

Chevenement are now being described by policy-makers as "70 per cent failures". These were "*programmes mobilisateurs*" designed to stimulate action in fields like bio-technology and information technology. The problem: the French penchant for autocracy. The *programmes mobilisateurs* were to be run at arm's length by small groups at the Ministry of Research (responsive to the needs of industry and research). But these small groups grew too large, and developed ideas and programmes of their own. Industry saw them as socialist interventionism. Papon himself admits he is anxious.

Meanwhile, Curien hopes to respond next year with a new and somewhat wiser "law for research" — wiser indeed than the Chevenement version of 1982, which aimed at an increase in French national research and development spending from 1.8 per cent of gross national product in 1981 to 2.5 per cent by 1985. That will not be reached, but the ratio will be 2.8 per cent. Now France is waiting for industry to respond.

Robert Walgate

Merger resisted

Düsseldorf

THE Social-Democratic (SPD) Government of Nordrhein-Westfalen in Düsseldorf has protested vigorously against the plans of the federal Minister for Research and Technology, the Christian Democratic (CDU) Dr Heinz Riesenhuber, who has proposed that the main thrust of biotechnology research in West Germany should be concentrated in future in one, rather than two, research centres.

Last year (see *Nature* 106, 305; 1983), an investigating committee suggested that the two major centres at Jülich (Nordrhein-Westfalen) and Braunschweig-Stöckheim (Niedersachsen, CDU government) would be better amalgamated into one, thus improving the efficiency of research and reducing its cost. The new committee recommended that the new centre should be based in Braunschweig despite the committee's poor opinion of the standard of the work of the 350 research workers at Braunschweig, and its praise for the work of the 100 researchers at Jülich.

Rolf Krumsiek, Minister for Research in Nordrhein-Westfalen, has now promised to retain the Jülich institute at its present size, and in this he has the full support of the two directors of this research centre, Professor Hermann Sahn and Professor Christian Wandrey, both of whom wish to stay in Nordrhein-Westfalen. This difference of opinion between the central government and that of Nordrhein-Westfalen may bring difficulties should the central government decide to withdraw its financial support for Jülich, at present 90 per cent of the total cost. Retention of an interest in this promising research sector would then require an enormous financial intervention from the *Land* government.

Jürgen Neffe

European science

Forging stronger research links

Paris

THE European Science Foundation (ESF), a cooperative focus for over 50 national science funding agencies in Europe, has received broad political backing for a \$1 million increase in its \$2½ million budget — to help European researchers to keep in touch with one another.

This was one of the more concrete results of a unique meeting in Paris on Monday of 21 European research ministers under the auspices of the Council of Europe. The meeting, which had taken nearly a year of preparation, aimed at creating a "fresh political impetus" to European scientific co-operation, and this it has clearly done. However, although it recommended \$1 million for ESF, the meeting had no power actually to define a budget. ESF must wait to see if its member agencies can find the cash.

Certainly, better cooperation as would be developed by ESF in a number of specified research areas is necessary, if any real life is to be given to the concept of "European research". The French Centre National de la Recherche Scientifique (CNRS), for example, annually sends more scientists to California than it does to the whole of Europe put together. And CNRS is not alone, either in its Atlanticism or in the need it feels to balance this by increasing cooperation within Europe.

In Paris on Monday, ESF was recommended to create "networks" of exchange in, for example, oceanography, Earth sciences, materials sciences, epidemiology and, altogether, 18 other fields of research. Although the money required would be a considerable sum for ESF, it would be small in relation to total European research budgets (a "per cent of a per cent", says ESF).

Now, ESF will make a detailed study of the 18 network proposals, themselves already filtered by ESF from around 200 originally received from national bodies before the conference. ESF will make specific recommendations for action within five months. The networks would differ from the superficially similar stimulation programme of the European Economic Community in one important respect, said ESF vice-president Professor Roger van Lieshout: they would be aimed at individual scientists, offering them mobility and choice, rather than at specific institutions. "If you create a centre of excellence, it will always remain a centre but not always remain excellent", said van Lieshout.

Also on Monday, the Council of Europe was instructed to consider the introduction of a "researcher's card". The card would be a kind of passport to Europe allowing accredited researchers certain privileges (such as help in getting electronic equipment past inquisitive customs officers). The Council of Europe should also

consider, said the ministers, other moves to improve mobility by removing certain trivial but cumulatively important obstacles to free exchange — such as freedom to open a bank account.

Peter Brooke, the British research minister, also made a surprising and last minute proposal: to create a prestigious European academy like, for example, the Royal Society and the US National Academy of Sciences. This would foster a sense of identity among European scientists, said Brooke. Conference president, Frenchman Hubert Curien, described the proposal as "very interesting", but it was not among the official recommendations of the meeting. Britain may take the proposal further on its own initiative, said Brooke after the meeting.

Robert Walgate

Amazon to yield more secrets?

THE government of Brazil has invited a team of Soviet oceanologists to carry out a survey of the Amazon and its estuary. This is a follow-up to last year's expedition aboard the Soviet oceanological research vessel, *Professor Shtokman*, in February–April 1983, in which a joint Soviet–Brazilian scientific team took part and which penetrated far up the Amazon as well as surveying the ocean around its outfall.

The 1983 expedition concentrated on the geological sampling of the bed, ichthyological studies, and also some hydrographic work. The exceptional depth of the Amazon (as much as 100 m in places) — a consequence of the river lying on the boundary of two geological plates — made it necessary to use an ocean-going vessel. Much of the data from the 1983 expedition remains to be fully worked out. Nevertheless, according to Academician Aleksandr Yanshin, a vice-president of the Soviet Academy of Sciences, much has already been discovered.

Numerical data from the 1983 expedition include figures for the annual outflow of the Amazon (6,000 km³, some 50 per cent more than the total of all Soviet rivers apparently) and the annual sediment burden (300 million tonnes). Theories have been developed to explain how the sediments became spread out all along the coast of South America rather than forming a delta as with most major rivers.

One notable discovery, the Soviet hydrobiologists claim, was that the Amazonian river water retains its brown colour even after the precipitation of all sediments. This, it is thought, is due to the presence of dissolved organic compounds, reminiscent of swamp water. Vera Rich