



## *Press Release*

July 12, 2023

The Winner of the 2023 (30th) International Cosmos Prize is:

### **Dr. Kristin Shrader-Frechette**

**O'Neill Family Professor Emerita**

**University of Notre Dame, Philosophy, Biological Sciences**

**Dr. Kristin Shrader-Frechette has developed the concept of “environmental justice,” which is essential in realizing a society in which everyone is treated fairly and can live in a healthy environment. She was an early advocate of the concept of “intergenerational equity”, the idea that the environmental problems of future generations are also significant to the current generation.**

On July 12, 2023, The Commemorative Foundation for the International Garden and Greenery Exposition, Osaka, Japan, 1990 (Expo '90 Foundation) (Chairperson: Mr. MITARAI Fujio) selected Dr. Kristin Shrader-Frechette (78), O'Neill Family Professor Emerita, University of Notre Dame, Philosophy, Biological Sciences, as the winner of the 2023 (30th) International Cosmos Prize. The decision to award the prize to Dr. Kristin Shrader-Frechette was reached after considering the recommendations submitted by the International Cosmos Prize Committee (Chairperson: Dr. YAMAGIWA Juichi) and the Screening Committee of Experts (Chairperson: Dr. SHIRAYAMA Yoshihisa).

Dr. Kristin Shrader-Frechette is a researcher who has explored diverse relationships between the environment and humans, and emphasized the importance of “environmental justice” and “intergenerational equity” in the consideration of environmental issues which has had various impacts on society at large. Environmental justice, based on methods of quantitative risk assessment she developed, has become an indispensable concept for realizing a society in which everyone is treated fairly and can live in a healthy environment, and is now a core aspect to be considered when discussing environmental issues in policy making and political manifestos.

The award ceremony will be held in Osaka in the autumn this year.



The photo is at the following URL:

<https://www.expo-cosmos.or.jp/main/cosmos/2023photo.html>

## 1. Focus and scope of research to be awarded

The prize will be awarded for research and work that has achieved excellence and is recognized as contributing to a significant understanding of the relationships among living organisms, the interdependence of life and the global environment, and the common nature integrating these interrelationships. It should be characterized by a global perspective which tries to illuminate the relationships between diverse phenomena, in keeping with the concepts and principle of “The Harmonious Coexistence between Nature and Humankind.”

The following points will be the standards by which the achievements will be evaluated.

- (1) The body of achievements should show an inclusive and integrated methodology and approach, in contrast to analytic and reductive methodologies.
- (2) The achievements must be based on a global perspective. If the focus is on a particular phenomenon or specific area, it must have universal significance and applicability.
- (3) The achievements should offer a long-term vision which leads to further developments, rather than solutions to limited problems.

## 2. Selection Process

### (1) Selection Process

The International Cosmos Prize Screening Committee of Experts met four times between April and June of 2023 in order to evaluate candidates for the prize. After careful deliberations, the winner was selected at the International Cosmos Prize Committee on June 16.

### (2) 2023 International Cosmos Prize Nominees

155 nominations (from 26 countries)

< Breakdown by Year >

Candidates since 2020: 45    Candidates since 2021: 34

Candidates since 2022: 37    Candidates since 2023: 39

< Breakdown by Country >

Japan (40), the United States (39), the United Kingdom (16), Germany (11), Thailand(8) , Brazil(6)  
Australia (5), Canada (4), Belgium(4), Slovakia(3) , the Philippines(3), India(2) , Indonesia(2)  
the Netherlands(2), France(2), Singapore(1), China(1), Kenya(1) ,Israel(1) ,Argentina(1) ,Spain(1)  
South Korea(1) ,Switzerland(1),Taiwan(1),Austria(1) Denmark(1)

※Dual citizenship nominees are counted twice

### Others:

#### (1) Award ceremony

The award ceremony will be held at Sumitomolife Izumi Hall in Chuo-ku, Osaka, on Friday, November 8, 2023.

#### (2) Others

The prizewinner shall be awarded a certificate of merit, a medallion, and a monetary prize of 40 million yen.

