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Newsmaker of the Year

Nature is pleased to name Rajendra Pachauri, the Indian engineer and economist, and chair of the Intergovernmental Panel on Climate Change, as our inaugural Newsmaker of the Year.

Science is perhaps less reliant on the concept of 'personality' than any other major realm of human endeavour. The scientific facts will remain the same, whoever first discovered them, or described them, or imagined that they might be so.

At the same time, it is because of who scientists are and how they work together, who they like and who they cannot stand, their beliefs about the world, their stamina and their foibles, that research actually gets done. Science, like history, is forged by individuals — even though both are forged on the back of a past whose inhabitants may have faded into anonymity.

It is through people, too, that science shows its public face. When science becomes news, it does so through human agency. That is why at the end of each year, from now on, *Nature* will single out for recognition a person whose role in science has had a particular impact on the wider world stage — a 'Newsmaker of the Year'.

A newsmaker is not necessarily someone to celebrate. In previous years we might have chosen a figure of obloquy, such as Woo Suk Hwang, the disgraced stem-cell researcher. In future years, it is not beyond the bounds of possibility that a cloned human being, a misguided politician or even a bioterrorist could be selected; anyone might have a significant impact in the news and on science itself, and deserve some sort of singular analysis.

But the contribution of this year's winner to scientific affairs can be celebrated without reservation. Rajendra Pachauri's great strength is in building and organizing institutions in the fields he understands best — engineering and economics as they apply to issues of development. In that area he has enjoyed a success that reflects his calm, yet fiercely driven personality (see page 1150). Over two decades he has built TERI, the Delhi-based energy and resources institute that he runs, into an organization with offices around the world and several hundred staff. And in the past five years, he has chaired the great collaboration that is the Intergovernmental Panel on Climate Change (IPCC).

The concept of an annual newsmaker does not signify an infatuation with star power, however. Discoveries, rather than personalities, remain at the core of scientific research. That is why *Nature*'s sister journal *Nature Methods* is introducing a 'Method of the Year'. The first winner is next-generation ultra-rapid DNA sequencing.

Pachauri's year has already featured his receipt, on behalf of the IPCC, of a share in the Nobel Peace Prize. It concludes with the moderately successful completion of the UN Convention on Climate Change talks in Bali earlier this month (see, page 1136), when nations made some headway in determining the likely shape of an agreement to succeed the Kyoto Protocol, which expires in 2012.

Protecting the vulnerable from the threat of climate change is about changing what we all do, and that requires political action as well as changes in personal behaviour. Burying carbon underground and lighting our bedrooms with the power of the atomic nucleus or the tides are things that need to be arranged by governments, both directly — by making the economic costs of carbon emission fall on the processes that emit it — and indirectly, through basic research and spurs to technology development. The Bali meeting provided just a taste of the testing political discourse ahead. Behind that lies the hard reality of the personal costs of mitigating climate change, which will fall alike on those who bear them — whether willingly or unwillingly.

But collective action has a positive and uplifting side, too. The IPCC is a case in point. Its members have sacrificed time that they would rather have spent on new research to do something for the world at large. Their endless meetings and discussions, their intellectual clashes and warm mutual understandings, have produce an unparallelled catalogue of reliable knowledge — and authoritative assessments of remaining ignorance — on a scientific matter of utmost public concern. To produce something that the hundreds of authors can be proud of, and in which the nations of the world have all, to some extent, invested their trust, is no mean thing. The IPCC's collective efforts span decades. But the person sitting in the chair at its hour of greatest achievement so far is Rajendra Pachauri, and we salute him. ■

A policy of drift

British physics faces an unnecessary squeeze.

In an 11 December announcement of the UK research councils' budgets for the next three years, the UK government's innovation secretary, John Denham, called the settlement "good news" for British science. But the numbers were bad news for the Science and Technology Facilities Council (STFC) which, for historical reasons, funds research in particle physics and astronomy, as well as facilities. The council's plan for implementing the budget takes from the former to pay for high operating costs on the latter — with potentially painful consequences for physics departments in UK universities.

After the government published its comprehensive spending review in October, it became clear that the STFC would not receive the necessary funds to absorb these running costs. Instead, the council is facing a funding shortfall of about £80 million (US$160 million) over the next three years. It plans to deal with this by pulling out of the international Gemini telescope project, stopping preparatory work on the proposed International Linear Collider, and slashing

funds available for research grants by 25%. It will also cut support for space-based scientific instruments by one-third, and reduce support for solar physics and high-energy γ-ray astronomy.

