

European Space Agency

Supposing stability

The European Space Agency (ESA) is hoping for a budget held steady for a decade, at a real £285 million a year from 1982. The sum is much less than ESA's current budget of £480 million, but it sets a floor below which ESA's rapidly falling spending should not fall.

This comes at a time when all is changing at ESA under Erik Quistgaard, the 58-year-old Danish industrialist who was appointed director-general of ESA in May. The current troubles come from the ending of the development programme for Ariane, ESA's launcher, and its transfer to the private company Arianespace, and the completion of Spacelab, due for launch on the space shuttle in 1983.

Last week Quistgaard presented his proposals to the ESA Council — the top decision-making body of ESA — in an unminuted restricted session of the Council "bureau", which consists of the top national delegates but takes soundings rather than decisions. It was this bureau session which agreed in principle to Quistgaard's budget. The bureau also supported his proposals for a 50 per cent increase over the next ten years in the mandatory science budget (which provides ESA's research satellites — 12 launched so far). This budget has been fixed effectively since 1971 at a level of £60 million a year (1980 prices), and is committed — all but £180 million — to 1990 on six projects.

These are a trip to Halley's comet in 1986 (a mission called Giotto), an astrometry satellite (Hipparcus), an X-ray observatory (Exosat), a 15 per cent involvement in the space telescope, an investigation of the solar corona outside the elliptic, and an experiment to measure the effects on the human body of controlled accelerations in space (SLED).

Whether the money materializes depends on decisions made nationally, and at subsequent meetings of ESA council (the next is this month). Agreement must be reached on the main technological programme of ESA — is it to be improvement of Ariane, Earth resources or communications satellites — against a tendency in France and Germany, opposed by smaller nations, to see ESA primarily as a research and development agency rather than a profit-making space multinational. And there are problems in both France and the United Kingdom over the procedure of contributing to ESA; so a ministerial meeting is being considered for the spring of next year.

In the United Kingdom, the problem is the division of contributions between the Department of Industry (for applications) and the Science Research Council (for research), so that a change in balance must be decided at ministerial level. In France, the problem is the competition between contributions to ESA and a growing

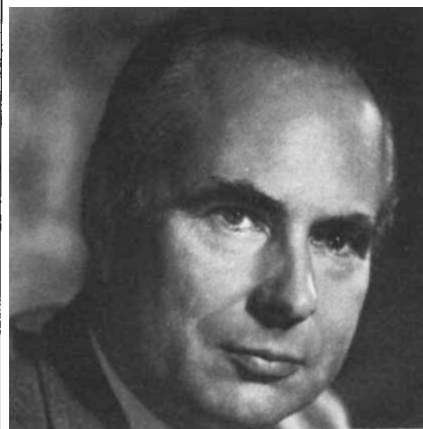
national programme within the budget of a single agency, the Centre National pour les Etudes Spatiales — again a matter for cabinet-level decisions.

But whatever the remaining problems, Quistgaard himself scored a major personal success last week. Delegates came to Council prepared to take their pound of flesh — France, for example, wanted a 10 per cent cut in ESA staff — but in the end they applauded him. In his summing up Quistgaard told delegates "You nearly killed me — but I survived." More than that, he has streamlined ESA, getting Council to agree to eliminate the 40-strong directorate of future programmes and planning, and to set up a think tank of half the size which will report directly to Quistgaard; and to devolve power to the existing directors (now to be called the management team). **Robert Walgate**

Huxley for PRS

Sir Andrew Huxley, the neurophysiologist, is now almost certain to be the next President of the Royal Society in succession to Lord Todd, who comes to the end of his five-year stint at the anniversary meeting, to be held this year on 1 December.

The society's election procedures require that nominations of new council members and also of the new president should first be agreed by the Council, and then submitted to the membership of the society in the form of a single slate of candidates. Sir Andrew Huxley's name



has apparently been agreed for several months, and it is known that several institutions have already engaged him to speak at conferences or to officiate at centenary celebrations well into 1981.

