of dumping facilities, at a cost of several million dollars to be raised in loans, would involve several stages, including building a plant to remove "floating solids" — which would then be incinerated on the site — building outfall pipes initially 300 metres into the sea, and eventually to reach a length of about 1950 metres, and building a high-rate primary treatment plant to re-

move fats and grease.

Earthworks to cope with this would involve a minor deviation to the Moa Point Road — part of the harbour's scenic drive — excavation of a large chunk of a steeply rising slope to accommodate the plant facilities, and possible reclamation of a shoreline area that would destroy a neighbouring beach opposite a small residential area.

The council drainage engineer, Mr Bonsall Budd, said this would eventually result in the grossly polluted Lavender Bay becoming "as clean as any beach in Wellington, and a major asset to the city."

### Shellfish

But he told Judge Treadwell that he could not guarantee the health of anyone who took shellfish from that area once the beach was cleaned up. In fact, he said, he would not recommend taking shellfish from any area affected by "human habitation."

Mr Budd said the council would be ready to proceed with the project as soon as a

favourable decision was received from the Planning Tribunal.

He rejected the objectors' suggestions of moving to another nearby site that would not affect them, saying that would cost a lot more, and would mean a far greater amount of excavation work.

Earlier, a town planning officer, Miss Phillipa Silcock, said the benefits from the project would outweigh the loss of the residents' beach.

It is a major facility which will substantially upgrade the water quality and recreation value of Wellington's southern shoreline," she said. "The proposal can be expected to have a beneficial effect on the general amenities of the residential area nearby."

But Mr Archer said the plant would be too close to those properties. The smell and noise from it would be offensive, while scenic views, including good vantages of the South Island, would be destroyed. Excavation work would expose the properties more to the southerly weather.

## CONSERVATIONISTS STALL PLANNED NATIVE FOREST LOGGING

Wellington THE EVENING POST in English 4 Nov 82 p 23

[Text]

AUCKLAND, Nov 1 (PA). — Big business and the conservation movement took a step closer together when Feltex agreed to reconsider its plans to mill a Southland native forest.

Feltex faces well-organised opposition from conservationists — some of them among the company's own shareholders — to its planned logging of Waitutu forest for furniture timber.

The company already has a cutting contract with the forest's Maori owners, but conservationists have opened the way to a compromise that could satisfy all parties and leave the forest intact.

### *Company agrees*

At the company's annual meeting in Auckland, directors of the Feltex board agreed to consider any government proposal that would protect Waitutu while compensating the company and the forest owners.

The meeting was swelled from an expected 350 people to about 600 by conservationists who had obtained shareholders' proxy voting forms.

The board chairman, Mr H G Callam, told shareholders that Feltex did not intend to clearfell the forest, as had been claimed by the Joint Campaign on Native Forests.

Feltex would remove only mature trees and then allow the forest to regenerate.

### *Little difference*

Professor John Morton, speaking for the joint campaign, said there was little difference between clearfelling and the logging planned by Feltex.

About 90 percent of the forest's rimu trees were mature, and their removal would damage the remaining 10 percent, he said.

It would take the forest about 500 years to regenerate to its present state.

The joint campaign chairman, Dr Alan Edmonds, said: "You will effectively take all the forest if you take the mature trees."

Mr Callam told the conservationists the board was "totally sympathetic" with their cause.

### *We have a contract*

"But we have a contract," he said. "The Maori owners (the Waitutu Incorporation) can take us to court and sue us if we do not keep our contract with them."

But — after some last-minute consultation — the board agreed to accept an amended version of the joint campaign's proposal. Feltex would reconsider the logging plans if the Government offered to compensate the company "for its interest in the standing timber."

The director of the joint campaign, Mr Guy Salmon, said after the meeting: "It is a giant step — unexpectedly pleasing."

Mr Salmon said the Government was now more likely to include Waitutu in the Fiordland National Park.

"The Government said it was no use getting involved when the forest was the subject of a contract, but now Feltex has said it will discuss alternatives we have removed that hurdle," he said.

### *Shearer next*

Asked if he thought the Government was likely to compensate Feltex, Mr Salmon said: "It is going to require a considerable amount of pressure. Our next step is to meet the Minister for the Environment, Dr Shearer, and the National Parks Authority."

Mr Callam said after the meeting: "The conservationists have to help us out. We have a contract, but we will look at anything the Government offers."

## BRIEFS

NATIONAL PARK ENLARGED--Wellington (Press Assn)--The Tongariro National Park is to have two large areas of state forest added to it. The Erua State Forest (3150 hectares) and the Rangataua State Forest (6100 hectares) will be added to the park's present 76,504 hectares. The addition of the Erua forest means that virtually all the forest between State Highway 4 and the mountain tops will be part of the park. Erua Forest consists of at least seven different forest types, while the lava flow in Rangataua is covered by red and silver beech. Bird life includes kiwis, pigeons, parakeets, tuis, bellbirds, whiteheads and kakas. The Rangataua State Forest, south of Mt Ruapehu and west of the Karioi State Forest, will include much of the Rangataua lava flow which originates from a vent below the summit of Ruapehu and stretches for about 14 kilometres. Only one of the 146 written submissions received by the Lands and Survey Department opposed the additions, which were approved yesterday by the National Parks and Reserves Authority. The one dissenting submission supported the logging of Rangataua on a sustained yield basis. [Text] [Auckland THE NEW ZEALAND HERALD in English 11 Nov 82 p 3]

THREAT TO WETLANDS--The proposal to reclaim some 2600 hectares of the Lake Wairarapa lake bed and wetlands for development for agriculture, should be scrapped, believes the Minister for the Environment, Dr Shearer. In a speech to the Kaituna-Motukarara branch of the National Party on Saturday, Dr Shearer said the proposal to reclaim 1700 ha of shallow lake bed for agriculture by a polder or dyke, along with another 900ha of lake wetlands, had drawn a lot of comment and controversy. The Commission for the Environment had produced an issues and options paper, which looked at the wider impact and connotations of the proposal. The three main options identified were for the scheme to go ahead as planned, with all possible environmental protection; for the polder scheme to be modified to preserve existing habitat; or for the polder scheme to be modified so that dykes were built landward of the present shoreline in order to preserve existing habitat but still allow considerable development of farmland affected by the wet. "My belief is that the polder scheme should be scrapped because it will effectively destroy another 2600ha of New Zealand's rapidly diminishing wetlands," Dr Shearer said. Lake Wairarapa had been rated by the Wildlife Service as New Zealand's third most important wetland, he said. There was also the risk that if the polder scheme went ahead it could encourage other catchment boards around the country to attempt similar projects. [Text] [Wellington THE EVENING POST in English 15 Nov 82 p 5]

NEW LAW ON ENVIRONMENTAL PROTECTION OF WATERWAYS REVIEWED

East Berlin NEUE JUSTIZ in German Vol 36 No 11, Nov 82 pp 501-502

[Article by Prof Dr Helmut Richter and Dr Christian Meissner, Department of Political Science and Jurisprudence, Martin Luther University, Halle: "New Regulations for Use and Protection of Water and Waterways." A translation of the Water Law of 2 July 1982, discussed below, is published under the heading "Law on Water Management Passed by People's Chamber," in JPRS 81729, 9 Sep 82, No 2314 of this series, pp 1-55].

[Text] Guaranteeing water availability and supply is a complicated task<sup>1</sup> in a developed industrial state with intensive agriculture and, as a consequence, an intensively utilized water balance. It requires the conscious cooperation of all state organs, economic units and citizens and the precise determination of their tasks, duties and rights in respect to the use and protection of water and waterways. The new Water Law (WaG) of 2 July 1982 (GBL [Legal Gazette] I, No 26, p 467) with its three implementing decrees [DVO] of the same date meets this concern by being oriented, especially in its principles (Art 2, Pars 1 and 2, Arts 11 and 23), toward efficient use of water and protection of waterways.

