

## Joint Paper by the Blue Planet Prize Laureates

As to celebrate the 20<sup>th</sup> anniversary of the Blue Planet Prize, a project was initiated around 2010, to seek how the laureates were thinking on the global environmental issues which currently were having difficulty in providing a path toward their solutions. Informal dialogues and discussions on social contributions commenced with the Blue Planet Prize Laureates. As a result, a specific plan was formed in 2012 and an invitation was issued regarding the preparation of a joint paper for improving the global environment by the Blue Planet Prize Laureates. In response to the invitation, a number of the laureates agreed to pursue the plan. Consequently, the volunteer laureates gathered and held animated discussions at the International Institute for Environment and Development (IIED) in London. A paper presenting their proposals on environmental issues has been prepared. The paper received a positive response when it was presented in 2012 at the UNEP Governing Council meeting held in Nairobi and the Planet Under Pressure in London, the integrated international meeting of academic societies related to the environment, where a number of the world's leading scientists and related parties gathered. The paper also attracted significant attention when it was introduced at the Rio+20 conference and the IUCN Congress.

The paper will be published as "Environment and Development Challenges: The Imperative to Act" by the University of Tokyo Press, and its Japanese translation has also been published

as "Kankyo to kaihatsu no teigen: Chi to katsudo no renkei ni mukete" edited by Honorary Professor of Kyoto University Kazuo Matsushita.

Through the publication of these papers, by introducing the proposals of the Blue Planet Prize Laureates to as many readers as possible, we hope that nature, which is irreplaceable, will be carefully passed down to future generations with the aim of developing a truly sustainable world.



### Environment and Development Challenges

#### The Imperative to Act

The Blue Planet Prize Laureates

Syukuro Manabe / Camilla Toulmin / Saleemul Huq  
Julia Marton-Lefèvre / Simon Stuart  
M.S. Swaminathan / Russell Mittermeier / Will Turner  
Paul Ehrlich / Karl-Henrik Robert / Robert May  
Harold Mooney / Gene Likens / Susan Solomon  
Gro Harlem Brundtland / Gordon Hisashi Sato / Emil Salim  
Amory Lovins / José Goldemberg / Nicholas Stern  
James Hansen / Robert Watson / Bunker Roy

edited by  
Robert Watson

University of Tokyo Press

#### >> New Publication Announcement <<

#### Environment and Development Challenges The Imperative to Act

Scheduled publication date: late March 2015  
Price: To be announced

環境と開発への提言：知と活動の連携に向けて  
Scheduled publication date: early March 2015  
Price: ¥3,456 (¥3,200 + tax)

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## >>> Environmental Doomsday Clock Original Character Comic Book <<<

We have published a booklet series that aim to expand environmental awareness using the Environmental Doomsday Clock and that primarily targets younger generation. The story allows readers to understand what environmental issues are occurring on Earth by reading through the adventures of Gring and Woodin. The series also features our foundation's board member Dr. Michiko Imai as a character. The comic can be viewed on the foundation's website. We will send the comics upon request. Apply using the Order Form on the foundation's website (<http://www.af-info.or.jp>).



## Grantees Report

### Environmental Research: The Kondo Grant

**Title:** Physiological studies for the reestablishment of health and stable ecosystem of the secondary forest "Satoyama"

**Recipient:** Professor Keiko Kuroda, Graduate School of Agriculture, Bioresource Science, Laboratory of Forest Resources, Kobe University (Total: 6.0 million yen, Grant period: 3 years from FY2013)



*Quercus variabilis*, the tree subject to physiological measurement, which wilts rapidly after being pierced by beetles (counting the number of galleries by sticking toothpicks into the tree bark)

Are you familiar with the tree disease caused by *Raffaelea quercivora*, a fungus? This disease has recently increased in "Satoyama" (secondary forests) in trees that bear acorns (excluding trees belonging to the genus *Fagus* of Fagaceae), such as oak trees. The disease starts when a 5 mm-long ambrosia beetle, *Platypus quercivorus*, make galleries (tunnels) in the stems of living trees and the pathogenic fungus grows in the galleries.

Infected trees react with an excessive protective response: xylem sap flows are blocked and then leaves turn red and wilt in summer for the deficit of water, so the damage is visible even from a distance. In "Satoyama" in Japan, over the last half century, traditional logging to produce materials for firewood and charcoal has ceased, and the number of aged and thick trees has increased. This is understood to have a strong connection with the increase in the scale of the damage. The vector beetle which carries the pathogenic fungus, was originally part of the ecosystem of the "Satoyama." However, as a result of the change in the constitution of the ages of trees in the forests of "Satoyama," with the spread of the death of trees, the beetle has started to attract attention as a pest.

