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Policy-makers have looked to international collaboration as a way to arrest the alarming decline in Japan's contribution to global science. This Nature Index supplement reports on the progress of that effort.

There is change for the better. Since 2014, when the Organisation for Economic Co-operation and Development urged Japan to become more involved in global innovation networks, the proportion of articles from Japanese institutions with international co-authors in Nature Index journals has risen from 46% to nearly 56%. The work of researchers such as the six profiled here has been instrumental in this rise. These scientists — chosen for their high-quality output and outstanding global networks — are reaching out from Japan and building links back from abroad.

But the fall in Japan's contribution to high-quality scientific output has continued. Japan's fractional count (FC) in the Nature

Index declined 1.7% between 2017 and the 12 months leading up to 31 October 2018, bringing the reduction in FC since 2012 to 19.9%.

It's too soon to say whether the rate of decline is slowing. In any case, international collaboration is only part of a solution. Japanese institutions should strive to create an outward-looking scientific ecosystem, with a diverse and highly connected workforce.

Achieving that will require cultural change to tackle rigid hierarchies, modernise work practices and reward systems, and foster new talent. When, or if, Japan becomes a research destination for the world's scientists, we'll know the necessary change has taken place.

Catherine Armitage
Chief editor, Nature Index

Reaching out

S9: Japan's government is spending big in key areas to become a crucial player on the global stage, but critics say the money should be more evenly distributed.

Global connectors

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Unconscious bias limits women's careers

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Dream teams need go-betweens

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The tables

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ANDREA UCINI

EDITORIAL: Catherine Armitage, Smriti Mallapaty, Rebecca Dargie, Gemma Conroy, Herb Brody, Stephen Pincock
ANALYSIS: Bo Wu, Willem Sijp
ART & DESIGN: Tanner Maxwell, Madeline Hutchinson, Wojtek Urbanek, Wesley Fernandes
PRODUCTION: Kay Lewis, Ian Pope, Nick Bruni, Bob Edenbach, Joern Ishikawa
MARKETING: Stacy Best Ruel, Angelica Sarne
SALES & PARTNER CONTENT: Sara Phillips, Chris Gilloch, Shoko Hasegawa, Maki Ishikawa, Tomoko Kawaguchi
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NATURE EDITORIAL OFFICES
The Campus, 4 Crinan Street,
London N1 9XW, UK
Tel: +44 (0)20 7833 4000
Fax: +44 (0)20 7843 4596/7

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