



Blue
Planet
Prize

MEDIA RELEASE

**1997 BLUE PLANET PRIZE:
ANNOUNCEMENT OF AWARD WINNERS**

Dr. James E. Lovelock (U.K.)

Pioneering the detection and measurement of trace substances such as chlorofluorocarbons (CFCs) in the atmosphere in addition to formulating the Gaia Hypothesis of earth science

Conservation International (U.S.A.)

Protecting the Earth's biological diversity through research into ways to conserve ecosystems while improving the lives of local peoples

Tokyo, June 11, 1997—The Asahi Glass Foundation, chaired by Jiro Furumoto, has chosen the recipients of the Sixth Blue Planet Prize, an international award first presented in 1992 at the United Nations Conference on Environment and Development in Rio de Janeiro. Presented annually to two recipients, the Prize commends individuals and organizations whose achievements have contributed to the resolution of global environmental problems.

1. Dr. James E. Lovelock, United Kingdom

Dr. Lovelock developed the electron capture detector (ECD), an extremely sensitive chemical analytical method for use in gas chromatography that can detect tiny amounts of substances in the atmosphere and elsewhere on Earth. He used this method to measure and analyze CFCs and other substances that have a major influence on our global environment. Dr. Lovelock is also the originator of the Gaia Hypothesis, now recognized as the Gaia Theory, which proposes that the Earth is a single, self-regulating system. This theory has helped generate interest in environmental issues throughout the world.

2. Conservation International, headquartered in Washington, D.C., U.S.A.

Conservation International (CI) is an international environmental organization that seeks to conserve global biodiversity. CI uses academic research and fieldwork to devise strategies for protecting those regions in greatest danger of losing biodiversity. The organization is active in 24 countries, focusing in particular on the tropics, which contain some of the areas richest in biodiversity but also are among the most threatened regions. Since its establishment, CI has recognized the integral role of people in conservation and believes that efforts to conserve a given area must benefit local residents in order to succeed.

In addition to public recognition, each Blue Planet Prize winner will receive ¥50 million, a trophy and a certificate of merit. An awards ceremony will be held at the Imperial Hotel in Tokyo on October 29, 1997, and the prize recipients will deliver commemorative lectures at the United Nations University in Tokyo on October 30, 1997.



The contents of this press release may also be viewed at the Asahi Glass Foundation's Internet home page. Please visit us on-line at

<http://www.af-info.or.jp>

THE ASAHI GLASS FOUNDATION

2nd Floor Science Plaza, 5-3 Yonbancho Chiyoda-ku, Tokyo 102 Japan

Phone +81 3 5275 0620 Fax +81 3 5275 0871

Remarks from the Award Recipients upon Being Notified of Their Selection

Dr. James E. Lovelock

“I am delighted and proud to have been chosen as one of the recipients of the 1997 Blue Planet Prize of the Asahi Glass Foundation. Chance is said to favor the prepared mind. I was fortunate early in my life as a scientist to serve for 20 years at the National Institute for Medical Research in London, where my mind was well prepared by outstanding scientists there. I was drawn into the study of the natural environment by the invention of a number of ultrasensitive detectors. One of these, the electron capture detector, first revealed the ubiquitous distribution of pesticides throughout the world and gave the base data that enabled Rachel Carson to write her influential book *Silent Spring*. The same device also revealed the omnipresence of chlorofluorocarbons in the atmosphere.

“I am especially moved to be offered this Prize that has so potent a name. It signifies the image of our planet seen from space—an elegant, dappled blue and white sphere. This image has illuminated my life for the past 30 years. I see the Earth as more than a ball of rock moistened with water and immersed in a carapace of air. I see it as a planet-sized ecosystem able to regulate its climate and chemistry so as always to be comfortable for living organisms. This view of the Earth is still controversial, but whether it turns out to be right or wrong I have found that, like the icon, it inspires both fruitful research and a healthy attitude to environmental concerns. I am deeply moved to be invited to join the select list of laureates of the Blue Planet Prize.”

Conservation International, President: Dr. Russell A. Mittermeier

“It is both a great pleasure and a very special honor for me to accept the Asahi Glass Foundation’s Blue Planet Prize on behalf of our organization, Conservation International. Our mission is the conservation of our planet’s biological diversity—the impending loss of which must surely be considered the most critical issue that humankind now faces. We already have developed technological fixes to most other environmental problems, such as pollution, toxic waste disposal, and acid rain, and only fail to put them in place because of a lack of economic incentive or political will. However, loss of biodiversity is irreversible; once a species of plant or animal becomes extinct, it is gone forever.

