Blue
Planet
Prize

FOR IMMEDIATE RELEASE
June 17, 2010

2010 BLUE PLANET PRIZE: ANNOUNCEMENT OF PRIZE WINNERS

Dr. James Hansen (USA)

Having predicted global warming in the early stage and warned that it would very probably cause destructive results for life on Earth, he called on the governments and the public to take immediate action to reduce and mitigate the impact of climate change.

Dr. Robert Watson (UK)

Having organized the famous scientific project to derive scientific evidence of the depletion of the Ozone Layer, he eventually endorsed the Montreal Protocol. Later as Chair of IPCC, he played a significant role in coordinating and bridging science and policy for protecting the world environment.

This year marks the 19th awarding of the Blue Planet Prize, the international environmental award sponsored by the Asahi Glass Foundation, chaired by Tetsuji Tanaka. Two Blue Planet Prizes are awarded to individuals or organizations each year that make outstanding achievements in scientific research and its application, and in so doing help to solve global environmental problems. The Board of Directors and Councillors selected the following recipients for this year.

1. Dr. James Hansen (USA)

Director at Goddard Institute for Space Studies (NASA)
Adjunct professor in the Department of Earth and Environmental Sciences at Columbia University

Dr. Hansen et al. succeeded in developing a practical climate model that was proven by abundant weather observation data, and pioneered the understanding and forecasting of the earth climate system. He predicted global warming in the future based on the climate model. In 1988, he testified at the U.S. Senate and House of Representatives and provided the public with an early alert to the dangers of global warming and to call for actions. He warned that an average temperature increase of even a few degrees would very probably cause irreversible and unrecoverable climate change and produce destructive results for life on Earth. He called on the governments and the public to take immediate action to reduce and mitigate the impact of climate change.

2. Dr. Robert Watson (UK)

Chief Scientific Adviser of the UK Department for Environment, Food and Rural Affairs (DEFRA)
Chair of Environmental Science and Science Director at Tyndall Centre for Climate Change Research, the University of East Anglia

Led by Dr. Watson, a team of scientists derived scientific evidence of the depletion of the Ozone Layer and endorsed the Montreal Protocol which incorporated the reduction of ozone depleting substances. As Chair of IPCC, he played a significant role in successfully completing the detailed review of the Third Assessment Report by national governments from around the world, coordinating and bridging science and policy for protecting the world environment. The amount of contribution he has made to policy-making by national governments and international frameworks such as UNFCCC, a necessity and the foundation for the conservation of the global environment, is tremendous.

Both recipients will be awarded a certificate of merit, a commemorative trophy and a supplementary award of 50 million yen.
The awards ceremony will be held on October 26, 2010 (Tuesday), at the Tokyo Kaikan (Chiyoda Ward, Tokyo).The commemorative lectures by the prize recipients will be held at the United Nations University (Shibuya Ward, Tokyo) on October 27 (Wednesday).

*This press release may also be viewed on our HP at www.af-info.or.jp. from 14:00, June 17, 2010.
The photos of the recipients are available from the HP of the Asahi Glass Foundation.

THE ASAHI GLASS FOUNDATION
2nd Floor, Science Plaza, 5-3 Yonbancho Chiyoda-ku, Tokyo 102-0081 Japan
Tel +81-3-5275-0620 Fax +81-3-5275-0871
E-mail: post@af-info.or.jp URL: http://www.af-info.or.jp

Report on the Selection Process (19th Annual Prize, 2010)

A total of 800 nominators from Japan and 1,200 nominators from other countries recommended 105 candidates. The fields represented by the candidates, in order of number, were ecology (29), environmental economics and policy making (19), atmospheric and earth sciences (18)and Compound area (10).

The candidates represented 23 countries; 13 persons, 12 percent of the total, were from developing countries.

After individual evaluation of the 105 candidates by each Selection Committee member, the committee was convened to narrow down the field. The results of their deliberation were examined by the Presentation Committee, which forwarded its recommendations to the Board of Directors and Councillors. The Board formally resolved to award the Prize to **Dr. James Hansen** and **Dr. Robert Watson**.

