panel members would be drawn from as many countries as possible.

Some of the least developed countries question the need for scientific advice at an international level, given the biodiversity convention's emphasis on conservation in individual countries. They fear that new scientific panels will be dominated by scientists from developed countries, introducing a biased perspective to the advice they give.

Similarly, panels set up with environment groups will be seen as partial to the environmentalist view. The role of IUCN may be particularly controversial, as many of its members appear to see conservation as more important than development.

"Conservation is a simple concept made difficult by high-paid consultants," says Rabi Bista, special secretary in the ministry of forests and soil conservation in Nepal. "In my country, we know which areas need to be conserved. We have no difficulty at the professional level. Local people often know more than people like me in the cities. We don't need more committees [of scientists], we need local action."

Tewolde Berhan Egziabher, general manager of Ethiopia's environmental protection agency, believes a committee of outside scientists setting generic research priorities on issues that affect individual countries amounts to interference in sovereign matters. Individual countries, he says, should be left to commission their own research.

"Take research on the impact on biodiversity of deforestation," says Egziabher. "Whatever it finds, it will have implications for forestry policy. Science itself may be neutral. But there is no such thing as politics-free science at this level."

But Töpfer says he is confident that governments will take to his plans for UNEP and that its governing council of world environment ministers will endorse them when it meets at the end of this month.

He says he has the backing of the UN secretary-general Kofi Annan who, he says, appointed him to bring in new thinking. "Whether I want it or not, I need to deliver ideas. If they think I am wrong, they should show me the red card." **Ehsan Masood**

Performance monitoring is 'last straw' for overworked NSF staff

[WASHINGTON] **Complaints of overwork among scientific staff at the US National Science Foundation (NSF) may be reaching breaking point. The problem is exacerbated by new requirements for officials to monitor all NSF grants and projects.**

A meeting of the physics and astronomy board of the National Research Council two weeks ago heard Bob Eisenstein, head of the NSF's mathematical and physical sciences directorate, predict a "trainwreck" at the science agency as officials struggle to manage projects and award investigator grants. "We don't have enough staff to do what we're trying to do," Eisenstein said.

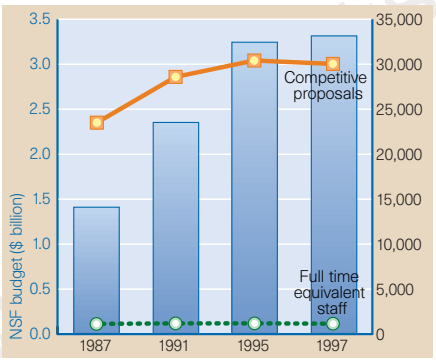
John Lightbody, head of the physics division in Eisenstein's directorate, added in discussion at the meeting that the Government Performance and Results Act (GPRA), approved by Congress in 1993, "will be how the trainwreck happens".

The act requires agencies such as the NSF to monitor the performance of its grantees more closely than ever before. It is imposing a large extra workload this year as officials implement detailed performance plans required by the legislation.

"People here are very worried about the workload implications of GPRA," Eisenstein said later. "It has the potential to consume enormous amounts of effort and energy." He added, however, that agency staff were still managing to process grant applications in "about the same time" as in previous years.

Eisenstein's comments reflect mounting apprehension at the NSF and other science funding agencies about the likely short-term consequences of GPRA at agencies where staff numbers have already been limited by the reluctance of either Congress or the White House to let them hire new staff.

In the case of the NSF, which funds most non-biomedical university research in the United States from its headquarters in Arlington, Virginia, the agency has been allowed to grow — but not to hire.



Left behind: NSF staff numbers have not grown in line with its budget and competitive proposals

Since 1987, the agency's annual budget has increased from $1.4 billion to $3.3 billion. The number of competitive proposals it receives has grown from 23,000 to more than 30,000, and the NSF is involved in ten times as many cooperative agreements as before. But it has the same number of full-time staff, 1,150, as ten years ago.

Indeed, the NSF often boasts that it spends just $1 on administration for every $20 it distributes in grants, less than most charities and foundations, and less than almost any other government agency.

Officials say that the staff's problems are compounded both by the increasing complexity of the proposals the NSF receives, and by the proliferation of special projects and 'cross-cutting' programmes. These address everything from the role of women in science to the special needs of regions that lack a strong science base.

"It's a real problem," concedes Richard Zare, professor of chemistry at Stanford University in California and outgoing chairman of the National Science Board, which oversees the NSF. "The ladders are close to breaking."

But Joe Bordogna, the acting deputy director of the NSF who is responsible for its GPRA effort, believes the agency can handle the demands being placed on it. He says that the use of computer technology is helping.

Bordogna also points out that the agency has taken on more scientific staff on secondment from outside — 130 last year, compared with 70 in 1987 — and more contractors. In the early 1990s, the number of seconded staff grew sharply, but it has been held steady since 1994.

This year, the NSF is requesting an increase in administration funding of around 7 per cent, the first time in years that it has sought an increase above inflation for administrative costs.

The impact of administrative strains at the NSF on outside grant recipients is hard to discern. Bordogna says the agency is "probably getting more complaints" from scientists, but that this reflects a general state of flux in the research university system.

One ecologist who declines to be named complains that grant decisions normally taken in March have not yet been made this year, making it impossible for him to plan.

But others say there has been no change. "The NSF has always been horribly understaffed for the job it has to do," says Jim Brown, professor of biology at the University of New Mexico. "I don't know if the situation has become any worse."

Judy Sunley, an aide of Neal Lane, the NSF director, says the proportion of grant applications that the agency clears within six months "has been hovering around 50 per cent" but was just over 60 per cent last year. The NSF wants it to reach 70 per cent in 1999, and 95 per cent at an unspecified future date, Sunley says.

Staff on the congressional committees that oversee the NSF say understaffing has been a persistent and growing problem, but never the agency's top priority. But one former Republican staff member concedes that this might be because NSF knows that "it wouldn't be politically viable" to argue for more staff. **Colin Macilwain**

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