

natureOUTLOOK

SCIENCE WITHOUT BORDERS

18 October 2018 / Vol 562 / Issue No 7727



Cover art: Taj Francis

Editorial

Herb Brody,
Richard Hodson,
Jenny Rooke,
Elizabeth Batty

Art & Design

Mohamed Ashour,
Wesley Fernandes,
Andrea Duffy,
Denis Mallet

Production

Nick Bruni, Ian Pope,
Karl Smart

Sponsorship

Reya Silao,
Yvette Smith

Marketing

Alan Abery

Project Manager

Rebecca Jones

Creative Director

Wojtek Urbanek

Publisher

Richard Hughes

Editorial Director

Stephen Pincock

Magazine Editor

Helen Pearson

Editor-in-Chief

Magdalena Skipper

If a researcher's goal is to improve people's lives, they should look to the world's poorer nations. Low- and middle-income countries — customarily grouped by the broad and flawed umbrella term 'the developing world' — are where the greatest gains can be found.

These nations commonly lack the wealth and resources needed to access and act on the world's scientific knowledge. What they do not want for is talent. And with more than half of the world's population growth between now and 2050 expected to come from low- and middle-income countries, it is more pressing than ever that their young people realize their talent.

As a country's population grows, the problems that it faces change. Non-communicable diseases such as diabetes are placing an increasing burden on health systems. In countries as far removed as Peru and India, the capacity to address these new priorities is being built (see page S65).

One threat to capacity-building in emerging economies is brain drain. Many budding researchers leave Africa to study in Europe and North America, and not all come back. And those who do return often find themselves unprepared for the challenges that await them (S58).

Not all the hurdles young researchers in low- and middle-income countries must overcome are unique to those locales. From the 68th Lindau Nobel Laureate Meeting in Germany this June came a call for a global commitment to support science (S64). Those assembled also discussed the central importance of researchers maintaining the trust of the communities in which they work (S62). Few Nobel prizes for science have gone to researchers from low-income nations. It falls on these countries' young researchers, and anyone with the power to assist them, to redress the balance.

We are pleased to acknowledge the financial support of Mars, Incorporated in producing this Outlook. As always, *Nature* has sole responsibility for all editorial content.

Richard Hodson
Supplements editor

CONTENTS

S58 EDUCATION

Coming home

How well are scientists prepared for research in Africa after studying abroad?

S62 COMMUNITIES

A matter of trust

Research organizations need to build relationships with local communities

S64 POLICY

Science as a global public good

Globalization of science

S65 HEALTH CARE

A shifting burden

Diseases such as diabetes are proving a new challenge for emerging economies

S68 RESEARCH

4 big questions

Where do we go from here?

RELATED ARTICLES

S69 Acting on non-communicable diseases in low- and middle-income tropical countries
M. Ezzati et al.

S79 Development in astronomy and space science in Africa
M. Pović et al.

S83 Steps to overcome the North–South divide in research relevant to climate change policy and practice
M. Blicharska et al.

S90 A global perspective is needed to protect environmental defenders
J. Ghazoul & F. Kleinschroth

S93 A research agenda for a people-centred approach to energy access in the urbanizing global south
V. C. Broto et al.

S97 Addressing food security in African cities
J. Battersby & V. Watson

Nature Outlooks are sponsored supplements that aim to stimulate interest and debate around a subject of interest to the sponsor, while satisfying the editorial values of *Nature* and our readers' expectations. The boundaries of sponsor involvement are clearly delineated in the *Nature Outlook* Editorial guidelines available at go.nature.com/e4dwzww

CITING THE OUTLOOK

Cite as a supplement to *Nature*, for example, *Nature* Vol. XXX, No. XXXX Suppl., Sxx–Sxx (2018).

VISIT THE OUTLOOK ONLINE

The *Nature Outlook Science without borders* supplement can be found at www.nature.com/collections/science-without-borders-outlook. It features all newly commissioned content as well as a selection of relevant previously published material that is made

freely available for 6 months.

SUBSCRIPTIONS AND CUSTOMER SERVICES

Site licences (www.nature.com/libraries/site_licences): Americas, institutions@natureny.com; Asia-Pacific, <http://nature.asia/jp-contact>; Australia/New Zealand, nature@macmillan.com.au; Europe/ROW, institutions@nature.com; India, npgindia@nature.com. Personal subscriptions: UK/Europe/ROW, subscriptions@nature.com; USA/Canada/Latin America, subscriptions@us.nature.com; Japan, <http://nature.asia/jp-contact>; China, <http://nature.asia/china-subscribe>; Korea, www.natureasia.com/ko-kr/subscribe.

CUSTOMER SERVICES

Feedback@nature.com

Copyright © 2018 Springer Nature Ltd. All rights reserved.