Now that Sir Andrew's nomination by the council is assured, the chances of his not being elected are vanishingly small. This could only happen if a majority of the members of the society were to strike out his name on the ballot paper and to substitute that of some other member.

Sir Andrew, who will be 63 at his election, has been a Royal Society Research Professor in the Department of Physiology, University College London, since 1969.

Indian laboratories

Back to GO*Bangalore*

In what is considered to be a major step to tone up the state of Indian research, the government led by Mrs Gandhi has transferred back to the Council of Scientific and Industrial Research (CSIR) four laboratories which the previous Janata government had handed over to user ministries. The laboratories concerned are the Central Fuel Research Institute, Dhanabad; the Indian Institute of Petroleum, Dehra Dun; the Central Road Research Institute, New Delhi; and the Central Building Research Institute, Roorkee.

In April 1978, the Janata government, which under Morarji Desai was firm on "socially committed research", had dissociated these laboratories from CSIR and transferred them to user ministries on an experimental basis. Presumably this "delinking and transfer" was intended to foster a closer relationship between research and industry that would accelerate the country's scientific potential for industrial growth.

However, the decision proved to be counterproductive. Not only did it fail to achieve the desired goal but India's scientific community saw this step as a "vicious attack on scientific autonomy". For the past two years there has been a heated debate on the move in India's administrative and political circles. It was widely alleged that the decision was taken without considering the opinion of the scientific community.

The controversy surrounding the delinking had cast a shadow over scientific research in India. While the advocates of delinking called it an important measure to enhance industry — "research interaction" — the critics saw it as "a dark conspiracy of alien agents acting in collusion with their Indian masters" to subvert indigenous research efforts.

CSIR was established in the early 1950s to promote scientific research into the economic exploitation of India's vast resources. By Indian standards, CSIR is a giant covering four laboratories and research associations, and it has never been handicapped by the paucity of resources or dearth of skilled manpower.

The contribution that the CSIR laboratories have made to indigenous research for industrial development is difficult to assess. While the left-inclined high-technology advocates say that CSIR has been a trail blazer in easing India's poverty and backwardness through innovative research relevant to the socio-economic conditions of the country, pro-Gandhian, appropriate-technology proponents say that CSIR is a "colonial set-up subservient to the capitalistic research" that is alien to the Indian environment.

In recent years, CSIR technocrats have

been complaining that there are virtually no takers for the processes and technologies developed in CSIR laboratories. In fact, most public and private sector industries in India have favoured the wholesale import of foreign technology. This anomaly was said to be the motivation behind the handing over of the laboratories to user ministries. But the import of technology by the bureaucrats in the user ministries has continued unabated.

B. Radhakrishna Rao

NIH research grants

Trying new tricks

Washington

In an attempt to cut down on the amount of "time and effort" reporting required of scientists, the National Institutes of Health (NIH) are being urged to try a new mechanism for funding research grants that would make the researcher financially accountable to his or her university or research institution rather than directly to the funding agency.

At present, NIH project grants — whose total value is about \$1,400 million, over half the total NIH research budget — are awarded on a "cost reimbursement" basis, under which the government agrees to cover all previously agreed costs that can be properly accounted for.

The proposal is to experiment with so-called "fixed obligation grants" (or "fixed price grants") where the research institution merely has to demonstrate to the funding agency that the scientific and technical goals of the research have been satisfactorily pursued.

"Time and effort" reporting is the most controversial of the strict new rules on accounting for research expenditures introduced last month by the Office of Management and Budget (OMB) in a document on cost principles known as Circular A-21.

These rules require all principal investigators to provide a semester-by-semester breakdown of the way they distribute their time between teaching, research, administration and other activities — and to report any change in this distribution to the federal government.

Federal auditors argue that this is necessary to ensure that money is being allocated and spent in the way agreed when a research grant is awarded. But scientists argue that in an over-zealous enthusiasm to minimize fraud and abuse — a popular target of congressional committees — the auditors are reducing the productivity of research laboratories for a minimal return.

