

them into a policy-relevant pot, where sustainable practices that harness the natural world (wetlands to clean waste water, for example) can be devised, analysed and then pulled out for use by politicians, scholars and researchers. This is probably the first time you've heard of nature-based solutions — unless you work for the International Union for Conservation of Nature, the European Commission or other select groups that have started to use the term in the past few years.

Will it catch on? It's easy to be cynical and scoff at this latest attempt to constrain and brand work already on the margins of scientific and public awareness, but don't let the grisly management speak put you off. 'Nature-based solutions' might sound like it belongs on the side of a gardener's van, but the concept it represents is of vital and urgent significance. As the grand challenges that face society continue to build, so does the need for multidisciplinary, evidence-based strategies to, for example, protect water supplies, address habitat loss and mitigate and adapt to climate change. And if a concept is solid, then the alien

words and terms that represent it have a habit of becoming familiar and bedding into everyday discourse.

Nature-based solutions may sound artificial and unusable at first, but then so, probably, did the now-widespread, accepted and useful 'sustainable development' and even 'biodiversity' when they were first written and spoken aloud — and both terms emerged into policy debate more recently than you might expect.

Still, if NBS seems poorly defined and vague, that is because it currently is — and this is where scientists come in. As specialists in conservation and sustainability point out in the journal *Science of the Total Environment* (C. Nesshöver *et al. Sci. Tot. Environ.* **579**, 1215–1227; 2017), NBS will require the research community, its supporters and funders to answer a series of questions. The answers will entail identifying the specific problems for which a nature-based solution is needed, and monitoring the outcomes. Words, after all, can only take us so far. ■

ANNOUNCEMENT

Five new Nature journals for 2017

Since *Nature Genetics* was launched in 1992, the stable of Nature research and review journals has grown significantly. This year they'll be joined by five more — a launch rate that is unprecedented and unlikely to be repeated. These new online-only subscription journals are responding to positive signals from their target research communities. They also reflect a deliberate diversification of the Nature journals into multidisciplinary research that addresses societal challenges, without losing their commitment to the disciplines of fundamental science.

Two of them, *Nature Astronomy* and *Nature Ecology & Evolution*, exemplify the traditional disciplinary approach. The first issue of *Nature*, in 1869, opened with an introduction from the great evolutionary biologist Thomas Henry Huxley; later in the issue, Norman Lockyer, the founding editor, discussed the total solar eclipse that had been recently visible across the United States.

Nature has published many discoveries since, including the first pulsar and the first extra-solar planet. Responding to the growth of the astronomy literature and the evident appetite for an international journal spanning astronomy, astrophysics and planetary science, *Nature Astronomy* aims to bring research communities together and discuss advances of mutual benefit, including in theory and in instrumentation.

If there is one word that sums up the interests of *Nature Ecology & Evolution*, it is biodiversity. Evolutionary biologists pursue how biodiversity arose and developed, and ecologists monitor how it is maintained and its effects. Much of the research in the journal's first issue focuses on fundamental topics — for example the evolution of early tetrapods and the idiosyncratic genetics of regenerative flatworms. But its scope goes beyond these predominantly academic questions. Global biodiversity is under unprecedented threat, a tragedy with consequences for food, health and climate. So the first issue also contains work on the effect of international trade on biodiversity and on the evolution of antimicrobial resistance.

Research in biomedical engineering involves discovery and invention, and *Nature Biomedical Engineering* aims to serve both these purposes. Clinical advances offer further improvements in methodology and generate hypotheses to be tested in the laboratory. And fundamental advances in biology, medicine, materials science and physicochemical and engineering processes lead to

developments in therapy and technology. Indeed, major inventions in biomedical engineering — such as artificial joints, magnetic resonance imaging, heart pacemakers, heart–lung machines and angioplasties — are built on findings that stem from basic research and have enabled further discoveries. By publishing content that traverses boundaries between fields, *Nature Biomedical Engineering* will help to build bridges between researchers working in the laboratory, in the clinic and in industry.

Human behaviour is relevant to humanity's responses to the great challenges that face it in climate change, sustainability, health, poverty and economic growth, and conflict. Whether in these contexts or in the fundamentals of human psychology, research addressing these topics is the stuff of *Nature Human Behaviour*. The journal offers an outlet for cutting-edge research on any aspect of individual or collective human behaviour and welcomes submissions from a broad range of disciplines across the social and natural sciences — including psychology, economics, political science, sociology, anthropology, geography, epidemiology, behavioural ecology, evolutionary biology, neuroscience, psychiatry, genetics, physics and computer science. It aims to publish research that represents a leap forward in describing, explaining, predicting or changing human behaviour. The journal is committed to promoting robust scientific practices — for example by publishing registered reports (whereby papers are accepted in principle before study data have been collected); high-value replications; and confirmatory studies whose scale and rigour mean that they supersede the existing literature and strengthen confidence in a scientific discovery.

The review journals launched under the Nature name have gained a high reputation, not least for their clarity and illustrations. *Nature Reviews Chemistry* promises to continue in that strong tradition. Chemistry plays an important part in many areas, including some that are close to the topics of the four new research journals already discussed. Cross-pollinating knowledge from different chemical disciplines can help all of them to advance, but doing so requires these fields be made accessible to a broad audience. This is one of the goals of *Nature Reviews Chemistry*. The launch issue includes reviews on earth-abundant catalysts for water-splitting, the use of scanning-probe microscopy for molecular characterization and manipulation, the collective effects of London dispersion forces in sterically crowded molecules and the use of lanthanide catalysis in transformations of carbon oxygenates. The journal will also feature regular columns focusing on chemistry education and how to translate research into business opportunities.

Both in the scope of their content and in their editorial practices, these journals, like their predecessors in the Nature stable, intend to deliver true added value, within their disciplines and beyond. ■