



**frontiers**  
research foundation

**frontiers**  **planet prize**

MOBILIZING SCIENCE FOR A GLOBAL GREEN RENAISSANCE

The Frontiers Planet Prize is a unique, global science competition that recognizes exceptional scientists who deliver breakthrough, scalable solutions for living healthy lives, on a healthy planet.



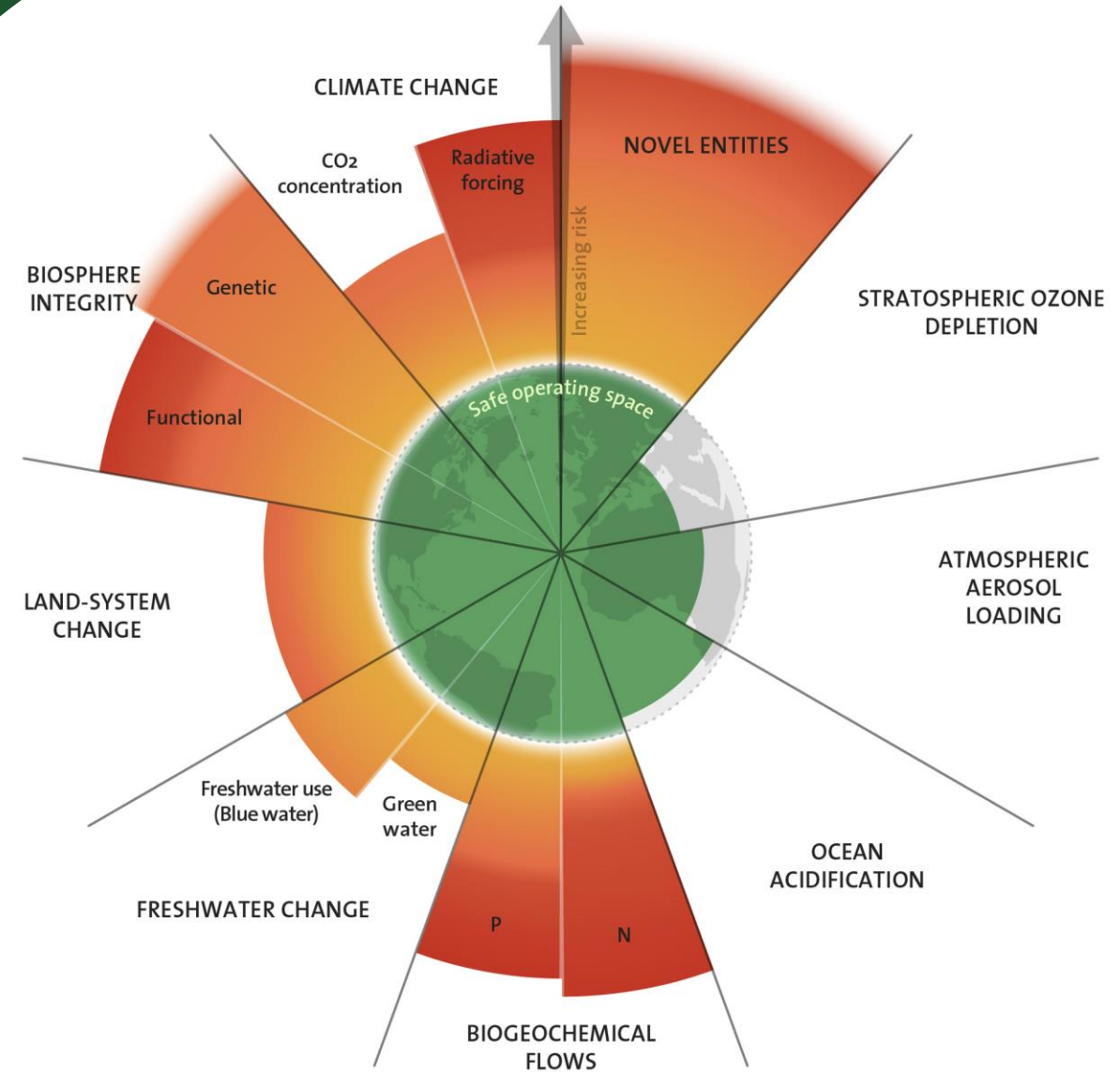
Each year, **3 prizes**  
of **\$1 million US**  
are awarded to the **three**  
**international champions**

# Planetary boundaries

Transgressed boundaries:

1. Biogeochemical flows
2. Biosphere integrity
3. Climate Change
4. Freshwater use
5. Novel entities
6. Land-system change

Sources: Updated Planetary Boundaries. The 2023 update to the Planetary boundaries. Licensed under CC BY-NC-ND 3.0. Credit: "Azote for Stockholm Resilience Centre, based on analysis in Richardson et al 2023"







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planet prize

# Frontiers Planet Prize: Our mission

## Mobilizing

The entire academic ecosystem, including universities, research institutions and national academies to join forces and find solutions