### Attached documents:

- Curriculum Vitae                      • Reason for Awarding the Prize
- Comments (on receiving the Prize) by the prizewinner                      • Prizewinners 1993-2022
- The International Cosmos Prize Committee, the Screening Committee of Experts

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# Curriculum Vitae

**Name:** Kristin Shrader-Frechette

**Date of Birth:** 14 September 1944, Kentucky, USA

**Nationality:** USA

**Current Position:**

O'Neill Family Professor Emerita, University of Notre Dame, Philosophy, Biological Sciences

**Professional Preparation:**

1966 B.A. Xavier University, physics  
1967 B.A. (summa cum laude), Edgecliff College, Xavier University, Mathematics  
1972 Ph.D. University of Notre Dame, Philosophy of Science  
1982 Post-doc University of California, Santa Barbara, Economics  
1983 Post-doc University of California, Santa Barbara, Hydrogeology  
1986 Post-doc University of Florida, Biological Sciences

**Appointments:**

1971-1973 Assistant Professor, Edgecliff College, Philosophy  
1973-1982 Professor, University of Louisville, Philosophy, Natural Sciences  
1982-1984 Professor, University of California, Santa Barbara, Philosophy of Science, Environ. Studies  
1984-1987 Professor, University of Florida, Philosophy, Natural Sciences,  
1987-1998 Distinguished Research Professor, University of South Florida, Philosophy, Environ. Sciences  
1998-2019 O'Neill Family Professor, University of Notre Dame, Philosophy, Biological Sciences  
2019-now O'Neill Family Professor Emerita, University of Notre Dame, Philosophy, Biological Sciences

**Select books:**

1. *Tainted: How Philosophy of Science Can Expose Bad Science*  
New York: Oxford University Press, 2014
2. *What Will Work: Fighting Climate Change with Renewable Energy, Not Nuclear Power*  
New York: Oxford University Press, 2011
3. *Taking Action, Saving Lives: Our Duties to Protect Environmental and Public Health*  
New York: Oxford University Press, 2007
4. *Environmental Justice: Creating Equality, Reclaiming Democracy*  
New York: Oxford University Press, 2002  
邦訳: 「環境正義: 平等とデモクラシーの倫理学」 勁草書房, 2022
5. *Technology and Human Values*, coedited with Laura Westra  
Savage, MD: Rowman and Littlefield, 1997

6. *The Ethics of Scientific Research*  
Savage, MD: Rowman and Littlefield, 1994
7. *Method in Ecology: Strategies for Conservation Problems*, coauthored with biologist Earl D. McCoy  
Cambridge: Cambridge University Press, 1993
8. *Burying Uncertainty: Risk and the Case Against Geological Disposal of Nuclear Waste*  
Berkeley: University of California Press, 1993
9. *Policy for Land: Law and Ethics*, coauthored with political scientist Lynton K. Caldwell  
Savage, MD: Rowman and Littlefield, 1993
10. *Expert Judgment in Assessing Radwaste Risks*  
Carson City, Nevada: Nuclear Waste Project Office / US Department of Energy, 1992
11. *Risk and Rationality*  
Berkeley: University of California Press, 1991  
邦訳: 「環境リスクと合理的意思決定—市民参加の哲学」 昭和堂, 2007
12. *Nuclear Energy and Ethics*, edited volume  
Geneva: World Council of Churches, 1991
13. *Risk Analysis and Scientific Method Methodological Ethical Problems with Evaluating Societal Hazards*  
Boston: Kluwer, 1985
14. *Science Policy, Ethics, and Economic Methodology: Some Problems with Technology Assessment and Environmental-Impact Analysis*  
Boston: Kluwer, 1984
15. *Four Methodological Assumptions in Risk-Cost-Benefit Analysis*  
Springfield, Virginia: National Technical Information Service, 1983
16. *Environmental Ethics*  
Pacific Grove, California: Boxwood Press, 1981; second edition, 1991  
邦訳: 「環境の倫理」 晃洋書房, 1993
17. *Nuclear Power and Public Policy: Social and Ethical Problems with Fission Technology*  
Boston: Kluwer, 1980; second edition, 1983