Instead of simply looking into the prevention or control of the disease caused by *R. quercivora*, this research will aim to physiologically clarify the factors that promote and prevent the onset of the disease and mitigate damage from the disease. In addition, through this research, we plan to suggest methods for maintaining and regenerating healthy forests to local communities. The maintenance and management of forests involves a wide range of issues related to people's lifestyles. Under this research, we are taking the initiative to address these issues together with municipalities, forest owners and local residents in Sasayama City, Hyogo Prefecture. (■■■■)

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## THE ASAHI GLASS FOUNDATION

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# af News

## 2014 Blue Planet Prize Awards Ceremony and Congratulatory Party

The Asahi Glass Foundation awarded the 23<sup>rd</sup> annual Blue Planet Prize in the ceremony held at Palace Hotel Tokyo on November 12, 2014. The recipients of the award this year were Prof. Herman Daly, Prof. Daniel H. Janzen, both of the United States and Instituto Nacional de Biodiversidad of Costa Rica. The ceremony was graced by Their Imperial Highnesses Prince and Princess Akishino, along with numerous distinguished guests, including ambassadors and representatives from government, academia, and business.

Mr. Tetsuji Tanaka, Chairman of the Foundation, presented the introductory remarks, followed by an introduction of the award winners by Dr. Yoshihiro Hayashi, Chairman of the Selection Committee.

Prince Akishino, gave the Congratulatory address. Then the message from Prime Minister Shinzo Abe

was read by Mr. Tsuneyoshi Tatsuoka, Vice-Minister of Economy, Trade and Industry. As representatives of the countries of the winners, Mr. Jason P. Hyland, Deputy Chief of Mission of the United States of America, and Ms. Lilliam Rodrigues Jimenez, Charges d'affaires ad interim of the Republic of Costa Rica, also complimented the laureates on their dedication to environmental issues and their many accomplishments.

The Awards Ceremony was followed by a Congratulatory Party. Well-wishers surrounded Prof. Daly, Prof. Janzen and Dr. Rodrigo Gámez Lobo, President of Instituto Nacional de Biodiversidad throughout the evening, celebrating the occasion, while toasts were proposed in recognition of their tremendous achievements.



Prince Akishino offers remarks at the Blue Planet Prize Awards Ceremony

Mr. Tanaka, Chairman of the Foundation and Prof. Daly

Middle : Prof. Janzen  
Right : Dr. Gámez

Learn from nature, grow nature's blessings and make society sustainable.

Here we introduce scientists who have set an example, and have proven and demonstrated what can be achieved.



Blue Planet Prize Commemorative Lectures

Remarks Made in Accepting the Blue Planet Prize

Prof. Herman Daly



I am both honored and humbled to accept the magnanimous Blue Planet Prize from the Asahi Glass Foundation. The making of such important products as glass and chemicals is already a great benefit to the world. Encouraging and supporting others in their efforts to protect and improve our Earth home, as the Asahi Glass Foundation does, is truly an example of generosity and service. When one is treated generously, then one is inspired to treat others the same way. Thank

you for that inspiration, and for including me among a list of recipients whom I have long admired.

This recognition is not only an encouragement to me, but also to many friends and colleagues who have worked hard to protect and preserve our Earth from the destruction caused by excessive growth and careless waste. Among these I especially include my colleagues in the International Society for Ecological Economics. If I have done anything to deserve this Prize it is to have provided a generational connecting link between my best teachers and my best students. May this award strengthen that continuing chain into the future!



Professor Daly became interested in human society and majored in economics at Rice University. He focused on research into a sustainable economy.



After gaining his Ph.D. in 1967, he taught at Louisiana State University.



He established the International Society for Ecological Economics jointly with Doctor Robert Costanza, and still participates in discussions.



He became a Senior Economist at the World Bank in 1988.

He continually questions whether economic growth has led to the happiness of human beings by presenting "Herman Daly's three principles," a point of origin of ecological economics, and the "Herman Daly pyramid."



Since 1994, he dedicated to the education an Honorary Professor in the University of Maryland's School of Public Affairs.

