

FOR IMMEDIATE RELEASE June 19, 2024

2024 BLUE PLANET PRIZE: ANNOUNCEMENT OF PRIZE LAUREATES

This year marks the 33rd awarding of the Blue Planet Prize, the international environmental award sponsored by the Asahi Glass Foundation, chaired by Takuya Shimamura. Every year, the Foundation selects two recipients, individuals or organizations who have made significant contributions to the resolution of global environmental problems. The Board of Directors has selected the following 2024 Blue Planet Prize laureates.

1. <u>Professor Robert Costanza (USA & Australia)</u> born on September 14, 1950, in the United States Ecological Economics at the Institute for Global Prosperity, University College London



In a groundbreaking 1997 paper, Professor Costanza and colleagues demonstrated, for the first time, that the ecosystem services provided by nature to humans far exceed the economic value of the world's GDP at that time. This work brought global attention to the previously understated importance of ecosystem services. As a co-founder of ecological economics, a new field of study that recognizes that the economy is embedded in society and a finite biosphere, Professor Costanza actively advocates for an ecologically sustainable, wellbeing society.

2. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Established on April 21, 2012, IPBES secretariat: Bonn (Germany)



IPBES is the leading global authority on the state of knowledge and science about biodiversity, ecosystem services and nature's contributions to people. Their landmark Reports facilitate better science-informed policy and action across scales, sectors, and knowledge systems. As growing numbers of companies also start to evaluate, disclose and improve their impact on the environment, businesses are also using the IPBES Reports to help shape their corporate sustainability strategies and ESG (environmental, social, and governance) activities.

Each recipient is presented with a certificate of merit, a commemorative trophy, and 500,000 US dollars in prize money.

- The Award Ceremony is scheduled on Wednesday, October 23, 2024, at Tokyo Kaikan. Commemorative lectures will be given on October 24 and 26, 2024, at the University of Tokyo and at Kyoto University, respectively.
- This press release and the photo of each recipient will be published at 11 a.m. on Wednesday June 19 on the website of the Asahi Glass Foundation (www.af-info.or.jp/en).

THE ASAHI GLASS FOUNDATION

Statements from the Award Recipients upon Notification of Selection

Prof. Robert Constanza

It is indeed a great honor and privilege to be named the winner of the 2024 Blue Planet Prize. The Asahi Glass Foundation has supported the work of many extraordinary individuals and groups, including many of my colleagues, in our shared quest to create a better world and I am overjoyed to join their ranks.

My work focuses on understanding our planet as an integrated, complex system. It recognizes that the economy is embedded in society and the rest of nature, and it cannot be understood or managed effectively without this integrated perspective. That is what the transdisciplinary field of ecological economics, which I helped to create, has been about. In particular, I have worked on understanding, modelling, and valuing natural capital and the ecosystem services it provides and have shown that their contributions to sustainable human wellbeing far exceeds the contributions of marketed goods and services as measured by GDP. I have also worked to understand and measure the integrated wellbeing of humans and the rest of nature and to create a shared vision of a world that can provide sustainable wellbeing and motivate the changes needed to get there.

Being awarded the Blue Planet Prize will enable me to continue my work in collaboration with the many people around the world who all strive for a better, more fair, prosperous, and sustainable future.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

We are very honoured by the selection of IPBES as one of the winners of the 2024 Blue Planet Prize. All credit for this prestigious award goes to our thousands of leading scientists and knowledge-holders, from all parts of the world, who so generously volunteer their expertise, time, and enthusiasm to our work. We also thank our 146 member States – for their unflagging support, and the broader IPBES stakeholder community, whose engagement remains so crucial to the success of our mission.

This accolade is global recognition of the importance of safeguarding and restoring biodiversity and nature's contributions to people – through better science, evidence, and options for action.

We offer our deep gratitude to the Asahi Glass Foundation for this honour and for their support to our efforts. Inspired by this distinction, we will continue our efforts to strengthen science and policy for people and nature.

