

Frontiers Planet Prize 2022



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Mission

The Earth's system is rapidly approaching and exceeding its planetary boundaries – and broad consensus is that human activities are the cause. As a united international community, we need to understand that the time needed to protect and restore planetary health is slipping away.

Pulling back from those boundaries, averting tipping points and critical thresholds, will require new urgency from societal institutions and leaders across the world. To secure a healthy planet we will need scientific solutions – and action – at pace and at scale.

To spark a race for breakthroughs in sustainability science, the Frontiers Research Foundation is launching a new international science competition, beginning in 2022, with CHF 3 million in prizes.

The Frontiers Planet Prize will recognize, encourage, and reward exceptional scientists whose work have a measurable potential to help humanity stay within the planetary boundaries.

It aims to emulate the passion and pride of the Olympic Games by unleashing the competitive spirit of researchers – who are supported by their universities and national leaders – to get the world to sit up, listen and act on the profound planetary environmental threats we face.

And it is a grand challenge to the scientific community across the world, offering major recognition for the most relevant, recent scientific insights that help navigate and secure humanity's future in the Anthropocene.



Context

Sustainability experts have identified nine planetary boundaries from which runaway changes to the planet become irreversible. The Frontiers Planet Prize is built around those planetary boundaries.

These Planetary Boundaries have been described in detail by Johan Rockström and Owen Gaffney in their book and documentary on Breaking Boundaries. Planetary Boundaries paint a clear picture of the challenges humanity faces and we believe they should spur a call to action. The Frontiers Research Foundation is rallying behind that call.

The prize will honor research – published in peer-reviewed journals over the past 2 calendar years – that has the greatest potential to help keep the earth system within the Planetary Boundaries. It will be awarded by the Frontiers Research Foundation, a not-for-profit foundation based in Switzerland.

All domains of science will be considered, whether their focus is, for example, a deeper understanding of the interactions and feedbacks defining planetary boundaries; the implications of inaction for the state and resilience of the Earth's system; or planetary justice that opens up transformative pathways for a world developing within Planetary Boundaries.

For this inaugural edition, we will be awarding three Planet Prizes of CHF 1 million each. The awards ceremony will be held at the annual Frontiers Forum in Montreux, Switzerland, in April 2023. On the basis of success, we will increase both the number of prizes awarded and the amounts involved in subsequent years.

With this prize we hope to:

- Spark an international competition that accelerates scientific breakthroughs in sustainability science worldwide.
- Promote the urgent need to fund sustainability science in all countries.
- Highlight scientific facts in sustainability science to inform policy.
- Catalyse funders, foundations and philanthropists to join forces with each other in

sustainability science.

- Amplify collaboration among initiatives in sustainability science.
- Accelerate the adoption of scientific breakthroughs in sustainability science in

commercial markets.

Process

We want to boost sustainability research at a global level and, much like the Olympics, foster a passionate competition between scientists, universities, and nations to fund and develop science that provides real solutions to the global environmental threats we face.

The leading universities or research institutions are invited to register with us as a National Nominating Body which opens Prize eligibility to their institution. The NNB committee then reaches out to its most promising sustainability scientists and invites them to apply with a standard application form supplied by the Frontiers Foundation.

From the applications received, the National Nominating Body will select and forward its top three candidates to the national academic institution serving as its National Representative Body. The window for the submissions is 1 November to 1 December 2022.

From this pool of candidates, the National Representative Body will select three National Nominees to submit to the Planet Prize Jury in December 2023.

The international Jury of 100 sustainability scientists, chaired by Professor Johan Rockström, will evaluate these National Nominees based on the importance and relevance of a recently published article. It will vote for one National Champion from each country, and then from among these selected National Champions, it will vote for three International Champions to win the 2022 Frontiers Planet Prizes.

Each of the three International Champions will be awarded a CHF 1 million prize.

In 2023, the National Champions will be announced in February. The International Champions will be announced on Earth Day, 22 April. And the Award Ceremony will take place at the end of April 2023 in Montreux, Switzerland.



Timeline



July - September

The NNBs, NRBs and Jury register with the Frontiers Planet Prize



September – October

NNB reaches out to its most promising sustainability scientists and invites them to apply



November – December

Each NNB submits 3 Nominations to their NRB



December

Each NRB submits 3 National Nominations to the Jury



January – March

The Jury reviews the applications and votes to select the Champions



February

The National Champions are announced publicly



22 April

The 3 International Champions are announced publicly on Earth Day



27 April

The Award ceremony takes place in Switzerland

Scientific criteria

The Frontiers Planet Prize will be awarded to the best research published in established peer-reviewed scientific journals in the past 2 years (date of acceptance: 1 November 2020 to 31 October 2022).

Scientific excellence is the guiding principle for the Frontiers Planet Prize. We are inviting contributions from all established scientific journals in the world with robust peer review and transparent publication procedures.

We welcome research across all sciences and are open to contributions that focus on one or more of the Planetary Boundaries. Research focusing on cross-scale interactions, for example from local to global, is eligible.

The following criteria must be met for contributions to be considered for the

Frontiers Planet Prize:

- The research should clearly contribute to solutions for humanity's ability to navigate the future of the world on planet Earth in the Anthropocene.
- The research must explicitly (analytically) connect (explore implications) to one or several Planetary Boundaries at the Earth system scale (global scale).
- While research can focus on single planetary boundaries, or single human dimensions of how to develop within a stable and resilient planet, research that explores interactions/relations between at least two Planetary Boundaries should be prioritized.
- Social science contributions are eligible if they emerge from a clear understanding of all the planetary boundaries and their scientific challenges (i.e., reducing risks in the Anthropocene, bending the global curves in the Great Acceleration, avoiding loss of life support systems and crossing tipping points).

Jury mandate

The Frontiers Planet Prize jury will decide independently on the winners of the national competitions and the three international winners.

This means the Jury has two main tasks:

- 1. After receiving three nominations from each national competition, the Jury will vote for one leading scientist in each country (the National Champion).
- 2. From among these National Champions the Jury will then select three International Champions.

The Jury will work as an independent community of scientists.

In the case of any conflicts of interest, jury members will be asked to declare their conflict and abstain during any proceedings related to a specific contribution