## Reasons for the Award

Dr. Kristin Shrader-Frechette is a researcher who has explored diverse relationships between the environment and humans. She emphasized the importance of “environmental justice” and “intergenerational equity” in the consideration of environmental issues; both concepts have given various impacts on the general public. Particularly, “environmental justice,” in which Dr. Shrader-Frechette has been actively involved, is an indispensable concept in aiming to realize a society where everyone is treated fairly and can live in a healthy environment. This principle is based on the rational and quantitative risk assessment supported by scientific evidences. Nowadays, it is an indispensable aspect to be considered when discussing environmental issues in policy making and political manifestos.

One of the major environmental concerns typified by global climate change is that human impacts will appear not now, but in years to come. In conventional society, these issues have been put off without due discussion, not to speak of solving, on the tacit pretext that their impact is unclear for the current generation. In response, through discussion “Technology, the Environment, and Intergenerational Equity” in *Environmental Ethics*, a book she edited, Dr. Shrader-Frechette theoretically explained that environmental issues of future generations are equally significant to the current generation. In so doing, she introduced the Japanese logic of “*on*” and “*ongaeshi*” (a favor and repayment of a favor), and emphasized the thought that sustainability is implemented through passing to our descendants (the future) the favor of natural environment preservation owing to our ancestors (the past).

In the 1970s and 1980s, there was a deep-rooted tendency to prioritize economic and industrial activities over environmental protection. However, in her book “*Environmental Justice*”, Dr. Shrader-Frechette theoretically defined the concept of “environmental justice” which treats environmental problems in terms of social justice, based on quantitative risk assessment, and provided an academic basis for the importance of social theories and ideological frameworks, all backed by scientific evidence, in response to the excessive bias in environmental issues towards environmental preservation campaigns.

The concepts of intergenerational equity and environmental justice that Dr. Shrader-Frechette advocated have greatly contributed to expanding the general perspective of philosophy, especially in the West. Moreover, the mentioned books written or edited by her, which discussed environmental issues comprehensively, were translated into many languages, including Japanese, and together with her many subsequent academic books these achievements have now been widely accepted and recognized throughout the world.

Dr. Shrader-Frechette has overstepped the boundaries of pulpit philosophy to pick actual issues – equity, fairness, justice – out of society and theorize about them, thereby productively making intellectual travel between theory to real-world problems. Precisely because of the strong ideological basis, her activities for environmental justice have gained support from a wide audience; looking beyond academic efforts, she has also participated in various committees involved in policy making, and won the deep trust of society. Her attitude of bridging ideals and reality into practice sounds a loud alarm against the current trend of overemphasizing practical studies and neglecting humanities like philosophy as “useless.”

This year, the International Cosmos Prize will be awarded for the 30th time. Dr. Shrader-Frechette applied a scientific and philosophical approach of “environmental justice” to the “relationship to life” implied by “coexistence,” the fundamental theme of the Prize. Her efforts include various elements marked by the Prize so far, such as biodiversity, universality, interdependence, and ecosystem services, which make Dr. Shrader-Frechette deserving of the 30th Anniversary Prize.

## Comment by the prizewinner

Thanks to committees for awarding me the International Cosmos Prize for 2023. I hope to continue seeking the same goal as Expo '90 Foundation, The Harmonious Coexistence between Nature and Humankind, by using methods of quantitative risk assessment to expose and help remedy environmental injustice---higher pollution burdens unjustly imposed on children, future generations, minorities, and poor people.

What is most important about this award, however, is what others made possible, not mainly what I have done.

Yes, I earned an undergraduate degree in **mathematics**, then planned to earn a mathematics PhD. Yet after a philosophy professor nominated me, without my knowledge, for a prestigious Woodrow Wilson doctoral fellowship, I could not graciously refuse this award. Thus I earned my PhD in **philosophy of science**, analysis of scientific methods. My doctoral dissertation assessed modelling in information theory, a branch of probability and statistics.

