

## Can these agencies jell?

**The plan to merge Japan's Science and Technology Agency with the education ministry is fraught with pitfalls but offers some opportunities.**

Japan's Prime Minister, Ryutaro Hashimoto, has met remarkably little opposition to his plan to merge the Science and Technology Agency (STA) and Monbusho, the ministry of education, science, sports and culture. That is surprising considering that the two organizations are about as compatible as oil and water. What is more, leaders of government research organizations throughout Japan are aghast at the manner and speed at which the plan has moved ahead (see page 327). But they have had no say in the decision.

The merger is very much the brainchild of Hashimoto, who was infuriated by the STA's failure to deal with a string of accidents at the Power Reactor and Nuclear Fuel Corporation and who quickly killed more sensible attempts to upgrade the agency into a ministry. There was no discernible opposition to the move in Hashimoto's reform council, which has only one scientist — Akito Arima, president of the Institute of Physical and Chemical Research (RIKEN), who seems to have taken an uncharacteristically ambivalent stance on the proposal. Moreover, the merger has gone largely unnoticed by the public and media, who have focused their attention on Hashimoto's difficulties elsewhere.

Yet the merger of the STA and Monbusho is the most radical reform of Japan's public sector science system in decades. The two organizations could hardly be more different. The science and technology section of Monbusho is tucked away in a dark corner of one floor of the ministry's six-storey building. The ministry's brightest career bureaucrats spend at most a couple of years in that section before moving on to the ministry's much stronger sections in education. The STA, on the other hand, is the only government agency devoted entirely to science and technology.

Some proponents of the merger argue that STA officials will bring much-needed new blood to the education ministry and help to break the ministry's notoriously bureaucratic stranglehold on the university research system. But even if all STA officials move to Monbusho — which is unlikely, given that some sections of the agency are to be hived off elsewhere — they will be greatly outnumbered. Furthermore, the problems in the university research system are caused as much by a sclerotic combination of conservatism, favouritism, deadwood and inbreeding in the universities themselves as by the policies of Monbusho bureaucrats.

The potential pitfalls of the merger are many. One particularly dangerous idea is that the Institute of Space and Astronautical Science (ISAS) under Monbusho should merge with the STA's much bigger National Space Development Agency. The acute danger in that apparently rational approach is a loss of the virtues of ISAS, a remarkable organization that has shown the world how to run a dynamic worldclass space science programme on a shoe-string budget.

So what benefits can be hoped for? The STA does have a greater awareness of the need for objective research assessment and may, with sufficient determination, be able to introduce such practices in universities that so far have insisted on 'self-evaluation'. Furthermore, the STA has, through a 'hands off' approach, allowed RIKEN to become one of the most successful enterprises for basic research in Japan. The merged organization should apply the RIKEN model to university research institutes, in particular those for joint university use, such as ISAS and the National Astronomical Observatory — which could bring much-needed autonomy to these organizations and let them make better use of limited funds. □

## Nuclear debate required

**It is time for France's National Assembly to flex atrophied nuclear muscles.**

The United States has one sort of cheese but 366 designs of nuclear reactors; France has 366 sorts of cheese but just one design of reactor. So goes a favourite quip used by French officials to express their pride in the meticulous planning that has produced the world's foremost nuclear power programme, the source of 80 per cent of the country's electricity. But the coherence of the programme increasingly resembles a lump of gruyère.

The reason is that France has continued doggedly to pursue the plutonium cycle that has dominated nuclear thinking since the 1970s. But the dream of a generation of fast-breeder reactors that would burn plutonium and breed further fuel has evaporated in the face of economic and technical problems, while plutonium is increasingly recognized to be dangerous environmentally and for proliferation. The root cause of France's unreasoned passion for plutonium is that influential technocrats and lobbyists have been able to make decisions in a system that has effectively shielded them from direct public scrutiny and democratic control.

A shift in this balance of power is now being brought about by

the Socialist government of Lionel Jospin elected last June, and the influence of its electoral allies the Greens. By deciding to unplug Superphénix, a FF60 billion failed commercial prototype fast-breeder, it dealt a sharp blow to the nuclear lobby. Superphénix was symptomatic of the French disease whereby long-term strategies that are difficult to reverse once in place are decided upon prematurely without proper debate. Last week's decision by a large group of a new generation of politicians to challenge the goals of the national nuclear waste disposal programme (see page 322) marks a step towards recovery.

Their opposition to the current excessive emphasis on deep storage can only be described as good sense, as this emphasis is resulting in neglect of other research avenues that may be more promising in the long term. Prudence is all the more desirable given that the choices that will be made over the next few years will fix French nuclear waste policy for decades. Also needing scrutiny is the wisdom of using MOX (mixed uranium/plutonium oxide fuel) in reactors. In short, the National Assembly should convene a national debate on the entire nuclear power programme. □