Brazilian research funding

Sliding backwards

Rio de Janeiro

There is uncertainty and alarm among Brazilian scientists following a series of forums held during the past few months at the request of the Brazilian Association for the Advancement of Science and involving the heads of the various funding agencies. Still no official government policy has been announced, and scientists are very much in the dark about the future of Brazil's science funding.

With inflation at 110 per cent this year and confronted with shrinking research budgets and graduate scholarships, research scientists, particularly those at universities, are concerned by suggestions made by Gerson Ferreira Filho, new director of the Financing Agency for Projects and Studies (FINEP), that his agency would abandon its policy of financing all institutions and only approve funding for specific projects. Support for institutional funding, he said, would be transferred to the Ministry of Education.

The Minister of Education, General Rubem Ludwig, in his turn, has hinted at the possibility of changing the status of 19 federal universities to that of "foundations", capable of "more financial flexibility". This would force the universities to balance their budgets by charging high tuition fees, making Brazil's education system even more discriminatory than it is now. Even with 65 per cent of the Ministry of Education's budget going to higher education, academics point out that the amount is ridiculously small. Education's share of the national budget has fallen from eleven per cent 10 years ago to less than five per cent today. And the Secretary for Higher Education, although admitting at one of the forums that "we've reached the last line of defence at the bottom of the financial pit", has made no proposals for improving the situation in the immediate future.

Another area of concern is the size of the support provided by FINEP, which amounts to $100 million per year for all fields of science. In principle other funds are available from FINEP for industrial development projects, but these are in the form of loans to private industry and government agencies, rather than academic institutions. Funds are allocated without external review, and this lack of participation of the scientific community was strongly criticized recently in a document signed by fourteen scientific associations.

The problems of inflation have hit particularly hard at those receiving grants and scholarships from the National Centre for Research (CNPq). The recent introduction of fixed ceilings for scholarships was strongly denounced at the forums, and CNPq, with a meagre $10 million budget, has announced a policy of increasing the number of scholarships on offer by reducing the size of each one. CNPq's deputy director has agreed to increase the value of grants already awarded to keep them in line with inflation. Fixed ceilings, however, would apply for all new grants and there are rumours that CNPq's own budget will not be adjusted for inflation next year.

When, at one of the forums Senhor Ferreira claimed that this year's budget was 38 per cent higher than in 1980, he was interrupted by one of Brazil's leading economists, Professor Maria da Conceiçao Tavares, who demanded "honesty in words", saying that because of inflation a 38 per cent absolute increase implied an effective cut of 60 per cent. Suggestions from administrators that scientists and professional organizations should lobby the government for more funds were quickly rejected by the scientists present, who pointed out that lobbying requires an effective Congress. In Brazil, however, Congress does not even legislate over budgetary matters — as these have been the sole responsibility of the Presidency since 1967.

Maurice Bazin

Soviet plate tectonics

Open approval

Moscow radio has denied Soviet prejudice against the "new global tectonics". On the contrary, according to Moscow radio's world service, there is a "healthy climate" of "perfectly normal scientific controversy" about continental drift and plate tectonics. The radio's science correspondent, Boris Belitskii, said that Western speculations that there are political overtones to the controversy are "quite absurd".

As evidence, Belitskii cited two tributes which appeared in Soviet learned journals last year on the centenary of the birth of Alfred Wegener. One article, said Belitskii, was written by a strong opponent of Wegener's views, Dr Evgenii Milanovskii, while the other was written by an enthusiastic supporter, Dr Portnov, thereby making nonsense of Western "mischief-making insinuations".

Nevertheless, Belitskii acknowledged that many Soviet geologists do not support plate tectonics, considering that the theory cannot account for many aspects of continental structure and evolution.

Whether this leads to bias, or a stifling of opinion, is not clear. Some who know the Soviet Union say that discussion among geologists is now quite free. At the same time, geophysical articles in the general and semi-popular media tended, until recently, not to support plate tectonics. One of the first approving popular articles was a progress report on the Baikal-Amur Mainline railway which observed in passing that, owing to continental drift, the line, when completed, would be some 50–70 cm longer than originally planned. **Vera Rich**

Chinese university development

Help from afar

Washington

The World Bank and its soft-loan subsidiary, the International Development Association, have agreed to lend $200 million to the People's Republic of China to support the country's efforts in meeting its present shortage of trained scientists and engineers. The loan is the first to have been made to the republic since the country assumed China's representation at the World Bank from Taiwan last May and is the biggest loan ever made specifically for building up a nation's scientific and technological base.

Half of the money will be provided by the World Bank at its standard interest rate of 9.6 per cent a year over 20 years, and the other half comes interest-free over 50 years from the International Development Association. The loans will go directly to supporting China's University Development Project, which includes among its aims an increase in the enrolment of science and engineering students at 26 leading universities from 92,000 to 125,000.

In addition, the money will be used to introduce graduate degree programme, to improve the general quality of teaching and research, and to strengthen the management of universities and the Ministry of Education.

According to World Bank officials, the government of the People's Republic of China will contribute an extra $95 million to the University Development Project as part of a general effort to increase undergraduate enrolment by 7 per cent a year up to 2.2 million in 1990. Graduate programmes will raise their enrolments from virtually zero to 200,000 by 1990.

Of the total amount of $295 million for which the project has at present budgeted, about $160 million will be used to buy instructional and research equipment. Most of this will be obtained through international competitive bidding, a standard requirement of World Bank loans. Preference will be given to local manufacturers, but World Bank officials admit that "the amount of equipment contracts to be awarded to local suppliers through international competitive bidding is expected to be small".

China's determination to proceed with its plans for science and technology education contrast with its decision substantially to reduce previous commitments to the purchase of capital research equipment. Plans for obtaining both a particle accelerator — which was to have been built to designs produced by the US Department of Energy — and a telecommunications satellite which was to have been provided through the National Aeronautics and Space Administration, have both been shelved because of the lack of available capital. **David Dickson**

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