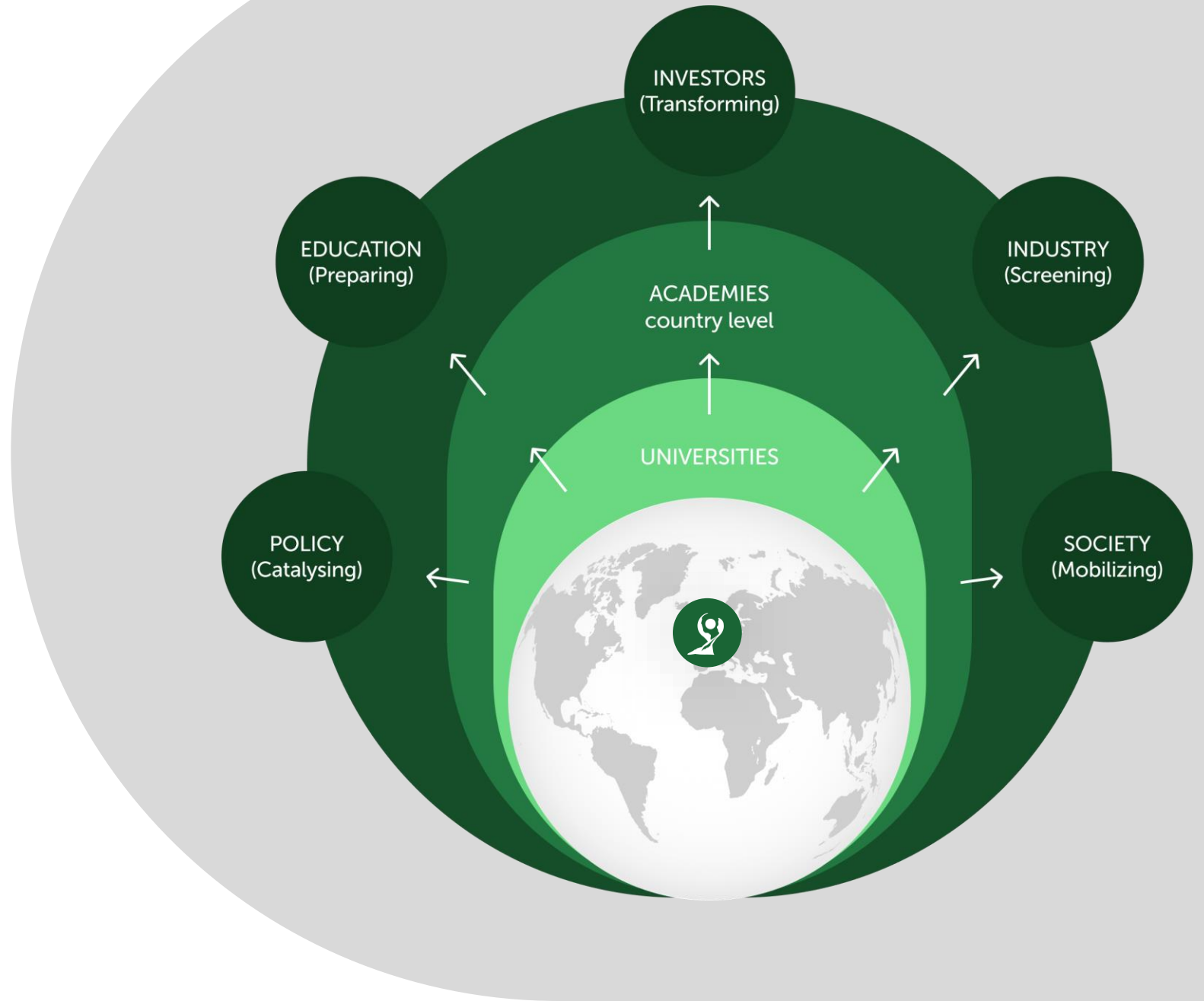
## Igniting

An international competition that accelerates scientific breakthroughs in planetary boundary science worldwide

## Catalysing

The adoption of scientific breakthrough by public and private stakeholders.

And what  
are we  
going to  
achieve?



# The nomination community

A unique mechanism  
Highlighting the best  
mission-driven science  
nominated by world-  
leading institutions