“Conservation International seeks to accomplish its mission by demonstrating that conservation can be a win-win situation in which natural systems can be maintained and human societies can improve their quality of life. Our program is strategically focused on the highest-priority areas for biodiversity conservation. We decided early on that we needed to invest our limited resources in threatened diversity “hotspots,” which comprise only 2% of the land surface of the planet and yet have within them more than 50% of all terrestrial biodiversity and more than three-quarters of biodiversity at greatest risk. We also place great emphasis on “megadiversity countries,” about a dozen nations that account for more than two-thirds of all terrestrial, freshwater, and marine life on Earth.

“Our conservation programs seek to integrate science, economics, policy, and communications in ways appropriate to local cultures and their needs and aspirations in addition to strengthening capacity at all levels to carry the cause of conservation into the future. We work at all levels, from the most remote indigenous communities to the highest levels of government, to come up with viable solutions to the biodiversity crisis that we currently face. The Blue Planet Prize is a true validation of our efforts; we feel very proud and privileged to have been chosen for this great honor.”

Profiles of the 1997 Blue Planet Prize Recipients

Dr. James E. Lovelock

(Born on July 26, 1919, in Letchworth Garden City, the United Kingdom)
Honorary Visiting Fellow of Green College, Oxford University

In 1957, Dr. James E. Lovelock invented the electron capture detector (ECD), a device for use in gas chromatography that can detect tiny amounts of chemical compounds in the atmosphere and elsewhere on Earth. This device, which is one million times more sensitive than thermal conductivity detectors, made it possible to detect halogenated compounds and nitrous oxide, even at levels of only one part per trillion (ppt), thus revolutionizing our understanding of the atmosphere and pollutants.

Dr. Lovelock used his own invention in 1970 to detect chlorofluorocarbons (CFCs) in air masses over Ireland. In 1973, the ECD was used to discover the existence of CFCs in the oceans and atmosphere throughout the Atlantic region from the Antarctic to the English Channel. The CFCs were particularly abundant in areas surrounding industrialized countries. These discoveries eventually led to the theory that CFCs destroy stratospheric ozone. Dr. Lovelock continued researching amounts of CFCs in the atmosphere and contributed much to our understanding of the atmospheric lifetimes of these substances. He also established the first atmospheric halocarbon monitoring station, in Adrigole, Ireland. This station was active from 1978 to 1984 and provided a valuable body of data on global CFC trends.

Dr. Lovelock's research also yielded discoveries about the distribution of other compounds. He found distributed in the ocean a number of substances, including methyl iodide, carbon tetrachloride, and dimethyl sulfide, the latter of which is produced by planktonic algae in seawater. Dr. Lovelock's studies of dimethyl sulfide were particularly significant because this substance plays an important role in regulating the planet's weather; it oxidizes into an aerosol that is a major source of cloud-condensation nuclei.

Dr. Lovelock's initial invention of the ECD has made possible rapid advances in our understanding of trace quantities of substances that have a large impact on the global environment. In particular, the discovery of the wide distribution of pesticide residues and polychlorinated biphenyls (PCBs) and measurements of organic mercury compounds played an important role in the development of environmental policies.

In the 1960s, Dr. Lovelock was invited by the National Aeronautics and Space Administration (NASA) to join its team developing lunar soil analysis methods, but he soon became involved with NASA's investigation of whether or not life exists on Mars. Dr. Lovelock compared the atmosphere of the Earth with that of Mars and found astonishing differences. In Earth's atmosphere, abundant oxygen can coexist with nitrogen and highly reactive gases in a state of deep chemical disequilibrium owing to the presence of living organisms. Conversely, the atmosphere on Mars is close to chemical equilibrium and dominated by carbon dioxide, which is only a trace gas on Earth. Thinking about these startling differences led Dr. Lovelock to build further on his broad background in chemistry and medicine and formulate the Gaia Hypothesis, now the Gaia Theory. His hypothesis stated that the Earth is a self-regulating mechanism that maintains its climate and chemical composition at levels comfortable for living organisms. This hypothesis was first stated in 1972 and was later developed through an ongoing collaboration with the eminent American biologist Lynn Margulis. The Gaia Hypothesis has generated a storm of controversy among biologists and other scientists.

The Gaia Hypothesis seeks to describe the Earth from a comprehensive point of view, not in specialized, fragmented terms. Gaia can be understood as a control system for the Earth and offers a new way of looking at our planetary biosphere. The Gaia Hypothesis also states that the global

environment is not regulated solely by the biosphere but is a total planetary system involving the mutual interaction of geology and biology. Although numerous critics have attacked the idea, it has also attracted many strong supporters. Regardless, Dr. Lovelock's development of a new way of viewing our entire world has helped raise interest in the environment all around the globe.

