

Feature

Environment

INTEGRATED ENVIRONMENT MANAGEMENT

NEMAP: A Model of Participatory Planning

by Enamul Haq and DL Mallick

INTEGRATED environment management and sound planning have emerged as the greatest challenge in the domain of development all over the world.

phase, carried out in 1992 by a team of national consultants, identified a number of areas and ecosystems undergoing rapid environmental degradation.

The earlier NEMAP process had been criticised for not being sufficiently participatory. So, the ministry invited representatives of leading NGOs to advise and assist the government to develop a pro-active, participatory process to frame a truly national action plan.

first quarter of 1994. The purpose was to seek people's concerns and find solutions. Each workshop had 60-80 participants from all walks of life including farmers, fishermen, agri-labour, women, teachers, local government officials, elected representatives and CEN representatives.

The sectoral issues cover health and sanitation, forest and bio-diversity, natural hazards, industry water, agriculture, energy, land, fisheries, housing, transport and environmental education and awareness.

The locational issues include salinity and shrimps, coastal marine, Barind and Madhupur tracts, wetlands, charlands and hill-cutting.

The longterm issues mean regional water sharing, climate change, urbanization, development and research.

Institutional issues imply inter-sectoral coordination, ensuring people's participation, legislation and monitoring of NEMAP.

The environmental issues and concerns expressed by the people through grassroots workshops and leaflets exceeded one hundred which are too many to deal with separately. So, they are aggregated

identified the problems but have also given their views to the solutions and in many cases have identified actions and actors related to the solutions. For example, taking the issue of sanitation and health, 35 per cent people favoured the use of sanitary latrines by making them easily available through local support, technical know-how for the installation and maintenance and social mobilization, while 18 per cent of them indicated better waste management as a solution to the concerns of health and sanitation.

Environmental awareness raising has been emphasized and suggested as a leading solution for all groups of concerns. Hence, both formal and non-formal education in environmental awareness deserves to be given priority. Social forestry and afforestation has also been suggested as a common solution to the major concerns. People have similarly identified several solutions to all groups of concerns.

The types of activities for the National Environmental Management Action Plan has been classified into three groups: policy level, advocacy and specific projects for action programme. For the purpose of sound environment management, better implementation of the action plan and enabling different agencies to take part in the process, all the proposed activities have been broadly categorized under four heads: institutional, sectoral, location specific and long-term actions.

The activities recommended in the action plan are to be implemented by different groups and organizations including government and non-government sectors. The NEMAP document has been developed in an open and highly consultative manner by the Ministry of Environment and Forest in cooperation with many other groups including NGOs, researchers, journalists, lawyers, academics and a cross section of people. It is expected that the implementation phase of the action plan will continue this cooperative and consultative process. This way NEMAP will be a true exercise in participatory planning and people-centred development approach.

Objectives of NEMAP

It was expected that NEMAP would identify the key environmental issues that are of concern to the country. It would suggest measures required to halt or reduce the rate of environmental degradation, and conserve habitats and bio-diversity. It would contribute to promoting sustainable development and quality of life. NEMAP is being formulated in response to the current and predicted environmental scenarios for actions required to mitigate their adverse impacts. Since environmental considerations and policies may change over time, as progress towards sustainable development takes place, NEMAP will evolve in response to these environmental changes. It will look at the issues not only on a sectoral basis, but search out the inter-sectoral linkages. It has to outline an action plan not only for the government but also for the society and suggest what each and every citizen can do to protect the environment and improve it.

The NEMAP Process

NEMAP, as an environmental planning, was initiated by the government following the commitments made under Agenda 21 at UNCED in Rio de Janeiro in June 1992. The exercise has been carried out in different phases. The first

The final phase of the NEMAP process consisted of an elaborate public consultation exercise to ascertain the people's own concerns and priorities, so that these could be reflected in the action plan.

of the third and final phase which was initiated in 1994 and had been carried out by the local consultants and experts employed by the government, NGOs and UNDP. In the NEMAP process, the government agencies, the non-government agencies, the representatives of civil society such as professionals (lawyers, media people, academics, doctors, university professors, researchers and development workers), parliamentarians and the business community worked closely together and gave their inputs through structured consultation process and workshops. In June 1994, a well organized media campaign was launched which included a special TV programme. Another programme was launched again in July to extract public opinions regarding environmental problems and how to tackle them.