# A unique mechanism Highlighting the best mission-driven science nominated by world- leading institutions

233  
institutions  
1st edition



475  
institutions  
2nd edition



610  
institutions  
3rd edition







**KVAB**  
Royal Flemish Academy of Belgium  
for Science and the Arts



**ACADÉMIE ROYALE**  
DES SCIENCES, DES LETTRES ET DES BEAUX-ARTS  
**DE BELGIQUE**



**ÖAW**

AUSTRIAN  
ACADEMY OF  
SCIENCES



**ACADEMIA NACIONAL  
DE CIENCIAS**



EXPLORE | DISCOVER | SHARE



**The African  
Academy of Sciences**



**TÜRKİYE BİLİMLER AKADEMİSİ**  
TURKISH ACADEMY OF SCIENCES



**HUNGARIAN  
ACADEMY  
OF SCIENCES**



**RSC SRC**



Pacific  
Academy  
of Sciences



**Australian  
Academy of  
Science**



berlin-brandenburgische  
AKADEMIE DER WISSENSCHAFTEN



**ACADEMIA COLOMBIANA  
DE CIENCIAS EXACTAS,  
FÍSICAS Y NATURALES**



**ACADEMIA  
BRASILEIRA  
DE CIÊNCIAS**



**中国科学技术协会**  
China Association for Science and Technology



**NATIONAL ACADEMY OF SCIENCES**

# Undisputed excellence

The Jury of 100  
led by Chair:  
**Prof Johan Rockstrom**



Johan Rockström



Prof Katharine  
Abernethy



Prof Priyanga  
Amarasekare