Yes, the US National Science Foundation awarded me three successive, competitive post-docs. The first, in **economics**, trained me in methods of quantitative risk assessment and risk-cost benefit assessment, so as to better assess environmental impacts. The second post-doc, in **hydrogeology**, helped me understand underground-transport models of stored radioactive and toxic waste. During a third post-doc, in **biological sciences**, I spent three years investigating the human-health, epidemiological, and ecological impacts of hazardous pollution.

Yes, in 1980 I wrote (what appears to be) the first book and article on “ecological justice,” now called environmental justice. I exposed the heavier pollution and health burdens that children, future generations, and near-reactor residents bear because of nuclear energy and radioactive waste.

Yes, by 1985, all over the world I was helping to expose “ecological injustice,” or environmental injustice, and to defend quantitative risk assessment (QRA) as the scientific technique best able to do so. By 1989 I was making scores of quick, one-suitcase trips. I recall one rapid 1989 trip that took me first to Sweden, to evaluate its planned permanent geological storage of radioactive waste; then to Italy to defend QRA as best able to expose environmental injustices; and finally to Congo, to reveal health harm from Africans’ accepting hazardous wastes from developed nations and to urge them to stop these imports, a result finally achieved by the 1991 Bamako Convention.

Yes, during most of my career, I held joint appointments in philosophy, biological sciences, and environmental sciences. I wrote 17 books, mostly on mathematical, biological, economic, and hydrogeological methods and on quantitative risk assessment of environmental risks. My work has been translated into and published in 13 languages.

However, what is most important is not these accomplishments, but what I did not do. I never merited parents who sacrificed, so as to give us a superior education. I never merited a courageous mother who showed me how to be a voice for society’s voiceless. I never merited my Black nonbiological grandmother, Catherine Jackman, a person who faced daily injustice from nearly all white people around her, and yet who—with grace and love—raised my white mother as her own beloved child because my invalid biological grandmother and struggling grandfather could not do so. I never merited brilliant secondary-school teachers who nurtured my love of mathematicians and physics. I never merited French and German ancestors who left their homeland to give their descendants a better life.

Yet without hundreds of such life-giving people, bestowing these immeasurable gifts that the Japanese call “on,” I would not be here today. I dedicate this award to them, especially to Catherine Jackman and to my mother, and I pledge to continue this “on” for future generations.

## PRIZEWINNERS 1993-2022

**1993 Sir Ghillean Prance**

Director, Royal Botanic Gardens, Kew, U.K.

An authority on tropical plants centering on those of the Amazon basin of South America, Dr. Prance advocates his Flora-on-the-Earth Project to establish a comprehensive record of the earth's vegetation in the form of a database.

**1994 Dr. Jacques François Barrau (deceased)**

Professor, Paris National Museum of Natural History, France

Dr. Barrau has conducted ethnobiological studies on nature and the life styles of people in the Pacific Ocean. His results have afforded unique insights into the relationship between human beings and food from a global perspective.

**1995 Dr. KIRA Tatu (deceased)**

Professor Emeritus, Osaka City University, Japan

On the basis of his quantitative research on plants' organic production, Dr. Kira has established "Production Ecology". He has also played a leading role in conducting field studies of the ecosystem in tropical rainforests in Southeast Asia.

**1996 Dr. George Beals Schaller**

Director of Science, the Wildlife Conservation Society, U.S.A.

Dr. Schaller has been conducting field research on the ecology and behavior of various wild animals in all parts of the world, and has written many books including "The Mountain Gorilla" and "The Last Panda."

**1997 Dr. Richard Dawkins**

Professor, Oxford University, U.K.

Dr. Dawkins totally reversed the conventional view of biology with a bold hypothesis he put forward in his 1976 book. He continues to present new views.

**1998 Dr. Jared Mason Diamond**

Professor, University of California at Los Angeles, U.S.A.

Dr. Diamond has made remarkable achievements in physiology. He has been organizing field expeditions to New Guinea and has employed the results of this fieldwork to restructure his unique studies of the evolution of human societies.