The final phase of the NEMAP process consisted of an elaborate public consultation exercise to ascertain the people's own concerns and priorities, so that these could be reflected in the action plan. A total of 23 grassroots workshops were held around the country in all the important agro-ecological zones in the

and non-government agencies seeking people's views about major environmental problems facing the country and about their solutions. Questionnaires were also published in leading dailies to mobilize people's views on these issues. Information gathered through all the above modes have been analyzed using advanced tools such as dBase, Lotus-4 and Geographical Information System (GIS). A series of professional workshops were also held in Dhaka by different organizations. These involved separate workshops for academics and researchers organized by BCAS, for women and NGO representatives by ADAB, for lawyers by BJMAS and for journalists by FEJB. The opinions and priorities of each of the relevant government ministries and agencies were solicited by the MoEF and were incorporated in the process.

People's Concerns, Priorities and Solutions

The main issues emerging out of the overall analysis and subsequent synthesis have been classified into four categories. These are sectoral, locational, long-term and institutional issues.

under eight major concerns i.e. sanitation and health hazards, socio-environmental, deforestation, pollution, natural hazards, water and FCDD, agro-chemical and others. Each of the major concerns has a number of sub-components. It is clear that the most important environmental concern relates to lack of sanitation and environmental health. This helps to highlight the importance of the national drive by both government and NGOs to enhance the coverage of sanitation throughout the country by showing the inherent demand for this service which people have recognized as an important environmental problem. The second most important concern expressed by the people is linked together under socio-environmental issue which consists of population growth, illiteracy, poverty and lack of environmental awareness. The leading seven concerns got 83 per cent of importance while the rest 17 per cent goes to other environmental problems such as erosion and soil depletion, biodiversity, fisheries and livestock, energy resource depletion and over urbanization and housing.

People have not only

A market in pollution

Infographic with text: A scheme to curb global warming by establishing an international market in carbon dioxide (CO2) permits is scheduled for discussion at the UN in April. Credits to total 835m tons, at \$10 per ton. Initially, Japan, US and European Union would operate the market; they account for 40% of global emissions. Others would join later.

Cool Start for Global Warming Pact

Representatives from 155 nations are meeting to open negotiations on a new round of controls to check global warming. (Climate change conference 28 March-7 April). Although the North remains the biggest emitter of carbon dioxide which contributes to heating of the planet, developing nations too may be forced to limit their emissions.

Fred Pearce writes from London

MANY industrial nations are renegeing on their commitments to stop the build up of 'greenhouse gases' that threaten to cause a rapid heating of the planet. When the 155 nations that have signed the Climate Change Convention meet in Berlin for the first time on 28 March-7 April, several will admit that they will probably fail to meet the first target set by the Convention: the stabilisation of emissions of carbon dioxide, the main greenhouse gas, at 1990 levels by the year 2000.

Among the greenhouse backsliders are Australia, Canada, New Zealand, Spain, France, Norway, Ireland and Japan. Other nations thought likely to fail include the United States, Belgium and Italy.

Britain will make a rare appearance on an international stage as an environmental goody. In early March British Environment Secretary John Gummer announced that his government expects a cut in emissions of up to 8 per cent.

The reason is that the privatised electricity industry is switching from coal to gas-fired power stations, which produce less carbon dioxide. Other countries to cut emissions will be Germany, the Netherlands and Switzerland. In most of eastern Europe and the former Soviet Union the closure of large numbers of inefficient and polluting factories and power stations has cut emissions already this decade by 20 to 40 per cent.