For more information, please contact: **Tetsuro Yasuda**
THE ASAHI GLASS FOUNDATION
2nd Floor, Science Plaza, 5-3 Yonbancho Chiyoda-ku,
Tokyo 102-0081 Japan
Phone +81-3-5275-0620 Fax +81-3-5275-0871
e-mail: post@af-info.or.jp
URL: http://www.af-info.or.jp

Attachment

Profile of the 2010 Blue Planet Prize Recipient

Dr. James Hansen (USA)

Based on the concept of radiative forcing to indicate the flow of radiation energy in the atmosphere, Dr. Hansen et al. succeeded in developing a practical climate model that was proven by tests such as the Pinatubuo volcanic eruption – they predicted global cooling to follow, which proved quite accurate – there are other verifications, and pioneered understanding and forecasting of the climate system. At a time when there was a noticeable temperature decline because of the impact of the sun and volcanic activity, Dr. Hansen predicted global warming in the future based on the climate model. In 1988, he got more attention with strong statements at an appropriate time to testify before committees and subcommittees in the U.S. Senate and House of Representatives and provided the public with an early alert to the dangers of global warming and to call for actions. Later he claimed that the climate had a "tipping point," and warned that an average temperature increase of even a few degrees would very probably cause irreversible and unrecoverable climate change and produce destructive results for life on Earth. Dr. Hansen called on the governments and the public to take immediate action to reduce and mitigate the impact of climate change. He has consistently emphasized the need for unprecedented international cooperation and significantly contributed to enlightening the whole world about global environment issues.

From astronomy to climate science

Study of planetary atmosphere

Dr. Hansen was born on a farm, located in Charter Oak township, Iowa in 1941. Attracted to the renowned space science program of Professor James Van Allen of the University of Iowa, he received a master's degree in astronomy and a doctorate in physics at the university. While attending the University of Iowa, he came to Japan and did researches on astrophysics and astronomy at the University of Kyoto and the University of Tokyo, respectively. Professor Sueo Ueno of Univ. of Kyoto kindly introduced Dr. Hansen to his methods of computation called "invariant imbedding", which is one of the techniques Dr. Hansen used for radiative transfer in planetary atmospheres.

In 1967, he analyzed the data on Venusian temperature and published a thesis arguing that the high temperature of Venus was attributable to a trap of thermal energy caused by aerosol in the atmosphere. In 1974 and 1975, he studied the composition of clouds in the Venusian atmosphere, which completely veil the planet so that its surface cannot be seen. He reported that the clouds consisted of very small spherical droplets of nearly uniform size – he also was able to measure the index of refraction of these droplets and how this index changed from ultraviolet to green to red and infrared wavelengths – this precise information was used by others to conclude that the hazy veil shrouding Venus must be sulfuric acid. The Pioneer Venus spacecraft launched in 1978 confirmed the properties that Dr. Hansen had inferred from telescopic observations and confirmed that the haze was sulfuric acid. The validity of the finding was proven by the Pioneer Venus Orbiter in 1978. In 1981, Dr. Hansen reported that the clouds consisted of sulfuric acid airborne droplets and sulfur dioxide.

Other researchers reported that Venus had been rich in water until several billion years before and that the water had disappeared from the surface of the planet due to the runaway greenhouse effect that subsequently occurred.[1] Later, Dr. Hansen warned that an occurrence of this kind of

runaways warming could expose Earth to a harsh environment like it did to Venus, through the evaporation of water.[2]

Then Dr. Hansen shifted the focus of his study to climate change that is caused by human activities which change the composition of Earth's atmosphere. He utilized NASA's satellite observation data in studying the thermal radiation of Earth's atmosphere, which led to the development of a global-scale atmospheric circulation model and significantly contributed to a detailed understanding, analyses and predictions of climate change that included the impact of human activities.