The primary means to protect water resources and to guarantee social utilization interests is efficient use of water and reduction of water consumption. For this, the law regulates rights and duties in respect to management, use and protection of water and waterways, maintenance and development of waterways and protection from flood dangers (WaG, Art 1, Par 2). Its purview applies to state organs, organs managing the economy, combines and enterprises, cooperatives and establishments, owners and those entitled to use plots of land and citizens (WaG, Art 1, Par 1).

Of the variety of legal relations which are possible in the application of the WaG, only a few which directly affect the citizens will be dealt with in the following. In this connection water law conditions are linked with conditions relating to land law, land improvement law and civil law.

Rights and Obligations in Respect to Use of Waterways

With the exception of the so-called general use of waterways (for example, swimming, drawing water by hand) all uses of waterways require a license

(WaG, Art 17, Par 1, Art 22 of the 1st DVO to it). For a citizen that could, for example, mean taking water from the ground water or piping a water course to supply his residential or vacation property or making a dam to remove water. It is up to the State Water Authority (SGA) alone, as the organ responsible for controlling use of waterways (Art 5) whether it issues a written use license in any one case according to the WaG, Art 17, Par 1. However, so that the SGA can make a decision which is in accord with the specific water management tasks, a requirement to report to the authorities should be affirmed--also for the safety of the citizens concerned. Any proposed introduction of sewage must in all cases be reported to the authorities.

Buildings along, in, below or above surface waterways are a special kind of waterway use. Typical examples are landing and fishing piers, boathouses, steps on the water bank or bridges. Consent of the SGA must be obtained (WaG, Art 17, Par 2) in order to erect, alter or remove these and similar structures. If this legal obligation is violated, then both additional costs and sanctions can be applied according to the WaG, Arts 42, 44, or claims for damages can be forfeited.

The SGA can issue various directions. These include, for example, the commitment that water management facilities must be jointly built or used (Art 18, Par 1, and Art 24, Par 2, section "i" of the 1st DVO to the WaG). If such a decision is issued, then the individuals involved must contractually regulate their rights and obligations (Art 18, Par 2 of the 1st DVO to the WaG), specifically according to the regulations concerning communities of citizens (Arts 266 to 273, ZGB [Civil Code]).

The SGA can also determine that existing facilities must also be used. However, since the ZGB only regulates joint use laws for parcels of land, relations in respect to joint building and utilization or joint use of water management facilities must be developed according to the general principles on contracts (Arts 43 ff, ZGB).

If those involved do not reach agreement, then according to Art 18, Par 2 of the 1st DVO to the WaG the responsible court makes the decision (or in the case of enterprises which are under the purview of the contract law, the State Contract Court decides).

#### Protection of Waterways from Pollution

Regulations to protect water and waterways from pollution are often violated because the citizens are not aware of the fact that they are handling water pollutants. Regulations and instructions for handling water pollutants are aimed primarily at enterprises and only insufficiently at citizens. Thus, it happens that packing, containers and implements and residues of household, agricultural or hobby chemicals are not disposed of as prescribed or objects covered with such chemicals are even cleaned in waterways. Even washing vehicles or other pieces of equipment, from which petroleum moves or can be washed directly into waterways as a dangerous pollutant,<sup>2</sup> attests to inadequate awareness of the environment.

Now everyone is obligated by Art 24 of the WaG to transport, transship, sell, store, use and dispose of solids, liquids or gases in such a way that water and waterways cannot be adversely affected. Art 29 of the 1st DVO to the WaG expressly prohibits in this connection introducing community refuse or waste products into waterways.

Frequently also the introduction of unpurified household wastes or allowing sewage to seep results in waterway pollution and impairs usability. Thus, Art 15, Par 2 of the WaG establishes a special sewage treatment obligation on owners and entitled users of residential lots which are not connected to public sewage plants. There is the obligation to treat or dispose of sewage in such a way that sanitary requirements are met and waterways are not adversely affected. This includes, for example, sewage processing with small purification plants if residential lots have toilets (TGL [GDR norms] 10698--water drainage from parcels).

But even if there is a connection to the public sewage plants those who introduce sewage have specific obligations. Thus, according to Art 10 of the order on general conditions for connecting land plots to and for the introduction of sewage into the public sewer system--sewage introduction conditions--of 20 July 1978 (GBL I, No 29, p 324) if need be, sewage must undergo pretreatment and various substances must not be introduced into the public sewer system.

#### Special Conditions of Use for Plots of Land

There are specific rights and obligations for users of plots of land which are located along the banks of surface waterways and in water management protection and reservation areas and for users of plots of land which are subject to special use conditions because of measures to maintain and develop waterways or for the operation and maintenance of public water supply and sewage plants (WaG, Arts 29, 33, 36, 37, 39, 40).

According to the WaG, Art 33, Par 2, waterside property, that is lands or areas which are located directly along a surface waterway, are to be maintained in such a way that the waterway bed and the banks cannot be endangered and controlled water discharge and maintenance cannot be hampered. The kreis councils can establish the necessary use restrictions and prohibitions for this. They can issue directions for erecting or altering buildings, for planting trees or bushes, for excavations, material deposits, and similar things. The general prohibition on parceling and cultivating areas of bank land 15 m wide, according to Art 74, Par 1 of the German Construction Order of 2 October 1958 (GBL-Sdr [special issue] No 287)<sup>4</sup> is likewise still in effect. Moreover, in the general social interest in embankment zones of those waterways which are used by the citizens for recreation or are suited to that purpose, cultivation, including fencing in of lots, is in principle not permitted (Art 14, Par 4 of the Land Improvement Law of 14 May 1970 [GBL I, No 12, p 67]).

There does exist an independent obligation on owners or users to maintain those buildings and walls that form the bank or which jut out into the waterway (WaG, Art 32, Par 3).

However, there can also be water management-based conditions of use for lands which do not adjoin waterways. This can affect plots in drinking water protection and reservation areas (WaG, Art 29, and the 3rd DVO to it), in flood areas and areas protected by dikes (WaG, Art 36), in coastal protection areas (WaG, Art 37) and water management reservation areas (WaG, Art 39). Possible use restrictions and prohibitions stem basically from legal regulations including state standards, resolutions affecting these protection areas or--for individual plots--from directions by organs having jurisdiction. For certain water management measures observance of special use conditions, the granting of specified-term or permanent shared use or joint use laws, temporary or permanent revocation, the transfer of ownership rights or the change in legal entity can be required for plots of land, waterways, buildings and plants (WaG, Art 40, Par 1). In this, the law is oriented toward contractual transfer for a consideration. If no contractual agreement develops, the rights of the users, owners or legal entities can be restricted or even cancelled by the responsible state organs (WaG, Art 40, Par 4). As far as that is concerned, the water law follows the regulation on claims and damages which was drawn up in the Mining Law of 12 May 1969 (GBL, No 5, p 29).

In this connection reference must also be made to the duty of land users to implement measures to counter the soil-eroding effect of water and not to alter the natural water discharge (WaG, Art 38). This obligation is aimed at flood and erosion protection, protection of the rights and interests of third parties, guaranteeing natural preflooding and the preservation of the land improving characteristics of the water.

Finally, land users must allow staff workers of the SGA access to property in order to carry out their tasks (Art 5 of the 1st DVO to the WaG).

