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REUTERS/P. ROSSIGNOL



Despite protests against austerity measures in Greece, some scientists see an opportunity for change.

POLICY

Greek crisis spurs research reforms

Economic meltdown adds fresh vigour to science shake-up.

BY ALISON ABBOTT

“The threat is very clear,” says Greek native Vassilis Pachnis, a developmental neuroscientist at the UK National Institute for Medical Research (NIMR) in London. “There is a danger that this financial crisis could damage the status of centres of research excellence in Greece.”

Last week, the Greek government agreed to implement further austerity measures in order to get another international bail-out for its crippled economy. Scientists were already facing tough times when Greece made its first bail-out request in April 2010 (see *Nature* 465, 22; 2010). Their take-home pay, which

was cut by 10% last March, will now shrink by at least another 10% under the new austerity programme. Direct financing of universities and research institutes was cut by about 20% last year, and is set to fall further, although the Greek ministry of education was unable to provide *Nature* with precise figures.

Any damage to science is unlikely to be permanent, Pachnis emphasizes. Like some other Greek scientists, he is hopeful that the country's economic woes may have a positive side. Reforms to the inflexible research and university systems, which do not systematically evaluate research quality or offer competitive grants, are now seen as a necessity in the country's fight for survival. “There is going to be terrible upheaval

at universities and possibly the research centres too,” says neurobiologist Rebecca Matsas at the Hellenic Pasteur Institute, Athens. “But in this economic situation there is no way out, and reforms are urgently needed.”

Although the quality of Greece's science is generally seen as poor, the country does boast pockets of excellence. Several internationally competitive research institutes have managed to flourish despite low government investment (see ‘Spending gap’). Greek scientists have also been very successful in winning funding from the European Commission's Seventh Framework Programme (FP7) of research, being awarded more euros per researcher than almost any other European Union (EU) country. The planned reforms, spurred by the financial crisis, could help to capitalize on these successes.

The National Council for Research and Technology, a scientific advisory board to the government, is currently designing Greece's first ten-year strategic plan for research. The council was reformed in September 2010 so that most of its members are academics working outside Greece. Using EU structural funds for research, the first major calls for competitive research projects since 2005 are being issued by the government's General Secretariat for Research and Technology. A total of €1.5 million (US\$2.2 million) of these funds must be spent before the end of 2013. “We will be recommending that they are distributed only on merit, through an agency modelled on the US National Science Foundation or the European Research Council,” says council leader Stamatios Krimigis, a space scientist at the Johns Hopkins University Applied Physics Laboratory in Laurel, Maryland.

The council's subcommittees, also comprising a majority of scientists working outside Greece, will carry out site visits to evaluate the scientific output of research institutes. These will guide policy on restructuring the research system, and are inevitably causing widespread anxiety. “By next year, there will be fewer institutes,” says paediatrician George Chrousos at the University of Athens Medical School, who is also a council member. That will probably happen through mergers, he adds: “The aim is not to fire people but to make them more effective, and the institutes more efficient.”

Meanwhile, universities are also set for a shake-up thanks to a new higher-education law, expected to be approved by the end of ▶

► this month. It will scrap a system that has favoured local recruitment, and make it easier for roughly 12,000 Greek scientists working abroad to return. The change may have come just in time: 25% of Greek universities' faculty members are due to retire in the next three years.

Under the law, each university will establish committees (including scientists from abroad) to oversee academic recruitment, which is currently decided by a faculty vote. The law will also modernize university governance, so that rectors will no longer be elected by university staff and students. Instead, a new board of directors will pick their university's rector after an international competition, and will have the power to fire the rector for poor performance.

The next few years will undoubtedly be extremely tough. Although the government says that it is determined to develop Greece's research base, it has not protected research funding in its austerity packages. And it is having trouble meeting its commitments to match research money that scientists have won from FP7. Greece is also negotiating deferrals of its contributions to international organizations such as the European particle-physics facility CERN, near Geneva in Switzerland, and the European Space Agency.

