

# THIS WEEK

## EDITORIALS

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## Half way there

*Spain, Italy and Greece all have new governments and new research laws. Despite the pressures of economic austerity, investing in science now could bring disproportionate benefits.*

Three of the Mediterranean countries hit hardest by the debt crisis — Spain, Italy and Greece — have little in common beyond a shared coastline and an inappropriately low level of investment in research and development. But in the past few years, all three have shown a desire to reform their sclerotic research systems. And in the past month, each has acquired, one way or another, a new government.

The priority for these governments is to haul their countries back from the brink of disaster, and thereby help to prevent the collapse of the euro. Given the enormity and international significance of these endeavours, does it make any sense to lobby for science to be favoured, financially and politically, in the tough austerity packages the new governments will have to enact?

It does, for two reasons. First, any developed country without a reasonable science base faces a bleak future — a familiar mantra, but true. Scientists in all three countries have for years seen little national money available for research projects, and almost no new academic recruitment. The best scientists have just about survived on international grants, particularly from the European Commission. Greek and Spanish researchers have the most to complain about, as austerity measures have cut into their pay packets, along with those of other civil servants in their countries. It is not hard to imagine that further cuts could lead to a dangerous level of demoralization.

Second, all three countries are now somewhere along the process of enacting or implementing new laws governing how research is organized and evaluated, which will bring them into line with scientific norms elsewhere in Europe. There is every reason to devote political resources to ensuring that these reforms are carried through properly — and, given that it won't cost much, little reason not to.

These Mediterranean countries have tended to be opaque in their science funding and academic recruitment, and so cronyism has often been able to rule over meritocracy. The new laws should help to fix this, primarily by introducing peer review and evaluation. In Spain and Greece, the new laws would also introduce for the first time much-needed independent national agencies for the competitively allocated funding of basic research, along the lines of the European Research Council or the US National Science Foundation.

These laws have taken years of discussion — Greece's long-promised science law has not even been approved yet, although its university law was passed in August. In Italy, a law for research was approved at the end of 2009 and a law for universities one year later. Spain's science law was approved in June.

All these laws differ in scope and detail, and they are not perfect in every clause. In all three countries, for example, most academics will remain civil servants with jobs for life, disappointing those who had hoped that universities and publicly funded laboratories would gain more hiring flexibility. But whatever their shortcomings, if appropriately implemented, each of the laws will make science higher quality and better value for money.

All this matters even more because a handful of internationally competitive institutes, along with smaller pockets of excellence, have sprung up in each of these three countries, despite a lack of political support. The leaders of these institutes have chosen to operate through meritocracy; imagine how much will be achieved when this approach becomes mandatory for the entire scientific enterprise in these countries.

**“Pockets of excellence have sprung up in each country, despite a lack of support.”**

Improvements in science in southern Europe will not only benefit the individual countries in which they occur, but will make Europe as a whole more competitive. Yet without new money, the legal frameworks may not be able to work the wonders expected of them. A new research funding

agency won't be much help without a budget.

Now is not the time to expect huge increases in science investment, but small increases could make a disproportionate difference. Half way to reform, science in Spain, Italy and Greece needs to be supported. Like fiscal reform, it promises a long-term pay-off for those countries, and for the continent. ■

## False economy

*The Danish government's plan to axe technology assessment is ill-conceived.*

Liberal democracy and science combined so successfully in the twentieth century that the nations and societies in which they were strongest rose to economic and cultural dominance. Nothing suggests that the recipe might lose its appeal as the twenty-first century proceeds, with democracy and science gaining ground in parts of the Arab world and some developing countries. But advances in science also raise ethical and environmental concerns that need to be taken seriously.

Denmark, a small but technologically advanced country that in January will take over the rotating presidency of the European Union, has pioneered the use of participatory methods to assess the risks and societal impact of new technologies. But plans to disband the Danish Board of Technology (DBT), which has been a leader in studying public views and expectations of science and technology, suggest that Denmark's new government is not quite aware of the country's formidable tradition in democratizing science. If it proceeds with the plan — which, ironically, is intended to preserve funds for research — it risks destroying a critical piece of Europe's science-policy system.

The DBT was set up in 1986 to advise the Folketinget, the Danish parliament, but its work is not confined to Denmark. In 2009, for example, it carried out the most extensive study to date of how communication affects global public attitudes towards climate change, covering 4,000 citizens in 38 countries. Unlike simple opinion polls, the World Wide Views on Global Warming project gave participants extensive information on the science and economics of climate change (see [www.wwviews.org](http://www.wwviews.org)). As the meetings progressed, widespread scepticism and doubt gave way to a high degree of consensus that climate change is real and should be dealt with promptly.

The DBT is currently assessing a range of other topics, including the sustainability of the Danish transport system, the risks related to synthetic biology, and the security of delivering government services using new information and communication technologies. On the international level, it is set to produce a policy report, World Wide Views on Biodiversity, for next year's Rio+20 summit on biodiversity in India.