Study of the Earth's climate

In 1987, Dr. Hansen et al. summarized and published the data on the atmospheric temperature of Earth mainly during the period between 1880 and 1985 obtained from global weather stations. Accurate data on atmospheric temperature from the last 100 years showed a rise of 0.5 - 0.7 degrees in the average temperature. The recorded figures of average temperature increase, updated in 2006, reached 0.8 degrees/100 years, showing that the tendency toward global warming was an undeniable fact and was not merely a result of urbanization.

In a thesis published with Dr. Menon et al., Dr. Hansen argued that there is the existence of atmospheric black carbon effects in the climate of some local regions. He showed that black carbon in the atmosphere brought convection and rain by heating the atmosphere and would ultimately lower temperatures over large areas by reducing the amount of sunlight reaching the ground. As an example, he explained a climatic abnormality observed in northern China in 1988. Then Dr. Hansen joined Dr. Makiko Sato in conducting a study using the solar photometer of AERONET (AErosol RObotic NET work) and showed that the impact of black carbon doubled the value that would normally be estimated from it. Black carbon in the atmosphere rapidly increased in the 1880s when the Industrial Revolution was at its peak. The increase slowed down from the 1900s to the 1950s and leveled off. Even at present, the emissions of black carbon are increasing in China and India, which are in the midst of their rapid economic growth.

Impact of human activities on climate change

In 2003, Dr. Hansen published an essay titled *Can We Defuse the Global Warming Time Bomb?* He warned that the climate change resultant from human activities has currently overcome natural climate change and, if this persists for extended periods, could grow to an enormous level causing great disasters. He also said that actions to prevent or mitigate global warming and other undesirable climate change phenomena need to be taken immediately, and that unprecedented kinds of international cooperation would be called for. He also stressed that such mitigating actions would be feasible and would benefit the health of humankind as well as agriculture and the environment.

In 2006, Dr. Hansen et al. suggested that the average temperature of Earth should be regarded as a yardstick of the degree of impact of human activities on the Earth's atmospheric system. He emphasized that the rise of the average temperature was inevitably accompanied by "a rise in the sea level" and "extinction of species" and that an increase in the average temperature of even one degree would produce highly destructive results for life on Earth. According to him, a CO_2 level of 450ppm or greater in the atmosphere would pose a great deal of danger and powerful measures to reduce CO_2 and other greenhouse gases are important and must be taken immediately.

Advocating conservation of the global environment

In 1988, Dr. Hansen published a thesis on climate predictions using a general atmospheric circulation model based on some scenarios of greenhouse gas emissions. He concluded that the global warming caused by human activities would grow to a level well above the level of natural climate variability within the next few decades. In the same year, Dr. Hansen testified before committees and subcommittees in the U.S. Senate and House of Representatives and provided the public with an extensive alert to the dangers of global warming.

In 2007, he used his knowledge of paleoclimatology to show that the sea level of 35 million years ago (when the average temperature of Earth was two or three degrees higher than today) was 25 meters higher than the current level and that the IPCC's estimate, 59 centimeters, was far from correct. In 2008, he gave a lecture and explained the definition of a tipping point, a threshold of climate change that humankind must not exceed, as 1) a tipping level: the level at which a large climate change occurs even when greenhouse gases do not increase any further; and 2) a point of no return: the point at which the climate system causes an uncontrollable and irreversible change on the climate. According to paleoclimatology, ice in the polar areas would dissolve suddenly instead of dissolving gradually. This can be interpreted as an example of a tipping point. Dr. Hansen uses multiple lines of evidence to conclude that the world has already reached a dangerous level of atmospheric greenhouse gases, but he admits that it is difficult to determine how long the world can be in the dangerous zone before the effects become large and irreversible. However, he argues further that if emissions continue at current or increased levels for a few decades large climate changes and impacts will proceed out of humanity's control.

Dr. Hansen recommends that all nations should determine their responsibilities for greenhouse gas emissions based on a historical viewpoint, more specifically, the cumulative amount of their CO_2 emissions. According to this yardstick, United Kingdom would be the largest cause of greenhouse gas emissions followed by the United States and Germany. He urges nations to base their actions on the extent of their responsibilities.
Last year, Dr. Hansen urged the U.S. government to set an example and lead the world in taking actions against climate change, because humankind should no longer postpone the implementation of anti-global warming measures. To ensure the next generations a better future, Dr. Hansen continues to explain to government officials and the public about the danger of global warming and to advocate early actions for reduction of greenhouse gases with the aim of conserving the global environment.

