

budget earlier this year. He pointed out that the cases quoted by Mr Mattingly — for example of consulting firms carrying out the same work for different agencies — were several years old, and that with a tighter management structure and more narrowly defined missions, OTA was now beginning to demonstrate unique value to Congress.

Much to OTA's relief, Senator Mattingly did not take his case to the floor of the Senate, and OTA's 1982 budget is now secure. "I presume it did not come up because a lot of people on both sides of the aisle have come to see OTA as a useful and important analytical tool", said Dr Gibbons last week.

Much of the recent work, both long-term and short-term, has impressed OTA's congressional clients. "Some of their stuff is really excellent, particularly in the energy field" says one staff member of the House Science and Technology Committee. A recent report, *Impacts of Applied Genetics*, an analysis of the economic and commercial implications of genetic engineering applied to microorganisms, plants and animals, has been widely praised and recently reached the "top ten list" of government publications.

One secret of OTA's survival seems to be its greater awareness of the limits within which it can safely operate. The genetic engineering study, for example, avoided all discussion of the human applications as "beyond its scope", and the MX study, while studying the "socio-economic" implications of the weapons' deployment, did not discuss political factors such as the full implications of local resistance. Dr Gibbons explains this pragmatically. "Our job is to narrow the issues that must be fought out rather than to tell the politicians what they should do", he says. He talks of breaking problems down into "bite-size" pieces, referring, for example, to recent OTA studies on energy utilization and demand.

Dr Gibbons is currently trying to forge closer links with the National Academy of Sciences, as well as discussing ways of complementing the policy orientations of the Office of Science and Technology Policy. Drawing technology assessment more closely into the traditional nexus of political decision-making may have disenchanted some of its earlier enthusiasts. But it has proved to be a formula for political survival. **David Dickson**

Islamic science

Radicals agree

Islam and a handful of radical Western scientists came together in a royal palace last week, leading to what one Islamic scholar called a "breakthrough in Islamic studies".

The objective of the meeting was to develop a critique of the role of science and technology in society as seen from an

Islamic perspective and using Islamic values. This is not a matter of counting Islamic angels on a needle point, but an issue central to the 42-nation Muslim world seeking both to absorb the fruits of science and technology without too much social disturbance, and to rally behind the flag and philosophy of Islam. The study was the first in a series of science in Islam and the West being organized by the International Federation of Institutes for Advanced Study (IFIAS), set up by the Nobel Foundation to consider issues of academic weight and world importance. King Gustav of Sweden has given the federation a palace as headquarters and conference centre.

Inspiration for the conference came from Ziauddin Sardar, a young Londoner born of Pakistani parents (and one-time correspondent of *Nature*) who has a passion for Islam and the issues of development in the Muslim world. He appears to have achieved a rapprochement between Westerners and the senior and devout Muslim scientists at the meeting.

Initially the meeting seemed likely to founder on the rock of the Muslim insistence on the purity of any search for knowledge. Islam directs the faithful to seek knowledge of the natural world, and inspiration in it: the world is the work of God. This concept, while appealing to Western scientific egos, seemed incomplete to the radicals — to whom some kinds of scientific knowledge were like a "second bite of the apple". This was heresy to the Muslims.

Distinctive development

The delicacy of politics in the Muslim world helps to explain why it has taken three years to install the director-general of the Islamic Foundation for Science, Technology and Development, Dr Ali Kettani, in the Jeddah headquarters.

Kettani has to deal with 42 diverse Muslim nations embracing Africa, the OPEC states and the Far East — each with its own internal political problems, its own approach to Islam and its own goal in "development". Kettani's goal is to forge an Islamic brotherhood of scientists and technologists, who would turn to each other, rather than to the West, to solve problems.

The foundation has been promised an initial \$50 million for 2–3 years recommended by the Organization of the Islamic Conference (of which \$15 million has already been paid by Saudi Arabia). There is to be a staff of some 30–40 and a charter which requires the foundation "to ensure that all member countries . . . both individually and collectively, make the greatest possible use of science and technology (including the social sciences) in the formulation and implementation of their socio-economic plans, keeping in mind the need to consolidate the unique Islamic personality and character".