Prof Angela Arthington



Prof Xuemei Bai



Prof Govindasamy Bala



Dr Elena Bennett



Prof Mercedes  
Bustamante



Prof Wouter Buytaert



Dr Stephen Carpenter



Prof Matthew Collins



Prof Robin Craig



Prof Gretchen Daily



Prof Wim de Vries



Prof Daniel Esty



Prof James Evans



Dr Mariele Evers



Dr Richard Florizone



Prof Carl Folke



Prof Hayley Fowler



Prof Pierre Friedlingstein



Prof Andrew Haines



Dr Shakuntala  
Haraksingh Thilsted



Prof Bronwyn Hayward



Prof Terry Hughes



Prof Hans J.  
Schellnhuber



Prof Kevin Jones



Prof Sirkku Juhola



Prof Louis Kotzé



Prof Praveen Kumar



Ms Rachel Kyte



Prof Rattan Lal



Dr Miriam L. Diamond



Prof Eric Lambin



Prof Tim Lenton

# Our advisory board



Peter  
Gluckman



Sybil  
Seitzinger



Jakob  
Lundberg



Lise Korsten



Lee  
Howell



Ian Miller



# The prize mechanics



# Mechanics

## An “Olympic” race for solutions



Foundation

NNBs  
National Nominating Body

NRBs  
National Representative Body

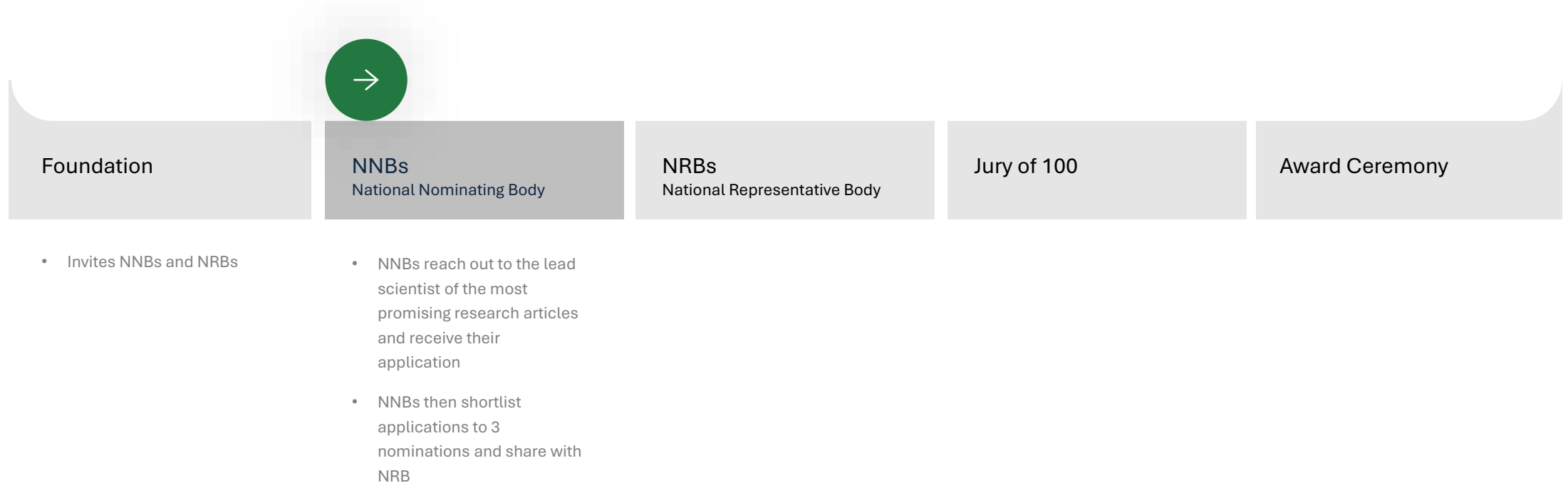
Jury of 100

Award Ceremony

- Invites NNBs and NRBs

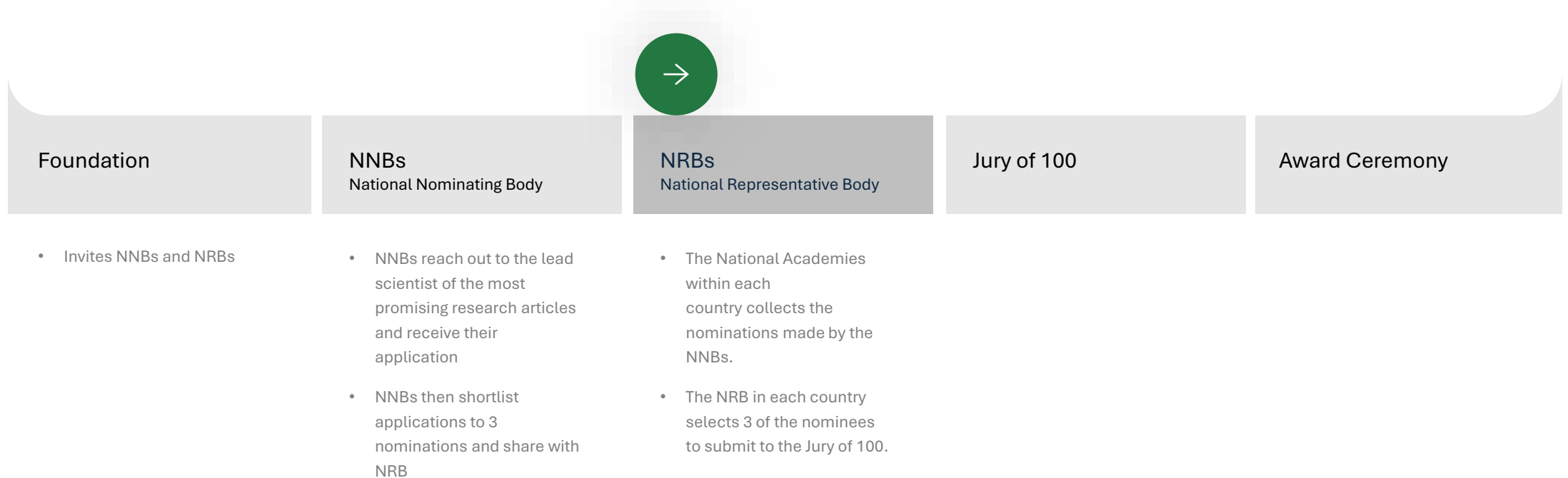
