European Communities
Commission
Background Report

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ENVIRONMENTAL POLLUTION: EEC RESEARCH

Pollution knows no national frontiers, but it marches with our technology. The dangers may be immediate and obvious, but increasingly they are 'inherent' and hidden.

Apart from the work on radioactive contamination done under the Euratom treaty, and the 'COST' projects undertaken with other European countries since 1971, the EEC has been deeply concerned with environmental protection - and consequently with research - since 1973. For we urgently need more information to protect ourselves.

To try to fill the many gaps it found in our knowledge, as well as to try to resolve the important areas of controversy - such as possible lead poisoning by motor car petrol, or the problem of carcinogenic substances in drinking water - the Commission has initiated a big research programme on a Community basis. The advantages of Community research are that: specialised laboratories in Member States can be focussed on the most urgent and difficult problems, avoiding pointless duplication; observations - such as epidemiological surveys - are spread over the sample area of the whole Community; and our pooled resources are more easily shared with other countries, notably the USA - though it should be noted that Canada, Switzerland and India have asked to link up on some projects.

The first EEC Programme: Progress to date

The first research took two forms: direct action - research in the Community's Joint Research Centre; and indirect action - partial funding of individual projects within states and universities, of which there were some 125 projects.

The research was coordinated by scientific officers of the Commission and an Advisory Committee, appointed by Member States.

Research at the Joint Research Centre at Ispra has especially dealt with pollution and its ecological effects in the air and in lakes. Amongst other things, a multidetection unit for organic micropollutants has been developed, using the latest techniques of chromatography, mass spectronomy etc. And together with contract research, a remote detection unit using Sodar, laser-based and correlation spectronomy systems is being developed against air pollution.

Contract research has already covered many fields, including a big epidemiological survey of air pollution and respiratory disorders, using a sample of 20,000 children in six countries. There have been projects on the lead content of petrol and its toxicity, and on many other toxic pollutants of air and of water.

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Another very important project, involving the Joint Research Centre and contract research is ECDIN: the pilot data bank for storing information on environmental chemicals, their toxicity, how they are used, where found, their ecological effects and so on. ECDIN will be of crucial importance in preparing safety and control measures. Since 1975 a permanent inventory of environmental research projects in all Member States has also been kept.

During this period, three 'COST' projects were also completed, which have told us much about the chemistry of sulphur compounds in the atmosphere; have given us a list of over 1,000 organic micropollutants in European waters; and have prepared work on the disposal and also the further use of sewage sludges, with a view to conserving materials as well as disposing of them safely.

The second Programme: to 1980 and beyond

This beginning helped to form a coordinated Community policy which has already, through directives, set objectives for environmental quality and pollution control. Now, with the help of the Advisory Committee, a new and more developed programme, for completion in 1980, is under way. Main emphasis is on water pollution, safeguarding the natural environment and waste management.

The Community has part funded some projects, and paid for the costs of coordination of others which are funded nationally but which are carried out under a joint programme supervised by a steering committee. Funds available were 16 million units of account (just over £9.5 million), and from 800 applications in 1976, over 150 projects have been chosen.

The areas covered are: information management (ECDIN); establishing the effects of exposure to pollutants - such as heavy metals, asbestos, organic micropollutants, new chemicals, and noise; improving the natural environment; and how to fight against pollution and nuisances, including the use of 'clean' technologies.

The Joint Research Centre has four main projects linked to the above: ECDIN; pollution in the atmosphere, including the modelling of pollution dispersion; water pollution in lakes and in coastal waters (and through thermal pollution); and the use of remote sensing to monitor the ground water which is becoming increasingly important to our water supplies.

The Joint Research Centre is also becoming the focus of collating and developing remote sensing techniques within the Community.

Finally, a new R & D programme for recycling and re-using domestic and industrial wastes is under way, both to protect the environment and conserve our raw materials.

Summary: the Future

The problems are large and complex. But the Community has already acted as a catalyst in the cooperation between the scientists and laboratories in her various countries.

The Advisory Committee, too, has come to play an invaluable role as a link between research projects. This will become still more the case in the future since the environment is, to such a large extent, held in common.