Education, and Academic and Professional Activities

1941	Manchester University, B.Sc., Chemistry
1948	London School of Hygiene and Tropical Medicine, Ph.D., Medicine
1959	London University, D.Sc., Biophysics
1941–1961	Medical Research Council, National Institute for Medical Research, London
1954–1955	Visiting Scientist, Harvard University Medical School, U.S.A.
1958–1959	Visiting Scientist, Yale University Medical School, U.S.A.
1961–1964	Professor of Chemistry, Baylor College of Medicine, University of Houston, U.S.A.
1964–1974	Visiting Professor, Department of Chemistry, University of Houston
1964–1989	Visiting Professor, Department of Cybernetics, University of Reading, U.K.
1993–	Honorary Visiting Fellow of Green College, Oxford University

Major Awards Received

1955	CIBA Foundation Award for Research in Aging
1974	Fellow of the Royal Society
1975	M.S. Tswett Award for Chromatography
1980	American Chemical Society's Award for Chromatography
1986	Silver Medal and Prize, Plymouth Marine Laboratory
1988	Norbert Gerbier Prize, World Meteorological Association
1990	Commander of the Order of the British Empire Amsterdam Prize for the Environment, Royal Netherlands Academy of Arts & Sciences
1996	Volvo Environment Prize

Conservation International

(Headquartered in Washington, D.C., U.S.A.)

Conservation International (CI) is a private, nonprofit organization that was established in 1987 with the goals of conserving global diversity and demonstrating that human beings are able to live harmoniously with nature. CI was founded by Peter A. Seligmann, the organization's current chairman and CEO. The organization's president is Dr. Russell A. Mittermeier. Headquartered in Washington, D.C., CI is active in 24 countries with an international staff of nearly 400 experts on biology, forestry, conservation planning, marketing and product development, economics, law and other areas. CI carries out many of its conservation programs through partnerships with international organizations that include the United Nations and World Bank, as well as with governments, research institutes, local nongovernmental organizations (NGOs), and major corporations.

Since its establishment, CI has set out to develop positive examples of people coexisting with natural habitats. The organization's activities, which are based on world-class scholarship and research, help developing countries pursue economic development while maintaining biological diversity through multifaceted efforts solidly grounded in economic theory, advanced scientific methods,

and respect for cultural differences. Some of CI's activities are described below.

1. Through its Rapid Assessment Program (RAP), CI uses cutting-edge biological research to quickly identify conservation priorities—areas of the world particularly rich in biodiversity and under imminent threat of destruction. Termed “hotspots,” these areas are often located in tropical rain forests. CI helps formulate and propose conservation solutions for these endangered ecosystems, which now number 26 around the world, and is directly active in 12 of these areas. Although threatened biodiversity hotspots account for only about 2% of the Earth's land surface, they are home to more than 50% of all terrestrial biodiversity.
2. CI's RAP is carried out by teams of experienced field specialists. These teams, which include experts on birds, mammals, and plants, rapidly collect, analyze, and disseminate information on threatened areas potentially rich in biodiversity. CI's first RAP expedition, conducted in 1990 in the Alto Madidi region of Bolivia, was a spectacular success. The team discovered a wealth of species, and in 1996 the Bolivian government created the 4.6-million-acre (about 1.9 million hectares) Madidi National Park based on CI's recommendations. Since then, RAP expeditions have discovered many new species and led to the establishment of other protected areas.
3. A great need exists for effective communication and the dissemination of knowledge on biodiversity. Consequently, CI has launched several publication series aimed at a variety of different audiences. One of these is the Conservation International Tropical Field Guide series, which focuses on providing attractive, scientifically accurate, ready-to-use information on key groups of flagship species in the tropics. The goal of these series is to stimulate further research on these animals and also to encourage ecotourism in high-biodiversity hotspot ecosystems. The first of these field guides is *Lemurs of Madagascar*; four others will be appearing in 1998. Another CI series is known as CI's Policy Papers, and the latest publication in this series, dealing with “best practices” in the oil and gas industry, is entitled *Reinventing the Well*.
4. The conservation of primates, among the most endangered animals in the world, symbolizes the importance of ecosystem conservation. CI conducts biological and ecosystems research in Madagascar and in the Amazon region, veritable treasure troves of primates, and has discovered new species in the Amazon.
5. It is highly likely that hidden in tropical rain forests are many yet-to-be-discovered plants with important medicinal properties. CI is a leader in “bioprospecting”—discovering and developing genetic plant and animal resources through cooperation with local communities, government agencies and NGOs. In addition, CI promotes contractual agreements that help indigenous people benefit from “discoveries” made based on their traditional knowledge. In 1993, CI's first such agreement involved the Saramaccaners of Suriname and Bristol-Meyers Squibb. CI also has a program to record important traditional plant and animal lore of people native to areas rich in biodiversity. Currently, CI is working with 40 indigenous communities in 19 countries.
6. In addition to its many research accomplishments, CI is also responsible for the negotiation of the world's first debt-for-nature swap. In 1987, CI used donated funds to purchase a portion of foreign currency denominated Bolivian commercial bank debt. In exchange for CI's elimination of the debt obligation, the

