

Universities win

Tokyo

THE Japanese government has decided to do what researchers worldwide wish their governments would do too — pour resources into university renovation. Japan's usually tight-fisted Ministry of Finance will invest approximately \$800 million in the renovation of major universities during the next five years. The sum, which far exceeds the \$600 million in renovation funds requested by the education ministry (Monbusho), shows the tremendous political importance that is now being attached to strengthening the basic research system.

Another sign of increasing interest in basic research is a decision to restructure Tokyo University's graduate school, with emphasis on mathematics, and on multidisciplinary research. At the end of August, Monbusho submitted a plan to the finance ministry to spend just over \$600 million on renovation over the next five years starting from fiscal 1992 (*Nature* 353, 292; 26 September, 1991). Normally such budget requests are whittled down by the Ministry of Finance. But in late-night negotiations in the final days of last year, the finance ministry in an unprecedented decision agreed to increase the budget to \$800 million.

The decision follows a string of recent government advisory reports recommending more money for the universities and came shortly after the formation of a new political pressure group in the ruling Liberal Democratic Party which is pushing for more money for Japan's public sector research system (*Nature* 354, 342; 5 December, 1991). The budget still has to be approved by the Diet, but approval is just a formality and no changes are expected.

Most of the money allocated for fiscal 1992 is expected to go to Tokyo University, Japan's leading national university. When the former minister of education Yutaka Inoue, visited Tokyo University last year he was appalled at the delapidated state of the university and spurred moves for a drastic rebuilding programme. Next in line comes Kyoto University followed by other leading former Imperial universities, including Tohoku University.

In fiscal 1992, work will begin on a new ten-storey building for the faculty of engineering of Tokyo University, in 1993 the university's faculty of science will get a new building. The medical science faculty is also getting a new building this year under a separate budget.

Some of the money for the rebuilding programme will be raised by selling university land. There are, for example, plans to move some parts of Tokyo University to Kashiwa city in Chiba Prefecture east of Tokyo. Just which parts will be moved and which lands will be sold remains a

controversial issue to be resolved in the next year or so. But even small patches of land in Tokyo can be sold for astronomical prices, while prices in Chiba are comparatively low.

Also approved by the Ministry of Finance is a plan to reform the graduate school of Tokyo University. A new graduate school of mathematical sciences with 60 professors and assistant professors will be created by bringing together and upgrading the rank of staff members from the faculty of science and the college of arts and sciences. Tokyo is also in line for a new graduate school with giant multidisciplinary research groups comprised of the rest of the science faculty (*Nature* 351, 679, 27 June, 1991). As a result, general research funds for each research group will increase by at least 25 per cent. The research group funds, which are automatically provided each year and are separate from competitive grants, are used for the general running costs of research. University researchers have been suffering from a severe shortage of such funds in recent years and the increase will

bring welcome relief to Tokyo University.

The faculty of engineering of Tokyo University will also undergo similar reform. But, because the number of staff members is much larger at about 200, reform will take several years. Also included in Monbusho's budget is a large 10 per cent increase in the budget for competitive grants, which are open to all university researchers, to \$520 million for fiscal 1992. The ministry has also won extra funds for scholarships and fellowships for graduate students. And a new programme of teaching assistantships for young researchers has been approved.

The huge influx of extra funds for the universities has wider political implications. Japan's bureaucrats and politicians have repeatedly told the United States that they cannot provide money for the US Superconducting Super Collider (SSC) until the situation in the universities is improved. The extra funds that have been approved for the universities will make it easier for Prime Minister Kiichi Miyazawa to offer financial support for the SSC when President George Bush visits Tokyo this week.

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MITI Science and Technology Budget for 1992

	thousand million yen	% change from 1991
Total R & D budget	259.7	+ 1.5
Japan Key Technology Centre	26.0*	- 9.7
Basic technologies for future industries	8.2	+ 5.6
Large-scale industrial projects	14.7	+ 4.8
Sunshine new energy sources project	26.5	+ 8.6
Moonlight energy-saving project	11.8	+ 4.7
Fifth-generation computer	3.6	-49.7
Sixth-generation computer	0.9	+842.7
Global environment	8.2	+ 22.1
Intelligent Manufacturing System (IMS) project	0.8	+197.8
Human Frontier Science Program (HFSP)	3.8**	+ 3.5
Elucidation of biological functions (domestic HFSP)	0.3	-12.8
NEDO international grants	0.7	+53.4
Reorganization of Tsukuba science institutes	14.9	+11.3

* budget shared with Ministry of Posts and Telecommunications

**budget shared with Science and Technology Agency

Science and Technology Agency Budget for 1992

	thousand million yen	% change from 1991
Total R & D budget	551.8	+ 5.7
Special Promotion Funds	11.0	+ 4.8
Space	144.7	+ 9.9
Nuclear Energy	315.2	+ 2.9
SOR (Spring-8)	7.0	+43.0
Ocean Research	11.4	+ 6.8
ERATO	6.3	+12.1
Sakigake	1.0	+117.0
Human Genome	1.1	+20.9

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Apart from the education ministry, there are no particular surprises in the budgets for Japan's science-related ministries and agencies which were approved by the Cabinet on 28 December. Of note, the Science and Technology Agency gets a 10 per cent boost in its space budget, much of it for Japan's contribution to the US space station (28,200 million yen). A similar amount is allocated for final development of Japan's new H-II rocket, which should be launched in 1993.