

Japanese environment

Rediscovery of pollution

Tokyo

PUBLIC outcry over pollution has almost vanished in Japan as the once notorious Tokyo smog becomes just a memory of the 1970s: the feeling is that the really big problems have been beaten.

The White Paper (policy statement) just released from the Environment Agency thus comes as something of a shock, detailing a host of new and more insidious problems.

There is no doubt that major battles have been won in the control of air pollution. Ten years ago, photochemical smog warnings were issued on close to 300 days of the year and some 5,000 victims a year were being registered in Tokyo alone. In 1965, things got so bad in Yokkaichi, a refinery port close to Nagoya, that all primary school children in the most polluted parts of town were issued with special face masks — not that they appeared to be effective. Now, nitrogen dioxide levels in the air are steadily declining in most parts of the country, despite increased traffic, and smog alerts are down to some 130 days a year.

Where new problems are arising is in the pollution of rivers and lakes and in the mass movement of population to new satellite cities with an infrastructure ill-prepared to receive them. Japan's largest lake, 674 square kilometre Lake Biwa, provides a classic example. The population of Shiga prefecture, in which the lake is located, is growing very rapidly as people move out of the nearby Osaka and Kyoto conurbations in search of a better environment and industries are relocated where land is cheaper.

The resulting effluent pouring into the lake, coupled with acid rain from the huge industrial areas nearby, is now rapidly turning it into a graveyard. The shallow southern half of the lake is in a state of almost total eutrophication, and the northern half is plagued by "red tides" — freshwater algal blooms. Attempts to cut the input of phosphates, by banning sale and use of phosphate detergents, for example, began in 1980 but came too late; it is unlikely that the lake water will show major improvement this century.

Similar problems are seen in many other lakes and rivers, and pollution is spreading into underground waters. Analysis of water in wells shows that some sites are contaminated by carcinogenic organo-chloro compounds at 600 times the levels recognized as safe by the World Health Organization, a serious problem given that 30 per cent of Japan's drinking water comes from underground sources and that the sources of pollution are virtually untraceable with present understanding of underground water flow.

All this highlights the way in which movement of population from the countryside and giant cities into suburban satellite cities, accompanied by an increasing

reliance on automobiles, has not been accompanied by adequate attention to sewerage and water supplies. "A glut of Walkmans and a shortage of sewers" was how experts from the Organisation for Economic Cooperation and Development recently summed up Japan's emphasis on private rather than public expenditure. Noise, traffic jams and garbage disposal problems are also becoming more severe in the new cities as they inherit the crises of the larger cities, and with Japan's urban population expected to reach 70 per cent of the total by the end of the century, there is little hope of a let-up in the pressure. But creating new urban infrastructures, or the greater dispersal of population and industry that the white paper calls for, cannot be achieved without massive expenditure that the government seems unwilling to make.

To cope with deterioration of lake and marshland, the Environment Agency has introduced legal limits on the levels of phosphorus and nitrogen effluent that can be discharged by industry. Japan is the first nation to attempt to control both factors. Initially stringent limits were, however, reduced after opposition by the Ministry of International Trade and Industry (MITI), highlighting the Environment Agency's own lack of power. Although the agency was originally intended as a single comprehensive pollution control body, when it was set up in 1971 it found that ministries with regulatory powers over pollution, particularly MITI, were unwilling to relinquish them. The result is that the agency is a watchdog without teeth: it can plan and coordinate policies but is not responsible for enforcing them, except in the case of wildlife protection.

In this area, the Environment Agency has just shown a willingness to respond to international concern by setting up a new "Headquarters for Wildlife Protection Measures". Severe criticism of Japan from abroad, reinforced by the visit of Prince Philip, Duke of Edinburgh, in his capacity as president of the World Wildlife Fund (see *Nature* 311, 698; 1984), for failing to obey the Washington Convention prohibiting the import of endangered species, was the chief stimulus to the establishment of the new office. The number of customs houses through which wildlife can be imported has been reduced to nine and officials are given training in spotting illegal imports.

The white paper itself, however, pays scant attention to international issues. Although it charts the destruction of tropical rain forest in South-East Asia — destruction in which Japanese logging companies and Japan's voracious demand for timber have played a large part — it does not call for any action other than membership of standard international environmental organizations.

Alun Anderson

French universities

New watchdog barks well

Paris

UNDER a dozen glittering candelabra that must each weigh a ton, beneath the frescoed ceilings of the Elysee Palace and surrounded by much of the academic elite of France, President François Mitterrand last Friday gave his full dignity to the latest effort to reform the French university system, the establishment of the Comité National d'Evaluation des Universités, or CNEU.

The purpose was serious, and the guests were hopeful, especially the director-general for the universities at the ministry of education, M. Jean-Jacques Payan, whose cheerful face has been proclaiming lately that he thinks his job now done. The 75 French universities, many created shortly after the 1968 student revolt, and mostly egalitarian and left-wing in spirit, have been opened up to once-hated industry and now, through CNEU, to competition among themselves.

The committee "responds to an evident need" said President Mitterrand on Friday. "It signifies for our country an innovation of major importance." It represents the increasing autonomy of the French universities (sweet words to the relatively powerless university presidents) whose counterpart is "the objective evaluation of their strengths and weaknesses" (rather more bitter words for the feebler institutions).

CNEU will be "entirely free" to make its own judgements and will report each year to the President. M. Mitterrand said, "I expect reports to have concrete effects" on the decisions of the French administration. (CNEU will not directly control and divide funds as does, say, the British University Grants Committee.)

The French universities, described by M. Henri Tézenas du Montcel, who resigned as president of the University of Paris (Dauphine) to write a critical book on his *alma maters*, as those "foggy and smoky" places, are now required, said M. Mitterrand, "to be more transparent and to develop the best among them".

The universities must obey three principles, he said: autonomy, which the President expanded to mean obedience to the recently-introduced system of research contracts agreed between the ministry of education and each university, assessed *a posteriori*; "emulation", a soft word for "competition" in which each university must attempt to emulate the best elsewhere; and quality, "the condition of success in scientific competition... and world technology, which greatly depends on the success of our universities and scientists". On this success the French people depend. And the President depends on CNEU to help increase the quality of the univer-