**1999 Dr. Wu Zheng-Yi (deceased)**

Professor and Director Emeritus, Kunming Institute of Botany, Chinese Academy of Sciences, China

Dr. Wu is a representative botanist of China. He edited "Flora of China" which describes all known plant species in China.

**2000 Sir David Attenborough**

Producer, Naturalist, Zoologist, U.K.

Sir David is a pioneer of wildlife documentary films. With his excellent films of various creatures or plants, he has told many people throughout the world about the nature of life for more than fifty years since joined the BBC.

**2001 Prof. Anne Whiston Spirn**

Professor, Massachusetts Institute of Technology, U.S.A.

Based on the principle, "Cities must not conflict with nature, it is possible to build cities that exists as part of nature", she proposes measures to develop cities while maintaining harmony with nature.

**2002 The Charles Darwin Research Station**

The Charles Darwin Research Station is a biological research center established in 1964 by the international NGO/NPO Charles Darwin Foundation in the Galapagos Islands of Ecuador.

The Station has made remarkable achievement in research and protection of the numerous indigenous species of the Island, including elephant tortoises and marine iguanas.

**2003 Dr. Peter Hamilton Raven**

Director, Missouri Botanical Garden, U.S.A.

Dr. Raven is a representative botanist of the U.S., and international pioneer in advocating for the conservation of global biodiversity. He has given his approach toward issues concerning life on earth from a global viewpoint and his significant contributions toward promoting the co-existence of nature and human beings in both academic and practical terms.

**2004 Prof. Julia Carabias Lillo**

Professor, National Autonomous University of Mexico, Mexico

Professor Carabias has always considered global environmental issues from the perspective of developing countries. She has achieved excellent results in resolving difficult challenges under different conditions, through the implementation of programs based on thorough fieldwork with a multidisciplinary approach.

**2005 Dr. Daniel Pauly**

Professor and Director, Fisheries Centre, University of British Columbia, Canada

Pursuing his comprehensive studies of the relationship between fishing and marine ecosystem, Dr. Pauly has made outstanding achievements in the field of research into marine ecosystems and resources, including the development of scientific models to enable both marine ecosystem conservation and sustainable resource use of fisheries.

**2006 Dr. Raman Sukumar**

Professor, Centre for Ecological Sciences, Indian Institute of Science, India

A strong advocate of preserving biodiversity and the environment, Dr. Sukumar has done pioneering research on the ecological relationship between elephants and humans, and on resolving the conflict between them, making him an internationally recognized expert on the coexistence of wildlife and humans.

**2007 Dr. Georgina Mary Mace (deceased)**

Professor of Conservation Science and Director of NERC Centre for Population Biology, Imperial College, London, U.K.

Dr. Mace played a significant role in the creation of scientific criteria for the identification and classification of threatened species. She has also contributed to the conservation of species and biodiversity.

**2008 Dr. Phan Nguyen Hong**

Professor Emeritus, Hanoi National University of Education, Vietnam

Dr. Phan has been involved in comprehensive scientific research in Vietnam, where war and overdevelopment have had a devastating impact on its mangrove ecosystem. He has made a major contribution to the restoration of the mangrove forests.

**2009 Dr. Gretchen Cara Daily**

Professor, Stanford University, U.S.A.

Dr. Daily has provided us with a comprehensive picture of the value of biodiversity-based ecosystem services, upon which human society is dependent. She has made a vital contribution to international initiatives such as the U.N. Millennium Ecosystem Assessment, and played a leading role in launching the "Natural Capital Project," which is a result of the fusion of ecology and economics, in order to promote the sustainable utilization of natural capital.

**2010 Dr. Estella Bergere Leopold**

Professor Emeritus, University of Washington, U.S.A.

Dr. Leopold has made tremendous achievements by continuing and further developing the Land Ethic, which was initiated by her father, Aldo Leopold (1887-1948), as well as by disseminating the idea to many places in the United States. She is still pursuing activities that weave the Land Ethic into the fabric of people's lives and society.