#### Responsibility for Violations of the Law

Art 42 of the Water Law lists minor breaches of regulations with disciplinary measures for guilty violations of the water law which reflect lack of discipline. These regulations are helpful particularly in observing the state licensing and approval process, respectively, guaranteeing waterway, flood and coastal protection and the maintenance of waterways. With consideration of the motive, the personality of the violator of the law and the damage which occurred, reprimands or penalties from M10 to M500 can be imposed, or in more extreme cases (for example, in causing greater damage or in the case of gross disregard of social interests) it can be up to M1,000. With substantial pollution of the water or with substantial impairment of the usability of a waterway fines as high as M10,000 can even be imposed.

In contrast to the 1963 water law, the new water law does away with independent control of claims for damages. This means that for damages which are caused by violating water law obligations, claims for damages must be investigated according to Arts 330 ff of the ZGB. In Art 35, Par 1 of the 1st DVO to the WaG, however, a special cost indemnification provision is set forth. According to it those who cause water use averages must reimburse

the costs incurred by the water management or transport system organs which are active in combating the average.

Moreover, Art 44 of the WaG provides, as an administrative sanction, for a compulsory fee which in respect to citizens can be used as a threat and carried out for the purpose of implementing orders, up to a maximum of M5,000.

#### Successor Regulations to the Water Law

The water law does not contain complete regulation of all water law conditions. Thus, for example, the supply relations between the legal entities of public water supply and sewage plants are regulated by the order concerning the general conditions for connecting property to the public water supply plants and for delivery and removal of drinking and enterprise water--water supply conditions--of 26 January 1978 (GBL I, No 6, p 89) and by the order concerning the general conditions for connecting up real property and for the introduction of sewage into the public sewage plants--sewage introduction conditions--of 20 July 1978 (GBL I, No 29, p 324). Additional special legal regulations are the first implementing regulation (DB)--flood reporting system--of 2 July 1982 (GBL I, No 26, p 490) and the order for water availability and water supply in extreme situations in accordance with water availability and water supply levels of 2 July 1982 (GBL I, No 26, p 492).

But nonetheless the water law is not only a "waterway law." Considering the natural and economic specifics of water resources it standardizes the processes which are associated with the use and reproduction of these resources in accordance with their complexity and interrelatedness. Moreover, it establishes the general principles, tasks and behavioral requirements and the legal consequences of violations of obligations.

The DVO's which were simultaneously issued with the water law make this specific. The first DVO provides further definition in particular of the tasks, rights and purviews of the state organs, as contained in the law, and the rights and obligations of waterway users to protect the waterways, to maintain them and for flood protection; moreover, it makes specific statements about water law licensing procedures. The second DVO regulates the conditions for the levying, fixing and payment of sewage fees as a state sanction in the case of violations of the law and of water use compensation as an economically justified tax. The third DVO guarantees a uniform procedure for establishing the various water management protection areas and sets forth the use prohibitions and restrictions for drinking water protection and reservation areas and the tasks and rights of the protection zone commission.

#### FOOTNOTES

1. Compare H. Reichelt, "Efficient Handling of Water--An Important Economic Task," NEUES DEUTSCHLAND, 3-4 July 1982, p 5.

2. One liter of petroleum contaminates 1 million liters of water. Pollution of the soil and waterways by petroleum has a considerable effect on the vegetation, results in life-threatening situations or the death of fish, water birds and other water organisms. With human beings, too, water polluted by petroleum can lead to severe illnesses.
3. In exceptional cases waterside property also includes lands which, to be sure, are not located directly on the bank, but in a bank area which is defined by the local state organs.
4. K. Sorgenicht demanded strict observance of this regulation at the 12 July 1973 meeting of the People's Chamber (compare the Law on Local Parliaments and Their Organs--A Step Toward Further Development of Socialist Democracy, in the series "From the Activity of the People's Chamber and Its Committees," No 8 [sixth legislative period], Berlin, 1973, p 28.
5. Compare, for example, GDR Standard TGL 24348/01-03 (drinking water protection areas).

12124

CSO: 5000/3003

REGULATIONS ON PROTECTING SEA TURTLES ISSUED

Cayenne LA PRESSE DE GUYANE 1 Dec 82 p 1

Text It is established in the state domain at Les Hattes (town of Mana) by official order of the prefect, commissioner of the republic of our region.

Attention of both residents and tourists is called to the provisions made to assure better protection of those species that are too often the objects of human depredation.

The perimeter of the beach sector of Les Hattes affected by this new regulation is delineated as follows:

- To the north by the Atlantic Ocean;
- To the west by the mouth of the Maroni River up to Vigie Point;
- To the south by the north and northwest limit of the departmental land area P 275 and CD 7;
- To the east by a perpendicular line to CD 7 joining this route to the sea at the spot called "Fallen Wood."

On the beach, as defined above, it is forbidden:

- to camp anywhere, except in sites specified and posted;
- to light fires;
- to shine flashlights on adult female turtles during their period on land and their departure;
- to shine lights on newborn turtles during their crawl to the sea;
- to take flash pictures or to use floodlights for filming during the adult female turtles' period on land, climb onto the beach and return to the sea, as well as during the newborn turtles' departure.

- to block the turtle's climb onto the beach or its return to the sea;
- to disturb adult female turtles by handling them, touching them or climbing on their backs;
- to touch or pick up baby turtles as they leave the nests;
- to uncover or pick up the eggs;
- to let dogs wander loose;
- to leave trash or garbage on the beach;

Violators of prefectural regulations will be subject to penalties set forth in article R 26-15 of the Penal Code.

A standing exemption is granted to scientists representing the National Museum of Natural History and to personnel of the sea turtles preserve of Les Hattes concerning the handling of adult or newborn turtles, the uncovering and sampling of the eggs and any procedure necessary for the safety or preservation of the eggs and animals.

9955  
CSO: 5000/2011

## BRIEFS

SILTATION STUDY--International Atomic Energy Agency (IAEA) will assist Bangladesh to study silt and sand movement in the two harbours by radioactive techniques. An IAEA expert Mr M. J. Crickmore is already in Bangladesh to prepare a feasibility report on the studies of silt and sand movement in Chittagong and Chalna harbour. Mr. Crickmore talking to newsmen yesterday said he will submit the consultancy report to the IAEA in Geneva later this week. The IAEA after studying the report will recommend to Bangladesh the methodology to measure the littoral drift of sediments to the outerbar of Chittagong and Chalna harbour. The expert has visited the River REsearch Institute, the space Atmospheric Research Organisation (SPARSO) Inland Water Transport Authority and the atomic energy research establishment at Savar during his month long stay in Bangladesh. The seidmentologist said the siltation in the Pasur and Shibsra rivers' at the Chalna Port might have been caused by the unplanned canal digging in the southwestern region of the country. The sunken ships at the river beds during the Liberation War is another reason for massive siltation at the harbour, he added. The IAEA expert delivered a lecture yesterday at the Bangladesh Atomic Energy Commission (BAEC) auditorium on 'Radioactive tracer techniques for sediment studies'. Mr. Crickmore leaves for Geneva tomorrow. [Dhaka THE NEW NATION in English 15 Nov 82 pp 1, 8]

CSO: 5000/7014

## INVESTIGATORS FIND EXCESSIVE POLLUTION IN DELHI

New Delhi PATRIOT in English 26 Nov 82 p 10

[Text]

**A** PEDESTRIAN or scooterist waiting for the red light to turn green at a busy road crossing in Delhi is inhaling more than five times the carbon monoxide than is permissible under health standards, according to tentative experimental data gathered in the Capital.

The human tolerance limits for carbon monoxide gas, the poisonous gas produced by incomplete combustion of any organic matter including oil and coal—and a major component of automobile exhaust—is only 0.8 per million (ppm) of air.

Test studies done by the Central Pollution Control Board of the Department of Environment at the Bahadurshah Zafar Marg and Deen Dayal Marg crossing show the average carbon monoxide range to be over 5 p.p.m.