# Mechanics

## An “Olympic” race for solutions



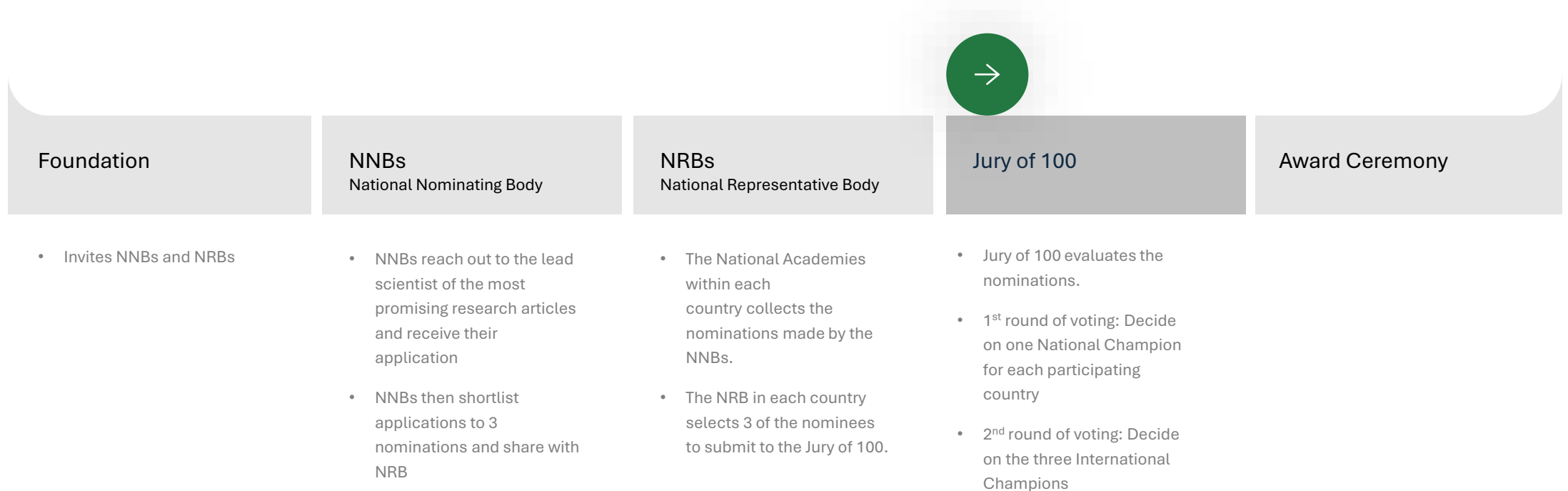
# Mechanics

## An “Olympic” race for solutions



# Mechanics

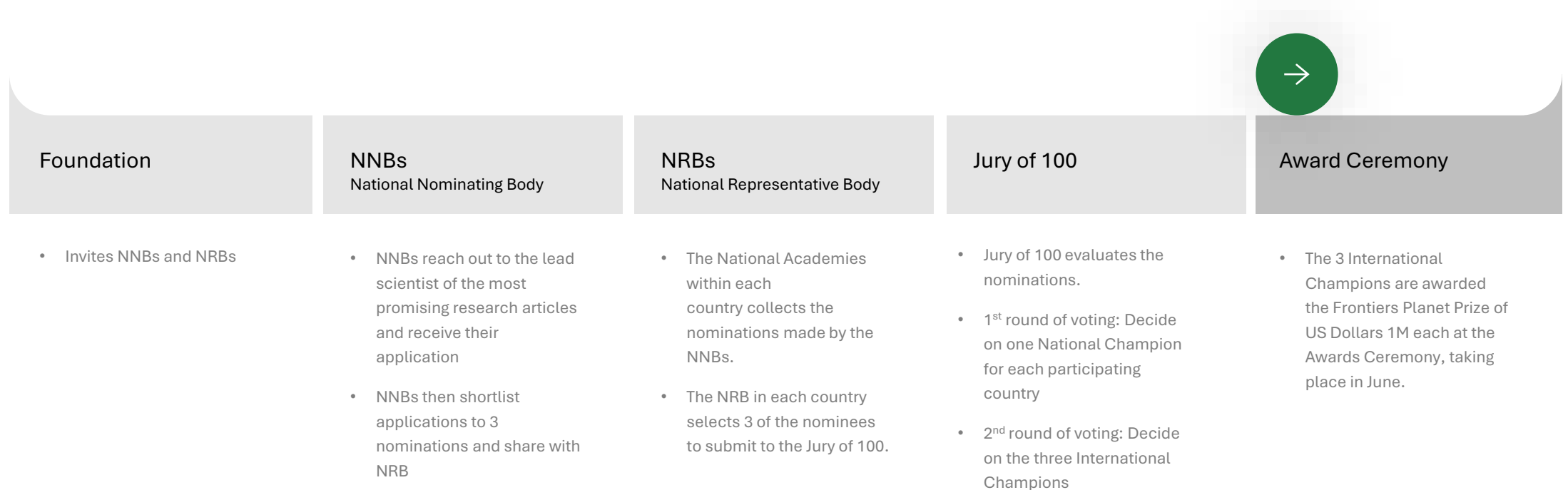
## An “Olympic” race for solutions





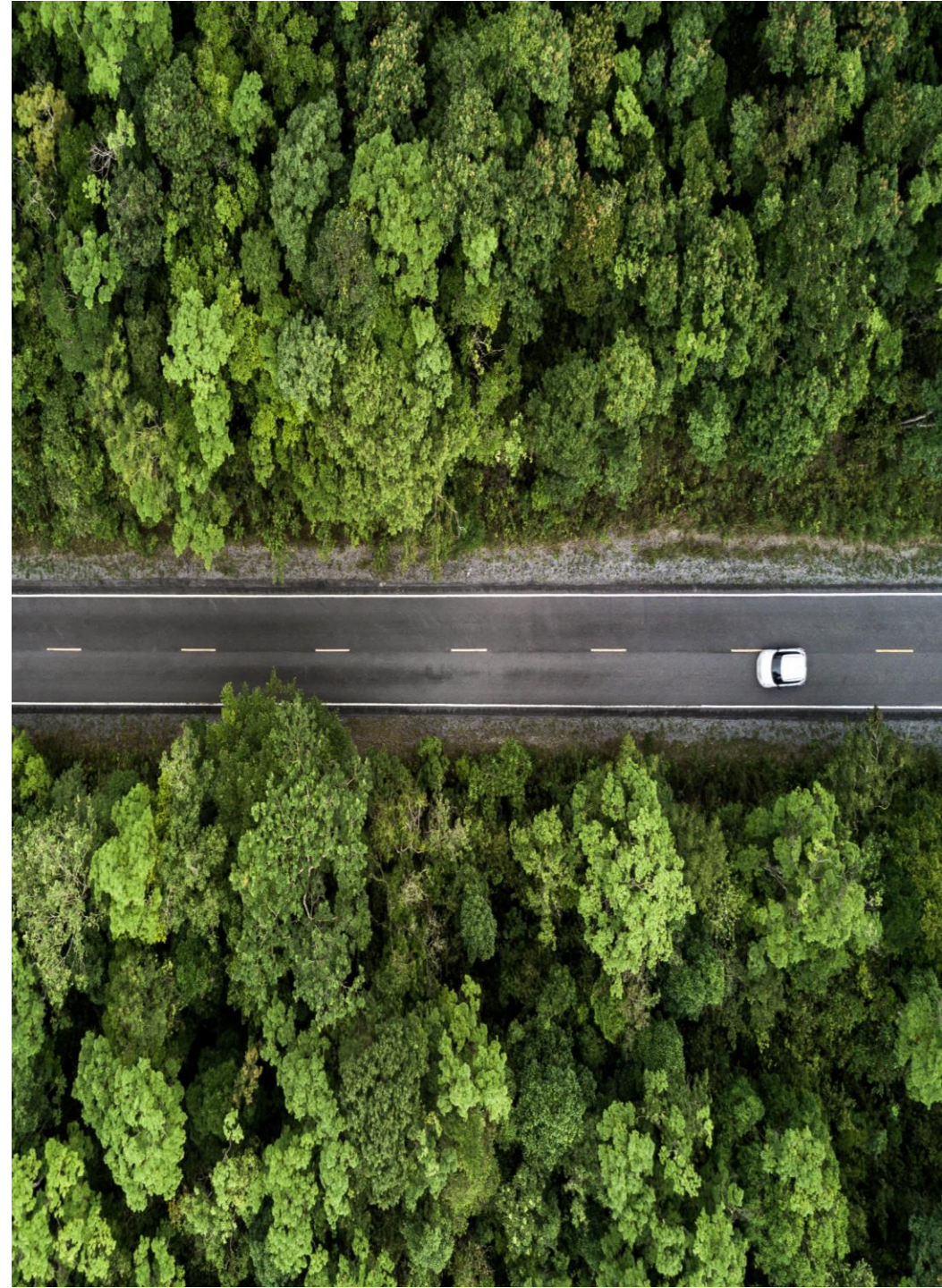
# Mechanics

## An “Olympic” race for solutions



# The criteria

- The Frontiers Planet Prize will be awarded to the best research published in established peer-reviewed scientific journals, with robust peer review and transparent publication procedures.
- Acceptance date of the article: 1<sup>st</sup> November 2023 to 31 October 2025  
scientific excellence is the default principle to participate in the Frontiers Planet Prize
- We welcome breakthrough science across all disciplines on condition it is focused on Planetary Boundaries and presents original research findings or insightful reviews and syntheses .





# The criteria

The Frontiers Planet Prize wants to honor:



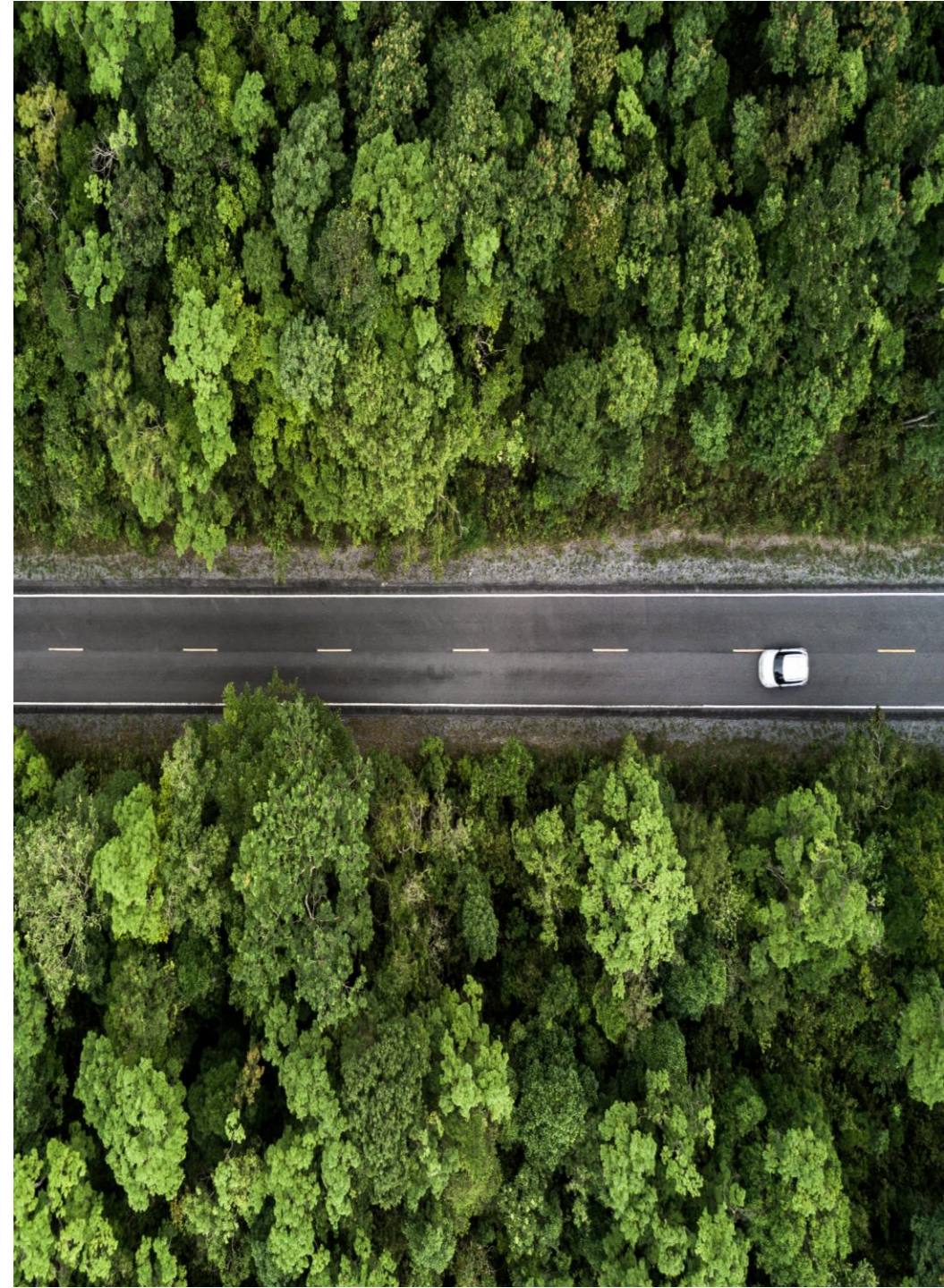
The research outlines actionable solutions or pathways that can be implemented in policies, adapted commercially, or otherwise contribute to keep global development within planetary boundaries.