**2011 Scientific Steering Committee of the Census of Marine Life**

The Scientific Steering Committee of the Census of Marine Life provided overall governance to the Census, a grand global project. The objective of the Census was to survey and analyze changes from past to present in marine life biodiversity, distribution and abundance, and to compile the resultant data into a comprehensive database called the "Ocean Biogeographic Information System" to be used in forecasting the future of marine life.

**2012 Dr. Edward Osborne Wilson (deceased)**

Pellegrino University Research Professor, Emeritus, Harvard University, U.S.A.

Dr. Wilson has accomplished outstanding achievements in his research into the natural history of ants and ethology. He has focused his scientific perspective and experience on helping to illuminate the human circumstance, including human origins, human nature and human interactions. Dr. Wilson has also been active in practicing biodiversity conservation and environmental education.

**2013 Dr. Robert Treat Paine (deceased)**

Professor emeritus of Zoology, University of Washington, U.S.A.

Dr. Paine has demonstrated, through explicit field experiments, that predators play essential roles in the stable maintenance of biotic communities. He proposed the concept of the keystone species, which plays a crucial role in maintaining the structure of an ecological community. He has had great impact not only on ecology, but also on conservation biology, as well as on the general public's understanding of biodiversity.

**2014 Dr. Philippe Descola**

Professor, the Collège de France, France

Dr. Descola, a distinguished anthropologist, has conducted rigorous fieldwork among the indigenous Achuar people living in Amazonia, South America, highlighting their view of nature and activities in interacting with the natural environment. On the basis of his findings, Dr. Descola has developed a philosophical concept and proposed the "anthropology of nature," which considers nature and culture in an integrated manner.

**2015 Dr. Johan Rockström**

Executive Director, Stockholm Resilience Center, Sweden

Dr. Rockström cautioned that we have reached a saturation point in terms of human pressures on the Earth System, and that if we let these anthropogenic pressures continue increasing to cross the thresholds or tipping points defined as "planetary boundaries," there is a risk of irreversible and abrupt environmental change.

**2016 Dr. IWATSUKI Kunio**

Professor Emeritus, Tokyo University, Japan

Dr. IWATSUKI has continually pursued the goal of biodiversity, and developed plant systematics in an inclusive and multifaceted manner, by adopting not only traditional methodologies but also molecular phylogenetic techniques. He advocated the importance of an integrated understanding of biological classification including phylogenetic systematics. Dr. IWATSUKI has also clarified that this approach is the essential principle which supports the abundance of life forms and harmonious coexistence between people and nature.

**2017 Dr. Jane Goodall**

Founder, Jane Goodall Institute, UK

Dr. Goodall has been studying wild chimpanzees since 1960 so as to paint a fuller picture of chimpanzees. She has conducted afforestation programs to provide habitats for chimpanzees, and an environmental educational project. She began Roots & Shoots, environmental learning program by young people. More than 150,000 groups are actively working in 99 countries under this program.

**2018 Dr. Augustin Berque**

Director of studies at the EHESS (École des Hautes Études en Sciences Sociales), France

Profoundly inspired by Fūdo, authored by the Japanese philosopher WATSUJI Tetsurō, and by further elaborating, deepening and evolving WATSUJI's concept of Fūdo, Dr. Berque organized his own thinking about landscapes and scenery, so as to develop a new academic discipline called "mésologie." Moreover, based on the theoretical results of mésologie, he proposed a theory about the subjecthood of nature, which holds that nature has subjectivity, while critically overcoming anthropocentrism in the nature-culture dualism and environmental ethics.

**2019 Prof. Stuart L. Pimm**

Doris Duke Professor of Conservation Ecology Nicholas School of the Environment and Earth Science, Duke University, U.S.A.

Professor Stuart L. Pimm has established the theoretical basis for understanding the complexities of food webs, the speed of species extinction and other such factors critical to the conservation of ecological habitats worldwide. He has established the non-profit foundation to take this work on conservation science into practical application in the field by supporting local groups in their habitat conservation activities and directing biodiversity conservation policy formulation based on scientific foundations. Prof. Pimm's contributions through this marriage of theory and practice in the field of habitat and species preservation are most impressive.

