Scientists can help again now — not least by explaining to politicians that the United States' principal technical objections to ratification have been overcome. In 1999, the US Senate rejected then-president Bill Clinton's push for ratification by a 51–48 vote, with opponents unconvinced that the technology was ripe either to detect cheaters, or to ensure the reliability and safety of the vast existing US stockpile of nuclear weapons without explosive testing.

Given the intensity of partisan politics in Washington DC today, hopes of any renewed effort by the United States to ratify the CTBT might seem fanciful. But at a symposium organized by the US Department of Energy in October 2015, US Secretary of State John Kerry called for just that, saying that the administration was determined to "reopen and re-energize the conversation about the treaty".

Backing the case for ratification at the symposium were leading government scientists, such as US energy secretary Ernest Moniz — who had a key role in brokering the deal between the West and Iran over that country's nuclear programme last July — and the heads of US nuclear-weapons labs at the Lawrence Livermore, Los Alamos and Sandia National Laboratories.

Kerry and the scientists pointed out that advances in research meant that the Senate's concerns from 1999 are no longer relevant. The detection within minutes of last week's nuclear test by North Korea once again demonstrates that the International Monitoring System of the Vienna-based Preparatory Commission for the Comprehensive Nuclear-Test-Ban Treaty Organization is up to the job it was designed to do. The US Stockpile Stewardship Program for its nuclear weapons, established in 1995, has also shown that advances in computer simulations and other technologies can assure the safety and reliability of its stockpile without any nuclear testing.

Although the CTBT has yet to enter into force, it has set an international standard. With the exception of North Korea, all countries have refrained from nuclear testing since 1998, when India and Pakistan each carried out two nuclear tests.

The United States has an opportunity to show leadership. By ratifying the CTBT, it would put huge pressure on China, India, Pakistan and other countries to do likewise. Iran, having scored a major diplomatic success with its nuclear deal with six world powers, is also in a strong position to support ratification. That would leave the signature of North Korea, probably the most recalcitrant non-signatory, for the CTBT to be able to enter into force. But as the Iran deal and the Paris climate negotiations show, diplomacy can prevail in the most difficult circumstances.

The CTBT alone will not solve all the complex issues of possession of nuclear weapons — in particular the disingenuous refusal of nuclear-weapons states to respect their commitment to the 1970 Nuclear Non-Proliferation Treaty to make serious efforts to disarm. But ratification of the CTBT would be a crowning achievement for science-based evidence and diplomacy in nuclear disarmament. Scientists played a key part in underpinning the nuclear deal with Iran; they now need to help to convince politicians that the CTBT is another deal in the best interests of international security. ■

ANNOUNCEMENT

Three new Nature journals

The traditional stamping grounds of *Nature* and the Nature journals have been the fundamental sciences — the physical, chemical, biological, Earth and environmental sciences. Three journals launched this week restate our editorial and publishing commitment to these territories. And one of them also delves into other disciplines, especially the social sciences, in tackling some of the 'grand challenges' facing society.

Nature Energy is the journal with the broadest scope. Like *Nature Climate Change* and *Nature Plants*, it includes social science and policy research: the first issue features papers on 'Policy trade-offs between climate mitigation and clean cook-stove access in South Asia' and 'Impacts of a 32-billion-gallon bioenergy landscape on land and fossil fuel use in the US'. But the journal is also committed to the natural sciences — and indeed to any research that assists humankind in getting to grips with the challenges of energy generation, storage and distribution. In short, *Nature Energy* will attend to how science, technologies and people can deliver, and are affected by, any and all energy systems.

Like *Nature* and all other Nature research and reviews journals, *Nature Energy*'s choice of what to publish lies entirely in the hands of its in-house editors, who are supported by external peer reviewers. Everyone on the editorial team (which includes a social scientist) sits in the same office and is able to work closely together in assessing submissions. This is of particular value when dealing with multidisciplinary submissions — a challenge that the journal sees as one of its principal missions.

Materials research is a key component of the energy-research landscape. It also contributes fundamental insights into materials themselves and provides contexts in which materials can be applied. High time, our editors and publishers concluded, that a Nature journal should survey progress across all these fronts: hence this week's launch of *Nature Reviews Materials*. Like the other two journals, it is an online-only subscription journal.

The launch issue includes reviews that outline the computational design of energy materials, the latest advances in photovoltaic devices, the surface properties of superhydrophobic and icephobic materials, the synthesis of carbon nanostructures and the design of pro-angiogenic materials, which are valuable in combating cardiovascular disease. It also focuses on sustainable materials, immunotherapy materials and the history of nanotechnology and the electronics industry. *Nature Reviews Materials* aims to cover the making, measuring, modelling and manufacturing of materials — looking at materials all the way from laboratory discovery to their use in functional devices. And in the coming months, the journal will analyse the impact that materials research can make in the field of medicine and on our environment, ensuring a healthier and more sustainable future.

The third journal is *Nature Microbiology*. As the most abundant living entities on our planet, microorganisms are fundamental to every facet of life on Earth. *Nature Microbiology* is interested in all aspects of microorganisms, be it their evolution, physiology and cell biology; their interactions with each other, a host or an environment; or their societal significance. The editors of *Nature Microbiology* are keen for the journal to be inclusive of all types of microorganism, whether bacterial, viral, archaeal or eukaryotic in nature. Accordingly, the launch issue features articles on a diverse array of microorganisms and topics, including the speciation of wild yeasts by hybridization, the global distribution of and disease burden caused by a bacterium and the identification of a virus that borrows its capsid coat from another virus.

Increasingly, researchers, their funders — both public and private — and their institutions recognize that great research needs to be pursued in both fundamental and societally useful domains. Such research needs to be inclusive, in disciplinary terms, and to aim for the highest standards of robustness. It is our hope that the Nature group of journals can support these ambitions, and notably so in the launches this week. ■