programmes to sustain selectively and in a coordinated fashion the care of species and programmes related to them, that would otherwise vanish from the face of the Earth.

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HIGH-LEVEL MEETING WITHIN THE FRAMEWORK OF THE ECE ON THE PROTECTION OF THE ENVIRONMENT, HELD IN THE PALAIS DES NATIONS, GENEVA, SWITZERLAND, 13–16 NOVEMBER 1979

This meeting, held at the ministerial level as a culmination of nearly three years of intensive preparatory work, resulted in decisions of transcending importance to the 34 member governments of the Economic Commission for Europe (ECE).

The genesis of the meeting and a summary of the work which preceded it have been presented in an earlier report.* It will be recalled that, of the five topics which were formally considered for inclusion in the High-level Meeting, only two (Long-range Transboundary Air Pollution, and Low- and Non-waste Technology and Re-utilization and Recycling of Wastes) were accepted as meeting the criteria which had been established.† Subsequent extensive effort resulted in full agreement regarding detailed elements of a Convention and an accompanying resolution of the first approved topic, and of a Declaration on the second. Only at that time (in April 1979) was a definitive decision taken to hold the High-level Meeting. In the course of the final six-months' period, the elements were edited into the texts of the documents which were considered at the Meeting itself.

The High-level Meeting consisted essentially of three parts: (i) formal adoption of the above-mentioned texts; (ii) signature of the Convention itself; and (iii) a general debate on the environmental situation in the ECE region, which, including as it does Canada, USA, and USSR, ranges practically around the Northern Hemisphere.

At the conclusion of the High-level Meeting there were 35 signatures to the *Convention on Long-range Transboundary Air Pollution;* these signatures included 31 of the 34 Member Governments of the ECE.‡ With regard to the Convention and the accompanying resolution, it is particularly interesting to note the following points:

- The Convention is the first legal instrument which directly applies, on a broad regional basis, Principle 21 of the Declaration of the Stockholm Conference; this principle expresses the common conviction that states have, *inter alia,* 'the responsibility to ensure that activities within their own jurisdiction or control do not cause damage to the environment of other states or of areas beyond the limit of national jurisdiction'.
- Despite its title, the scope of the Convention has a somewhat broader connotation; it addresses itself throughout to problems of 'Air pollution, including long-range transboundary air pollution'.
- The Convention legally binds the contracting parties to 'endeavour to limit and, as far as possible, gradually reduce and prevent, air pollution, including long-range transboundary air pollution'.
- In this connection, each Contracting Party 'undertakes to develop the best policies and strategies including air quality management systems and, as part of them, control measures compatible with balanced development, in particular by using the best available technology which is economically feasible and low- and non-waste technology'.
- Pending ratification of the Convention, the Signatory States have (through adoption of the accompanying resolution) formally taken an unusual and far-reaching decision. Specifically, they decided to initiate, 'as soon as possible and on an interim basis', the provisional implementation of the Convention and to carry out the obligations arising therefrom to the maximum extent possible, pending its entry into force. In this respect they will seek, *inter alia,* 'to bring together their policies and strategies for combating air pollution including long-range transboundary air pollution'.

The adoption of the Declaration on Low- and Non-waste Technology and Re-utilization and Recycling of Wastes provides, in essence, a high-level impetus to the development of preventive techniques for reducing or eliminating waste products, thereby helping to protect the environment and leading to a more rational use of resources. Such an impetus accelerates and extends the programme which is already being carried out in this field by ECE—and which is part of a global effort for development of environmentally sound and appropriate technologies—under the auspices of the United Nations Environment Programme (UNEP). The detailed Declaration considers ways and means for the application of such technologies; it then recommends various measures and activities which should be undertaken at the national level, as well as greatly enhanced cooperation at the international level within the framework of the ECE.

In the general debate on the environmental situation in the ECE region, attention was focused not only on the above two topics but also on others which were of particular concern, and which appeared to warrant subsequent consideration at high government level. The problem which received the greatest attention in this respect was that of water pollution, including transboundary water pollution. There was wide interest in the successful conclusion, at the earliest possible date, of the draft ECE Declaration of Policy on prevention and control of water pollution. The hope was expressed that this Declaration, which includes consideration of shared water resources, could serve as a basis for further cooperative agreements at high level.

Other topics which received special attention during the general debate included toxic substances and toxic wastes, endangered species of flora and fauna, and the threatening impact of fluorocarbons and carbon dioxide on human health and climate.

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*See *Environmental Conservation,* Vol. 6, No. 2, pp. 163–4, Summer 1979.

†The other three topics were water pollution, including transboundary water pollution; toxic substances and toxic wastes; and the protection of flora and fauna and their natural habitats.

‡Those member states which have not, as of the date of this report, signed the Convention, are Albania, Cyprus, and Malta.