The board has set up a monitoring unit near the crossing. The unit is equipped with continuous measuring equipment that samples the air near the crossing during the day. A tube has been put about 20 feet over the road and sucks the air into a spectroscopic gauge that automatically estimates the carbon monoxide (known chemically by its symbol 'CO') in the air.

According to available data, the peak hour CO content—during 9 to 11 a.m. and then during 4 to 7 p.m.—is 5 ppm and the average around 3 ppm. Extraordinary high concentrations of the noxious gas were

discovered on 12 and 23 October when the spectroscope registered 12 ppm of CO.

The unit also has mobile equipment to take gas measurements at various levels.

According to scientists, the CO problem on roads aggravates during winter as the gas remains close to the road surface—in fact at about the height of a scooter driver as the huge buses went more and more CO when their engines idle at traffic junctions.

The unit has also conducted tests on solid particles in the air—coming not only from the Indraprastha power plant but from exhaust and microscopic dust raised by moving vehicles. The solid particle concentration is about 100 parts per cubic metre of air, within the tolerance limits of 150. Excessive solid particles are said to cause allergy, itching in the eyes and occasionally symptoms resembling those of a common cold.

In another test that the department conducted on public transport recently at the Inter State bus terminus, it was discovered that the buses of Delhi and Uttar Pradesh transport undertakings were the worst offenders in the "dirtiness" of the smoke they emitted from

their exhausts.

The permissible limits of carbon and other solids in bus exhausts is 65 ppm. The DTC and UP buses averaged well over 70 ppm, occasionally well over 90 ppm. Scientists said this was the result of faulty maintenance. The 'cleanest' exhaust was of Rajasthan buses, followed by Punjab, Himachal and Haryana.

The Department of Environment is also investigating the sulphur dioxide content in the atmosphere, specially in industrial areas of the Capital where this acidic gas is a major pollutant.

CSO: 5000/7015

## DELHI RIVER YAMUNA REPORTED HIGHLY POLLUTED

New Delhi PATRIOT in English 29 Nov 82 p 10

[Text]

LUCKNOW, Nov 28 (PTI)—River Yamuna is highly polluted in Delhi, the fourth geological congress which concluded recently at the Banaras Hindu University (BHU) has been told.

Dr Shadab Khursheed of the geology department at the Aligarh Muslim University said that the river received a major share of pollutants from some of the huge industrial estates all along the course in the north, western Uttar Pradesh and southern part of Haryana, besides the north eastern region.

The worst polluted part of the Yamuna lie in Delhi between Wazirabad and Okhla where the water receives industrial wastes from tanneries textiles mills chemical distilleries sugar factories thermal power houses and metal based industries, Dr Shadab told the congress.

Dr Shadab, while reporting his finding, said that besides this, a large quantity of untreated urban and domestic wastes from the sewer drains of the metropolitan Delhi and its adjoining areas are also regularly poured into the Yamuna.

The industries in the Union Territory are located primarily within three drainage basins like Nazafgarh, trans-Yamuna, MCD and Kalkaji, he pointed out.

However, Najafgarh alone has 215 relevant industries while the trans-Yamuna, MCD and Kalkaji have 116 and 28 industries respectively, Dr Shadab informed the congress.

The Total Dissolved Solids (TDS) in the industrial waste water, being 19,846 kilogram per

day, was highest from Najafgarh drainage, he said.

Similarly, the quantity of the Total Suspended Solids (TSS) was as high as 6,822 kilogram per day from Nazafgarh, Dr Shadab said.

CSO: 5000/7017

## HIGH ARSENIC LEVEL REPORTED FOUND IN BOMBAY FISHES

Madras THE HINDU in English 27 Nov 82 p 7

[Text]

COCHIN, Nov. 26.

A high concentration of the deadly arsenic has been reported in some fish sold in Bombay.

In a paper at the symposium on "Harvest and Post-harvest Technology of Fish" here, Mr. J. B. Khot, Mr. A. T. Sherikar and Mr. H. V. Karale of the Department of Food, Hygiene and Public Health, Bombay Veterinary College, said 64 samples of four species of fish were analysed by 'atomic absorption spectroscopy' technique for heavy metals like zinc, copper, lead, cadmium, iron and nickel.

The heavy arsenic was chemically analysed by 'modified Gutziet method'. Amongst all heavy metals arsenic concentration was as high as two parts per million (ppm). Only one sample each of Bombay duck shell fish and pomfret and two samples of prawns, were found to contain less than two ppm of arsenic.

The paper said other heavy metals in all species were found within the tolerable limit.

A slightly higher concentration was observed in fish samples from Thana and Chembur market as compared to that of Dadar market.

**Other metals:** Mr. P. T. Lakshmanan of the Central Institute of Fisheries Technology, Cochin who analysed nine species of fish, five species of prawns and a backwater crab for mercury, copper, zinc, manganese, cadmium

and lead, in his paper said all the samples except tuna and crakmeat showed mercury content of 100 parts per billion (ppb). In tuna it varied from 120 to 220 ppm and in crab meat from 160 to 375 ppb. The level of copper in general was found to be low and in most products it was five ppm. Zinc was in the range of 6.5 to 30 ppm.

In their paper on organochloride insecticide residues in fish samples from the Vellar estuary in Tamil Nadu, Mr. N. Rajendran and Mr. V. K. Venugopalan of the Centre of Advanced Study in Marine Biology, Parangipettai (Tamil Nadu) reported that residue concentrations of organochloride insecticides such as DDT and its metabolites, BHC (lindane) and Endosulfan had been detected in samples of the fish *Mugil Cephalus*, *Siganus Jauas* and *Mystus Gulio* collected fortnightly for one year from different locations of the estuary.

The concentration of DDT and its metabolites ranged from 0.6 to 5.6 microgram a kg, lindane from 0.36 to 3.2 microgram a kg and endosulfan from 0.04 to one microgram a kg on wet weight basis.

Increasing residue levels of chlorinated hydrocarbons were found in the orders *M Gulio*, *M Cephalus* and *S Kavus*. The residue levels did not seem to be an immediate danger to the fish. None of the sampling locations produced consistently higher residues than the others.

CSO: 5000/7016

AIR QUALITY DETERIORATING THROUGHOUT COUNTRY

Tel Aviv HA'ARETZ in Hebrew 10 Nov 82 p 4

[Article by Eli El'ad; "Average Air Quality in October Worsens in Most Areas of Country"]

[Text] In October there was a worsening in the average air quality throughout most of the country. This information was contained in the October report of the conservation of environmental quality service.

The report notes that in October, which is a typical autumn month, there was warm and stable weather, with weak winds. These factors and others caused a worsening in the air quality in comparison to September, and in contrast to what has occurred in October in prior years.

The worsening in the last month was also expressed in concentrations of gaseous pollutants for a short time. In some cases, these pollutants reached concentrations of 30-40 percent over what is permitted by regulations, and in two places concentrations were recorded of more than 50 percent, constituting deviations from the Israeli standard of 99 percent. These deviations were recorded in Haifa on 25 October, with a concentration of nitrogen oxide, and in Tel Aviv on 24 October, with a concentration of hydrocarbons.

Also recorded in the current month were rises in concentrations of sulfur dioxide in large cities, as compared to September. Also recorded were relatively high concentrations of sulfur dioxide in the Hadera region (the Sharon). It should be noted that these concentrations were recorded especially on days when the power station at Hadera was not operating. It should also be noted that in contrast to what was published (HA'ARETZ, 26 October), no damage was suffered by agriculture in *pardes khana* as a result of escape of sulfur dioxide from the power station at Hadera.