Notes

1: Kasting J.F. (1988) "Runaway and moist greenhouse atmospheres and the evolution of earth and Venus" Icarus 74 (3): 472–494.
2: Climate Threat to the Planet: Implication for Energy Policy and Intergenerational Justice Jim Hansen December 17, 2008 Lecture at AGU

Biographical Summary

Born on March 29, 1941

1963	Receives a bachelor's degree in physics and mathematics at the University of Iowa
1965, 67	Receives a master's degree in astronomy and a doctorate in physics at the University of Iowa
1967-69	A researcher at Goddard Institute for Space Studies (New York)
1969	Post-doctoral fellow at Leiden Observatory (Netherlands)
1969-72	Researcher at Columbia University (New York)
1972-81	Manager of the planetary atmospheres program at Goddard Institute for Space Studies
1978-85	Adjunct professor in the Department of Earth Sciences at Columbia University
1981 - present	Director at Goddard Institute for Space Studies
1985 - present	Adjunct professor in the Department of Earth and Environmental Sciences at Columbia University

Awards

1996	Elected to United States National Academy of Sciences
2001	John Heinz Environment Award
2001	Roger Revelle Medal, American Geophysical Union
2006	Duke of Edinburgh Conservation Medal, World Wildlife Fund (WWF)
2007	Laureate, Dan David Prize for Outstanding Achievements & Impacts in Quest for Energy
2007	Leo Szilard Award, American Physical Society for Outstanding Promotion & Use of Physics for the Benefit of Society
2007	Haagen-Smit Clean Air Award
2007	American Association for the Advancement of Science Award for Scientific Freedom and Responsibility
2009	Carl-Gustaf Rossby Research Medal, highest award of American Meteorological Society
2010	Sophie Prize

Dr. Robert Watson (UK)

Dr. Watson worked on the study of the creation and depletion of the Ozone Layer at the National Aeronautics and Space Administration (NASA). Leading numerous scientists, he produced scientific evidence of human-induced depletion of the Ozone Layer which led to the Montreal Protocol which incorporated the reduction of ozone depleting substances. In this way, Dr. Watson has made a significant contribution to the enactment of the Protocol. Later, as Chair of the Intergovernmental Panel on Climate Change (IPCC), he took the initiative in developing the Synthesis Report of the Third Assessment Report. In particular, he played a significant role in successfully completing the detailed review by national governments from around the world of the Synthesis Report, coordinating and bridging science and policy and achieving an international consensus on the need to ratify the Kyoto Protocol to the United Nations Framework Convention on Climate Change (UNFCCC). He also served as the first Chair of the Science and Technical Advisory Panel to the Global Environmental Facility (GEF), and held other important positions at the World Bank and other organizations. As Associate Director for the Environment in the Office of Science and Technology Policy under the Clinton Administration, he testified dozens of times before committees and subcommittees of the U.S. Senate and House of Representatives on conservation issues. He emphasized the importance of environmental issues. Devoted to the facilitation of cooperation between science and government policy, he has communicated with related government officials and has helped them make policy decisions. The amount of contribution he has made to policy-making by national governments and international frameworks, a necessity and the foundation for the conservation of the global environment, is tremendous.

Depletion of the ozone layer and preventive actions

Dr. Watson received a bachelor's degree and a doctorate in chemistry at Queen Mary College, University of London (England) in 1969 and 1973, respectively. Later, he worked as a postdoctoral fellow at the University of Maryland and the University of California, Berkeley (United States) before establishing a research group at the Jet Propulsion Laboratory (JPL) of the National Aeronautics and Space Administration (NASA). He was purely academic by nature. As a result of the reputation he gained with his doctoral thesis on halogen chemistry research, however, he began to work on a more realistic issue, "depletion of the ozone layer resultant from the use of chlorofluorocarbons (CFCs)." It was already a known fact that depletion of the ozone layer would increase harmful ultraviolet rays reaching the earth's surface, which could increase the occurrences of dermal cancer, conjunctivitis and other serious diseases. In this way he grew motivated to work on the important issue of the global environment.