Prof. Daniel H. Janzen and Instituto Nacional de Biodiversidad (INBio)



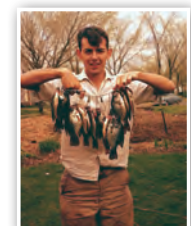
We - all of us, including 2.6% of the world's biodiversity - are delighted and honored to learn of the Blue Planet Prize for us and Costa Rica's INBio. This honor really is for a cast of thousands of Homo sapiens - Costa Ricans and internationals - dancing with billions of other beasts, each doing their part to keep alive some portion of the nature that

produced all of us. It is wonderful and wise that years ago the Asahi Glass Foundation had the foresight to offer this support to attempts to move away from the very human tendency to consume and alter our nest. Yes, we can restore some of what we have destroyed, and yes, we can help the world to become biologically literate. Without bioliteracy, nature is just a green threatening mass and there is little hope of its peaceful coexistence with all of us. We, INBio, and Area de Conservacion Guanacaste, are happy recipients of this recognition of decades of trying to open the doors of conserved wildlands to non-damaging partnerships with humanity. Only through direct understanding of the wild world can society welcome it into the family, village and nation.

To receive the prestigious Blue Planet Prize, given in recognition of our voluntary efforts to conserve Costa Rica's rich biodiversity is a great honor, which we appreciate in all of its significance. We are humbled to be among many of the most outstanding authorities and leaders in the quest for solutions to the global environmental problems who have been previously recognized with this award, as well as to share it with Dr. D.H. Janzen, a world authority in tropical ecology and conservation with whom INBio has worked in a mutually beneficial association.

What our National Biodiversity Institute has been able to achieve through its institutional efforts has been largely determined by an enabling national environment; the endorsement of the Government of Costa Rica; the support of bilateral and multilateral development agencies; the collaboration of the scientific community and the profound commitment of INBio's community with the cause of promoting a greater awareness of the value of biodiversity in our society.

The Blue Planet Prize becomes a new source of inspiration and motivation to continue our search for a harmonious relationship between humanity and our living world.



Professor Janzen obtained a Ph.D. in entomology from the University of California in 1965, and currently teaches conservation biology at the University of Pennsylvania.



Professor Janzen and his wife were also involved in the establishment of INBio in 1989.



INBio possesses more than three million specimens. Information about these specimens has been processed by the database through the DNA barcoding method and is available to the public free of charge.



He continues to carry out research jointly with his wife, Doctor Hallwachs, and is undertaking research by spending six months in the Area de Conservacion Guanacaste (ACG) in Costa Rica.



The couple has made their utmost efforts to achieve ecosystem conservation of the ACG, and other locations in the area in which restoration and regeneration have made progress were named a UNESCO World Heritage Site in 1999.



Increasing cooperation with companies and research institutions, aimed at the economical use of biological resources through research in the gene and biological chemistry sectors



Providing opportunities to experience and learn about nature by establishing a theme park nearby to enhance the awareness of residents and children in the regions

