



Canadian excellence, global recognition:

Canada's 2020 winners of major
international research awards



**Universities
Canada.**

Foreword



This past year has challenged the world to harness the power of research to advance solutions during a time of great uncertainty. Researchers everywhere have had to ask how to build upon and leverage our assets to get through something as destructive to our physical, mental and economic wellbeing as the COVID-19 virus.

In Canada's research community, the response to the pandemic has been outstanding and filled with innovation.



The researchers highlighted in this publication have demonstrated collaboration, perseverance and dedication during these challenging times that has provided the world with research that not only advances science globally, but also improves our quality of life and helps drive economic growth in Canada. The contributions of top researchers – the discoveries they make, the teams they assemble, the spin-offs they enable – will help Canada emerge even stronger after COVID-19.

In the coming months and years, we must not lose sight of the value of our research enterprise to building a better Canada and working across borders. We encourage all researchers and innovators to share their story more loudly; It's important for Canadians to learn about your work and share in your success.

Our next generation of researchers and innovators need the inspiration from our international award winners to see the value of careers in research and discovery. At our universities, research-enriched learning helps make this happen, while also equipping all students for rewarding careers in the rapidly changing world of work.

Today's outstanding researchers give them incredible examples to follow.

Congratulations to the award winners on their innovative research and their continued success.

The Right Honourable David Johnston 28th Governor General of Canada and Chair, Rideau Hall Foundation

Paul Davidson, President, Universities Canada

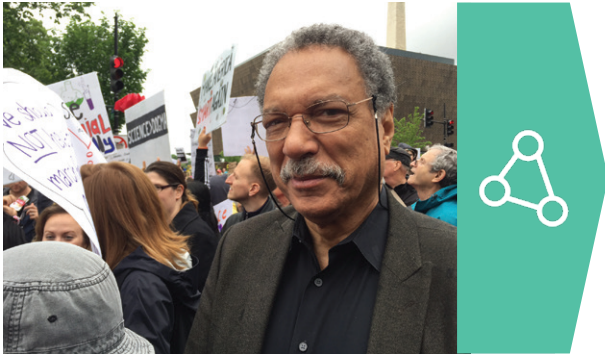
Meet international award winners from previous years at: www.univcan.ca/globalexcellence



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BIOLOGY



Daniel Pauly

Using data to fight back against overfishing

Overfishing threatens the world's fish stocks. Fixing the problem requires comprehensive data on catches, which has traditionally been missing in official records. The University of British Columbia Professor [Daniel Pauly](#) — the most-cited fisheries scientist in the world — has dedicated much of his career to changing that.

A 2020 winner of the [BBVA Foundation Frontiers of Knowledge Award in Ecology and Conservation Biology](#), Dr. Pauly — founder of the [Sea Around Us](#) project at The University of British Columbia — has spent his long career exploring the worldwide decline in fish stocks. In announcing the award, the BBVA Foundation highlights his “seminal contributions to our understanding of the world's oceans, and their efforts to protect and conserve marine biodiversity and oceanic ecosystem services in a rapidly changing world.”

Fisheries data has fallen short in the past by excluding information about catches by small-scale fisheries, the catches of women, illegal fishing and discarded fish, recreational fishing and close inshore fisheries.

“Countries send in their industrial catch,” Dr. Pauly says of official data provided to traditional databases. “It's also true for Canada. We send nothing from the Arctic.”

To address the shortcoming, Dr. Pauly drew on global networks he built during his many years at the International Center for Living Aquatic Resources Management in the Philippines, asking contacts around the world to produce a complement to the official data.

“On the basis of this data we built a huge database and a website (www.seaaroundus.org) which document more realistically than official data what is happening in the fisheries in the world.”

The results showed stocks declining more than official stats indicated and the data, now freely available, helps countries see the overfishing taking place off their shores.

The *Sea Around Us* database and website are built on top of another of Dr. Pauly's major achievements, i.e., a database and website called FishBase (www.fishbase.org), an online encyclopedia of 40,000 fish species — and a “monster success,” attracting millions of users monthly.

In the years ahead, Dr. Pauly says he will focus on keeping the *Sea Around Us* and FishBase going. “We have millions of users for our free products” he says of projects that jointly rely on 75 full-time staff around the world. “I have to maintain that and that keeps me going.”