In 1980 he moved to the headquarters of NASA located in Washington, D.C., as a manager of the upper atmosphere research program and had the opportunity to work with leading numerous scientists studying the depletion of the Ozone Layer. He developed skills and strategies to control and manage the NASA program which was growing more enormous and complex. The most important part of the strategies was the way he adeptly ran the organization by acknowledging the unique values and abilities of scientists and motivating them to a higher goal irrespective of differences in their organization or affiliation. He appealed to the pride of researchers and successfully encouraged them to deepen their involvement in the program. This approach to running the organization gained the support of numerous researchers.

To proceed with a big program aimed at the scientific elucidation of ozone layer depletion, he developed a relationship of trust with Dr. Dan Albritton, Director of the National Oceanic and

Atmospheric Administration (NOAA), and helped realize the cooperation of former rivals: NASA and NOAA. The two organizations cooperated with each other and made significant achievements by communicating to policymakers the importance of scientific actions against the crisis and threat posed by a hole in the ozone layer. In cooperation with Dr. Albritton, he sent a team of scientists to the Antarctic in 1986. Dr. Susan Solomon, then an NOAA-affiliated scientist, was appointed the chief of the team. Dr. Solomon's team performed balloon observations and sample analysis experiments near the ground, and strongly suggested that the ozone layer depletion could be attributable to an artificial cause, namely chlorofluorocarbons (CFCs), rather than a natural weather phenomenon. The validity of the report was demonstrated the following year, by an analysis of upper air atmosphere performed in the stratosphere using a high-altitude plane (ER2). Their suggestion became a scientifically undeniable fact. With the latest scientific data, he joined Dr. Albritton in attending meetings for the ratification of the Montreal Protocol, which was negotiated in 1987. They explained to government officials from participating nations the fact that the cause of the Ozone Layer depletion was chlorofluorocarbons (CFCs), and endorsed ratification of the Montreal Protocol which incorporated a 50% reduction of chlorofluorocarbons (CFCs) by 2000. Then-President Reagan signed the Montreal Protocol and said it would boost the development of new technologies. He tackled ozone layer depletion, the biggest environmental issue at that time, and influenced the whole world toward the pursuit of solutions.

IPCC Third Assessment Report

From 1997 to 2002, Dr. Watson chaired the IPCC and led the review of scientific, technical and socio-economic studies on global warming. In 2001, the IPCC published its Third Assessment Report. The Bush Administration ordered the U.S. National Research Council (NRC) to review the report. The NRC said the IPCC Third Assessment Report (especially Working Group I[1] and technical summary) deserved a lot of praise as a study on climate science[2]. This statement enhanced confidence in the IPCC report.

The Third Assessment Report is important in that it included a Synthesis Report, which said there was strong evidence that the progression of global warming was undeniable and was due to human activities; that the human-induced climate change was expected to persist for centuries; and that the prevention of global warming would require comprehensive actions: continued technical development and overcoming of socio-economic difficulties. The introduction to the Synthesis Report defines the essence of the report as "integration and summarization of information that is policy-relevant and is not policy-prescriptive." The definition means that the Synthesis Report aims to cover all policy-relevant matters and to continually inform them by using expressions that contribute to policy-making, and that the Synthesis Report represents advice from the scientists' view and is not meant to tell policymakers what to do. This strongly conveys the attitude of Dr. Watson toward realistically solving climate issues without deviating from his position as a scientist or limiting the role of the Synthesis Report to mere scientific remarks.

