

# The hand that feeds

The efficiency of research agencies and their responsiveness to grant applicants vary widely around the world. It is time for the laggards to reform.

**T**he integrity of the grant-selection process should be the central objective of every research agency — and scientists who apply for grants fully understand that the process must be thorough and exhaustive.

Nonetheless, as we report in this issue (see page 308), grant applicants confront an array of service quality ranging from first-rate to abysmal. Like other consumers of government services, they are entitled to expect a satisfactory level of service from the agencies that they deal with — including politeness from staff, timely responses to enquiries, and ready access to all non-confidential information pertaining to the grant review process.

Instead, some researchers report interminable paperwork, unexplained delays, arbitrary rules and regulations, and ultimate bafflement regarding the actual nature of the review process. Some of this is probably sour grapes from failed grant applicants. And grumpy researchers should bear in mind that the agency's overriding obligation is to the taxpayer whose money it dispenses. Nonetheless, many researchers' complaints are justified, and reflect a level of public-sector incompetence that must be urgently addressed by the agencies in question.

Most of these agencies argue, with varying degrees of persuasiveness, that they are working to improve things. But pinning down their progress can be difficult. Some agencies are tracking their performances against indicators such as the amount of time taken to acknowledge correspondence or to reach decisions. But these criteria — and agencies' performances against them — are often hard for grantees or other taxpayers to track down. And if no one knows the benchmarks, it is hard for anyone to be held accountable.

Some of funders' most useful innovations have been borrowed from the private sector, such as the use of surveys and focus groups

to get feedback from grantees. But the analogy with private industry cannot be pushed too far. Research agencies are public bodies with public responsibilities. On the other hand, they face no real competition: researchers can't choose between funders in the same way that consumers can between suppliers.

Pressure on the public sector to improve its performance can move research agencies in the right direction. In Japan, for example, the government of Prime Minister Junichiro Koizumi has pushed for greater transparency and efficiency from its research agencies. In the United States, the Bush administration has asked federal agencies to streamline their submission systems ([www.grants.gov](http://www.grants.gov)), a move that could help the best practices of the strongest research agencies, the National Science Foundation and the National Institutes of Health, to rub off on the rest of government.

But other political pressures can cause bureaucratic demands to stack up. Concerns over the treatment of minorities and women, for example, or over financial conflicts of interest, often lead to additional requirements on grant application forms — which are always easier to add than to remove. Agencies need to look at their forms over time, to see if they still make sense. Researchers, for their part, should bear in mind that the forms may reflect legal requirements over which the agency has no control, as well as priorities, such as fair treatment of applicants, that the researchers probably share.

It is particularly important that agency staff have time to get out and meet the communities they serve: direct contact with these staff is particularly valuable for young scientists who are new to the application process. And discussions with researchers suggest that their level of satisfaction with agencies can be improved through relatively simple steps, such as responding quickly to complaints and maintaining a telephone helpdesk that is manned by real people. ■

## Global reach

Nations need a more effective way to coordinate their responses to environmental challenges.

**T**he United Nations Environmental Programme (UNEP) will be looking for a new director-general at the end of this year, and the UN World Summit this week may consider steps to widen the body's influence.

UNEP's departing director, former German environment minister Klaus Töpfer, has worked hard during his eight years in office to strengthen the body's ties with industry, and to get its work taken seriously beyond the narrow circle of environmental groups that have supported its efforts in the past.

But a great deal more needs to be done if this relatively obscure office, with about 450 professional staff and an annual budget of US\$60 million, is to make any real impact on epic global environmental problems such as global warming, clean air, clean water and biodiversity conservation.

UNEP was set up in 1972 with a mission "to provide leadership and encourage partnership in caring for the environment by inspiring, informing, and enabling nations and peoples to improve their quality of life without compromising that of future generations".

The programme has scored some notable successes on Töpfer's watch, helping to coordinate international discussions on water-supply issues, for example, and helping poor countries develop laws and regulations on complex issues such as the transportation of biological specimens and transgenic plants.

But UNEP is not currently constituted to provide genuine leader-

ship on critical environmental issues, even when these cry out for an international response. Unlike fully fledged UN agencies such as the Food and Agriculture Organization or the World Health Organization, it is merely a 'programme', funded on a voluntary basis by the United Nations' member states.