The research advances the scientific understanding and quantification of planetary boundaries. It explores how planetary boundaries are affected or impact life support systems/the Earth system or investigates the implications of adopting planetary boundaries thinking across disciplines, sectors and activities/applications



The research must connect to several planetary boundaries at the Earth system scale. Research that explores interactions/relations between multiple Planetary Boundaries will be prioritized.





# Transformational science: Breakthrough research from our National Champions



**Turkey**  
**Mustafa**  
**Sahmaran**

Developed a novel chemical process that enhances cement carbonation and offsets its production emissions



**Japan**  
**Jian Feng Ma**

Engineered rice capable of growing in polluted environments



**USA**  
**Edward Kolodziej**

Identified toxic compound in tyres that leaches in rivers and impacts aquatic ecosystems



**South Africa**  
**Petra Holden**

Determined which invasive species should be removed to reboot biodiversity and restore freshwater systems



**China**  
**Baojing Gu**

Reduced ammonia emissions from fertilizer production, which reduces air pollution in cities



# Transformational science: Breakthrough research from our National Champions



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Petra Holden

Determined which invasive species should be removed to reboot biodiversity and restore freshwater systems



**China**  
Baojing Gu

Reduced ammonia emissions from fertilizer production, which reduces air pollution in cities



**Denmark**  
Minik Rosing

Revealed the potential of spreading powdered volcanic rock on agricultural lands to enrich soil nutrients



**Netherlands**  
Paul Behrens

Showed how adoption sustainable dietary practices such as reducing meat consumption, mitigates climate change



**Argentina**  
Pedro Jaureguiberry

Conducted an assessment that showed 60% of biodiversity loss is driven by land use change.

Outputs of the third edition



Dr Rafael Pedro Fernandez  
Instituto Interdisciplinario  
de Ciencias Básicas  
(ICB-CONICET)



Dr Arunima Malik  
The University of Sydney



Prof Dr Günter Blöschl  
Vienna University  
of Technology



Dr Suzanne Tank  
University of Alberta



Prof Xing Yuan  
Institute of Atmospheric  
Physics, Chinese  
Academy of Sciences



Prof Dr Robert Arlinghaus  
Leibniz Institute  
of Freshwater Ecology  
and Inland Fisheries



Dr Uria Alcolombri  
The Hebrew University  
of Jerusalem



Dr Giovanni Forzieri  
University of Florence



Dr Paola Laurino  
Okinawa Institute  
of Science and Technology



Dr Kok Sin Woon  
Xiamen  
University Malaysia



Dr Fabiola S. Sosa-Rodriguez  
Metropolitan  
Autonomous University



Prof Sjak Smulders  
Tilburg University



Dr Sebastian Steibl  
University of Auckland



Dr Nicoletta Makowska-Zawierucha  
Adam Mickiewicz  
University



Prof Carlos Manuel Duarte Quesada  
King Abdullah University  
of Science and Technology