**2021 Dr. Peter Bellwood**

Emeritus Professor, Australian National University, Australia

He proposes the "early farming dispersal hypothesis" based on interdisciplinary research in archaeology, linguistics, and human physiology clarifying the agricultural origins and the process of early farmers' migration and dispersal. At the same time, through this research, he has investigated the history of "The Harmonious Coexistence between Nature and Humankind", from a holistic perspective.

**2022 Dr. Felicia Keesing**

Professor of Biology, Bard College, U.S.A

Dr. Keesing clarified the relationship between the biodiversity of natural ecosystems and the risk that zoonotic pathogens may be transmitted to human society through her practical research, and provided scientific suggestions for thinking about what The Harmonious Coexistence between Nature and Humankind should be like in the post-COVID-19 era.

## The International Cosmos Prize Committee

2023.4

Position	Name	Specialty	Official Title
Chairperson	Dr. YAMAGIWA Juichi	Anthropology, Primateology	Director General, Research Institute for Humanity and Nature
Vice Chairperson	Dr. NAKANISHI Tomoko	Radioplant physiology	Professor Emeritus, The University of Tokyo
Member	Dr. AKIMICHI Tomoya	Ecological anthropology, Ethno-biology	Director General, Fujisan World Heritage Center
Member	Dr. ASASHIMA Makoto	Developmental biology	Research Professor, Teikyo University
Member	Dr. IKEUCHI Satoru	Astronomy	Professor Emeritus, The Graduate University for Advanced Studies
Member	Dr. SHIRAYAMA Yoshihisa	Marine biology	Professor Emeritus, Kyoto University
Member	Dr. NISHIZAWA Naoko	Plant molecular biology	President, Ishikawa Prefectural University
Member	Dr. HAYASHI Yoshihiro	Animal science and resource	Professor Emeritus, The University of Tokyo
Member	Dr. YOKOHARI Makoto	Landscape and environmental science	Professor, School of Engineering, The University of Tokyo
Member	Dr. WASHITANI Izumi	Ecology, Conservation ecology	Professor Emeritus, The University of Tokyo
Member	Dr. WADA Eitaro	Biogeochemistry	Professor Emeritus, Kyoto University

Position	Name	Specialty	Official Title
Advisor	Dr. IWATSUKI Kunio	Systematic botany	Professor Emeritus, The University of Tokyo
Advisor	Dr. OIKE Kazuo	Geoscience	Chairman and President, University of Shizuoka
Advisor	Dr. KISHIMOTO Tadamitsu	Immunology	Project Professor, Immunology Frontier Research Center, Osaka University
Advisor	Dr. NAKAMURA Keiko	Biohistory	Honorary Director, Biohistory Research Hall

## The International Cosmos Prize Screening Committee of Experts

2023.4

Position	Name	Specialty	Official Title
Chairperson	Dr. SHIRAYAMA Yoshihisa	Marine biology	Professor Emeritus, Kyoto University
Vice Chairperson	Dr. IKEYA Kazunobu	Environmental anthropology	Professor, National Museum of Ethnology
Member	Dr. OKI Taikan	Global Hydrological System	Professor, School of Engineering, The University of Tokyo
Member	Dr. Monte Cassim	Environmental science	President, Akita International University
Member	Dr. SAKURA Osamu	Science and technology studies	Professor, Interfaculty Initiative in Information Studies, The University of Tokyo
Member	Ms. TAKAMURA Yukari	International law, Environmental law	Professor, Institute for Future Initiatives
Member	Ms. TSUJI Atsuko	Science journalist	Project Professor, Chubu University
Member	Dr. FUKAMACHI Katsue	Landscape and Environmental science	Associate Professor, Graduate School of Global Environmental Studies (GSGES), Kyoto University
Member	Dr. YUMOTO Takakazu	Plant Ecology	Professor Emeritus, Kyoto University
Member	Dr. YOKOYAMA Jun	Systematic botany	Professor, Faculty of Science, Yamagata University