The US, the world's biggest emitter of carbon dioxide, still claims it will meet the stabilisation target through a mixture of voluntary energy-saving measures. But few diplomats or commentators believe it. Joel Darmstadler of the blue-chip Washington think-tank, Resources for the Future, says that even simple measures such as ending tax breaks for employers who subsidise

workers' parking fees have not been introduced. The European Union is controversially sanctioning large increases in emissions from some of its members because it says they will be compensated by cuts among other nations. So reductions by Britain and Germany will allow increases of 25 per cent for Spain (already the world's 18th largest emitter), 20 per cent by Ireland and 40 per cent by Portugal.

Says Michael Oppenheimer, senior scientist with the Environmental Defense Fund in New York: 'If the nations miss their targets they will just have to do more later. They are digging a deeper hole for themselves.'

But he says that failure is not critical to the future of the Convention. The main thing for Berlin is to get a mandate to negotiate for the next stage. This is a long haul. The battle will take decades to win. The minimum environmentalists expect is that countries will agree in Berlin to open negotiations on a new round of controls, including perhaps cuts, for the first decade of the 21st century. Even Gummer agrees that 'we cannot wait until the end of the century before deciding what to do next.'

Europe and North America currently produce half of the world's annual emissions of more than six billion tonnes of carbon dioxide. Developing nations are increasing their contribution by six per cent a year, but from a much lower level per head of population. Currently, the three-quarters of the world's population living in developing countries contribute only around 30 per cent of global emissions. But by 2025 that figure could exceed 50 per cent.

Developing countries are not yet covered by any emissions targets. Bill Hare of the

environmental pressure group Greenpeace International says some industrialised nations are likely to insist in Berlin that limits are placed on developing country emissions before they will agree to tougher measures.

Some Western environmentalists agree such a move cannot be delayed for long. Says Oppenheimer: 'My personal view is that by 2010 the developing countries will have to get serious about their own targets.'

But others, such as Aubrey Meyer of the Global Commons Institute, argue that most of the carbon dioxide in the air is the cumulative pollution of industrialised nations over many decades, and the onus should remain on them to clean up.

In Berlin, the chairman of the Convention's scientific panel, Professor Bert Bolin, is likely to insist that sharp reductions in global emissions are needed to meet the Convention's objective of preventing dangerous disruptions to the world's climate. To stabilise concentrations of the gas at today's levels would need an immediate 60 per cent cut in emissions.