The basic details of the report were decided by scientists. The line by line wording of the report required consent by government officials from around the world. The coordination activities needed between scientists and government officials was all about putting scientific remarks into the most appropriate language for policymakers. Discussions for coordination were focused on a relationship between "accuracy, balance and clarity of message" in wording and "policies and interpretations." The approval of the Synthesis Report of the IPCC Third Assessment Report, led by Dr. Watson, involved many people consisting of delegations from 100 countries, 10 non-governmental organizations and 42 scientists. Assuming leadership of this

large organization, he summarized important points and submitted them to the IPCC plenary. By facilitating close exchange between science and policy, he contributed to making important policies, set an exemplary precedent for collaboration and coordination between scientists and policymakers and is now referred to as the master of uniting government officials and scientists.

Most remarkably, he drastically changed the whole world's view on climate change through the IPCC report which led to important changes of policy designed for the reduction of greenhouse gases at regional, national and international levels.

Facilitation of environmental policies

Dr. Watson chaired the Scientific and Technical Advisory Panel of the U.N. Global Environment Facility (GEF) and the international Global Biodiversity Assessment and Millennium Ecosystem Assessment of the United Nations Environment Programme (UNEP) and has held important positions at many other international organizations. His administrative and managerial abilities were thoroughly exhibited in his commitments to the conservation of the global environment. From 1996 to 2007, he acted as Chief Scientist and Director for Environmentally and Socially Sustainable Development at the World Bank. He was devoted to revitalizing scientific programs at the World Bank. In line with the aim of the World Bank, namely relief from poverty and development of a sustainable society, he facilitated international exchanges of scientists and endeavored to help developing nations improve their scientific abilities. As Associate Director for the Environment in the Office of Science and Technology Policy under the Clinton Administration, he testified dozens of times before committees and subcommittees of the U.S. Senate and House of Representatives on conservation issues. He explained the causal relationship among human economic activities, depletion of the ozone layer and global warming as well as the impact and damage that could result as a consequence, explaining to the whole world the graveness of environmental issues. Mr. Al Gore, former U.S. Vice President, described Dr. Watson as a "Hero of the Planet" in a letter written to a senior U.S government official.

The Dr. Watson has devoted himself to the facilitation of cooperation between science and government policy, disseminated important information and views on science and helped government officials make policy decisions by keeping in contact with them. The size of the contribution he has made to policymaking by national governments and international frameworks, a necessity and the foundation for conservation of the global environment, is tremendous.

Notes

1: IPCC Working Group I (designed for scientific, technical and social-scientific assessment of climate change)

2: Committee on the Science of Climate Change, NRC (2001)

Biographical Summary

Born March 21, 1948

1969	Receives a bachelor's degree in chemistry at Queen Mary College, University of London
1973	Receives a doctorate in reaction kinetics at Queen Mary College, University of London
1976-87	Appointed as a scientist at NASA Jet Propulsion Laboratory
1980-87	Acts as Deputy Program Scientist at NASA
1980-06	Co-chairs scientific assessments of the Ozone Layer for World Meteorological Organization (WMO)/United Nations Environment Programme (UNEP)
1987-90	Serves as Branch Chief for Upper Atmospheric Research and Stratospheric Chemistry Program of NASA's Earth Science and Applications Division
1991-94	Chairs the U.N. Global Environment Facility (GEF) Scientific and Technical Advisory Panel
1993-95	Chairs the Global Biodiversity Assessment for United Nations Environment Programme
1993-96	Associate Director for the Environment in the Office of Science and Technology Policy of the Executive Office of the President of the United States (under the Clinton Administration)
1993-97	Co-chairs the IPCC Working Group II
1996	Joins the World Bank as Senior Scientific Adviser in the Environmental Department
1997	Becomes Head of the Environment Sector Board of the World Bank and later Chief Scientist and Director for Environmentally and Socially Sustainable Development
1997-02	Chairs IPCC
2000-05	Co-chairs Millennium Ecosystem Assessment
2003-08	Directs the International assessment of Agricultural Science and Technology for Development
2007	Appointed Chief Scientific Adviser of the UK Department for Environment, Food and Rural Affairs (DEFRA) Becomes Chair of Environmental Science and Science Director at Tyndall Centre for Climate Change Research, the University of East Anglia (England)

