Polish science 'in need of further reforms'

Warsaw. Widespread reforms in the organization of science in Poland, aimed at reducing rigidities in the post-Communist system and increasing incentives for researchers to improve the quality of their work, have been recommended by a panel of science policy experts put together by the Organization for Economic Cooperation and Development (OECD).

In particular, the panel proposes the creation of a fully fledged Ministry for Science, devolving funding responsibilities to a number of research councils, limiting the activities of the Polish Academy of Sciences, and increasing government spending on research and development to one per cent of gross national product (GNP) from its current level of about 0.7 per cent.

The panel also suggests that Poland should abolish the traditional system under which all permanent university staff are required to have a thesis-based second doctorate, known as a habilitated doctor (HD) degree. The "substantial opportunity costs" of this system, it says, are "a major barrier to Polish science becoming internationally competitive."

The OECD review was carried out at the request of the Polish authorities under a procedure that is widely used by the Paris-based agency. Speaking at a meeting in Warsaw two weeks ago at which the panel's findings were discussed — and whose proceedings will themselves be published together with the report — Aleksander Luczak, Poland's vice-prime minister, said he welcomed the conclusions as "an independent and objective point of view" on Polish science.

The four-member panel gives its general approval to the main thrust of science policy reforms introduced since the end of the communist regime in 1990 (see *Nature* **372**, 593–597; 1994). These have in particular included the creation of a State Committee for Scientific Research (KBN) to focus state support for science.

"[We] believe that the philosophy and competitive principles underlying the system are basically sound," it says, warning against "any moves to relax the existing centralized funding arrangements for science and technology which will be essential to achieving greater concentration and selectivity in Polish research".

Home of the Polish Academy: abolition calls are 'unrealistic'.

But it argues for a clearer separation between responsibility for policy-making and for carrying out research. In this context, it suggests that the KBN should be relieved of its functions as a financing body — these would be passed to research councils and executive agencies — and that its role should evolve into "that of a true Ministry of Research and Technology", responsible for strategic policy decisions.

The panel acknowledges that the academy, based on the Soviet model, is widely seen as "part of the Communist legacy". But it adds that many powerful supporters argue "with some justification that its scientific track record is far superior to that of the universities in a number of areas".

Demands that it should be abolished, says that panel, are therefore "politically unreal-

German research centres take on a historical name

Bonn. **The umbrella group for Germany's 16 federally funded national research centres, which have recently been under pressure to increase their effectiveness, last week announced that it is to adopt a new name. It will also have a new central structure to enable it to play a stronger role in deciding the general strategy of the individual centres.**

In line with the German tradition of naming research societies after famous scientists, such as Max Planck and Joseph von Fraunhofer, the body now known as the Arbeitsgemeinschaft der Grossforschungseinrichtungen (AGF, or association of national research centres) will in future be called after one of Germany's best-known scientists, Hermann von Helmholtz.

From November, the AGF will be known as the Hermann von Helmholtz-Gemeinschaft Deutscher Forschungszentren (HGF), the Helmholtz association of German research centres. The association's chairman, Joachim Treusch, hopes that the image of the nineteenth-century physiologist, physicist and mathematician will be more appealing than the association's present title.

"Our motivation is to signal to the outside world that the national research centres do high quality research and have good collaboration with the whole of the research community," says Treusch.

A better image is certainly needed. The national research centres, whose activities range from research in nuclear safety to plasma physics, have been getting a bad press over the past few years, partly because of their alleged inflexibility — a consequence of the job security enjoyed by most of their scientists.

Criticism flourished in particular during the economic recession that followed reunification, as the centres are expensive to run. Their responsibility to carry out 'big science' or large interdisciplinary programmes means that they often have several thousand scientists.

The centres have recently been under political pressure to improve procedures for assessing the quality of their research, and their budget has not been increased for five years. At the same time, there has also been pressure from industry to make their research more directly relevant to industrial needs (see *Nature* 372, 4; 1994).

In response, research centres have cut staff numbers and those centres conducting a high level of applied research agreed last year to include more industrialists on their scientific and supervisory boards. Behind the scenes, a more sophisticated defence was being planned. The new HGF will be more conscious of the need to let the public know exactly what it stands for: that is, says Treusch, long-term research programmes that are in Germany's general financial or social interests, and which require substantial resources and the willingness to take risks.

In addition, a new senate will be established to steer a coherent general research policy. Its members, who will be announced in November, will include eight *ex-officio* members representing research organizations, the ministries of research and finance, and the BLK, a body of politicians representing research interests of the federal and state governments.

A further 17 members will be elected from the scientific community, industry and elsewhere. The research centres themselves will not be represented. The head of the Helmholtz association will prepare and lead the senate meetings but will have no voting rights.

The senate will provide general advice on research strategy, oversee the mechanisms for ensuring the quality of research in the centres and promote cooperation both with other centres and with industry. Alison Abbott

istic". But it argues that the academy, which is still responsible for the operation of a large number of research institutes, "should play a more limited and traditional role similar to that of the Royal Society or other major western academies of science".

The panel members say they decided to endorse requests "expressed by the majority of the scientific community" for a significant increase in government spending on research. They acknowledge the economic difficulties caused by the shift to a market economy. But they warn that, if the budgetary stringency resulting from the current transitional phase is prolonged, "Polish R&D may well lose its strongest assets".