Report on the Selection Process (2024 Blue Planet Prize)

Nomination forms were sent to approximately 503 nominators in Japan and 847 overseas. By the deadline, we received a total of 142 nominations. The top three fields represented by the candidates, in order of number, were ecology (39), environmental economics and policy making (25), atmospheric and earth sciences (22). The candidates represented 39 countries.

The results of the Selection Committee were examined by the Presentation Committee. Then the Board of Directors formally decided to award the Prize to Professor Robert Costanza and IPBES. The selection committee chair observed, "This year, both recipients are recognized for their work related to ecosystems. As it happens, this was coincidental, but we believe it may reflect the growing global sense of urgency about ecosystems, similar to the issue of climate change."

Laurea	tes (1992-2023)		
1992	Syukuro Manabe (USA) International Institute for Environment and Development (UK)	2008	Claude Lorius (France) José Goldemberg (Brazil)
1993	Charles D. Keeling (USA) IUCN—The World Conservation Union (headquartered in Switzerland)	2009	Hirofumi Uzawa (Japan) Nicholas Stern (UK)
1994	Eugen Seibold (Germany) Lester R. Brown (USA)	2010	James Hansen (USA) Robert Watson (UK)
1995	Bert Bolin (Sweden) Maurice F. Strong (Canada)	2011	Jane Lubchenco (USA) Barefoot College (India)
1996	Wallace S. Broecker (USA) The M.S. Swaminathan Research Foundation (India)	2012	William E. Rees (Canada) and Mathis Wackernagel (Switzerland) Thomas E. Lovejoy (USA)
1997	James E. Lovelock (UK) Conservation International (head-quartered in the USA)	2013	Taroh Matsuno (Japan) Daniel Sperling (USA)
1998	Mikhail I. Budyko (Russia) David R. Brower (USA)	2014	Herman Daly (USA) Daniel H. Janzen (USA) and Instituto Nacional de Biodiversidad (INBio)
1999	Paul R. Ehrlich (USA) Qu Geping (China)	2015	Partha Dasgupta (UK) Jeffrey D. Sachs (USA)
2000	Theo Colborn (USA) Karl-Henrik Robèrt (Sweden)	2016	Pavan Sukhdev (India) Markus Borner (Switzerland)
2001	Robert May (Australia) Norman Myers (UK)	2017	Hans J. Schellnhuber (Germany) Gretchen C. Daily (USA)
2002	Harold A. Mooney (USA) J. Gustave Speth (USA)	2018	Brian Walker (Australia) Malin Falkenmark (Sweden)
2003	Gene E. Likens (USA) and F. Herbert Bormann (USA) Vo Quy (Vietnam)	2019	Eric Lambin (Belgium) Jared Diamond (USA)
2004	Susan Solomon (USA) Gro Harlem Brundtland (Norway)	2020	David Tilman (USA) Simon Stuart (UK)
2005	Nicholas Shackleton (UK) Gordon Hisashi Sato (USA)	2021	Veerabhadran Ramanathan (USA) Mohan Munasinghe (Sri Lanka)
2006	Akira Miyawaki (Japan) Emil Salim (Indonesia)	2022	Jigme Singye Wangchuck, the Fourth King of Bhutan Stephen Carpenter (USA)
2007	Joseph L. Sax (USA) Amory B. Lovins (USA)	2023	Richard Thompson (UK), Tamara Galloway (UK), and Penelope Lindeque (UK) Debarati Guha-Sapir (Belgium)

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Supplementary Information Profiles of the 2024 Blue Planet Prize Laureates

Professor Robert Costanza

Major research achievements and activities

Professor Robert Costanza is an American-born ecological economist. He is known as one of the founders of ecological economics¹, which recognizes that the human economy is part of a finite biosphere. He established the field along with Herman Daly, an American economist and a 2014 Blue Planet Prize laureate, who pioneered the concept of a steady-state economy². In 1989, these two played a central role in founding the International Society for Ecological Economics (ISEE), with Professor Costanza serving as its inaugural president. and the academic journal *Ecological Economics*, with Professor Costanza as its founding editor-in-chief.