That project and most ongoing assessments will perish if the board is dismantled. The governing coalition of three centre-left parties formed after the parliamentary elections in September intends to redirect the board's annual funding of about 10 million kroner (US\$1.8 million) to the 2012 research and education budget, which it is determined to spare from savage cuts. In times of financial crisis, such a stance deserves applause — but the impact on Danish society and government of the loss of competence in technology assessment and public engagement in science would far outweigh the benefits

to students and researchers of the modest sum gleaned from closing the DBT.

Many other countries take inspiration from Denmark on how to study and shape public attitudes towards the science that could help society address issues such as ageing, climate, energy and biodiversity. The DBT is leading a €5.4-million (US\$7.2-million) European Union-funded project, called PACITA, to expand technology assessment based on public engagement (see [www.pacitaproject.eu](http://www.pacitaproject.eu)). Denmark's approach is also gaining a following in Asia, where demand for sustainable energy technology is growing rapidly. Policy-makers in China and South Korea, for example, are increasingly open to the participatory methods for technology assessment pioneered by Denmark.

Clearly, then, the DBT should be saved. A way forward might be for it to apply its analytical services more widely to international assessments, such as the biodiversity exercise it is currently engaged in. Domestically, it should serve all decision-makers, from municipal to national levels, rather than just parliament. Taking on more externally funded projects could help to compensate for unavoidable budget cuts.

Meanwhile, scientists and science academies in Denmark and abroad should voice their support for a democratic institution that has served science better than its small size and modest title might lead one to believe. Danish MPs and the government's young science minister, Morten Østergaard, should take note. ■

**“The Danish government risks destroying a critical piece of the science-policy system.”**

## A poor sequel

*Muted media response to the release of more climate e-mails shows science's strength.*

In an interview with *Nature* about 12 months ago, to mark the first anniversary of the release of hacked e-mails in an incident now widely referred to as Climategate, climate scientist Phil Jones said he feared that the anonymous hackers were sitting on more material, and that they would release it. He also said, having been through the experience already, that if there were to be a repeat then he was confident he would deal with it much better second time around. Last week he was proved correct, on both counts.

In marked contrast to the original 2009 release, Jones and his employer, the University of East Anglia in Norwich, UK, this time responded rapidly and with a keen sense of what the media were going to be interested in. This was never a story about the integrity of climate science, but rather about the behaviour of those scientists whose e-mails painted an incomplete but troubling self-portrait. The absence of the chief protagonist last time around only fuelled the flames.

Within 24 hours of the second batch of e-mails being handed to climate-sceptic websites, Jones was in central London answering questions at a press conference. And the university made widely available its explanations of some of the excerpted messages doing the rounds on the blogosphere. The reasons for this change in approach range from the practical — the original Climategate broke on a Friday, whereas the sequel arrived on a Tuesday — to the personal — Jones was shaken badly in 2009 and in no state to face the press. There is also a generous dollop of hindsight. For almost two years, those involved have had to listen to criticism of how they handled Climategate and how they should have done it differently. Last week they were able to show that they have learned from their mistakes.

Still, the swift response from Jones and his university cannot alone explain the relative indifference with which the new batch of e-mails — Climategate 2 — has been met by the wider world.

Much of the media frenzy over the e-mail release in 2009 was prompted by the high political profile of climate change at the time. Nations were preparing for the heavily hyped and ill-fated Copenhagen summit, and soon afterwards a blunder in an Intergovernmental Panel on Climate Change report about melting Himalayan glaciers added to the sense of climate science not being what it seemed. Climategate 2 came just ahead of the latest round of United Nations climate talks in Durban, South Africa, but that meeting is lower profile. It is harder to draw attention when fewer eyes are on the subject.

There is also the sense that many in the media felt cheated by the original Climategate. They were led by the nose, by those with a clear agenda, to a sizzling scandal that steadily defused as the true facts and context were made clear. Many will not make the same mistake — to write headlines first and ask questions later — again. Plus, it is hard for anyone except the most committed conspiracy theorist to see much of interest in the content of the released e-mails, even taken out of context.

None of the independent investigations that followed the 2009 release found any hints of scientific misconduct. Critics won't find any in the new batch either — the animated discussions that the highlighted e-mails do include, not shy of strong personal opinions and the occasionally harsh judgement concerning the quality of this or that piece of work, never really stray from sound normal science.

Climategate did no lasting damage to science. In fact, it can be argued that the incident fostered climatology and improved the way the field is perceived by the general public. The anonymous onslaught — illegal and grossly low, to be sure — has forced scientists to speak more openly about the gaps, difficulties and uncertainties that they are facing. On a more general note, it served to remind scientists, and hopefully legitimate critics as well, that respect, honesty and politeness are essential qualities in any intellectual endeavour.

If anything, Climategate 2 may damage the cause of the climate sceptics who eagerly promote it. Despite their obvious lack of anything approaching credible evidence, their hyperbole, accusations, claims and allegations remain the same. Beyond the echo chamber they inhabit, who is still listening? You cannot, as Abraham Lincoln said, fool all of the people all of the time. And it is getting harder to fool them some of the time too. ■

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