Finally, the OECD panel is sharply critical of what it describes as the excessive "egalitarianism" that has come to dominate many universities since the fall of communism, arguing that it can lead to a fragmentation of programmes and a dispersal of resources that would be "particularly unfortunate" at a time of growing budgetary restrictions.

It argues, instead, for the concentration of a "substantial proportion" of both human and financial resources in centres of research excellence.

At a press conference held after the Warsaw meeting, Luczak, who took over as chairman of KBN at the beginning of this year, said that two of the OECD panel's most controversial sets of proposals were those on the future of the academy and on creating a centralized science funding agency comparable, for example, to the Centre Nationale de la Recherche Scientifique in France.

Equally controversial, he said, was the proposal to merge higher education institutions in various cities throughout Poland into "comprehensive universities". The panel suggested, for example, that the decision to integrate a medical academy into the Jagellonian University in Krakow could be copied in other cities.

Czeslaw Strumillo, vice-chairman of the KBN, said that implementing the proposals accepted by the government "would take time". Nevertheless, he described the report as a "rich source of information" that would be of considerable value to the government in formulating its future plans. □

Strong yen prompts Japanese search for overseas talent

Tokyo. Under pressure from the rising value of the yen and Japan's prolonged recession, many Japanese companies are reorganizing their research and development (R&D) efforts both domestically and overseas.

This restructuring appears to be aimed not only at the conventional goal of bringing new products more quickly to market but also at finding ways of tapping into the creative talents of Western researchers to make up for their apparent absence in Japan in areas such as software design.

A survey last month by the *Nikkei Shimbun*, Japan's leading financial newspaper, of 35 major companies — including electronics, steel, automobile and pharmaceutical manufacturers — revealed that nearly two-thirds have reorganized their R&D divisions over the past year or will soon do so.

In addition, more than a third of those covered by the survey reported that they intend to set up new R&D facilities overseas soon or to strengthen existing ones.

For example, at the end of June, Mitsubishi Electric reorganized its R&D so that near-market research formerly carried out by various corporate research laboratories will now be done by the business section most closely related to the research.

Specifically, three laboratories, the Computer and Information Systems Laboratory, the Communications Systems Laboratory and the Image Systems Laboratory will be split and merged into two development centres, for information and communication systems and visual information systems, under the corresponding business units.

Eight other laboratories, including the company's central research laboratory near Osaka, will be merged into two centres, the Advanced Technology R&D Center and the Information Technology R&D Center.

Similarly, Matsushita Electric last year merged four research laboratories, including its central research laboratory, into a corporate headquarters for research while another five have been combined into a separate headquarters for product development. This followed a reorganization by the rival company Sony in the previous year tying near-market research more directly to the 24 business groups that make up the company (*Nature*, **361**, 193; 1993).

In all three cases, the goal of the restructuring has been to strengthen and speed up the introduction of new products to the market in order to help companies pull out of the recession. This contrasts with the so-called 'bubble economy' of the late 1980s, when Japanese companies poured money into new institutes carrying out basic research far from the market.

Such research is now being squeezed. None of the 35 companies surveyed said they expect to increase their support for basic research, although several also said that they do not plan any major reduction in such funding because of the long-term importance of such research.

Partly because of the rapidly rising value of the yen, several companies are planning to set up new research institutes in the United States and Europe. The average salary of a Japanese company researcher is equivalent to the most highly-paid researchers in the West, and Japanese companies are hoping to recruit talented Western researchers to the new laboratories.

But, unlike the institutes set up by Japanese companies in Europe and the United States in the late 1980s — many of which focus on quite basic research — the new facilities will be closer to market. One particular focus will be the development of new multimedia.

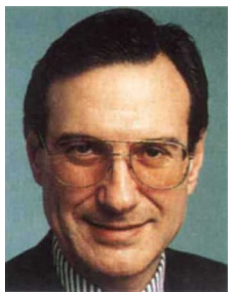
In August, Mitsubishi Electric will set up two R&D units in Europe. One in London will conduct research on digital broadcast technology, and will interact with another in France, focusing on telecommunications.

At the same time, two existing research groups in the United States — one working on high-definition television in New Jersey and another in California developing multimedia — will be brought under the wing of a single unit in Massachusetts, and their personnel will be expanded.

Japan's recent economic success has been built on combining high- quality production technology with mass production techniques. But many of the companies included in the survey said they think that future economic success will rest in the rapid development of software and new ideas — areas in which industrial research in Japan tends to be weak. So an additional incentive for establishing research facilities in the West is to gain access to what are widely seen as the more creative skills of Western researchers.

David Swinbanks

D'Escatha to head French atomic agency



Paris. **The French government last week nominated Yannick d'Escatha (right), currently deputy-director of the Atomic Energy Commission (CEA), to succeed Philippe Rouvillois as head of the agency.**

D'Escatha, who is 47 years old and a graduate of the Ecole Polytechnique, outside Paris, joined CEA eight years ago, with responsibility for activities relating to technology transfer.

After being appointed deputy-director in 1992, he supervised a comprehensive reorganization of the agency to focus its activities on long-term research in areas such as nuclear technology, reprocessing and safety (see *Nature* 374, 104; 1995). □