In his groundbreaking paper "The value of the world's ecosystem services and natural capital," published in the science journal *Nature* in 1997, Professor Costanza and colleagues conducted the first systematic assessment of the economic value of 17 ecosystem services⁴ (water supply, climate regulation, cultural services, etc.) across 16 biomes³ (open ocean, tropical forest, cropland, etc.). His research revealed that the global economic value of these services averaged US\$33 trillion per year in 1995 (equivalent to US\$46 trillion in 2007), with the majority of this value existing outside the market system. Notably, this figure exceeded the global GDP at the time (approximately US\$18 trillion), drawing widespread attention to the significance of ecosystem services. Professor Costanza's study highlighted the critical role these services play in supporting human economic activity and well-being, both directly and indirectly. He argued that these services form a part of the overall economic value of the planet, but that policy decisions often undervalue ecosystem services due, in part, to their lack of traditional market valuation.

In 2014, Professor Costanza and colleagues published a follow-up study in the journal *Global Environmental Change* titled "Changes in the global value of ecosystem services." The study re-evaluated ecosystem services and their economic value using the same methodology employed in the 1997 paper. The results showed that the estimated total global value of ecosystem services in 2011 was US\$125 trillion/yr (in 2007 dollars). Based on these estimates, the annual loss of ecosystem services due to land use change between 1997 and 2011 was estimated to be US\$20.2 trillion/yr (in 2007 dollars). The study also emphasized that many ecosystem services should be considered public goods or common pool resources, and that conventional markets are often not suitable for their management. Professor Costanza argued for the need to develop new shared common asset institutions to better account for the value of ecosystem services.

Professor Costanza is a prolific author and scholar with over 600 scientific publications and 30 books to his name. His work has been cited over 160,000 times on Google Scholar with an h-index of 141, a testament to his significant contributions to the fields of ecological economics, environmental science, and beyond. He is the founding editor-in-chief of the journal *Ecological Economics* and currently serves on the editorial boards of ten other international journals. Professor Costanza has held distinguished academic positions, including professorships at Louisiana State University, University of Maryland, University of Vermont, Portland State University, and the Australian National University, where he also held a Vice-Chancellor's chair in public policy. Currently, he is a Professor of Ecological Economics at the Institute for Global Prosperity at University College London (UCL). He is a Fellow of the Academy of Social Sciences in Australia and the

Royal Society of Arts (UK), a full member of the Club of Rome and an ambassador of the Wellbeing Economy Alliance. He continues to conduct research on ecosystem service valuation, integrated modelling of socioecological systems, and indicators of societal and ecosystem wellbeing. He also makes policy recommendations for inclusive and sustainable wellbeing.

Academic and Career Background

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2022-Present	Professor of Ecological Economics at the Institute for Global Prosperity (IGP),
	University College London, UK
2013-2022	Professor and Vice Chancellor's Chair in Public Policy, Crawford School of Public
	Policy, Australian National University, Australia
2010-2012	Distinguished University Professor of Sustainability, Institute for Sustainable
	Solutions, Portland State University, Portland, USA
2009-Present	Senior Research Fellow, Stockholm Resilience Center, Stockholm, Sweden
2002-2010	Professor and Founding Director, Gund Institute of Ecological Economics,
	Rubenstein School of Environment and Natural Resources, The University of
	Vermont, USA
1988-2002	Center for Environmental Science and College of Life Sciences, University of
	Maryland, USA
1984-1988	Associate Professor, Center for Wetland Resources, Louisiana State University, USA
1979	Ph.D. University of Florida, USA, (Systems Ecology, Environmental Engineering
	Sciences, minor in Economics)
1974	MA University of Florida, USA, (Architecture/Urban and Regional Planning)
1973	BA (with honors) University of Florida, USA, (Architecture)

Notes:

1. Ecological economics

Ecological economics is a transdisciplinary field that combines ecological and economic concepts and methodologies with other disciplines and stakeholders to study the interrelationships between ecosystems and economic systems in the broadest sense. It views economic activities within the limits of nature in a whole systems context and values ecosystem services and biodiversity as key contributors to sustainable human wellbeing. It shares some methods and goals with environmental economics, but takes a broader more 'ecological' or whole systems perspective that recognizes that unlimited material growth on a finite planet is not sustainable or desirable and prioritizes the coexistence of a healthy environment and a sustainable wellbeing economy.