Prof Zahra Kalantari  
KTH Royal Institute  
of Technology



Prof Shabbir Gheewala  
King Mongkut's University  
of Technology Thonburi



Dr Marina Romanello  
University College London



Dr Zia Mehrabi  
University  
of Colorado Boulder





Dr Arunima Malik  
The University  
of Sydney  
Australia



Prof Zahra Kalantari  
KTH Royal Institute  
of Technology  
Sweden



Dr Zia Mehrabi  
University of  
Colorado Boulder  
United States



# The Frontiers Planet Prize: We have achieved a lot



10'000+ participating  
scientists



62 National  
Champions



10 International  
Champions



\$9.6 Million to support  
their research



620 Participating  
universities



25 National  
Academies



6 Strategic Partners



100 Globally  
recognized top  
scientists on  
Jury



560+ Media pickups  
covering the prize



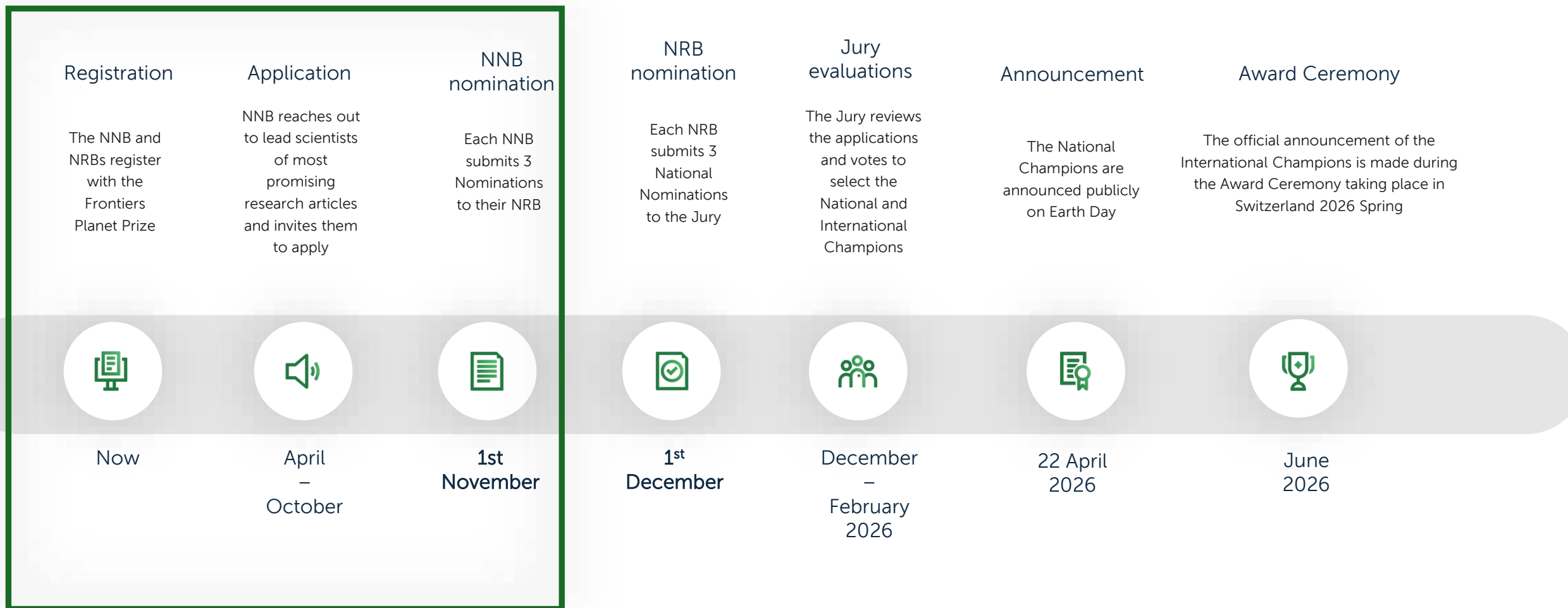
50+ countries with  
media pickup



299 Policy documents citing  
Champion work

# Timeline and Next Steps

# Timeline





# What are the next steps?

## If you represent an institution...

1

Register on our platform to formalize your participation as a National Nominating Body.

2

Nominate the **lead scientists** of the most promising research articles of your institution that have been accepted for publication between 1<sup>st</sup> November 2023 and 31<sup>st</sup> October 2025

### Who is the **lead scientist**?

The lead scientist best represents the research of the published article

In the event that the individual is awarded the International Champion, they will manage the prize money to drive the project forward.

The lead scientist is selected directly by the NNB. Being a lead scientist is not based on the hierarchical position of the author

3

Invite them to apply by filling out the application form attached in the resource hub, also attaching a PDF of the published article by a deadline set by you.

4

Review the applications, select the top three and share with your NRB.



# What are the next steps? If you are a scientist



1

Check if your institution is registered as a National Nominating Body by visiting the [Frontiers Planet Prize website -> nomination partners](#)

2

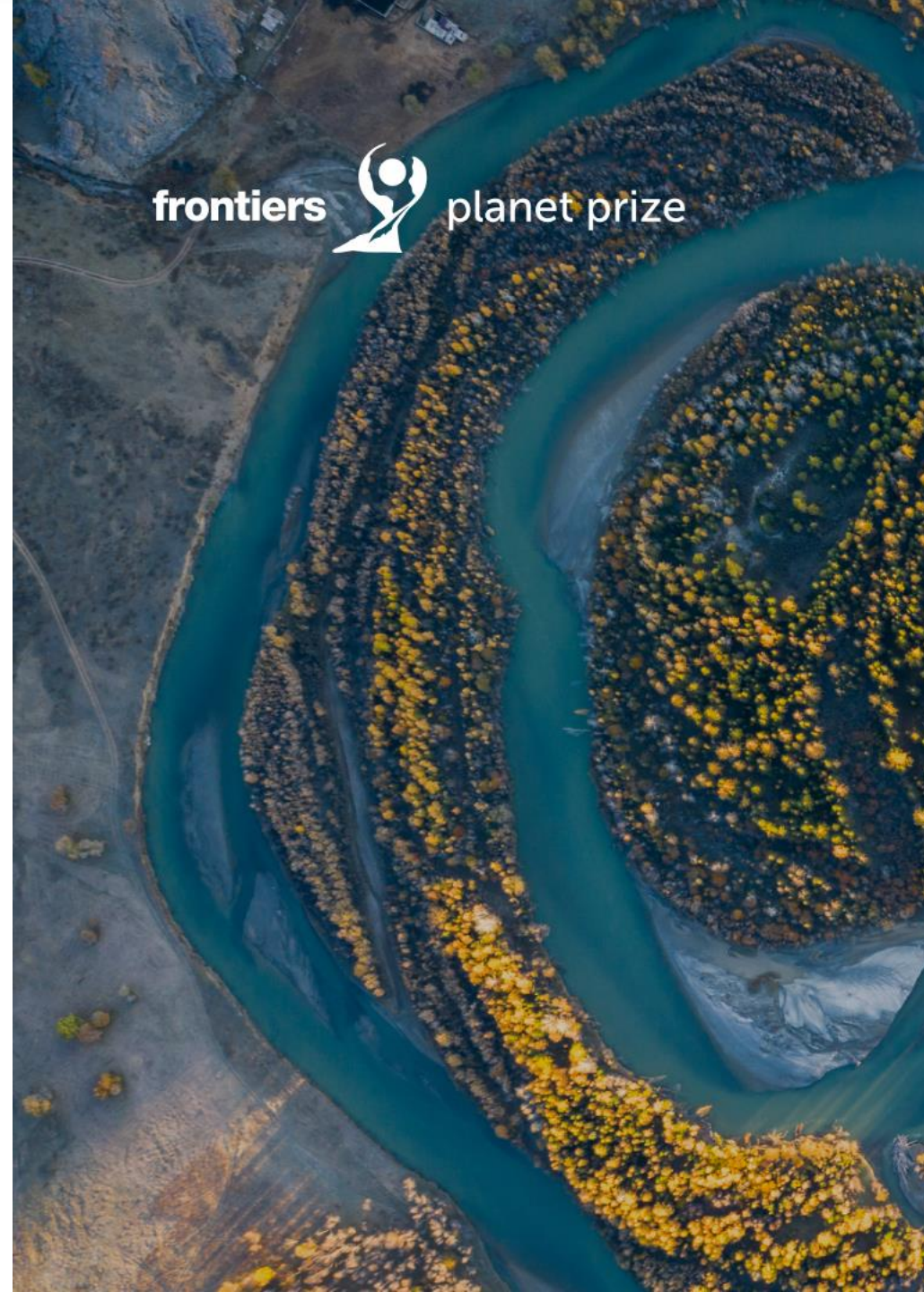
- Should your institution be registered, and you do not know the point of contact for managing awards and prizes, get in touch with [info@frontiersplanetprize.org](mailto:info@frontiersplanetprize.org) and we will direct to you the point of contact.
- Should your institution not be registered, reach out to [info@frontiersplanetprize.org](mailto:info@frontiersplanetprize.org) and we will issue an invitation to have your institution to participate.