There was also a rise in nitrogen oxide concentrations as compared to September in all large cities, and a rise in carbon monoxide in Tel Aviv and in dust in Hadera and environs. In Beer Sheva during the past month there was a high concentration of dust.

prominent in the report was the fact that in the past month, Beer Sheva was the most polluted place. In addition to high concentrations of dust, there were also rises in concentrations of gaseous pollutants.

From the data recorded by the electric company collection stations, it is apparent that in September in the area of Ashdod there was a continued trend in the rise of the number of deviations from Israeli standards for concentrations of sulfur dioxide.

The number of deviations in the region of Ashdod in 1982 is almost 2.5 times higher than the number recorded in parallel months of 1981.

The number of deviations in Haifa is similar this year to the number of deviations in parallel months during 1981.

7075

CSO: 5000/4505

DECREASE IN LAKE TIBERIAS SALINITY

Tel Aviv HA'ARETZ in Hebrew 31 Oct 82 p 5

[Article by Eli El'ad: "Laboratory Report Determines that Tiberias Is Less Saline"]

[Text] Lake Tiberias is less saline -- this comes from the annual report of the Laboratory for Researching Lake Tiberias for the current year (1981), which is being published in the new issue of BIOSPHERE.

The report notes that Lake Tiberias has, for many years, been undergoing a process of de-salinization, which is expressed in concentrations of chlorides: for the years 1969-1974, the range of concentration was 230-252 milligrams per liter, while in 1975-1981, the concentration of chlorides declined to 216-238 milligrams per liter.

This improvement will enable the reduction of the spread of saline springs during hot years, on condition that the water table be maintained at a normal level. A very strong reduction in the water table would require a maximum diversion of spring water from the lake.

The laboratory report notes that as compared to the decline in concentrations of chlorides, there has been in Lake Tiberias since 1974 a rise in concentrations of organic nitrogen and phosphorous. Concentrations of organic nitrogen gradually rose by 30-50 percent as compared to the beginning of the 1970's. The concentrations of phosphorous were particularly prominent in 1979-1981.

In the wake of these findings, scientists at the laboratory note that in order to prevent deterioration in the condition of Lake Tiberias, there must be a significant reduction, to the point of absolute elimination, of fish pools as they are presently operated, and a change in the mode of operating a limited area of pools. Likewise, there must be introduced equipment for collection at all stages in treatment of runoff and purification, and these must be diverted to recycling in agriculture. The general quantity in the accumulation ponds is 6-10 million cubic meters per year. Adoption of the recommended changes would result in a reduction of phosphorous entering the lake by 40-50 tons per year (out of 130 tons of general phosphorous), and of organic nitrogen by 200-250 tons per year (out of 520 tons).

7075

CSO: 5000/4505

## BRIEFS

NEW NATIONAL REFORESTATION OFFICE ESTABLISHED--This week, attention focussed on the Cameroonian forest. On 6 December, at an annual meeting of Water and Forestry officials, the deputy minister of agriculture, Mr Nfor Ngwei, noted the considerable role played by wood in our economy: in 1980/1981, 791,574 cubic meters of wood were exported, amounting to over 55 billion francs; as a result, our country ranks third among African exporters of wood. On this occasion, Mr Nfor Ngwei expressed the wish that "absolute priority" be given to the rational exploitation and protection of our forests. By a fortunate coincidence, two days later, on 8 December, the president of the Republic signed a decree creating the National Forest Regeneration Office (ONAREF) which is to implement the government's policy with respect to forest regeneration, reforestation and soil preservation and restoration. This new industrial and commercial public institution is headquartered in Yaounde; it is managed by a board of directors and a managing director. The real estate and property of the National and Fish-Breeding Fund will be passed on to ONAREF, except for the assets having to do with fish-breeding, which will be passed on to the Ministry of Animal Husbandry, Animal Industries and Fisheries. [Text] [Yaounde CAMEROON TRIBUNE in French 9 Dec 82 p 1] 9294

CSO: 5000/59

## DROUGHT CAUSES GREAT LOSSES TO COMMERCIAL, COMMUNAL FARMING

Harare THE HERALD in English 6 Dec 82 p 1

[Article by William Bango]

[Text] **FARMERS in some parts of Zimbabwe will face another crisis this season if more rain does not fall soon.**

The main areas already hit hard are in Mashonaland, Manicaland, Masvingo and some parts of the Midlands. Both commercial and communal farmers in these areas expressed concern at the weekend because of the loss they had incurred so far.

A spokesman for the Commercial Farmers Union said yesterday that unless it rains within the next five days, the situation would be extremely serious.

"With regard to Matabeleland and some parts of the Midlands, as far north as Chegutu, the position is reasonably satisfactory. But in the north and east of that line, including Beitbridge, the position is bad and unless rain falls within the next five days, the situation will be extremely serious," he said.

Some farmers believe there will not be enough rain to ensure good harvests.

"If we have to replant, it means that we are going to buy seeds again and we will be late generally. Those who used to plant two crops in one season will not be able to do so and this will obviously affect the industry," said the CFU spokesman.

However, he said, the

country had enough to feed the nation at the moment because of last season's maize harvests.

Communal farmers were the worst hit by the uncertain rainfall situation. "We won't be able to get the money to buy more seeds to replant and our cattle will also be too thin to provide enough draught power if it does not rain soon," said a Chinamhora farmer.

Most communal farmers interviewed on Saturday morning said because half the country was affected by lack of rain, Zimbabwe might face another serious drought next year.

"We haven't got any rain in Gokwe. It last rained on October 25, and most of us lost so much cotton seed we had put into the ground," said Cde Godwin Gutsa.

"Rivers are almost running dry in our area and if it does not rain soon, our livestock will suffer because of lack of water and grass," said Cde Christopher Gundo from Chikomba near Chivhu.

Two elderly farmers from Mutoko and Murewa suggested that a national traditional ceremony to plead for rain from the ancestral spirits should be held soon.

"District councils must organise their communities and brew beer for a rain ceremony. This must be done now otherwise it will be too late," said Cde Marakiya Kapfende of Murewa.

"It is useless to moan from each individual homestead because it won't help the situation. Let us unite and go back to our elders. I am sure that is the only answer," said Cde Tambarayi Hukwimwe of Mutoko.

Asked to comment on the rainfall position, a spokesman for the Meteorological Office said it was difficult to say whether the country would have rain or not because they did not conduct seasonal forecasts.

The department would only forecast the weather and atmospheric position generally for periods not exceeding three days.

"However, as for today and the near future, unless the Inter - Tropical Convergence Zone comes down from Zambia coupled with a fall of pressure over South Africa, most parts of the country will have no rain," he said.

Rainfall in the eastern half of the country had been below normal, while in the west and south-west it had been above average.

The largest reported surplus was at Mukandi (+155 mm) followed by Doma (+143 mm).

The largest reported deficits were Norton (-86 mm), Arcturus (-83 mm) and Raffingora (-55 mm).

"The dry air covering some parts of Zimbabwe has affected the rainfall patterns in the country and unless the air becomes moist there will be no rain. It's unfortunate that all these factors do not seem to be imminent," said the spokesman.

