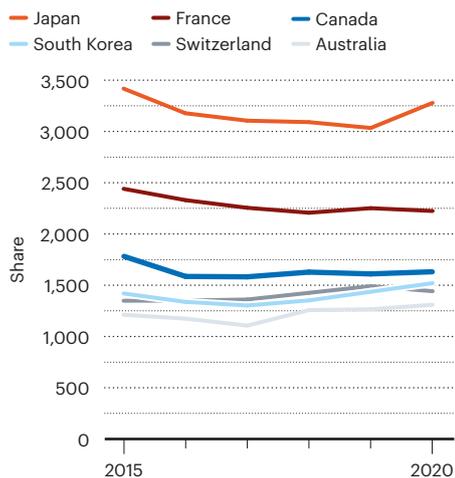


Benchmarking the competition

Canada's research landscape, compared with its closest rivals. **Data analysis by Catherine Cheung. Infographic by Catherine Armitage and Tanner Maxwell.**

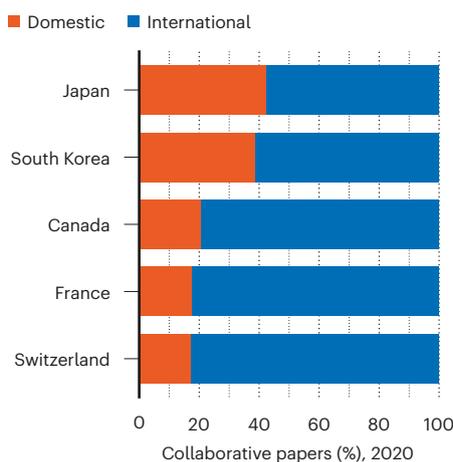
THE SECOND SIX

Canada ranks 7th in the world for high-quality natural-sciences research based on Share in the Nature Index. The top four countries by this measure (not shown here) are the United States, China, Germany and the United Kingdom.



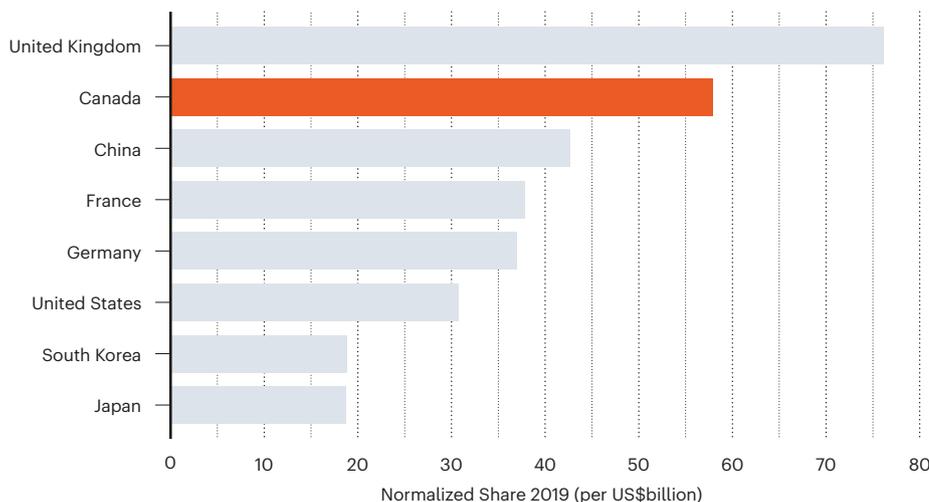
LOOKING OUTWARDS

Canada's proportion of internationally collaborative papers in the Nature Index is slightly less than France or Switzerland's, but higher than Japan's and South Korea's. Its biggest collaborative partner by far is the United States (9,243 co-authored articles 2015–20) followed by China (3,157 articles over the same period).



VALUE FOR MONEY

Among the leading eight countries in the Nature Index by Share, Canada was second only to the United Kingdom in delivering value for research funding in 2019, measured by the amount of Share achieved for each US\$1 billion spending on research and development. In the same year, Canada achieved Share of 57.9, three times more than South Korea or Japan achieved.