The Westerners would also not allow a firm distinction between the search for knowledge and its use, which would have solved the dilemma. The idea was simplistic, they said: half the world's science is attributable to defence and industrial research budgets, even if that science is, in its minutiae, "fundamental".

The solution came from Dr Ali Kettani, recently appointed director of the Islamic Foundation for Science, Technology and Development (see box). In Islam, both the ends and means of an individual's actions must be "hallal" (allowed), so knowledge sought within a context of "haram" (forbidden) use would also be forbidden.

The social context and consequences of science could also be considered within Islam, the meeting judged, using precisely defined Quranic concepts such as "adl" (equity), "zulm" (oppression), "muslah" (public interest) and "dyah" (waste).

A measure of the success of the meeting was that the participants tore up their papers, prepared before the conference, and which were to have been the basis of a book, promising to rewrite them in the light of what they had learned. Subsequent meetings in the seminar series will turn to more practical technical issues, such as energy and environment (to be held in Riyadh), habitation, agriculture, health, and industry and mass production.

Robert Walgate

London science centre

No cash ahead

The new London Science Centre is appealing for money to keep going for a second year. The centre was established last April by the Foundation for Science and Technology with about £50,000 of donations from learned societies and industry. It is now looking for a further £200,000 to tide it over until it becomes self-financing.

The centre's aim is to provide facilities for small learned societies whose existence is threatened by the high cost of central London. So far, interest has been modest. Only twenty-six societies have joined, and are entitled to pay less than the going rate for assistance with their day-to-day administration. The main facilities on offer are two small conference rooms and five offices, together with secretarial assistance, at the centre's rented headquarters in the Royal Society of Arts.

The centre's preoccupation during its first six months has been to take over the role of liaison among learned societies from the Royal Society. But plans for the future are more ambitious. The idea is that the centre will not only offer facilities such as word-processing and computerized membership lists, but will become a focus for interdisciplinary communication.

Even so, its centre is the residue of a far more ambitious scheme to emulate the Clunies Ross Memorial Foundation set up

in Australia in 1963. With the backing of government and industry, that was meant to provide Australia with a prestigious scientific meeting place. Its success prompted the Commonwealth Foundation to sponsor similar centres in twelve other capitals. But the attempt to set one up in Britain failed, largely because of the existence of well-established learned societies.

The idea was nevertheless kept alive by a group of senior scientists and administrators, including the president of the Royal Society and the chairmen of the science and medical research councils, concerned to help small specialist learned societies out of financial difficulties. In 1977, the group set up the Foundation for Science and Technology with the remit of raising funds to set up small science centres in British cities.

The London Science Centre is the first. The foundation is now in the throes of appointing a permanent director to take over from its interim director John Chadwick, previously director of the Commonwealth Foundation. But the more immediate problem is to raise enough money to ensure the centre's existence beyond next March. **Judy Redfearn**

World wildlife fund

Bank on conservation

This year the World Wildlife Fund (WWF) is celebrating its twentieth anniversary, and something of a revolution in its policy and strategies. While its aim is still the preservation of the world's endangered flora and fauna, the old incompatibility with the demands of development in the Third World has been resolved. The World Conservation strategy, now in circulation for 18 months, shows that there can be no conservation without ecologically and environmentally sound development policies.

How far this conviction has gained ground within the policies of the European Community was brought to light in a seminar held in Brussels last week, between the European Commission and international conservation organizations. Although the renegotiated treaty between the European Economic Community and the sixty-one African, Caribbean and Pacific (ACP) countries (Lomé II), which are largely old European colonies, now includes a reference to the need for environmental considerations in development projects, the reality in the field belies this exhortation.

The recently completed report by the International Institute for Environment and Development (IIED) on "the European development fund and environment" reveals in case studies undertaken in Jamaica, Guyana, Burundi and Mali the poor degree of environmental impact planning. Failure to consider environmental factors in the planning of develop-

ment projects has led to the failure of projects, and produces projects which themselves cause environmental damage and the loss of valuable resources.