CSO: 5000/58

## BRIEFS

RAIN, FLOODS IN AZERBAIJAN--Our correspondent reports from Baku: Torrential rain which started 2 days ago in the subtropics of Azerbaijan has not stopped for a single hour. Yet again, as happened in recent floods, the rivers have burst their banks. A mass of water weighing many tons has rushed down from the hills into the fields. A considerable amount of the area sown to winter cabbage has suffered in Lenkoranskiy Rayon, as have the forcing frames growing vegetable crop seedlings, and the vineyards. The floods are threatening roads linking populated areas in the region. A headquarters to combat the elements has been set up at Lenkoran Gorkom. Workers from all the farms in the rayon are in the vegetable and tea plantations with equipment are making extra flood channels to drain the flooded area. [Text] [LD251410 Moscow Domestic Service in Russian 1130 GMT 25 Nov 82]

EFFECTS OF AZERBAIJAN EARTHQUAKE--As we have already reported, an earthquake has struck Zardobskiy Rayon in Azerbaijan, causing quite a lot of damage. Dwelling houses, public buildings, stockbreeding farms and underground mains were ruined and damaged. The republic organization is giving practical aid to those who have suffered. A rayon headquarters has been set up to liquidate the aftermath of the earthquake. On building sites of new dwellings, a two-shift work system has been organized in order to hand them over for occupancy as soon as possible. Zardob farmers have suffered three earthquakes this year and they have passed this harsh examination with honor. They have considerably overfulfilled the plans for the sale of the state of grain crops, cotton and other produce. [Text] [LD251634 Moscow Domestic Television Service in Russian 1130 GMT 25 Nov 82]

AZERBAIJAN FLOOD DAMAGE--Moscow, 27 Nov (AFP)--Floods caused by recent torrential rains in Central Asia have done extensive damage in the Azerbaijan region of the Soviet Union, the worker newspaper of Baku reported. The newspaper said a number of crops, notably tea, had been damaged, bridges and roads had been washed away, and villages had been threatened by the rising waters. The newspaper did not report any casualties, but said local authorities had constituted a relief commission. [Text] [NC271554 Paris AFP in English 1539 GMT 27 Nov 82]

EARTHQUAKE HITS TAJIKISTAN, UZBEKISTAN--Moscow, 16 Dec (TASS)--At 3 hours 40 minutes Moscow time today, residents of Dushanbe, the capital of the Soviet Central Asian Republic of Tajikistan, felt an earth tremour of 4-5 points on the 12-point scale. Its epicentre, according to the central seismic observatory, was on the territory of Afghanistan, in the northern spurs of the Hindu-Kush ridge. The earth tremour reached there 8 points. Tremours of 5-6 points were registered in the south of Tajikistan, tremours of 5 points in Nurek and Kulyaba, 4 points--in Horoga, 3-4 points--in Pedjikent and Ura-Tuba. There are no casualties. Some old buildings were affected. Commissions were formed locally to see into the consequences of the earth tremours. Tremours were also felt on the territory of Uzbekistan. A tremour of 3.5 points was registered in Tashkent. No considerable damage was inflicted to structures. [Text] [LD161136 Moscow TASS in English 1117 GMT 16 Dec 82]

EARTHQUAKE NEAR BAKU--Baku, 17 Dec (TASS)--An earthquake was registered by Azerbaijan's seismic stations at 9 hours 52 minutes Moscow time today. At the epicentre, located in the Caspian Sea 108 kilometres to the north of Baku, the quake was of force 4 according to the 12-point scale. The tremor was of force 3-4 in the populated localities closest to the sea. There was no loss of life or damage. [Text] [LD171440 Moscow TASS in English 1430 GMT 17 Dec 82]

CSO: 5000/27

REPORT POINTS OUT LIKELY THREAT TO ENVIRONMENT

Nicosia TA NEA in Greek 5 Dec 82 p 10

Text Pollution sources are seriously poisoning the air, soil and sea of Cyprus. In a report on the natural environment, the Popular Bank describes the existing conditions and warns that Cyprus may not yet be considered as badly polluted a country as the industrially advanced countries but such a condition may be approaching. In describing the various pollutions in the island, the report states:

The means for proper and scientific measurement of the air pollution do not exist and no data were ever published about the air pollution by the Larnaca refinery as well as by six heavy industries spread along the southern coastal area between Limassol and Dekeleia. Half of the population is exposed to the air pollution.

The sulfur content in the oil used by the two electric power producing stations averages 3.5 percent in volume. On the other hand, the sulfur dioxide air particles from the factory producing sulfuric acid will more than exceed the present level of 27,000 tons annually. This is hazardous to the flora, wildlife and public health.

The dirty air particles are generated by the factories and mines throughout the island.

7520

CSO: 5000/4710

ENVIRONMENT MINISTER WANTS TOUGHER POLLUTION LEGISLATION

Copenhagen BERLINGSKE TIDENDE in Danish 24 Nov 82 p 6

[Article by Helle Ravn Larsen]

[Text] "It must no longer be profitable for enterprises to cause pollution. We are experiencing a very dangerous development where enterprises prefer to pay an occasional small fine rather than avoiding pollution."

This statement was made by Environment Minister Christian Christensen, who wants to undertake an inquiry into the entire pollution legislation. The Christian People's Party wants to take an even stronger stand as a pro-environment party and has, at present, a visit from a Swedish environment expert, Bjorn Gillberg, who will assist in the preparation of a complete environment program.

"It is especially the major chemical enterprises which we must get hold of. Many control measures in minor enterprises, for example in the area of food inspection, may be relaxed, for the level is already very high. The money which will be saved in this area may instead be used for stricter control of large enterprises," Christian Christensen says.

Bjorn Gillberg's expertise is primarily within the area of chemistry, where he is regarded as one of the leading experts.

Expects Major Environmental Damage

His theory is that if it is possible to develop substances chemically, it is equally possible to break them down chemically, so that the dangerous combustion process is avoided. He expects major environmental damage in Denmark in a number of cases in the course of the next few years, with a danger of ground water pollution.

Bjorn Gillberg proposes, moreover, that a fund of 200 million kroner be set up for the enhancement of the environment. The contributions are to be made by enterprises which constitute a threat to the environment.

"We have got many good ideas from Gillberg which we are now developing. It is important for people to appreciate the problems. We shall have to

look into the problems of pollution to an ever increasing extent and increase our efforts," says Christian Christensen, stressing that it will, however, have to be done without further economic burdens to the economic life.

7262

CSO: 5000/2524

## HAZARDOUS WASTE DUMPS SEEN THREAT TO GROUND WATER

Copenhagen AKTUELT in Danish 2 Dec 82 p 18

[Article by Bjarne Kjær]

[Text] The comprehensive charts prepared by the Environment Protection Board of more than 3,000 dumps and localities show that chemical waste has been deposited or buried in 501 dumps. A preliminary report estimates that 114 dumps are the ones most hazardous to the environment. These chemical waste dumps constitute a threat to the ground water or the surface water in lakes or the open sea. In the course of 10 years, it will be possible to introduce proper measures to check leakages from chemical waste dumps. Such measures will cost approximately 400 million kroner.

In a report on the chemical waste dumps, Minister for the Environment Chr. Christensen (Christian People's Party) tells the Finance Committee of the Folketing that, already in the course of the present sessional year of the Folketing, he will present a bill on buried chemical wastes. He has asked the Environment Protection Board to start work on a draft in cooperation with the municipal organizations.

#### Duty to Disclose Information

In its report, the Environment Protection Board has proposed that the legislation in question comprise chemical wastes dumped prior to 1 April 1976, seeing that, after that date, the removal of chemical wastes has been ensured by law. The Environment Protection Board proposes that both the state, the counties, and the municipalities contribute financially to this essential task.

According to the proposal, the legislation shall contain provisions governing the duty to disclose information on the part of the polluter to the extent that he is known or on the part of the owner of the area where the chemical wastes have been deposited, as well as the duty of an owner, if any, to agree to examinations of and the removal, if necessary, of poison depots.

