Forecasters seek better data on work patterns of scientists

London. An announcement last week that employment prospects for graduates in Britain are worse than they have been for a decade has highlighted the importance, not confined to Britain, of matching the supply of scientists to the demands of research and industry. But attempts by governments in the 1960s and 1970s to use central planning to achieve this goal went badly wrong, often with disastrous results. So what can be done to minimize the chances of a serious mismatch between a country's scientific needs and its labour force resources?

The answer, according to forecasters attending a meeting in London last week organized by the Science Policy Support Group (SPSG), is to shift the focus of the exercise. Recognizing that most forecasting relies on little more than the dubious practice of extrapolating existing trends, participants agreed that emphasis should be placed not on prediction but on a better understanding of the present.

Attempts to do this, however, are plagued with problems. One is the paucity of relevant data (combined with the fact that the available data are seldom sufficiently detailed to be useful to policy makers). A second is that data collected in one country are not necessarily comparable to those collected in another, making international comparisons difficult.

The Commission of the European Communities (EC) confronts both problems in designing programmes intended to boost research and technology. "Statistics and indicators on human resources in science and technology are very incomplete, and of variable quality and comparability", says Ian Perry, who manages statistics in the EC's

director general for science, research and development. "The quality, coverage and comparability of data need to be radically improved."

Britain has already abandoned the idea of central planning to produce a perfect match between supply and demand, but it is clear that the market alone cannot deliver the best solution. What is needed is better information about such characteristics as the precise number of scientists and engineering in the workforce and how they are used.

The Office of Science and Technology is therefore planning to develop a monitoring system that would provide a central, rolling database of scientists in employment. One of the models being studied is that used by the US National Science Foundation in its biennial science indicators series.

Aware of the advantages of being able to make international comparisons — and at the same time of some of the limitations of aggregated statistics — the Organization for Economic Cooperation and Development (OECD) in Brussels has encouraged its member countries to carry out more detailed analyses of their scientific workforces.

However, even OECD statistics have their limitations. For example, the organization does not yet provide statistics on the number of women engaged in science because officials believe that the data are not good enough. Another area is the international flow of scientists. Although most countries keep aggregate data on foreign scientists working within their borders, few know the number leaving to work elsewhere.

David Dickson

Japan reacts to special issue

Tokyo. Recommendations for reform of Japanese science, contained in a recent special issue of *Nature* on Japan (see 359, 573–582; 1992), have caused quite a stir in Tokyo extending to the highest levels of government.

Last month, Minoru Kawashima, a member of the Social Democratic Party of Japan, asked for the government's reaction during a meeting in the Diet of the lower house committee for science and technology, comprised of representatives of both the ruling and opposition parties. The questioning follows considerable coverage in the Japanese media.

The *Nikkei Sangyo Shimbun*, a leading daily newspaper for industrialists, ran a series of articles and translated the main article

from *Nature* ("Reforming Japan's science for the next century") into Japanese. Last month, *Kagaku Asahi*, a popular science monthly, published a roundtable discussion by three government officials and a university professor on both *Nature*'s special issue of 15 October and one that appeared the following week in *Science*.

Tomonori Kudoh, director of the university education division of the Ministry of Education, Science and Culture, replied to Kawashima's question by saying that "we think from one point of view *Nature* was right on the mark on several matters, and so do many university professors, but [the article] was rather one-sided. However, we receive those recommendations humbly."

David Swinbanks

South Africa to form nonracial science academy

Cape Town. Three South African scientific societies organized along racial lines have agreed to form one academy embracing the natural sciences, humanities and engineering. The new nonracial body, to be called the Academy of Science of South Africa, has the support of the three existing academies: the predominantly English-speaking Royal Society of South Africa, the Afrikaans-speaking Suid-Afrikaanse Akademie vir Wetenskap en Kuns, and the (black) Science and Engineering Academy of South Africa.

The new academy is neither an amalgamation of nor a replacement for the existing science academies, according to Reinhard Arndt, chairman of the academy's temporary nominations committee and president of the Foundation for Research Development, a government granting agency. Members will be chosen from those who have made outstanding research contributions or those "demonstratively capable scientists who are in a position to promote the academy's objectives", says Wieland Gevers, a former president of the Royal Society of South Africa. The election process is nothing if not complicated.

Each of the three existing academies will provide a dozen people, not necessarily members of the academy concerned, to serve on a facilitating committee to elect the first 60 members of the new body. They are not themselves eligible for election. These 60 members will then elect 40 more, with members of the facilitating committee now eligible. These 100 founding members will review the constitution drawn up by the facilitating committee and elect officers and additional members as they see fit.

Members will be asked to vote for or against each candidate, or to register a neutral vote. The candidates with the largest number of affirmative votes will be elected, and anyone with more than 25 per cent negative votes will be excluded, allowing an existing academy to defeat someone if its members vote as a bloc.

Prospects for funding the new academy are uncertain. The government has awarded it a very modest initial grant of R100,000 (US\$32,000) but has made it clear that the new body must look to the private sector or its own activities, such as publishing textbooks and other scholarly materials, for funding. Of the existing academies, only the Afrikaans one receives a state grant. Another unresolved matter is the location of the academy, a potentially contentious issue in a country with strong regional tendencies.

Michael Cherry