Although national governments have paid lip-service to the development strategies outlined in the Brandt report and the World Conservation Strategy, the IIED report suggest that the government agencies responsible for aid management have yet to take them seriously.

Speakers at the seminar in Brussels claimed that European Community member states themselves do not pursue economic policies based on the sustainable use resources, and that the Common Agricultural Policy is an instrument for environmental damage not only at home but abroad too. Developing countries are being encouraged to misuse their resources to support irrational pattern of agricultural production and consumption in Europe.

European Commissioner for environmental affairs, Karl-Heinz Narjes, agreed with the need for agricultural and development policies in line with the principles of the World Conservation Strategy. But he pointed out that the Commission and European Parliament were still wrestling with the member states even to win the modest finance needed for an environmental fund from the EEC budget. The prospects for finding the money to expand the work of the commission to include environmental planning were poor.

The need for agricultural research to devote more time to developing agricultural techniques which are also ecologically sound was also discussed at the seminar. A 110-page study just released by the World Bank calls on developing countries to step up their investment in agricultural research from an average of 0.31 per cent of agricultural gross domestic product (1975) to 2 per cent. The number of research scientists, says the bank, will need to increase by 9,000 by the year 1984. Such an ambitious programme would establish a solid base in research and would be an important step in helping to meet the food needs of developing countries.

The World Bank itself plans to expand its lending for agricultural research from \$350 million in fiscal year 1981 to approximately \$550 million in 1984. The lending for research and extension in 1984 will be 13 per cent of the \$4,600 million the bank lends for agricultural and rural development — up from 9 per cent in 1980.

Jasper Becker

Science parks

Plans forged

A few British universities are planning to set up science parks on the pattern of Research Triangle in North Carolina; the example of route 128 around Boston is less attainable. Although plans for the parks began before the latest crisis, universities hope that the parks will earn them at least

some extra income.

Local authorities, especially in areas of high unemployment, are enthusiastic, seeing the parks as a means of attracting new high technology industries and more jobs. Some of the latest schemes differ from the two existing parks attached to British universities — a research and development park at Heriot-Watt and a science park at Cambridge — chiefly by the support they have won from local government.

So far, the most advanced scheme is that announced last week by the council of the City of Birmingham, the second largest city in Britain. The city plans to spend £2.5 million on a science and technology development centre attached to the University of Aston in Birmingham, one of those whose budgets were sharply reduced by the University Grants Committee. The university has since been looking to industry for moral if not financial support.

The city money will pay for the refurbishment of a 3.5-acre inner city site next to the university to provide units for small manufacturing firms or research and development laboratories. More land is to be made available when companies need to expand. The city hopes that new, small companies as well as established multinationals will be attracted to the site, helping the university by paying for the use of facilities and expertise.

The hope is that academics will take on more consultancies and will even be encouraged to set up their own small firms, although the arrangements whereby they can spend up to one day a week working for industry will not be changed. Secondment for those involved in establishing firms, however, will be looked on favourably, according to Professor Frederick Crawford, vice-chancellor of the university.

The initiative for the Aston park came from the city council, hitherto persuaded that neither of its two universities, Aston and Birmingham, was capable of collaborating effectively. However, the appointment of Professor Crawford, who has been involved with the Stanford Industrial Park in California, as vice-chancellor last year, seems to have changed that opinion.

The city council of Salford, an industrial city in the depressed north-west of England, is planning a similar collaboration with its local university, also severely penalized by the grants committee. The council spent £250,000 last year on establishing a pilot science park large enough to house four small technological companies. It has sold land in the Salford enterprise zone (where companies are exempt from rates and planning permission) to a commercial company which will open a larger science park next month. The new park will have close links with Salford University Industrial Centre Limited, a commercial company set up by the university 12 years ago to forge links with industry and one which the local council has just spent £350,000. It is hoped that new business from the science park will boost the uni-