# THIS WEEK

## EDITORIALS

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# Wanted: climate leadership

*US President Donald Trump's candidate to lead the World Bank could undermine its efforts to get greener. Nations need the courage to challenge the nomination.*

Just a few days into 2019, the international development community received a shock. Jim Yong Kim announced that he was resigning as president of the World Bank three years before his contract expired — leaving a crucial leadership role vacant. The decision about who fills it is important for researchers and for the planet.

The 75-year-old bank is the world's largest publicly owned lender. With a mandate to end poverty and promote sustainability, it provides loans and grants for infrastructure projects, with by far its biggest footprint being in developing countries.

Its record on environmental challenges, however, is mixed. Although it has a long history of supporting carbon-intensive infrastructure projects such as fossil-fuel power, at the end of 2018 it agreed to double its climate-change spending to $200 billion between 2021 and 2025, extending commitments made at the Paris climate accord to become a greener bank. This welcome decision was a collective effort of the world's governments, the bank's staff and Kim, a physician and leader in international health policy. Kim's departure has put the bank's leadership and future direction in jeopardy.

The role of World Bank president traditionally goes to a US citizen, a legacy of the post-war carving up of big jobs between Europe and the United States. At the beginning of this month, US President Donald Trump nominated David Malpass, an economist at the US Treasury, to become the bank's next president. The successful candidate is expected to be named in time for the bank's annual meeting on 12 April.

***"Malpass is already advocating taking the bank back to its post-war roots."***

With the United States out of the Paris agreement, Malpass is already advocating taking the bank back to its post-war roots: financing energy and infrastructure projects regardless of their environmental impact.

Given the high stakes, the rest of the world must determine whether Malpass is worth backing. Meeting the Paris target to keep temperatures within 2 °C of pre-industrial levels needs serious international financial commitment.

The United States is the bank's largest shareholder (with nearly 16% of votes) and, traditionally, European nations back the US candidate. But because Trump has shredded the usual rules of US–European Union cooperation, the EU (with its combined voting shares of nearly 26.5%) should consider carefully whether it is worth abiding by this agreement.

If most of Europe does support Malpass, however, that leaves Japan (which has nearly 7% of World Bank votes) and China (which has nearly 4.5%) with the biggest individual say in his election. Japan will not defy Trump, and China's position is hard to read. China was one of the architects of the Paris accord, but talks between Beijing and Washington to avert a trade war are at a delicate stage, and China's priority is to keep those talks on track.

The nations of Africa, Asia, Europe and Latin America need to think seriously about unifying around a different candidate, and there is no shortage of credible names. High on the list are the bank's chief executive Kristalina Georgieva from Bulgaria, who is standing in as acting president, and the respected British economist Jim O'Neill.

Trump's decision to nominate Malpass presents the world's leaders with a dilemma, but it is one that they cannot shirk. Malpass might have stellar economic credentials, but an unwillingness to acknowledge the seriousness of climate change — the world's biggest threat — cannot be acceptable in the leader of an international organization with unrivalled power to tackle it. ■

# Materials gain

*Data mining uncovers a treasure trove of topological materials.*

Collaborative efforts to develop centralized databases have become common in some fields. To be useful, databases need appropriate support and to be annotated using standardized approaches. Whether time and resources are well spent on these tasks depends on the value gained from exploring vast data repositories.

Three papers in *Nature* this week show that materials science is reaping the rewards of such investment (see pages 475, 480 and 486). The teams developed algorithms to scan through tens of thousands of non-magnetic materials catalogued in crystal-structure databases and, astonishingly, found that around one-quarter could be considered 'topological' — harbouring unusual states at their surfaces or edges that are caused by the geometry of their electronic structures.

The unusual properties of topological systems offer new possibilities for materials engineering, including the design of energy-efficient transistors and circuits. Yet only a few topological materials have been identified.

The findings in *Nature* are theoretical and, as physicist Alex Zunger points out in a Comment on page 447, many such materials might be difficult to synthesize, or could turn out not to have the predicted properties when tested experimentally. Even if researchers need to curb their enthusiasm down the line, the unimagined scale of this discovery was possible only because of the existence of large crystallographic databases.

Just as data sharing has facilitated these theoretical predictions, it will also benefit future materials discovery and engineering. But to achieve this, researchers will need to systematically release all underlying data. Topological catalogues are still in the early stages of development, so this community would do well not to miss the opportunity to push for widespread and standardized sharing of experimental data. ■