Perhaps the outfit whose clout contrasts most vividly with UNEP's is the World Trade Organization, which is independent of the United Nations and arbitrates forcefully and effectively in disputes between its member states. UNEP, on the other hand, has neither ways to settle disputes nor mechanisms to enforce compliance with international environmental agreements such as the Convention on Biological Diversity.

UNEP's remit is more modest than that. Its job is to set and monitor standards for environmental protection and sustainable development around the world, in collaboration with local governments, scientists, non-governmental organizations and other interested parties. This responsibility stretches from biodiversity to climate change, from managing clean water to desertification, and from bio-safety to problems posed by invasive species.

Under Töpfer, UNEP has improved its use of scientific information, and gained better access to the corridors of corporate power. On the downside, Töpfer has been drawn into distracting public disputes with other international bodies, over issues such as the administration of the Global Environment Facility, which finances environmental projects (see *Nature* 394, 4; 1998).

But UNEP's real problem is that it lacks the power to enforce the growing number of binding environmental agreements between nations. Beefing up the programme would probably involve a mandatory funding scheme based on the size of members'

economies. Plans for this have been around for years, but they face significant obstacles, starting with the opposition of the United States, which currently contributes less than either the United Kingdom or Germany to UNEP's budget.

Such funding concerns hide a broader fear, by no means confined to the United States, that a more powerful UNEP would constrain the freedom that national governments currently enjoy to pollute pretty much as they please. This may be short-sighted, however. In the long run, national governments — and global capitalism, for that matter — might benefit from a strong international environmental body, a World Environmental Organization, if you will, with a remit to safeguard the future of the planet.

Töpfer has helped UNEP to build bridges with the worlds of business and finance, and sought to convince business leaders that sustainable development and a healthy environment are in their interest, too.

The UN Summit could strengthen UNEP in the short term by merging it with the smaller, separate UN Division for Sustainable Development, currently a branch of the UN Department of Economic and Social Affairs. Secretary-General Kofi Annan then needs to appoint a heavyweight successor to Töpfer who can provide UNEP with energetic and determined leadership. That person should continue the policy of partnership with industry, while carefully guarding the organization's independence and further nurturing its credibility, in preparation for the day when national governments are ready to upgrade its status. ■

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## All things equal

Lack of affordable child care is a major impediment to women's careers, in science as elsewhere.

**T**he problem of under-representation of women in science, particularly at the most senior levels, is not going to go away. Public discussion of the issue often focuses on the extent to which girls are encouraged to pursue scientific interests at school, or to which they are discriminated against at work. But a more readily addressable impediment obstructs the career paths of many female researchers in early- and mid-career: the absence of suitable child-care arrangements.

The issue of child care tends to arise at a crucial juncture in women scientists' careers, and there is a growing consensus that it can play a significant role in thwarting scientific ambitions. All over the world, even as the number of women who pursue graduate education continues to grow, women remain under-represented in senior scientific positions. Among the major scientific nations, the situation is perhaps most acute in Japan and in Germany, where women make up 30% of those starting graduate school, but only 6% of full professors.

Advocacy groups such as the Association for Women in Science frequently emphasize the need to encourage girls to do science at school, and to mentor women scientists early in their careers. They should place equal emphasis on the need for affordable day care. Without it, women scientists can be forced to choose between putting off having children, or having their careers derailed by motherhood.

Most major universities and laboratories offer some child-care options, but uneven access and affordability prevent anything resembling a working, national system in all but a few countries. These programmes vary widely in quality and even the best ones have significant shortcomings, as we report in this issue (see page 446). Scandinavian nations and France offer some of the most comprehensive arrangements, but these are stretched thinly, with long waiting lists the norm. Most US universities offer child care, but the cost can be prohibitive to junior researchers.

Some employers have sought to address the affordability issue: the European Molecular Biology Laboratory in Heidelberg, Germany, for example, charges a fee of 10% of parents' combined income. Individual senior researchers have also chipped in to tackle the problem: Nobel laureate Christiane Nusslein-Volhard, head of the Max Planck Institute for Developmental Biology in Tübingen, set up a foundation last year to give five women scientists at the laboratory €400 (US\$490) a month for babysitting and domestic help, when she noticed that talented female research assistants were dropping out of science once they had children.

The only systems that really work, though, involve government subsidies or tax incentives that enable the considerable cost of child care to be spread between the state, the employer and the employed. If women's representation in science is truly their objective, governments and research institutions must find a way to share the child-care load. ■

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