Awards

received eight awards from NASA for distinguished service over the years

1989	Designated member of UNEP's "The Global 500: The Roll of Honor for Environmental Achievement"
1991	American Geophysical Union's Edward A. Flinn, III Award established to recognize individuals who personify the American Geophysical Union's motto of unselfish cooperation in research through their facilitating coordination and implementing activities (first recipient)
1992	U.S. National Academy of Sciences Award for Scientific Reviewing
1993	American Meteorological Society Special Award "for notable efforts in organizing and conducting international assessments in ozone depletion and global change" American Association for the Advancement of Science Award for Scientific Freedom and Responsibility
2003	Global Green Award for International Environmental Leadership – US chapter of the Green Cross International formed by Mikhail Gorbachev Honorary "Companion of the Order of Saint Michael and Saint George" from the United Kingdom
2006	Zayed science award for the Millennium Ecosystem Assessment,
2007	Nobel Peace Prize for the IPCC, chaired from 1997-2001
2008	American Association for the Advancement of Science Award for International Scientific Cooperation

Remarks from the Award Recipients upon Notification of their Selection

Dr. James Hansen

I am grateful to Asahi Glass Foundation for the opportunity provided by the Blue Planet Prize.
I must use this opportunity to try to help the public understand human-made climate change.
Our planet is dangerously close to tipping points. Ice is melting worldwide and many species are stressed by climate change and other factors. Continued warming may cause sea level rise, species extinction, and increasing climate extremes out of humanity's control.
Stewardship of life on our blue planet demands action to stabilize climate. Geophysics reveals the requirements: phase out coal use, leave tar sands in the ground, and do not go after the last drops of oil.
Yet as long as fossil fuels are the cheapest energy we will burn them, an economic law as certain as the law of gravity.
Solution therefore requires a rising fee on oil, gas and coal. Funds collected must be distributed to the public to allow lifestyle adjustments and stimulate clean energy innovations.
Human-made climate change is a moral issue, a matter of intergenerational injustice. Climate can be stabilized and the remarkable life on our blue planet can be preserved. The public must demand that governments serve the public and preserve our blue planet.

Dr. Robert Watson

I would like to thank the Asahi Glass Foundation and it's selection committee for the incredible honour of awarding me the 2010 Blue Planet Prize, which has been bestowed in previous years on a group of truly outstanding scientists and policy-makers. It is a particular honour to receive it in the same year as James Hansen who has played a critical role in the climate change debate.
I have been fortunate to have worked with many of the world's best scientists on issues such as stratospheric ozone depletion, climate change, and more recently biodiversity loss and sustainable agriculture. These issues are not only environmental issues, but of importance to poverty alleviation, economic development and human security.
The international scientific programs and assessments in which I have been associated have played a critical role in influencing national and international policies. The international assessments are credible only because of the commitment of so many experts throughout the world in preparing and peer-reviewing them. Chairing and directing these assessments, and then translating the information for decision-makers in government and the private sector, has been an incredible, enjoyable and highly rewarding experience.

Message to the Japanese public

Dr. James Hansen

I want the public to know that the dangers of climate change are avoidable – if the public insists. Climate can be stabilized and the remarkable life on our blue planet can be preserved. Phase-out of fossil fuels has other benefits, such as cleaner air and water.

Required actions are resisted by special interests that benefit from business-as-usual. Profiteers have great clout, controlling a weakened media, and denigrating the science. Our governments connive, proposing ineffectual actions.

However governments were instituted for the people, not for special financial interests. We must demand, through growing peaceful means, that governments protect our blue planet.

Dr. Robert Watson

I believe there is no dichotomy between protecting our environment and sustainable economic growth by using environmentally-friendly technologies, developing policies that protect the environment, and engendering a philosophy of individual behaviours that recognizes the importance of nature. In fact, improving the lives of the billions of people who live in abject poverty, cannot be achieved unless we provide clean energy and water, protect our biological resources, and address human-induced climate change. Therefore, we need the scientific community to work with governments, private sector and civil society to reshape the way we produce and use energy and manage our lands.