But the most competitive research labs should be sustained by more than €400 million expected to come from EU structural funds by the end of this year. And despite the turmoil, Pachnis is planning to leave the safe haven of his current post as head of the NIMR's neuroscience division to become director of the Institute of Molecular Biology and Biotechnology in Heraklion, Crete. The move offers scientific opportunities that are too good to pass up, he says, and he is confident that Greek science as a whole will survive. "If I can help keep the infrastructure afloat at one centre of excellence through this hard time," he says, "I'll be happy." ■



EU research commissioner Maire Geoghegan-Quinn (second from left) wants more money for innovation.

POLICY

Europe lines up hefty science-funding hike

Farm subsidies trimmed to enable a 45% rise for research.

BY COLIN MACILWAIN

Like many governing bodies, the European Union (EU) has entered an era of austerity, with one striking exception: scientific research. Under a proposal released on 29 June by the European Commission, the executive body of the EU, spending on research and innovation would rise by about 45%, from €55 billion (US\$80 billion) over the current 2007–13 period to €80 billion in 2014–20. A reduction in farm subsidies would help to pay for science, and spending in other major areas of the €1-trillion budget would remain flat (see 'Innovative thinking').

The proposal is a crucial milestone in a long and convoluted process that will eventually determine the size and format of the successor to the Seventh Framework Programme (FP7) — the EU's flagship research programme — to be called Horizon 2020. The proposal still needs to be agreed by the European Parliament and by member states. But it marks a success for the EU's research commissioner, Maire Geoghegan-Quinn, says Peter Tindemans, head of the science-policy working group at Euroscience, a science-advocacy group headquartered in Strasbourg, France. "She's managed to convince the other commissioners that where there's to be an increase at all, it should be in research."

Other research advocates say that the proposal — although falling short of the major realignment of funding priorities they had been hoping for — was as good as could be expected in the circumstances. "Given the times we're in, we couldn't realistically have

hoped for much more," says Dieter Imboden, president of Eurohorcs, the body representing Europe's national research agencies.

Geoghegan-Quinn told *Nature* that the proposal was "a big vote of confidence in science" but also called on researchers to push to get the proposal implemented — especially in their home countries. "The farmers will be out there lobbying, and scientists and researchers need to do the same," she says.

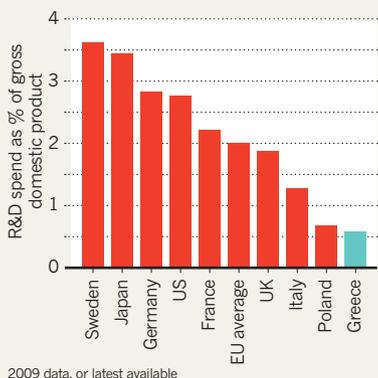
Commission officials say that the total EU budget for 2014–20 would be worth 5% more, in real terms, than that for 2007–13. The share for research and innovation would grow steadily, and eventually double, from 4.5% in 2007 to 9% by 2020.

The research proposal includes €4.5 billion that would be transferred from farm subsidies

SOURCE: EUROSTAT

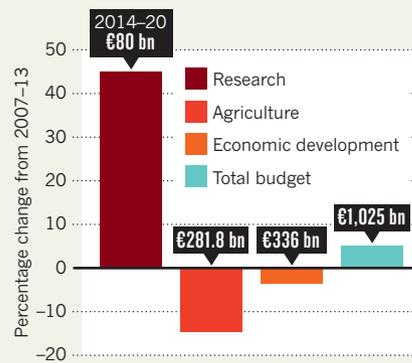
SPENDING GAP

Greece has one of the lowest science investment levels in Europe.



INNOVATIVE THINKING

European research funding looks set to grow in 2014–20 under the Horizon 2020 programme, but other budgets will shrink.



SOURCE: EUROPEAN COMMISSION