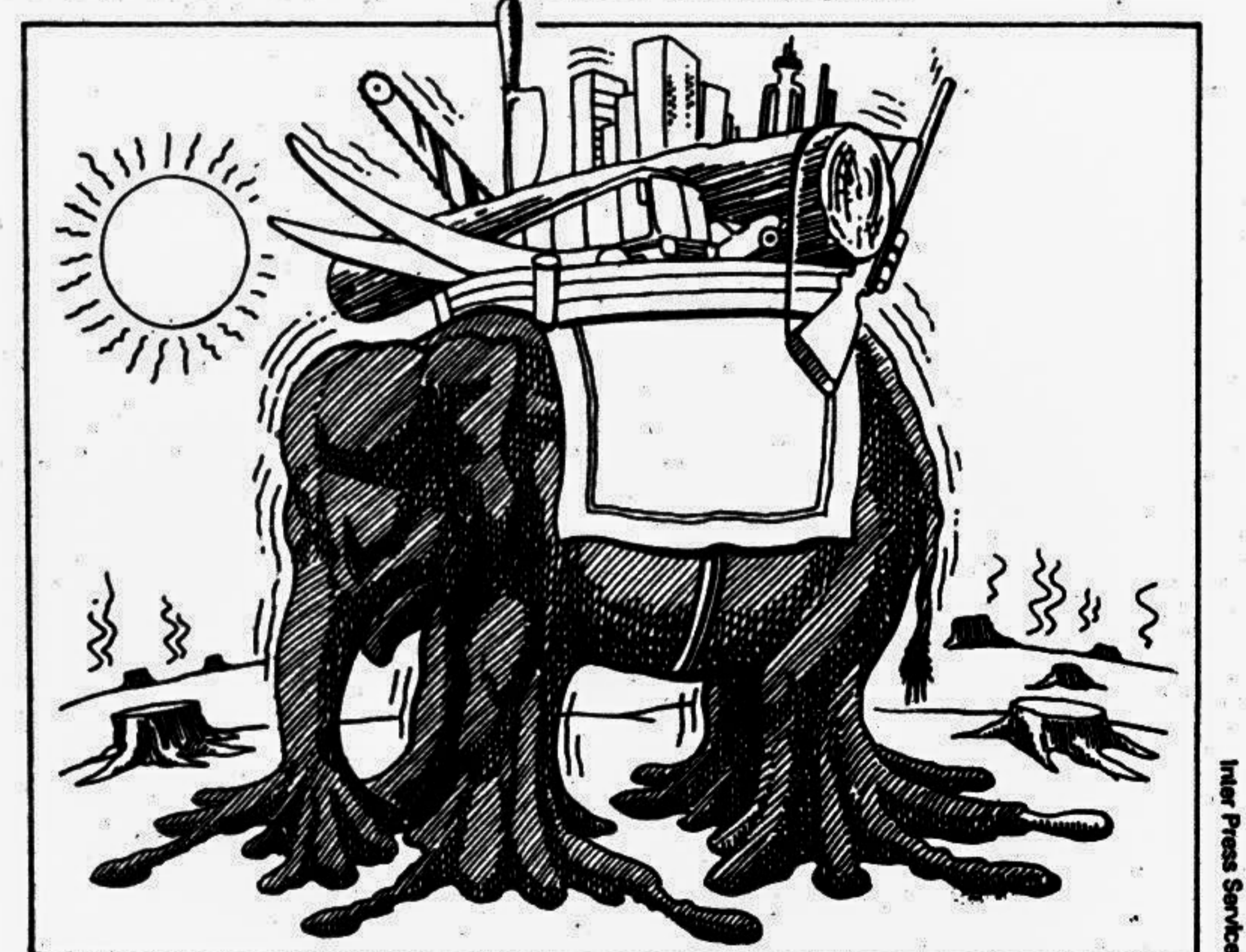
Some nations in Berlin will literally be fighting for their lives. States such as Tuvalu and Kiribati in the Pacific and the Maldives in the Indian Ocean could disappear beneath rising sea levels within a few decades if the direst predictions of the effects of global warming prove correct.

Representing them, the Alliance of Small Island States will propose cuts of 20 per cent by industrialised countries by the year 2005. Gummer has said that Britain will propose cuts of between five and ten per cent by the year 2010. — GEMINI NEWS

FRED PEARCE is a British environmental journalist and author.

Thailand's Mammoth Loss

The elephant has a permanent place in the heart of Thais, but the mammal is rapidly running out of living space in the wild. Leah Mak- abenta of Inter Press Service reports from Bangkok.



FOR centuries, the elephant has been a symbol loved by all Thais who honour the giant, lumbering creatures in rhyme and song and, until 1917, even in their national flag. But animal rights groups say the time may soon come when Thais will never see an elephant, as the largest and most treasured of Thailand's mammals fights a losing battle for survival.

Thailand now only has an estimated 3,000 domesticated and 2,000 wild elephants, both of which are in extreme danger of disappearing in 20 years' time, says Soraida Salawala, secretary general of the Friends of the Asian Elephant (FAE) foundation. Domestic elephants roam the country's cities looking for money to feed themselves and their poor caretakers while wild elephants face a shrinking habitat and constant threats from ivory poachers.

Reports of herds of wild elephants invading and destroying forest settlements in Thailand's remote provinces are frequent and point to a fierce fight for survival in future between people and the animals. But settlers who trespass on forest reserves and then complain about being terrorised by elephants get little sympathy from local authorities and elephant lovers. Soon Muakmuang, village headman of Ban Ruamthai in Prachab Khiri Khan province near the Burmese border, says settlers had no right to complain after 20 elephants recently trampled a sprawling settlement at the forest's edge 'because they had trespassed on the land and the elephants' habitat to cut trees and grow pineapples.'

Soraida agrees: 'The wild animals have their own place, but we are intruding into their homes. They don't have food, their original habitat is being destroyed. Where is the space for these animals? It's not only humans who own the planet.'