3

Once registered, your institution will receive the application form, all information and process for them to be a national nominating body

4

Follow their process to get your application submitted. Note that your institution will be responsible for nominating the top 3 applications they receive, to put forward to their National Representative Body.





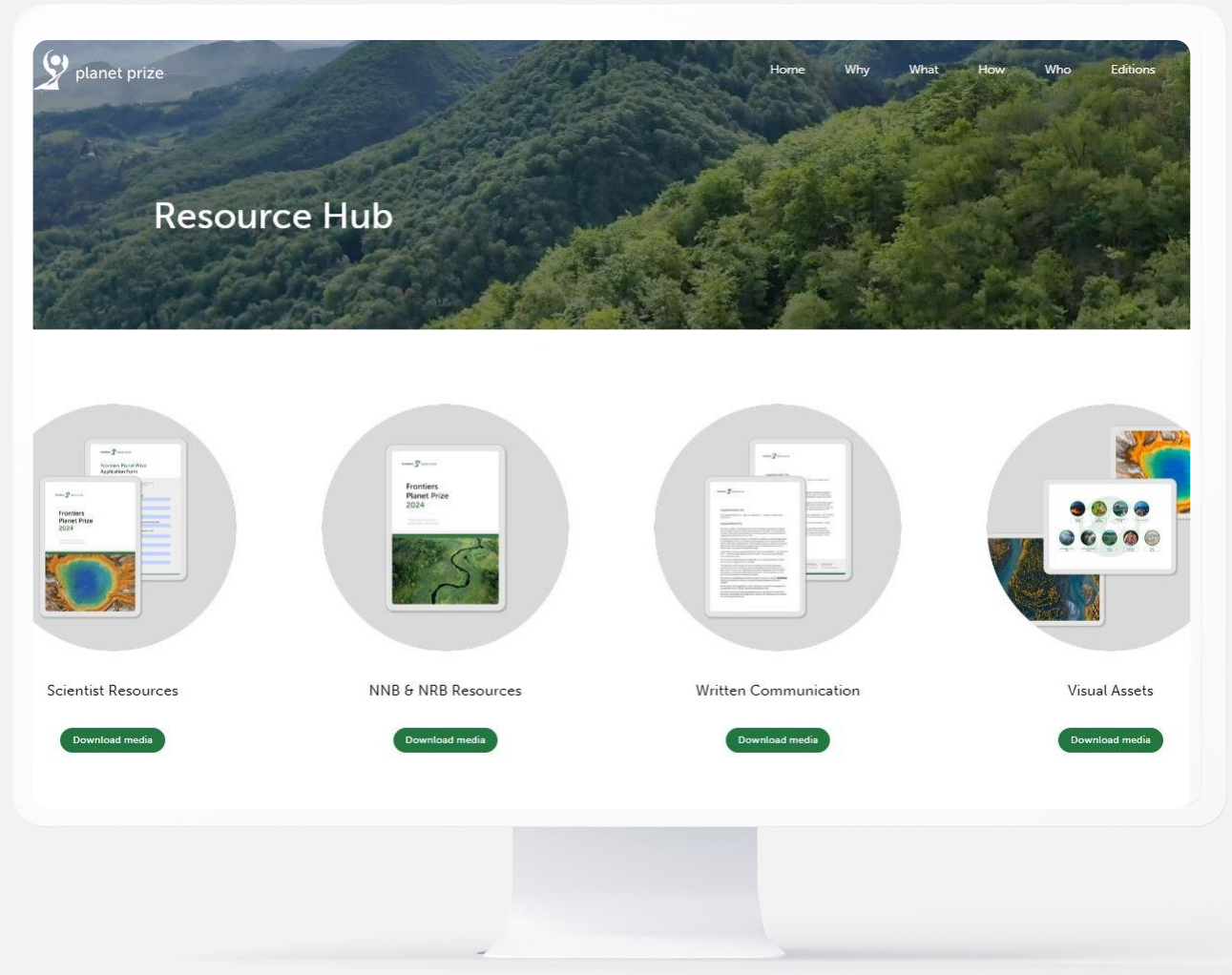
# The Resource Hub

Scientist Resources →

NNB & NRB Resources →

Written Communication →

Visual Assets →



# Why your participation matters:

- The prize collapses the timeline to achieve scientific consensus, allowing the fast take up of transdisciplinary research
- The prize money is used specifically to scale up and amplify the impact of breakthrough research
- The prize is a movement: it mobilizes the academic community and gives science a voice to drive positive change.

The Green Renaissance will not happen without your participation.



The foundation  
facilitates the prize,  
the world of science  
owns it



[linkedin.com/company/frontiers-planet-prize](https://www.linkedin.com/company/frontiers-planet-prize)



[Frontiersplanetprize.org](https://Frontiersplanetprize.org)



Prof Dr Jean-Claude Burgelman  
Director

[jean-claude.burgelman@frontiersplanetprize.org](mailto:jean-claude.burgelman@frontiersplanetprize.org)



Dr Gilbert De Gregorio  
Associate Director

[gilbert.degregorio@frontiersplanetprize.org](mailto:gilbert.degregorio@frontiersplanetprize.org)