Researchers in most disciplines, in most parts of the world, have to tighten their belts from time to time. But these reductions are more drastic and sudden than any arm of a competently managed research agency should have to bear.

The funding shortfall arises in part because UK subscriptions to CERN, the European Southern Observatory and the European Space Agency are increasing owing to the weakness of the pound against the euro, and the relative growth of British gross domestic product, on which the United Kingdom's contributions are based.

But the main cause of the gap is the rising operating costs of the Diamond synchrotron light source and a second target for the ISIS neutron source, both sited at the Rutherford Appleton Laboratory in Oxfordshire. The popular facilities, which are used by researchers in disciplines ranging from biomedical research to condensed-matter physics, are projected to cost around £60 million to operate over the period of the council's plan.

The problem has been looming for some time. But the Department of Innovation, Universities and Skills (DIUS), which oversees the research councils, was only created in June and has been unable to obtain additional funds to ease the STFC's plight. Keith Mason, the council's chief executive, has publicly attributed this to the fact that government officials are insufficiently convinced of the economic value of physicists' and astronomers' work.

It should not always be necessary for scientists to provide a purely economic justification for fundamental research into the nature of the Universe. But that case can be made: this research creates skills and ideas that feed into a stronger society and a stronger economy.

The withdrawal from the linear collider and from Gemini reflect badly on Britain's readiness to stand by international collaborations, and will disappoint partners who had long held the nation and its research councils in high esteem. Moreover, grants are being cut in fields where Britain has traditionally excelled, even as the STFC proposes new projects for which a strong scientific case has not been made — such as a joint robotic Moon mission with NASA.

"Government officials are insufficiently convinced of the economic value of physicists' and astronomers' work."

Both the DIUS and STFC, which was founded from an amalgamation of two research councils only in April, are young organizations and their inability to secure extra funding may reflect their relative lack of proficiency in the ancient art of Whitehall infighting. But it also seems, from Mason's comments, that senior officials at the Treasury do not consider astronomy or particle physics relevant to that department's policy of backing research that will foster business innovation.

Denham has asked a panel chaired by Bill Wakeham, vice-chancellor of the University of Southampton, to review the likely impact of the proposed changes and report next spring, and the House of Commons innovation committee is launching its own enquiry into how the shortfall came about. These reviews should find out whether it is possible for particle physics and astronomy grantees to be treated fairly inside a research council whose priority will always be the provision of facilities. They should also explore ways of ensuring that disciplines using facilities such as Diamond pay their fair share of operating costs. ■

Welcome *Nature Geoscience*

Not before time, the world's population is focusing its attention on threats arising from humankind's impacts on its planetary habitat. But underlying whatever abilities we have to mitigate the impacts of habitat change lies the essential ability to understand our planet's structure and dynamics at all levels and on all time-scales.

The slow but steady progress in understanding Earth is the momentous achievement of the geosciences since their foundations were laid well over a century ago. *Nature Geoscience* is *Nature*'s newest monthly sister journal, and is intended to capture the best of those sciences and serve all of the interested research communities (see http://www.nature.com/ngeo). As with all Nature research journals, this launch in no way dilutes *Nature*'s own commitment to these disciplines.

Launching in January 2008, the journal can be expected to track important research currents. For example, an expanding branch of climate science is the investigation of past analogues for current change, such as rapid sea-level rise, warm periods, ocean acidification or such crucial links as the coupling between atmospheric carbon dioxide concentrations and global temperatures over geological time-scales. Traditionally rooted in geology, palaeoclimate researchers are now interacting more intensively with modellers and with investigators of modern climate.

Solid-Earth scientists are still exploring the implications of the 2004 discovery of the high-pressure phase of the mineral $MgSiO_3$, the post-perovskite that dominates the lowermost mantle, for our understanding of the structure of this region. This discovery affects our understanding of the temperature in the lower mantle and mantle convection, as well as iron and heat exchange between Earth's core and the mantle. All these, in turn, have implications for our reconstructions of Earth's history, the evolution of its core and the geodynamo.

Like all the Nature research journals, *Nature Geoscience* will also have its informal aspects. The 'Backstory' section, about the hard work that comes before a publishable research paper, will describe, for example, what it takes to reconstruct 15 million years of Arctic ocean circulation, to map the floor of the Arabian Sea or to study an Alaskan glacier. One of these articles will be published on the final page of each printed issue, with additional articles published online each month.

The coming year sees the start of a period of international programmes focusing on our planet, not least the International Year of Planet Earth. The new journal could not arrive at a more auspicious moment. ■