According to the FAE, domestic work elephants have an even grimmer time. Thai law has categorised elephants into wild and domesticated, legitimising the use of the mammoth beasts for what could only be called an elephant's job. Until fairly recently, there was a great demand for trained elephants to push, carrying and pile felled trees in Thailand's logging industry. At the turn of the century, there were an estimated 100,000 working elephants in the country.

and made to work night and day until they die. The elephants fall down, they break their legs, even their backbone. Several of them have been found dead.

Many mahouts now bring their elephants from their villages to the cities to earn a living by having them perform for tourists and Thais who walk under the animals' belly for good luck.

This takes a toll on the animals' fragile health, especially in cities like Bangkok where the elephants can be seen treading carefully through monstrous traffic jams — trunks assaulted by pollution, ears deafened by the sound of cars and motorcycles and their soft, sensitive feet burned by

hot concrete. The movement to protect the animals was given impetus last year by the case of a baby elephant named 'Honey' who was hit by a truck while walking home from a performance.

Honey's hip and backbone were broken and the whole country watched anxiously as she suffered, for four months while veterinarians from the Bangkok zoo tried to save her.

Soraida, who earned national renown for staying with and taking care of Honey until her death, is the driving force behind FAE's elephant hospital in northern Lampang province where many sick, convalescent and handicapped elephants get care.

LESSON FROM ABROAD

The Lyonnaise des Eaux Group: Champion of Ecology Business

by Jacques Belmont

THE main job of the Lyonnaise des Eaux-Dumez, one of the major suppliers of drinking-water to the French, has, for a century, been to distribute, process and purify water.

water. The revolutionary process of filtration using membranes pierced with microscopic holes was invented there, making it possible to obtain exceptionally pure water.

But the Lyonnaise also distinguishes itself by the very great variety of its other services. With a turnover of 90 billion francs, it plays an increasing part in real estate, communication, energy, building and public works.

With its ecological innovations, the Lyonnaise made the best of the French market by offering local authorities and industrialists, a range of often original solutions to their problems. Thus the household and hospital waste processing plant at Bayonne-Biarritz was fitted by the Lyonnaise with a system combining the recuperation of materials, the manufacture of compost and the production of heat and electricity. Similarly the sewage works in Benfeld in Alsace in the East of France, which is operated by computer, produces biological mud that can be used in agriculture.