2. Steady-state economy

A steady-state economy is an economic system that aims for a sustainable society without prioritizing economic growth, while maintaining a constant population, capital stock, and resource and energy consumption. In contrast to the traditional economic growth model, which raises concerns about environmental degradation and resource depletion, steady-state economy aims to improve people's living standards through efficiency gains and technological innovation while keeping the scale of economic activity within safe planetary boundaries.

3. 16 biomes

A biome is a large-scale ecological unit on Earth with distinct biological communities and vegetation types that are adapted to specific climatic conditions and topography. The economic value was estimated for the 16 biomes shown below in the paper:

Open ocean, Estuaries, Seagrass/algae bed, Coral reefs, Shelf, Tropical forest, Temperate/boreal forest, Grass/rangelands, Tidal marsh/mangroves, Swamps/floodplains, Lakes/rivers, Desert, Tundra, Ice/rock, Cropland, and Urban

Among the 16 biomes studied, the top three biomes with the highest economic value were the open ocean (US\$8.3 trillion), shelf (US\$4.2 trillion), and estuaries (US\$4.1 trillion), compared to the average global value of annual ecosystem services of US\$33.2 trillion.

4. 17 Ecosystem services

- 1 Gas regulation: Regulation of atmospheric chemical composition
- 2 Climate regulation: Regulation of global temperature, precipitation, and other biologically mediated climatic processes at global or local levels.
- 3 Disturbance regulation: Capacitance, damping and integrity of ecosystem response to environmental fluctuations.
- 4 Water regulation: Regulation of hydrological flows.
- 5 Water supply: Storage and retention of water
- 6 Erosion control and sediment retention: Retention of soil within an ecosystem.
- 7 Soil formation: Soil formation processes.
- 8 Nutrient cycling: Storage, internal cycling, processing, and acquisition of nutrients.
- 9 Waste treatment: Recovery of mobile nutrients and removal or breakdown of excess or xenic nutrients and compounds.
- 10 Pollination: Movement of floral gametes.
- 11 Biological control: Trophic-dynamic regulations of populations.
- 12 Refugia: Habitat for resident and transient populations.
- 13 Food production: That proportion of gross primary production extractable as food.
- 14 Raw materials: That proportion of gross primary production extractable as raw materials.
- 15 Genetic resources: Sources of unique biological materials and products.
- 16 Recreation: Providing opportunities for recreational activities.
- 17 Cultural: Providing opportunities for non-commercial uses.

Among the 16 biomes studied, the top three ecosystem services with the highest economic value were the nutrient cycling (US\$17.0 trillion), cultural (US\$3.0 trillion), and waste treatment (US\$2.2 trillion), compared to the average global value of annual ecosystem services of US\$33.2 trillion.

Profiles of the 2024 Blue Planet Prize Laureates

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES)

Major activities

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an international body that assesses the state of knowledge about biodiversity and nature's contributions to people². Established in 2012, it has 146 member States (as of May 2024). IPBES conducts expert scientific assessments, drawing on expertise and evidence from around the world, through an inclusive and transparent process that utilizes the best available knowledge from the natural and social sciences, as well as from a wide range of knowledge systems, including extensive contributions from indigenous and local knowledge. The results of these assessments help guide decision-making, policy and action at all levels and across all scales – from the G7 and G20, to the World Economic Forum, national Governments, the private sector, research institutions and even community and individual action. The work of IPBES is also central in the international efforts and negotiations under a range of multilateral organisations – especially the Sustainable Development Goals (SDGs) and the Convention on Biological Diversity (CBD³) but also including, among others, the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES), the Ramsar Convention on Wetlands, the Convention on Migratory Species (CMS) and the United Nations Convention to Combat Desertification (UNCCD). Additionally, IPBES plays a crucial role to inform the shaping of regional, national, and subnational environmental policies. IPBES is sometimes referred to as the "IPCC4 for biodiversity," analogous to the Intergovernmental Panel on Climate Change (IPCC), which carries out similar work, but in the field of climate change.