7262

CSO: 5000/2524

ENVIRONMENTALIST GROUP WEIGHS ACHIEVEMENTS, FUTURE ACTION

Hamburg DIE ZEIT in German 3 Dec 82 p 4

/Report by Horst Bieber, datelined Hanover, end November: "Hesitation Before the Next Step"/

/Text/ The three-letter organization has now been in existence for 10 years. The "Federal Association of Citizens' Initiatives for the Defense of the Environment" (BBU) celebrated this anniversary last weekend as soberly and businesslike as if it were glad to have finally put its fledgling years behind it. The site of the general meeting, a violently yellow painted school about as cozy as an assembly line producing instructional material, was not conducive to any demonstration of pride in the organization's achievements. At best some of the roughly 100 delegates appeared satisfied to have "amanaged" to stick together and become a factor of (environmental) politics that neither parliaments nor authorities now dare to ignore.

The removal of the BBU office from Karlsruhe to Bonn--and the association is not much more than an office--seems to confirm the self-confidence long felt by association officers but still lacking in many member initiatives. Members still tend to feel a contradiction between a spontaneously arising initiative--limited as to locale and subject matter--, and a central organization, however loose. They are concerned that "the ones at the top might get detached from the rank-and-file." Still, after 10 years reason is prevailing, and members realize that both are needed--local efforts and federation-wide actions. As one delegate put it, they can no longer postpone the "change from short pants to the first suit." The BBU endeavors to establish a broad coalition with all extra-parliamentary forces. It has long left behind the narrow platform of an "antinuclear movement." According to executive board spokesman Jo Leinen, the BBU is now on the way to becoming an "ecological and alternative movement" and thus increasingly a reflection of the public debate. And this debate on the future of the industrial society, he says, has only just begun.

Not all initiatives will pursue this road. Still, ever since the establishment of the "Federal Association" there have been withdrawals and accessions. Actually the word "association" is somewhat deceptive. There has never been leadership or control from above. The BBU has been a kind of mail box or center of information for the various initiative groups who were very careful to make sure that this informality should be maintained. It is therefore useless to ask about membership figures. The BBU is able to "contact" some 1,050 initiatives with about 300,000 members; it

is not able to mobilize them: That is up to the autonomous decision of the various groups who jealously guard their independence. Nor do all initiatives adhere to the BBU, not even all those involved in environmental issues. The extent of organization is more in the south of the FRG, less in the north.

The initiatives are the legitimate political offsprings of the social-liberal coalition according to Willy Brandt's promise of "daring to go for more democracy." Of course theirs is another, rather more grassroots democratic interpretation that assigns precedence to the group rather than to the impact of large-scale organization. This independence makes sense whenever a definite project is involved--whether a motorway or chemical plant or the lack of nursery schools. On the other hand major and supra-regional issues, ranging from air pollution to the waste of groundwater, require more organized Land or federation-wide action. This compelling factor clashes with the origin of the initiative movement--the spontaneous reaction of people who are personally affected.

Against this background the anniversary meeting dealt with three groups of issues: Subject matter, the crisis of the forms of action and the question of what in fact has been achieved.

There is no doubt that the "classic" environmental issues will continue to be dealt with; unfortunately these topics are no longer enough. "Acid rain" is a present environmental danger--what, though, are we to make of genetic engineering and its great potential hazards? Not even the citizens' movement is able to manage without factual understanding and specialists; the gap between those who know and those who act, unfortunately, continues to widen.

Are demonstrations obsolete as the most important kind of action? The majority claims that it is not so but does not deny the problems arising from the participation of "autonomous groups" who wish to use force while the BBU insists on strict nonviolence. When and where is the limit reached? Are there new nonviolent types of activism that will once again provide a strong appeal to the public at large? Some 1,800 demonstrators against the western runway must expect criminal prosecutions that may easily be followed by civil damage claims or claims for repayment of the costs incurred for the deployment of police. Should the BBU remain silent about the danger that government monetary claims may undermine the right to demonstrate, or should it see itself as a civil rights movement?

"In the past 10 years we have made the public conscious of the environmental chaos," says Inge Ammon, former and present member of the executive board. "But in future we may not confine ourselves to accusations, we must define alternatives." It is a fact that environmental consciousness has been aroused, often though just the bad consciences of those who are ecological sinners. The BBU has not been able to achieve the breakthrough to a generally accepted ecology.

The movement is unwilling to be involved with the parties; in fact it firmly intends to keep its distance from them. That even applies to the Greens who are looked upon benevolently (after all, many Greens started with the initiatives and some with the BBU) but with whom the movement does not want to be identified. After all, the Greens themselves did not keep all their promises, and some BBU members already say

quite frankly that they consider themselves "correctives for the Greens," in other words continue to represent a nonviolent, supra-party and extra-parliamentary citizens movement.

This repeated assertion betrays uncertainty. The change of government in Bonn is merely subsidiary in this context. Though almost all think they feel a cold wind blowing, only a few are firmly convinced that the FDP-Union coalition intends to restrain the citizens' movement by legislation and the administration of justice. Actually the initiatives are the victims of their success. The BBU has become so large and influential--and popular--that it feels an uncomfortable compulsion in future to do more, be more successful, not to disappoint its members. Nobody has any suggestion to offer how that is to be done without the movement turning into a lobby or ancillary party, without betraying its very nature.

This kind of helplessness does not allow pride in earlier achievements to arise. Several million federal citizens have practiced politics in the initiatives. Many were thereby prevented from joining parties, but many more--especially the young--were preserved from resignation and apathy. Their critique of the system's mistakes has helped to stabilize the system (and of course some do not like to hear that). Still, their influence on the parties has remained disappointingly small and, therefore, its willingness to work as the Bonn lobby for the environment--though this has been a great temptation for some BBU members.

All these topics are to be discussed next year at a "conference on strategy." Arms modernization, peace movement, the preservation and defense of democratic rights, solidarity with the victims of Bonn budget cuts--whether students or renters--, new structures for the economy and the society: The BBU has long taken the step from "environmental control" to "ecology" and, therefore, politics. Outsiders tend to have fewer doubts than members that the movement will be able to cope.

11698

CSO: 5000/2528

## PARLIAMENT GIVING NEW ENVIRONMENT MINISTRY WIDE POWERS

Helsinki HUFVUDSSTADSBLADET in Swedish 27 Nov 82 p 16

[Text] It will not be the "narrow" ministry that the middle groups in Parliament wanted. But neither will it be quite as wide ranging as the Left wanted it to be. Instead, the model adopted is the one that the Conservative Party, being the "weighmaster" party, considered just right. That was the result of the second reading on Friday, when Parliament decided on the shape of the much-debated ministry that will be set up just under a year from now.

For as long as the Ministry of Environment was being debated, the coalition parties could not agree on what form it should take. And they were still not in agreement yesterday when the majority in Parliament decided the issue after about 10 votes had been taken.

The solution that has now been adopted has certain features of a compromise, although it is clear that the advocates of a "broad" model eventually won. The final vote was 124 to 51.

It was chiefly the groups in the middle, headed by the Center Party, which wanted the Ministry of Environment to have narrow powers. So when the votes were taken in Parliament on Friday, the Center Party, the Swedish People's Party, the Finnish Rural Party, and the Finnish Christian League were in the minority.

Voting for the winning alternative were both of the leftist parties, the Conservative Party, the four liberals in the Center Party group, and two members of the Christian League.

Parliament decided to transfer the Ministry of Interior's departments for construction matters and planning to the new ministry. On the other hand, the Ministry of Agriculture and Forestry will continue to be responsible for forestry and agricultural matters.

But the Left had to yield on the issue of water resources management. On that issue, the Conservative Party agreed with the groups feeling that water resources do not fall within the scope of the Ministry of Environment. One exception, however, is water protection. When the Ministry of Environment is set up next October, water protection will be separated from the rest of water resources management and assigned to the new ministry.