government of Bolivia agreed to establish a fund in local currency to pay for the management expenses of the Beni Biosphere Reserve in northeastern Bolivia and raise the legal protection of this area to the maximum extent possible under the law. Debt-for-nature swaps give developing countries a chance to reduce their debt burden while conserving their natural resources and preserving the traditional lifestyles of native peoples. Since that first swap in 1987, many other nature conservation organizations and governments have followed CI's lead. The total of all such transactions to date exceeds US\$100 million.

7. CI is helping tie conservation to higher living standards in rural communities. In Ecuador, local harvesters of the ivory-like tagua nut, which is made into buttons and jewelry, gain income through an international market for their sustainably harvested product. Known as the Tagua Initiative, this CI project has produced more than 70 million buttons and generated nearly 2,000 jobs in local communities. In 1994, the United Nations Environment Program (UNEP) chose the project as one of the 10 best examples of sustainable development throughout the world.

Through the methods described above, CI is using science to pinpoint areas most in need of action and devise ways to conserve biodiversity while benefiting local communities. CI's many accomplishments in the fields of biology and ecology represent a major contribution to the conservation of our planet's biodiversity.

Highlights

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| 1987 | CI established by Peter A. Seligmann, the current chairman and CEO.
First debt-for-nature swap carried out in Bolivia. |
| 1989 | Dr. Russell A. Mittermeier joined CI as president. |
| 1990 | First hotspot map published.
First RAP expedition conducted.
Tagua Initiative launched.
Debt-for-nature agreement signed with Madagascar (US\$5 million).
CI's <i>Rain Forest Imperative</i> published.
First Regional Priority Setting Workshop held in Amazonia. |
| 1991 | Debt-for-nature agreement signed with Mexico (US\$4 million).
CI's Geographic Information System (CISIG) released in Spanish. As of 1997, this system is available in four languages and used in more than 350 institutions in 27 countries. |
| 1992 | CI participated in Earth Summit in Rio de Janeiro.
CI held its first Asia-Pacific region Conservation Priority-Setting Workshop in Papua New Guinea. |
| 1993 | Bioprospecting program established with Bristol-Meyers Squibb, the National Institute of Health, and the people and government of Suriname. |
| 1994 | RAP expedition to Peru recorded six new species of butterflies, eight orchids, two beetles and other important new findings.
First Marine RAP Expedition conducted to the Indispensable Reefs region of the Solomon Islands. |
| 1995 | Formal RAP course launched to train local field biologists. |

Lemurs of Madagascar, the first volume in CI's Tropical Field Guide series, published.

CI home page opened on World Wide Web of the Internet.

Dr. Mittermeier awarded the Golden Ark by H.R.H. Prince Bernhard of the Netherlands.

1996

Bolivia created the 1.9-million-hectare Madidi National Park, largely as a result of attention focused on the region through CI's RAP expeditions.

First phase of CI-UNESCO scientific capacity building workshops conducted in partnership with Intel and NEC.

Internet network created to link 25 international biosphere reserves.

CI's RAP expeditions and long-term Peru Program led to establishment of 325,000-hectare Bahuaja-Sonene National Park.

1997

Revised hotspot map launched.

Ford Motor Company and CI established the Henry Ford Brazilian Conservation Award to recognize lifetime conservation achievements and support environmental initiatives in Brazil.

Owing to major efforts by CI and Brazilian partner organization IESB, the Government of the State of Bahia created the 7,000-hectare Serra do Conduru State Park, doubling the area protected in this critically endangered hotspot region.

CI published *Reinventing the Well*, a volume highlighting the importance of "best practices" in the oil and gas industry.



For more information, please contact:

Nobuaki Kunii, The Asahi Glass Foundation

2nd Floor Science Plaza, 5-3 Yonbancho, Chiyoda-ku, Tokyo 102 Japan

Domestic Tel. (03) 5275-0620 Fax: (03) 5275-0871

International Tel. +81 3 5275-0620 Fax: +81 3 5275-0871 E-mail: post@af-info.or.jp