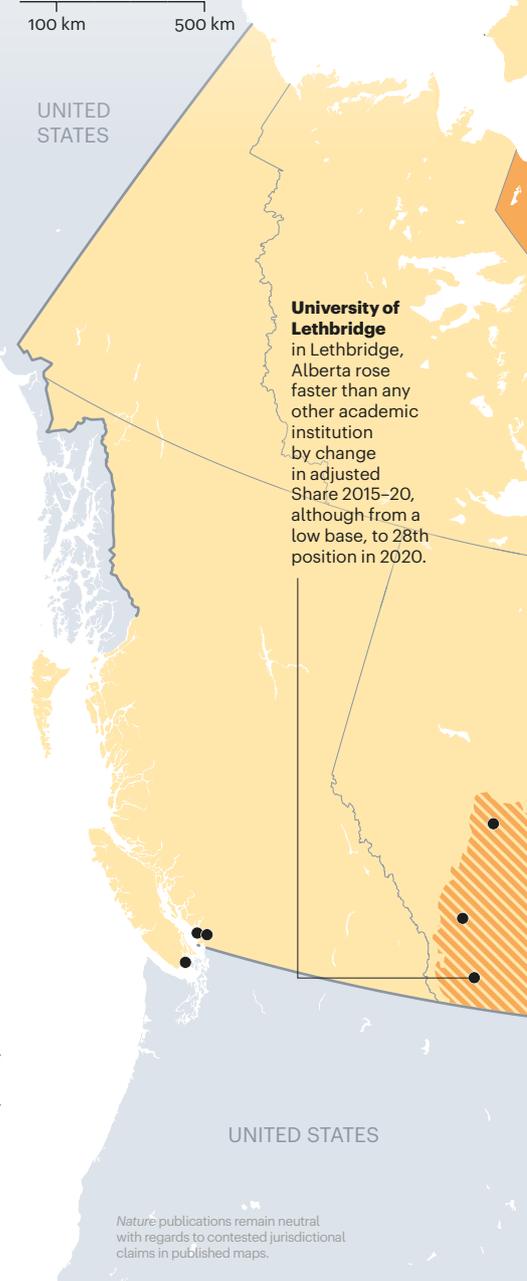


AREA OF STUDY

Canada's universities, including the leading 30 by the key Nature Index metric, Share, are concentrated in the more densely populated south of the country. The Canadian Rockies in the west, the Arctic north, the prairies, the Canadian Great Lakes and the Experimental Lakes Area of Ontario, offer a vast natural laboratory for research. Share, Nature Index's signature metric, is a fractional count for an article that accounts for the proportion of authors whose institutional affiliation is with that institution or location.

Legend

- A leading 30 academic institution
- Other institutions



SOURCE: NATURE INDEX, OECD, UNESCO

Nature publications remain neutral with regards to contested jurisdictional claims in published maps.

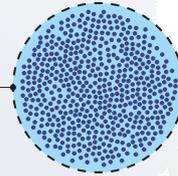
Roughly 85% of the 35,944 residents of **Nunavut**, the largest and northernmost territory of Canada, are of Aboriginal identity. Indigenous hunters in Nunavut provide polar bear researchers with fur and tissue samples for study. See page S16.

GREENLAND

SHARE AND SPACE

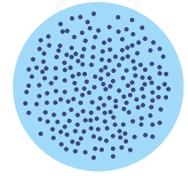
Canada has the lowest population density among its closest competitors. For Share per million of population in 2020, it is a distant second to Switzerland.

1 km²



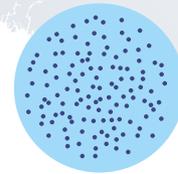
South Korea

Share/capita (mill.): 29.4
Pop. density: 530.97
Land area: 100,370 km²
Population: 51.78 million



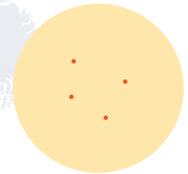
Switzerland

Share/capita (mill.): 166.8
Pop. density: 218.57
Land area: 41,290 km²
Population: 8.64 million



France

Share/capita (mill.): 33.0
Pop. density: 123.08
Land area: 549,087 km²
Population: 67.39 million



Canada

Share/capita (mill.): 42.8
Pop. density: 4.24
Land area: 9,879,750 km²
Population: 38.00 million

Hudson Bay

CANADA

When the ice retreats on the inland sea of Hudson Bay in summer, polar bears come ashore along its western coast in **northeastern Manitoba**, where researchers track and tag them. See page S16.

University of Toronto

had the highest Share of any Canadian institution overall and in all four subject areas in the Nature Index in 2020, with 21.1% of the national Share.

Western University in London, Ontario, was the second-fastest rising academic institution by change in adjusted Share 2015–20 to reach 10th position by 2020.

The **Canadian Prairies** — primarily concentrated in this rough area across Alberta, Manitoba, and Saskatchewan — are home to more than 70% of the country's arable farmland. See page S8.

The non-profit **Perimeter Institute for Theoretical Physics** in Waterloo, Ontario is the highest performing non-academic Canadian institution in the Nature Index, in 9th position overall in 2020.