In summarizing the results of the Meeting, its chairman (Minister Olof Johansson, of Sweden) stated in conclusion that:

'– this High-level Meeting is a landmark in the co-operation of ECE governments for the protection of the environment;
– the results constitute a breakthrough in the development of international environmental law, and will be of value and guidance also to governments in other regions; and
– the decisions taken bear witness of the readiness of ECE governments to go from words to action, thereby contributing to the follow-up of the Conference on Security and Cooperation in Europe (CSCE)'.

The highly successful outcome of the High-level Meeting on the environment should greatly facilitate the convening of similar meetings in other fields, such as energy.

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RESOURCE RECOVERY: A WAY AHEAD—SEMINAR HELD AT THE MANCHESTER BUSINESS SCHOOL, BOOTH STREET WEST, MANCHESTER, UK, ON 22 NOVEMBER 1979

Alcoa, ICI, Reed Paper, Rockware Glass, and Thames Board Mills, were among the companies represented at the first in what Manchester Business School intends to be a series of seminars on the theme of 'profit from waste'. Recycling, heavily promoted by environmentalists, is rarely an easy option, but the day's proceedings confirmed that industry can—indeed must—build a recycling loop into its manufacturing processes.

Europe's business schools, with certain honourable exceptions (and Max Nicholson, opening the seminar, mentioned Geneva's Centre d'Etudes Industrielles as one such exception), may have been slow in grasping the idea that environmental and resource issues are now properly issues for industrial managements, but Manchester Business School is making up for lost time. Indeed, it has been a prime mover in the creation of a new company, Profit from Waste Limited, whose basic objective is to identify and exploit new business opportunities in resource recovery and recycling.

Several of the early papers in this Seminar, including my own, covered the approaches of a range of European companies to the recycling of wastes that had been generated internally, while later papers discussed the opportunities which are latent in the broad spectrum of domestic, commercial, and industrial, wastes that are generated by an industrial society. Alcoa, in fact, is one company which has a written recycling policy, and its Director of Facilities Planning, Mr H. B. Grainger, reported on the company's *Cash a Can* scheme, which is currently being piloted in Edinburgh. The attraction of recycling in the aluminium industry is that 95% of the energy used in extracting aluminium from its ore is saved and, as Mr Grainger argued, a can-recycling plant can be built in half the time and for one-tenth of the cost of a new aluminium smelter.

Aluminium is one thing, however, but paper is quite another. Mr C. S. G. Wallace (Director, William Somerville & Son), a paper manufacturer, pointed out that quality assurance is vital in economic recycling. His company makes high-quality papers from recycled fibre, but he pointed out that, while he might save perhaps £10 a tonne if he uses recycled raw material, one poor batch of paper might result in the loss of 10 tonnes of final product—at a cost of perhaps £400 per tonne.

West Germany is in the front rank within the EEC, as far as recycling is concerned. Dr Bernd Wolbeck, Director of that country's Waste Management Programme, gave a status report—the recycling of glass alone saved West Germany 85,000 tonnes of oil in 1979 and created 1,300 extra jobs.

Not surprisingly, perhaps, one of the papers at the Manchester seminar was given by a trade unionist, Colin Barnett, of the National Union of Public Employees. Provided resource recovery and recycling schemes were intelligently presented by management, he said, 'there will be a considerable and ready response from the trade unions'.

However, while the Federal Government in West Germany has given a strong lead in this field, the UK has increasingly tended to leave resource recovery to market forces—and a number of pioneering ventures, such as the Waste Materials Exchange, initiated by ICI and the Department of Industry, have gone to the wall. Government action, as John Butlin of Manchester University's Agricultural Economics Department pointed out, is essential if the highly volatile markets for recycled raw materials are to be stabilized. Furthermore, as Andrew Elliot of the Pollution Research Unit at the University of Manchester's Institute of Science and Technology (UMIST) argued, Government action is also required to arrange 'marriages' between those wishing to dispose of wastes and those with a use for such wastes. He has, in fact, been a member of the Waste Management Advisory Council's Fuel from Waste Working Party, which recently published a report arguing that the 6 to 7 million tonnes of household and commercial waste generated each year in the UK could be widely burned by industry—Blue Circle and IMI already have such schemes—and could save up to 3 million tonnes of coal a year, worth up to £60 millions at 1976 prices.

Ralph Carter, of Profit from Waste Limited, reported on his firm's household surveys carried out in Blackburn, which showed strong support for waste-recycling schemes. The firm's Chief Executive, John Pontin, reviewed its plans for the combined recovery of glass (as in the successful 'Bottle Banks' scheme run by United Glass and other manufacturers), metals, and paper, while Keith Waterhouse (Director, White Cross Equipment) fleshed out the bones of the proposals. One idea which he proposed was that disused petrol stations be used, as they are both accessible and have tanks which could be used to store waste oil.

The seminar papers have since been published, and are available from Profit from Waste, Manchester Business School, Booth Street West, Manchester M15 6PB, UK, price £10.00.

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