In its 2019 Global Assessment Report, IPBES explored the concept of "Nature's Contributions to People (NCP)" as part of a broad analytical and conceptual framework that encompasses ecosystem services. While ecosystem services link individual service categories to human well-being, NCP considers both positive and negative impacts of organisms and ecosystems on the quality of human life. This includes positive aspects, such as food provision and water purification, as well as more negative aspects, such as disease transmission and predation. Because the relative values of NCP depend significantly on context and culture, IPBES emphasizes the importance of presenting key messages and policy options that are relevant to the widest possible range of decision-makers. This is partly achieved through the inclusions of diverse perspectives, knowledge and values, rather than relying solely on a Western-centric viewpoint. Such an approach is crucial for promoting biodiversity conservation, restoration, and sustainable development.

IPBES's assessments, which have received widespread acclaim and significantly contributed to the advancement of biodiversity science and policy, have raised global awareness and led directly to global action on the biodiversity crisis. Here are some of the key IPBES Reports published in recent years:

"The Assessment Report on Invasive Alien Species and their Control (2023)"

Invasive alien species are one of the five major direct drivers of biodiversity loss globally. This Report showed that more than 80% of their impacts are negative, with 60% of global species extinctions having been caused

solely or mainly by invasive alien species, and with a total annual global cost of more than US\$423 billion. The Report identified management and policy options to tackle these rising challenges.

The central message of this Report was that decisions based on a narrow set of market values of nature underpin the global biodiversity crisis. Economic and political decisions have predominantly prioritised market-based instrumental values of nature, such as food produced intensively, but these values don't properly reflect how changes in nature affect people's quality of life. The Report introduced a new, comprehensive typology of nature's values, providing decision-makers with concrete tools and methods to better consider the diverse values that individuals and communities hold about nature.

"The Global Assessment Report on Biodiversity and Ecosystem Services (2019)"

This report alerted the world to the extremely alarming loss of global biodiversity, occurring at a rate unprecedented in human history, with one million species of plants and animals facing extinction, many within decades. It identified and ranked the five most important direct drivers of biodiversity loss, and explored the kind of transformative change that will be needed to address these challenges. It was the most successful environmental report launch ever to that date, raising the profile of the biodiversity crisis to the same levels as that of climate change. The findings served as a scientific basis for the Kunming-Montreal Global Biodiversity Framework, adopted by Parties to the CBD in Montreal in 2022 as the global targets for nature over the coming decade.

"The Assessment Report on Pollinators, Pollination and Food Production (2016)"

This report highlighted that pollinators such as bees and butterflies are declining worldwide. It underscored that this decline poses a severe threat to food security, as pollination is essential for producing many fruits, vegetables, and crops. The Ministry of the Environment of Japan incorporated findings from this report, along with others, into its National Biodiversity Strategy 2023-2030.

In recent years, there has been a growing movement for companies to address biodiversity conservation and restoration through the framework of the Taskforce on Nature-related Financial Disclosures (TNFD⁵), which evaluates and discloses the impact of business activities on the natural environment and biodiversity. The IPBES Assessment Reports have also influenced corporate sustainability strategies and ESG⁶ (Environmental, Social, and Governance) activities. For instance, the report titled "Nature Risk Rising: Why the Crisis Engulfing Nature Matters for Business and the Economy," published by the World Economic Forum (WEF⁷) in 2020, emphasizes the importance of biodiversity for businesses based on the IPBES 2019 Global Assessment Report.

History of the establishment of IPBES

The Convention on Biological Diversity (CBD) was adopted at the United Nations Conference on Environment and Development (UNCED), also known as the Earth Summit.

2001-2005 The Millennium Ecosystem Assessment (MA) was conducted under the leadership of the United Nations.

[&]quot;The Assessment Report on the Diverse Values and Valuation of Nature (2022)"

2005-2007	The International Mechanism of Scientific Expertise on Biodiversity (IMoSEB) conducted
	consultations.
2010	At the 2rd ad has intergovernmental and multi-stalraholder macting on an IDDES hold in

At the 3rd ad hoc intergovernmental and multi-stakeholder meeting on an IPBES held in Busan, Korea, the need for the establishment of IPBES was generally agreed upon (Busan Outcome Document).