The new Ministry of Environment will be in charge of protecting the environment, nature, streams, and seas, oversee the use of nature for recreation and outdoor life, be responsible for combating the damage done by oil and pollution, and be in charge of the housing policy, planning, and construction matters.

The Ministry of Environment will result in relatively few new positions. Most of its employees will be transferred from existing ministries and civil service departments. Most of its recruits will come from the Ministries of Interior and of Agriculture and Forestry.

"The establishment of a Ministry of Environment will not involve any major changes in environmental protection itself. Only the administration of environmental affairs is being changed, and all this means is that environmental matters may be better coordinated after the Ministry of Environment really gets working," said Member of Parliament Ole Norrback on Thursday as he presented the views of the Swedish People's Party's parliamentary group during Parliament's debate concerning the Ministry of Environment.

Norrback criticized the Constitutional Committee's position on the issue of water resources management, among other things, and described its bill as surprising and impractical.

Norrback said: "The Constitutional Committee is proposing that the Water Board remain under the supervision of the Ministry of Agriculture and Forestry, but that matters concerning the highest level of management and supervision be assigned to the Ministry of Environment. Deciding where to draw the boundary line can hardly be easy in every case, and when controversial issues are involved, the result may be a tug of war between the two ministries. In such a tug of war, the Water Board's role will obviously be strengthened. Those who have criticized the Water Board for disregarding environmental interests in permitting the harnessing of streams are certainly left wondering at a decision that will actually further strengthen the Water Board."

Norrback suggested that since few authorities are able not only to plan their own activity and carry it out, but also to supervise themselves, supervision should be taken completely away from the Water Board and assigned to a special office in the Ministry of Environment. The Constitutional Committee's recommendation that water issues be studied further finds no support in the Swedish People's Party's parliamentary group.

11798  
CSO: 5000/2523

## MEASURES ANNOUNCED TO COMBAT POLLUTION

Athens TA NEA in Greek 14 Dec 82 p 5

Excerpts The following are a few of the measures decreed in the 5-year anti-pollution program that was announced yesterday by Minister of Environment And. Tritsis: placing of filters in industrial establishments, use of better quality gasoline by private vehicles and liquid gas by taxis and trucks, as well as the use of city gas by some industries, legislating strict international specifications for newly-imported automobiles, establishment of technical checks on automobiles, drawing up of a proper urban planning policy and strict controls on central heating.

Taking the opportunity offered, the minister referred to the measures that had been implemented (restrictions on private vehicles, etc.) and said that in 1982 the pollution levels never once surpassed the levels required for the imposition of emergency measures. To the contrary, from 24 November 1980 to 24 November 1981, these levels were surpassed nine times. He said the difference is due to the measures we took.

Fuels: Beginning 1 October 1982, fuel oil for industrial use has a content of 0.7 sulphur rather than 1 percent. Beginning 1 December 1982, all diesel fuel for both transportation and heating purposes will have a content of 0.3 percent sulphur rather than 0.5 percent. Beginning 1 June 1983, gasoline will be available with a lower lead content, from 0.40 grams a liter to 0.15 grams. Through the improvement of fuels, there will be a significant drop in pollution (32 percent of the sulphur dioxide emissions and 62 percent of lead emissions). Also being studied for the middle of 1983 is the extension in the use of liquid gas for trucks and buses of municipalities, various services and organizations. Moreover, another study deals with the removal of polluting gas installations from the Kerameikos region in the next 3 years.

Automobiles: During the first quarter of 1983, the first Vehicle Technical Check Center will be completed and put into operation in Athens for trucks and buses. In 1984, the KTEL Joint Bus Receipts Fund will become seven in number for all types of vehicles, while EEC specifications for newly-imported automobiles will have been legislated, requiring reduced exhaust emissions.

Central Heating: Beginning 1 January 1983, systematic checks on the operation and emissions of central heating units will be made. Within the next 3 years there will be an expansion in the use of city gas.

City Planning Measures: Up to June 1983, the systematic detection of those pollution-causing uses and operations in every city block of the capital will have been completed. Within the next 5 years, the removal of those uses that are not compatible with residential areas will be planned for. Beginning 1 December 1982, 1 billion drachmas will be set aside--through the Land Bank--for long-term low-interest loans for the improvement and cleanup of buildings in the center of Athens. The first systematic program for the drive against dust will be implemented in mid-1983, with a total of 80 million drachmas budgeted for the capital.

5671

CSO: 5000/4711

MEASURES OUTLINED TO SAVE BOSPORUS

Istanbul MILLIYET in Turkish 15 Nov 82 p 9

[Text] Ali Gokberk, head of the Istanbul branch of the Turkish Society for the Preservation of Nature, in an appeal addressed to us, touched on the problems confronting the Istanbul straits and discussed measures that ought to be taken. Describing the straits problems and the means of solving them to the "Milliyet at your service" department, Ali Gokberk summarized the current and future appearance of the Bosphorus. Let us listen to Ali Gokberk.

"The famous Bosphorus, which adorns Istanbul as a delicate necklace, has been neglected for years. The beauty of the shores and the hills full of riches are gradually being clouded by this neglect. Concrete buildings rising in the area contribute further to the ugly appearance.

"That the neglect, which has gone on for 50 years, is finally ending and the Bosphorus is being given attention is cause for great joy. In light of this joy we have found it useful to once again consider the problems facing the Bosphorus and the means of solving them.

"The present condition of the Bosphorus may be characterized as a tragedy. The reasons for this are as follows:

"For years no one attached proper significance to the Bosphorus or took responsibility for its problems. It comprises the most distressed wasteland. Until now, the Bosphorus, which should be considered a national issue, has been considered only as a district of Istanbul.

"Another reason is the shortcomings that emerged in development. Because of frequent changes in the public improvements statutes, no common features remained between the old buildings and the new.

"Land speculation, rapid development and the glut of squatter settlements are other factors that have given the Bosphorus its present appearance.

"Gas, gravel, firewood and coal deposits discovered in various places, as well as several factories, have made the Bosphorus a virtual industrial district.

"The unchecked cutting of trees and gradual widening of development units permitted a decrease in the vegetation cover on both shores of the Bosphorus and in its place left cement heaps."

Ali Gokberk, head of the Istanbul branch of the Turkish Society for the Preservation of Nature, noting that the tourism potential of the Bosphorus has been wasted as a result of these activities, describes how the area might be stripped of its present negative appearance and what measures ought to be taken:

"The inadequacy of the laws in effect as well as unplanned decision-making and implementation have been the cause of the distressed condition of the Bosphorus. In view of all of the characteristics of the Bosphorus, the site should be adopted as a special area. A Bosphorus administration, outside of or within the present municipal organization, would encounter failure from the very first step, since it would remain under the influence of the errors and deficiencies rooted in the municipality.

"The special area administration to be set up for the Bosphorus should comprise research, planning, implementing and financing units. We may summarize here the functions these units would perform:

"Research unit: construction system, water pollution, forestation, fishing.

"Planning unit: private construction planning and establishment of the boundaries of the Bosphorus.

"Implementing unit: supervising development and all administrative operations.

"Financing unit: establishing a fund to cover the expenses of the special area administration."

Ali Gokberk also discussed with "Milliyet at your service" the portion of the work that would be done first of all:

"Remove every industry and warehouse whose character spoils the area;

"Include all building to be done on the straits in one program;

"Emphasize sea communication as was done years ago, alleviating land communication on both shores;

"Examine the pollution of the sea, and for this purpose collecting the trash in the sea as on the land;

"Formulate a traffic plan for ships passing through the straits;

"Establish beaches, wooded sites and excursion spots;

"Make efforts to protect and increase vegetation cover;

"Form a special fund for nationalization; and

"Form a police force to comprise the executive branch of the special administration."

9962

CSO: 5000/4708

END