Selection Rationale

Dr. Yoshihiro Hayashi, Chairman of the Selection Committee



Prof. Herman Daly

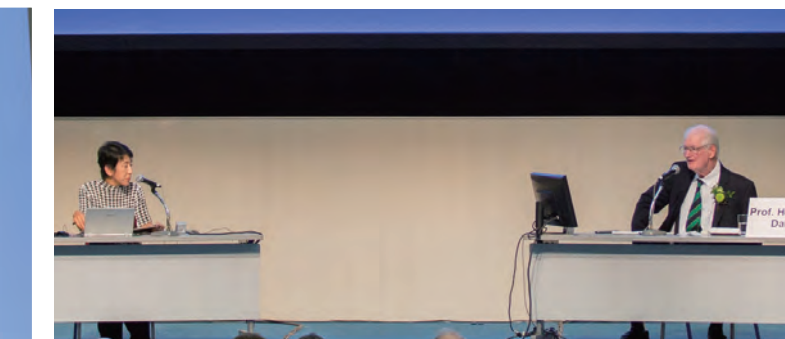
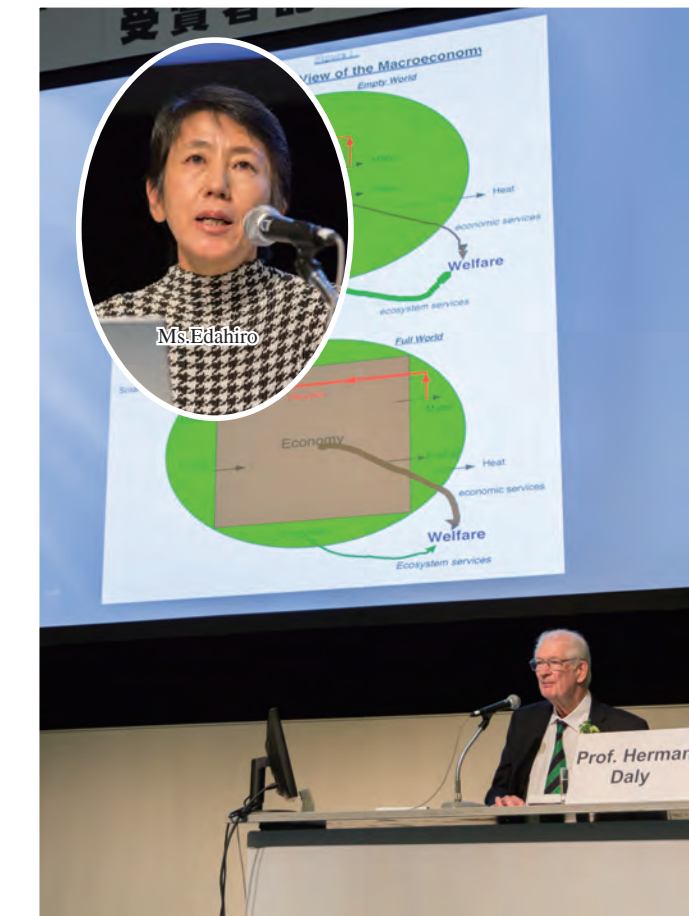
Professor Herman Daly is a key pioneer who is known for his theory that any economy that ignores the precious nature, which forms the basis of human society and the economy, will collapse sooner or later, and that it is essential to develop new economics to realize a sustainable society. Professor Daly established the foundation of ecological economics that takes nature and the environment into account based on "steady state economics," and he has been setting off alarm bells around the world, which tends to overly prioritize economic growth. Professor Daly has also asked, "Has economic growth led to the happiness of humans?" He has advanced ecological economics by adopting new values, such as quality of life and ethics, which have almost never been discussed before in the field of economics. Professor Daly also co-founded the journal Ecological Economics to promote active discussions, made an impact on a number of people through the International Society for Ecological Economics, the World Bank and university education, and made an effort to develop a number of human resources, leading to incomparable achievements.

Prof. Daniel H. Janzen Instituto Nacional de Biodiversidad

Professor Daniel H. Janzen, Doctor Winnie Hallwachs, the research partner and wife of Professor Janzen, and the Instituto Nacional de Biodiversidad of Costa Rica (INBio) have been cooperating in the regeneration and conservation of biodiversity in tropical dry forests and rainforests in Costa Rica, producing internationally outstanding and important achievements. These achievements, the DNA barcoding that Professor Janzen has introduced and implemented, the collection and identification of more than three million biological specimens by INBio and the development and use of tools to utilize information about the specimens, have been widely recognized. As a result, they have become a global model for a sustainable development through regeneration and conservation of fragile nature in the tropical zone. A wide range of activities, including environmental education closely based on regions and local communities and bioprospecting, the process of the discovery and utilization of useful genetic resources from biological resources, which even covers international commercial cooperation, have now become a source of inspiration for researchers and environmental conservation activists around the world. These activities are expected to continue to expand in the future.

The award winners presented their lectures at the U Thant International Conference Hall at the United Nations University on November 13 to an audience of more than 200 persons.

In the first part, Prof. Herman Daly presented a lecture titled "Economics for a Full World," which was followed by a question-and-answer session moderated by Ms. Junko Edahiro, President of Institute for Studies in Happiness and Society.



In the second part, Dr. Rodrigo Gámez Lobo, President, Instituto Nacional de Biodiversidad, gave a lecture titled "How to promote awareness of the value of biodiversity in a society: The experience of Costa Rica's National Biodiversity Institute," followed by Prof. Daniel H. Janzen with a lecture titled "Conservation of tropical wildlands through non-damaging biodiversity development: a Costa Rican example." After the lectures, a question-and-answer session took place moderated by Prof. Tetsukazu Yahara, Director, Institute of Decision Science for a Sustainable Society, Kyushu University.

It was a truly fulfilling three hours, providing us with deeper understanding on the achievements of each recipient and a valuable opportunity to learn behavioral guidelines for us to work toward resolving global environment issues. The handouts and lectures can be viewed at the website of the Asahi Glass Foundation.