Despite earlier protests, OMB had refused to delay the implementation of the new rules, the outcome of several years of negotiation. However, under continued pressure from universities, the agency is now prepared to discuss ways of reaching its accountability goals more effectively.

OMB has already agreed to experiment

at ten universities where "time and effort" reporting will be on a statistical basis rather than professor-by-professor. What is now being suggested, however, is considered by NIH director Dr Donald Frederickson to be revolutionary — "as radical as *Finnegan's Wake*".

The outlines of the proposal were presented to the NIH Directors' Advisory Committee (DAC) by Dr Linda Wilson, Associate Vice-Chancellor for Research at the University of Illinois in Urbana, and Mr James Kelly, previously Executive Vice-Chancellor of the State University of New York and a long-time proponent of fixed-price contracts.

The general idea is that there would be no change in the present pre-award proposal process for the selection of research and determining the amount of an award. However, post-award administration would be changed to delegate most of the responsibility to the recipient institution and the principal investigator, in particular the emphasis of accountability would be shifted from the allowability of costs and the adequacy of documentation to criteria that indicate "reasonableness of technical progress".

Supporters of this new proposal, which comes out of a recommendation made in a recent report from the National Commission on Research for Experiments in Grant-in-Aid Support for Research Institutions, argue that it should still be possible to build in enough controls to ensure that public funds are not misused (such as spot auditing checks). The new system might eliminate some existing problems, but there could be new ones. For example, by shifting prime responsibility for the financial conduct of the grant from the federal government to the research institution, tensions between the government and the institutions could be replaced by tensions between the institution and its principal investigators.

Additional pressure would also be incurred on efforts to measure scientific accountability; Dr Wilson emphasizes that research grants should be treated as *assistance* rather than *procurement* funds, to avoid the rigid accountability — and hence loss of flexibility.

Mr Kelly told members of the DAC that there was little evidence that a new system for administering grants would save much money and that any increase in research productivity would not necessarily be measurable. The principal advantage, he said, was that the new approach might reduce tensions between universities and the federal government, currently running high in the wake of the introduction of Circular A-21.

Any experiments in this direction are likely to receive the approval of the Office of Science and Technology Policy (OSTP), whose associate director, Dr Denis Prager, told the committee that reducing non-budgetary constraints on research was one of OSTP's top priorities, particularly by

encouraging forms of regulation based on performance.

Polish academy

Flexing muscle

Polish scientists wishing to travel abroad for professional purposes should in future find it considerably less complicated to obtain the necessary passport. Last week, Dr Jan Kaczmarek, Academic Secretary of the Polish Academy of Sciences, announced that the academy now has the right to decide such matters for its members.

This announcement marks a small, but significant step towards the greater academic autonomy widely demanded by Polish intellectuals in the wake of the Gdansk accords. It was made at an extraordinary general meeting of the Polish Academy of Sciences, which was called to discuss and re-evaluate the role of the academy, and of the scientific establishment generally, in the light of the recent changes in the country. The meeting, which participants reported had a warm and open atmosphere, made some sharp criticisms about the situation in Poland during the past few years, in particular, both the over-centralistic attitude of the authorities, which made it extremely difficult to get a

No stay for badgers



This will be a bad week for British badgers. Today (Thursday, 30 October) Lord Zuckerman's report on the practice of gassing badgers thought to be infected with bovine tuberculosis will be made public. This issue is contentious among conservationists because the Badger Act, carried through the British parliament with some emotion, which makes it a criminal offence to kill badgers even when they damage land and crops, provided an exemption for the Ministry of Agriculture, Fisheries and Food to allow the destruction of badger hides thought to be a reservoir of bovine tuberculosis.

Conservationists have since protested that the practice of gassing badgers for the sake of protecting cattle has been too widely licensed, and that it is in any case unnecessary or ineffective. Lord Zuckerman's report it thought to argue in an opposite direction.