

would entail a detailed geological survey down to the mantle, using every available technique, of a band 2 to 20 kilometres wide stretching from the North Cape in Norway to North Africa, across the many major ancient geological boundaries of Europe.

The exercise would be a continental parallel to the International Deep Sea Drilling project and would cost around £3 million over seven years, 2–3 years of which would be used to gather data. The Swiss national research council will pay for a pilot study.

On a smaller scale, the foundation has decided to set up a new fellowship scheme — this for toxicologists — similar to its existing European Training Programme in Brain and Behaviour Research. Each year £70,000 will be made available by council in nine countries (Denmark, Finland, Ireland, Italy, The Netherlands, Norway, Sweden and the United Kingdom) for short-term and long-term fellowships in toxicology. The object is to stimulate research on the toxicology of environmental chemicals — and to help increase the number of experts in Europe who could advise governments and industry. The first fellowships will be advertised next spring to be available in autumn 1982.

Robert Walgate

EEC Research Council Broader future

Brussels

EEC's ten research ministers have finally approved the first stage of a biomolecular engineering programme and the 4-year programme on microelectronics (worth \$40 million). This agreement, reached at a meeting on 9 November, reflects the future attitude of the Community to research and development.

The European Commissioner for industry and now research, Etienne Davignon, sees research and development as being one of the prime vehicles by which Europe's flagging industrial competitiveness compared with the United States and Japan can be revived. That his ideas are being taken seriously by member states is demonstrated by the council's decision to go ahead with biomolecular engineering and microelectronics programmes.

Only the first stage of the 4-year programme (indirect action) on molecular engineering has been agreed. The original six comprehensive projects proposed by the commission still stand, but the whole programme will now be focused on agriculture and on safety and environmental questions. So for two years and with about \$8 million to spend on 50 per cent support, the commission will fund research on, say, the synthesis of vaccines and pesticides of importance to European agriculture; on the biotransformation of agricultural surpluses and wastes; and on plant molecular genetics and gene transfer. The safety work — accounting for 20 per

cent of the grant — will cover the detection of contaminants in industrial microbial strains and the extension of risk assessment procedures.

After two years, the programme will be re-assessed and if successful continued — probably with a further injection of cash. The commission hopes to call for tenders around the end of this year, and the programme will start in earnest on 1 April 1982.

The commission's 4-year action programme in microelectronic technology is the second arm of the strategy to stimulate European research into telematics and informatics. A programme has been under way since September 1979 on data processing and a third programme on telecommunications is expected to be proposed before the end of 1981. The agreed budget is for \$40 million, \$12 million less than was originally asked for.

This programme is also important because member countries have agreed to coordinate their activities and keep each other informed of new developments to ensure that a microchip production industry is soon established in Europe.

Figures from a report being prepared on the competitiveness of European industry illustrate the struggle facing Europe. Jobs created in Europe between 1970 and 1980 numbered 2 million compared with 19 million in the United States and 5 million in Japan. Japan spends globally half as much money on research as EEC, but Japanese researchers register four times as many patents.

In the field of microprocessors, EEC is calculated to have spent \$470 million developing chips compared with Japanese expenditure of \$240 million. But Japan and the United States each supply 40 per cent of the world microprocessor market, while European production accounts for less than 10 per cent.

The commission's desire to coordinate research efforts carried out at national levels would involve holding regular twice-yearly meetings to plan and exchange information and analyse national spending. By discussing programmes at the early stages, overlapping and duplication could be avoided and lead to an efficient dissemination of research results both among the member states and between universities and industry. Using Euronet as an industrial data base and the planned INSIS integrated numerical network, the gap between research and industrial application would be narrowed.

For the Community's joint research centres, Davignon foresees the scope of the research being widened — a move that might involve the opening of the centres to agricultural research for the African, Caribbean and Pacific countries linked to EEC by the Lomé convention. The concept of promoting "centres of excellence" is also being discussed.

Agriculture research will also be boosted. Only 1.1 per cent of EEC's

research budget is devoted to this field despite the vital role the Common Agricultural Policy plays in EEC affairs.

Although the commission seems to be backing the argument that increased research and development is a means of solving current economic problems, a belief supported by European industrialists, ministers were non-committal on Davignon's request to double between now and 1986 the amount of money from the Community budget actually devoted to research and development.

Jasper Buker

Netherlands universities

Misery ahead

Ending several weeks of uncertainty the Netherlands government announced on Monday the latest forward plan for the universities. Briefly, the Ministry of Education and Science is looking for a 2 per cent cut in university salary budgets in the years 1984 and 1985, together with a 3 per cent cut in other expenditure. Although the percentage reductions of the university budget (expected to save a total of 75 million Dutch guilders (£16.5 million) a year) are not at first sight large, coming as they do after several years in each of which university budgets have been reduced by 3 per cent, the consequences could be serious.

In the two years ahead, the ministry has also decreed that there should be a freeze on academic vacancies. During that period, the ministry also hopes that there will be a rationalization of the structure of university departments, with resources concentrated in the stronger departments. The Academic Council, which advises the ministry, has already begun to put individual departments in order of merit. It is possible that if the universities concerned do not take the initiative in reorganizing themselves, the minister will provide an incentive by adjusting the grants they are offered in the years ahead, either up or down.

One curious feature of this week's proposals is that the government expects the universities collectively to pay their bills less promptly. The result may be that the drain on the government's cash resources is reduced by up to 40 million guilders in 1982. The reactions of the universities' creditors are not yet known.

On the face of things, there will be no immediate need of redundancies among academic staffs, although the ministry has set up a central register of vacancies. Even during the two years ahead, universities will be free to apply for a dispensation to fill vacant posts considered essential to their academic or research programmes. There is, however, a possibility that some universities will prefer to reduce their staffs than to stomach for a further two years the acute shortage of disposable income from which they have been suffering.

The next step will be for the parliament