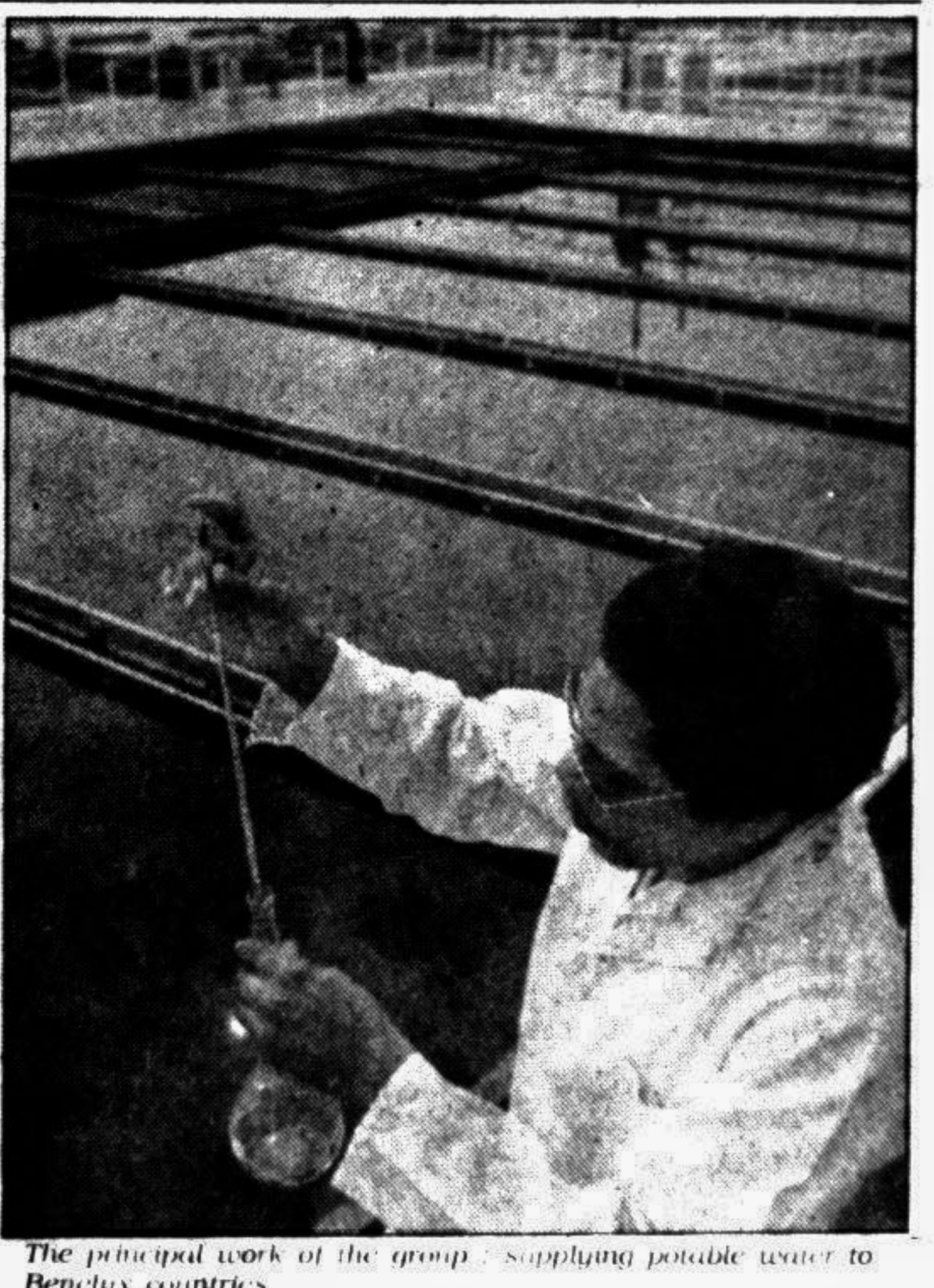
Jerome Monod, who easily overturns structures and people, brought a breath of air into the firm by taking up the new challenge of the modern world which is the protection of the environment. The group's imperatives now are not to squander the world's natural capital and to preserve it for future generations. He assigns more than 300 scientists and technicians to research on ecology and devotes 200 million francs a year to develop new technologies.

In the Paris area, the group has one of the best laboratories in the world for treating

In Eastern Europe, the group was put in charge of purifying the water in Rostock (former East Germany). In Poland, it was chosen over other competitors to build the water purification plant in Warsaw. The Czech Republic granted it the concession on the water service for Brno for a quarter of a century, and Lithuania, the concession for the water throughout the whole country for thirty years.

In Argentina, the French group, together with a Spanish company are working at purifying the water in Buenos-Aires. In Mexico, it will provide 2.5 million inhabitants with drinking water. In Australia, it is involved in supplying Sydney with water. In Saudi Arabia, the parks and gardens of Taif are maintained using the residual urban water, filtered by means of a process developed by the Lyonnaise.

The company is even involved in the area of water services in Asia. The Lyonnaise won two concessions for water production in Malaysia and, above all, it has set foot in China where it distributes water to the citizens of Shenyang, the fourth largest town in the country, as well as to those in Tanzhou in the province of Canton.



The principal work of the group: supplying potable water to Benluc countries. access ways up Everest, polluted by the numerous expeditions of the last 40 years. This operation, called Sagarmatha 93, consisted in processing impressive amounts of rubbish on the spot. Two pieces of equipment, invented by the group, were used for this purpose: a refuse compactor and an incinerator or 'mountain top furnace', both of which can be dismantled and carried on men's backs. Once the operation was over, these pieces of equipment were given to the Nepalese Sharpas. While helping to keep the highest mountain in the world clean, this transfer of technology contributes to developing that culture of the environment which meets the demands of the men of the 21st century. L'Actualite en France