

## British research

## Catalogue of steady decline

ALTHOUGH declining British government support for civil research is offset by an increase in support for military research, this has not prevented a decline both of the proportion of the Gross Domestic Product (GDP) spent on research and of Britain's standing relative to other industrial nations in civil research spending. This is the simplest lesson to be drawn from the *Annual review of government funded R & D 1985*, published earlier this week (HMSO, £9.50).

The survey is the fourth in the series produced since the House of Lords Select Committee on Science and Technology recommended in 1981 that there should be such a document. It is also the last to be produced by Sir Robin Nicholson, the scientist member of the Cabinet Office who will be leaving in the new year to become research director of Pilkingtons, the glass manufacturers.

Nicholson obviously hopes that he established a tradition that will survive not only his office but general elections yet to come, explaining how future editions will improve on the quality of the data (which is at present variable, especially on topics such as manpower). One guarantor of survival is that the survey is entirely free of value judgements, and that government departments' own estimates of their research spending under various categories are normally entered as supplied.

The survey is largely based on figures for spending by government departments covering the last financial year (to last April) together with the three immediately previous years and plans for the present and the two succeeding years (as announced last February). The figures, such as they are, for industrial spending on research and development come from a survey carried out by the Department of Trade and Industry.

In the current year, according to the survey, government spending on research and development is at a shallow peak, amounting in real terms (and 1983-84 prices) to £4,137 million. On present plans, the total is expected to decline from now on, to £3,966 million in 1987-88. Within this total, however, defence spending on research and development, now just over a half at £2,077 million, is expected to increase modestly to £2,181 million in 1987-88 (again at 1983-84 prices). But even these figures make the conventional but increasingly doubtful assumption that about 30 per cent of spending on higher education may be counted as research expenditure.

Nicholson emphasized earlier this week that the international comparisons suggested by the survey are made uncertain by the extent to which the data cannot easily be compared. But according to data collected by the Organisation for Econo-

mic Cooperation and Development (OECD), Britain stands out as the only major member country in which total spending on research and development (by industry as well as government) has actually declined in recent years (by 0.9 per cent in 1983, the latest year for which a comparison is attempted). □

## US panel split on guidelines

### Washington

AGREEMENT was finally reached on 4 December on policy guidelines for the safe introduction of recombinant DNA technology by a working group of the Organisation for Economic Cooperation and Development (OECD). The guidelines have now only to be formally approved by OECD's Committee on Science and Technology Policy before being published.

The drawing up of the guidelines, which has taken two years, spawned dissent between US agencies which led to the cancellation of a meeting of the working group in August and expressions of concern by US senators. At the meeting earlier this month at OECD's headquarters in Paris, the US delegation offered a radically changed version which omitted a section of a previous draft dealing with large-scale industrial practices. The compromise document now agreed represents "a merger of the best of both versions", according to Dr Frank Young, commissioner of the US Food and Drug Administration (FDA), who secured the eventual agreement between US agencies. Dr Henry Miller of FDA, whose involvement in the project generated controversy, said he was "absolutely delighted" with the results.

The confusion over the US position delayed completion of the guidelines by 4-6 months. The representative of the Environmental Protection Agency who earlier coordinated US work on the project boycotted the latest meeting.

The document now agreed endorses the use of agreed standards of good industrial large-scale practice for genetically engineered organisms deemed to represent a low risk; many OECD countries had been waiting for this recommendation to cite as justification for their domestic policies. Higher-risk organisms can be safely handled with established containment techniques. When considering environmental releases of genetically altered organisms, the document says risks can be evaluated in the same way as for other organisms, and recommends a step-by-step approach of progressively expanding the containment through small-scale and then large-scale field tests before allowing full release.

Tim Beardsley

## Deep-sea drilling

## Britain rejoins programme

A BLACK sheep became a prodigal son last week, when the British Natural Environment Research Council (NERC) announced that it would be able to find the annual subscription for the new Ocean Drilling Program being organized by the National Science Foundation in the United States through the intermediary of JOIDES, the consortium of US oceanographic institutions responsible for the earlier IPOD (international phase of ocean drilling) programme. Britain participated in the planning of ODP, but did not become a full member because NERC could not pay the \$2.5 million annual subscription.

Signs that the prospects were good were seen last month, when the secretary of the council, Dr John Bowman, said that he hoped to have raised the subscription for 1986 by the end of the year. Now, it seems, the Department of Energy and other government departments have agreed to meet a fifth of the cost, with the oil companies providing 14 per cent. NERC will provide the remainder, equivalent to about £1.2 million at present exchange rates and will also stand the risk of future currency fluctuations.

Everybody seems cheerful about the prospect. At a meeting of the British coordinating committee last Friday, Dr Tim Francis of the Institute of Oceanographic Sciences was appointed as the British representative on the ODP planning committee, next due to meet at the end of January in Hawaii.

Representatives were also nominated for the dozen or so working groups of ODP, now mostly organized on regional lines, but it may be necessary to change these assignments, if, as seems likely, the structure of ODP is recast.

Even so, Britain will participate only in Leg 107 of the new programme, which is planned to sail from Malaga for several drilling programmes in the Mediterranean on 26 December next year. (The first leg of the new programme will put to sea on 31 January 1986.) There is particular British interest in Leg 14, in the Weddell Sea, in the Antarctic near the British station to be drilled in 1987.

Domestically, the British coordinating committee under Professor M.G. Audley-Charles (University College, London) will expect the British representatives on the ODP working panels to act as convenors of parallel groups among British geophysicists. The presence of the oil companies among the sponsors of the British contribution is reckoned to have been politically if not financially crucial, given the British government's belief that industrial sponsorship of research is a public good in itself. □