## European scientists ask governments to boost basic research



The economies of Germany and Greece may have little in common. But scientists in those two countries—and across Europe—believe that their national science systems are facing similar assaults from what they view as wrong-headed government policies.

In an open letter published Wednesday, prominent science policy advocates from Spain, Italy, Greece, Portugal, France, Germany, and the United Kingdom deplore "the systematic destruction of national R&D infrastructures." The nine authors highlight what they describe as "drastic" budget and hiring cuts at research institutions and universities, a funding bias toward well-established groups, and an increasing emphasis on applied research.

The situation is especially dire in the countries most shaken by the economic crisis, according to Amaya Moro-Martin, an astrophysicist at the Space Telescope Science Institute in Baltimore, Maryland, who summarized the letter in a *Nature* commentary. Since 2009, the "Spanish civil R&D budget has dropped by 40%, resulting in a reduction of 40% in grants and 30% in human resources programs," she writes in an e-mail to *Science*Insider. During that same time frame, Italy has cut its higher education budget by 20%, and the number of permanent positions open to recruitment is down

by 90%, says Francesco Sylos Labini, a physicist at the Enrico Fermi Center in Rome. Since last year, there has been virtually no money for basic research grants in Italy, he adds. In Greece, the budget of research centers and universities has been cut by at least 50%, and there's a freeze on new hiring, notes Varvara Trachana, a cell biologist at the University of Thessaly in Greece.

Many of the funding and hiring cuts in the southern countries have been done under European pressure to reduce their national deficits, the letter notes. Even in Germany, which has met the European target of spending 3% of its gross domestic product on research, the percentage of scientists working on fixed-term contracts rather than holding permanent positions has risen to as high as 80% at some institutions following the introduction of a new science employment act.

In response to the letter, European science officials say that austerity within individual countries has been partially offset by spending increases at the E.U. level. "This substantially increased support to ambitious projects, whose content is decided exclusively by researchers, must be seen as part of the solution and not part of the problem," writes the president of the European Research Council (ERC), Jean-Pierre Bourguignon, in an e-mail to *Science*Insider. Bourguignon cites the growth in the E.U. research budget from €55 billion for the 2007 to 2013 period to €80 billion for 2014 to 2020, with more than €13 billion going to ERC. At the same time, he acknowledges that "it is indeed true that some of the austerity measures taken in some countries have severely affected the research sector."

Nearly 5000 scientists have signed the letter, which also warns of a brain drain "from the South to the North and from Europe to beyond." One positive step that national governments could take to stop that flow, Moro-Martin says, would be to eliminate a country's investment in public R&D from a calculation of its national deficit. Another accounting change could allow a country that increases its national budget for R&D to proportionately decrease its contribution to European funding schemes. Structural funds could also be used to curb the brain drain, she adds.

The open letter is part of a broader movement that includes a 3-week cycling tour around France and a series of meetings at major Italian universities. *EuroScientist* has launched a blog to promote pan-European discussions. The protest is expected to culminate next week with a march in Paris, a protest in Madrid, and a press conference in Rome.

"We are now at the critical point," Sylos Labini says. "If there will not be a real effort from ... the government to change ... direction, the [Italian public science] system ... will not last for long," he predicts.

\*Clarification, 10 October, 4:41 p.m.: This story has been changed to make clear that the European directive on reducing national deficits did not specifically address public employment.