Oct. 2010 The Aichi Targets were adopted at the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity (CBD-COP10).

Apr. 2012 IPBES was officially established in Panama City with 94 countries as founding members.

Notes

1. Biodiversity

Biodiversity refers to the variety of life on Earth, encompassing the diversity of species and individual populations. This concept highlights the coexistence of diverse organisms on Earth, forming interconnected ecosystems. There are three levels of biodiversity: species diversity, genetic diversity, and ecosystem diversity.

2. Nature's contributions to People

Nature's contributions to people refers to all the contributions that humanity obtains from nature, including ecosystems goods and services and negative contributions such as pests, pathogens, or predators. They can be classified in three broad categories:

- 1. Nature's regulating contributions to people refers to functional and structural aspects of organisms and ecosystems that modify the environmental conditions experienced by people, and/or sustain and/or regulate the generation of material and non-material contributions. For example, these contributions include water purification, climate regulation and the regulation of soil erosion.
- 2. Nature's material contributions to people refers to substances, objects or other material elements from nature that sustain people's physical existence and the infrastructure (i.e. the basic physical and organizational structures and facilities, such as buildings, roads, power supplies) needed for the operation of a society or enterprise. They are typically physically consumed in the process of being experienced, such as when plants or animals are transformed into food, energy, or materials for shelter or ornamental purposes.
- 3. Nature's non-material contributions to people refers to nature's contribution to people's subjective or psychological quality of life, individually and collectively. The entities that provide these intangible contributions can be physically consumed in the process (e.g., animals in recreational or ritual fishing or hunting) or not (e.g., individual trees or ecosystems as sources of inspiration).

3. Convention on Biological Diversity (CBD)

The Convention on Biological Diversity (CBD), adopted in 1992, is the international agreement with three objectives: "the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of the utilization of genetic resources." As of 2019, the convention has been ratified by 196 nations. The Conference of the Parties (COP) to the Convention meets every two years to review progress, set priorities, and ensure that work plans are being implemented responsibly.

4. Intergovernmental Panel on Climate Change (IPCC)

The IPCC is an organization that assesses the scientific, technical, and socioeconomic information relevant to understanding the human-induced climate change, its impacts, and options for adaptation and mitigation. Established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP), the IPCC regularly produces assessment reports prepared by scientists and experts. These reports serve as critical informational resources for policymakers.

5. Taskforce on Nature-related Financial Disclosures (TNFD)

The Taskforce on Nature-related Financial Disclosures (TNFD), an international initiative, provides a risk management and disclosure framework for organizations to identify, assess, manage, and disclose nature-related issues. The framework includes disclosures covering nature-related dependencies, impacts, risks, and opportunities. TNFD aims to support a shift in global finance flows away from nature-negative outcomes and toward more nature-positive outcomes. TNFD is positioned as a nature-focused equivalent to the Task Force on Climate-related Financial Disclosures (TCFD), through which large companies are increasingly disclosing climate change risk information.

6. ESG

ESG refers to three key perspectives (principles) that are crucial for the sustainable development of both businesses and society:

- Environmental: The impact of corporate activities on the environment.
- Social: The impact of corporate activities on society, including human rights, safety, and relationships with local communities.
- •Governance: The soundness of a company's management system, encompassing fairness, accountability, and transparency.

Companies can promote sustainable growth and contribute to society by prioritizing ESG in their management practices.

7. World Economic Forum (WEF)

The World Economic Forum (WEF) is an international organization that works to improve the state of the world through public-private cooperation. It engages with leaders from business, politics, academia, and other key stakeholders to shape global, regional, and industry agendas. The World Economic Forum Annual Meeting, held in Davos, Switzerland, brings together top CEOs, government officials, and international organization leaders to discuss solutions to global challenges. The Forum was founded in 1971 as a non-profit foundation and is headquartered in Geneva, Switzerland.