

most East German scientists were hopelessly out of date.

The two states reunited on 3 October 1990, and next Sunday's 20th anniversary of reunification provides an occasion to reflect on just how far the new country has come, despite its unpromising start, in re-establishing itself as a world leader in science. It may never again enjoy the domineering prominence of its golden days, but on many criteria it has become a top achiever — in some areas overtaking the other two European scientific giants, the United Kingdom and France, which have recently started to take their eye off the ball.

It achieved this through consistent policies. Successive governments of different political shades have treated science as a priority and have continued to bankroll science budget increases each year. They have supported rolling five-year budgets, which also increase annually, for research organizations such as the Max Planck Society and the Helmholtz Society, whose institutes and research centres carry

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out basic research, as well as for the DFG, the university granting agency. The governments have routinely increased support for strategic research programmes. Germany's 16 states have also increased their own research budgets. Spending on research and development has increased from 2.27% of gross domestic product (GDP) in 1998 to an estimated 2.63% in 2008. Even now, with the total budget for 2011 proposed by the government

shrinking by 3.8%, funding for the science ministry is slated to increase by more than 7%. According to Eurostat, the European Commission's database of European statistics, over the same period, research and development spending by France fell from 2.14% of GDP to a projected 2.02% and that by Britain rose slightly from 1.76% to 1.88%.

The money has been absorbed well. This owes much to the strength of Germany's institutions, with their culture of efficient administration (where red tape is kept pruned), capacity for planning and high standards for quality of work. The research organizations coordinate to lobby governments. They have each found ways — not without pain — of rooting out complacency, essentially by injecting competition, while attempting to open themselves up to two major, and until

recently neglected, pools of scientists: foreigners and women.

When the Max Planck Society opened new institutes in eastern Germany after reunification, for example, it took pains to recruit more women and foreigners to top positions. The society set up international graduate schools, together with universities at which all teaching is in English. The number of foreigners receiving PhDs in Germany is still well below Britain's 40%, but has risen from 6.7% in 1997 to 14.5% in 2008. The conservative universities took little initiative of their own, but were spurred into action in 2005 when the federal government launched its Excellence Initiative, a clever, multi-step competition whereby universities winning awards for both large research clusters and graduate schools could compete for the ultimate 'elite' status, clearly worth more to them than the prize money itself.

Germany also systematically looks outwards. It boasts the smartest organization within the European Union (EU) to exploit the European Commission's Framework programmes of research, keeping its scientists and institutions aware of funding possibilities and advising them on navigating the notorious complexities of application. Analysis of the Sixth Framework Programme (2002–06) showed Germany to be alone among the large EU countries — if the anomalous discount in membership fees enjoyed by the United Kingdom is taken into account — in winning back the grant money it paid into the programme.

The German focus on science and research is also reflected at higher political levels. German Members of the European Parliament head key committees responsible for science-related areas such as research, environment, energy and food safety and thus are well positioned to guide EU policy. German scientific institutions are reaching out beyond Europe, to the United States but also to Latin America and China. The Max Planck Society, for example, has in the past five years set up institutes in Shanghai, Buenos Aires and Jupiter, Florida.

All this remains very much a work in progress, and Germany still has a long way to go to achieve all of the goals it has set itself — women, for example, still hold only 12% of top academic positions, among the lowest in Europe. But the relentless trajectory is clear. Other European countries should look at its consistent, systematic approach to raising its research base and feel not afraid, but inspired to do likewise. ■

Defend the quangos

UK regulatory bodies are unpopular, but not all deserve the axe.

What does the Scientific Advisory Committee on the Medical Implications of Less-Lethal Weapons have that the Expert Advisory Group on HIV/AIDS does not? Why should the Veterinary Residues Committee die while the Veterinary Products Committee soldiers on? The new UK government is keen to cut down on expensive and wasteful quangos — quasi-autonomous non-governmental organizations — but its approach seems haphazard.

Quangos, which are publicly funded advisory and regulatory bodies, are a popular target for politicians and newspapers in Britain. All three main political parties in this year's general election pledged to reduce their number, and the Conservative–Liberal Democrat coalition government is now preparing to deliver on its promise. Documents leaked to media outlets last week detailed 177 such organizations that face the axe, with the future of dozens more described as "still under review". The government's reaction to the leak suggests that the list is genuine.

The end of some high-profile groups, such as the Health Protection Agency and the Human Fertilisation and Embryology Authority (HFEA), had already been floated. Other entries, including a review of the Environment Agency, were more surprising.

The very existence of some bodies was enough to raise eyebrows. It is not for *Nature* to judge the value of the Government Hospitality Advisory Committee on the Purchase of Wine, which could soon find itself squashed. But those, including politicians, who would delight in the demise of apparently obscure groups should beware. Most, after all, were set up for a reason.

For some, the motive was to rebuild public trust; the Food Standards Agency (FSA), for example, was set up after the bovine spongiform encephalopathy crisis of the late 1990s. Others, including the HFEA, were set up explicitly to keep politically awkward decisions at arm's length. The Spongiform Encephalopathy Advisory Committee's work to assess risk in the food chain was vital to policy at a critical time for public health. It is easy for those who are unaffected by a group's remit to poke fun, but most are useful to specific communities, be they scientists or wine drinkers.

Despite stories earlier this year that the FSA was to be abolished, the leaked list suggests that the government will keep it. That could reflect fierce lobbying from its supporters, and a similar effort is now under way to protect the HFEA. Scientists who wish to prevent the loss of other threatened bodies should take note. Without outside pressure, the government is unlikely to rethink its decisions or even explain them and publish a detailed account of the savings. Why would it, when some groups cost the public very little, with members offered barely more than travel expenses?

At a time when central funds are under serious threat, the traditional advocates of evidence-driven policy are unlikely to speak in defence of an unpopular cause. Researchers who value the advice and independence of quangos must say so, or see them disappear. ■