# 2019 Honda Prize Nomination Guide

HONDA FOUNDATION

公益財団法人 本田財団

# Honda Foundation

**“I reached where I am now just through technology.  If we really can solve problems with technology, then I definitely want to be of some use."**
(Soichiro Honda, the founder of Honda Motor Company)

Honda Foundation was established in December 1977 by donations from the founder of Honda Motor Company, Soichiro Honda, and his younger brother, Benjiro.

# Funding Prospectus

- **Modern society has been achieving great prosperity**, thanks to sustained high economic growth that has been made possible through various technological innovations in production, traffic, transportation, telecommunications and other activities. **We are experiencing revolutionary changes** in our way of life, and in our changing lifestyles we have also expanded our horizons.
- **This achievement has had negative effects too**: environmental destruction, pollution, urban density, food shortages due to the population explosion, the growing consciousness gap between nations, races and religions plus a number of other deep-rooted, complex issues.
- Various research and efforts have been made to resolve these problems. Each of them, however, is a kaleidoscopic reflection of different elements of modern civilization, and thus **requires a completely new approach in the search for a resolution.**
- A makeshift resolution serves no purpose. Wisdom and effort must be pooled on an **international level**, and **through an interdisciplinary approach** to **the analysis of modern civilization**, the results can be used to promote human welfare and happiness. In this way **we must strive to create a higher level of humane society**.
- In order to provide the opportunity for scholars, researchers and specialists **from all walks of life**, irrespective of nationality, **to meet together and freely discuss** the present state and the future of our civilization, the HONDA FOUNDATION sponsors **international symposia and colloquia, and offers prizes and awards for the promotion of research, education and other such activities, and also carries on its own studies and research, making use of the achievements of modern civilization**, the FOUNDATION **was established** with such objectives in mind, and by extending its own activities to fulfill the requirements of the modern age, **it contributes towards the creation of a truly humane civilization**.

# Funding Prospectus

## Prosperity

## Negative effect



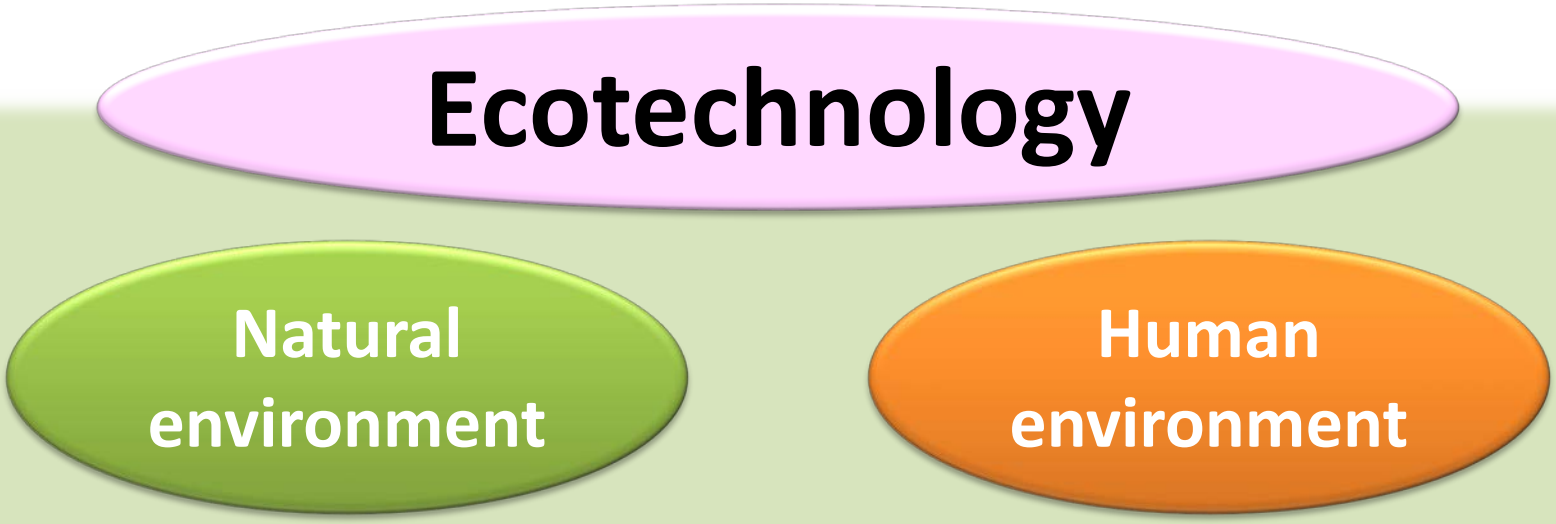


Requires a completely new approach
in the search for a resolution

Creation of a truly humane civilization

# Ecotechnology

Requires a completely new approach in the search for a resolution




- **Harmonize human activities with the natural environment**
- **Develop science and technology in harmony with human environment**
- **Science and technology for the welfare of human beings**

# Ecotechnology (in detail)

## Narrow Meaning

**Ecotechnology**

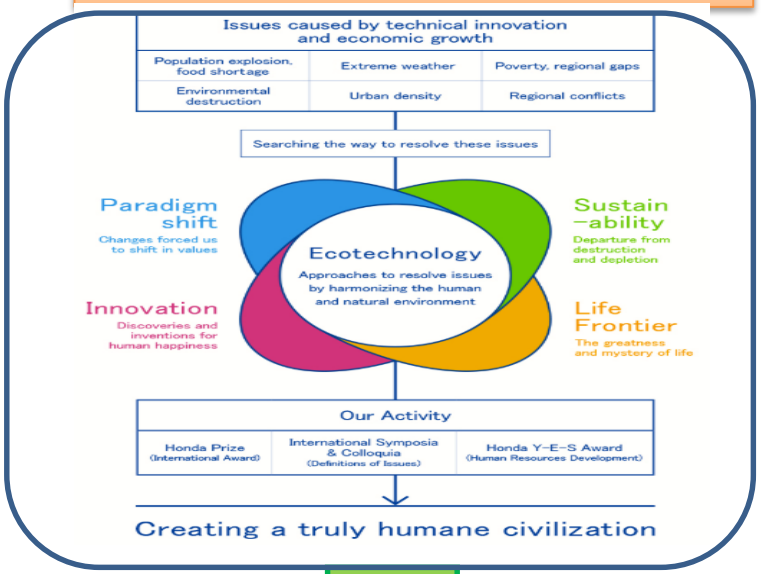
- Advances in global warming and wider pollution damage
- Inequality in resources and wealth
- Widening regional disparity
- Cooperation across industrial and academic fields

**Natural Env.** **Human Env.**

Departure from destruction and depletion

**Sustainability**

## Broader Meaning




## Past Laureates in broader fields of Ecotechnology

1994
Dr. Benoit B. Mandelbrot (France)
Lifelong work on the Fractal Geometry

**Paradigm shift**

1985
Dr. Carl Sagan (U.S.A.)
Novel perception of human civilization

**Sustainability**

2006
Dr. Richard R. Nelson (U.S.A.)
Evolutionary Theory of Economic Change

**Innovation**

1991
Dr. Monkombu S. Swaminathan (India)
Leading role in the Green Revolution

**Life Frontier**

# Four Perspectives of Ecotechnology

## Issues of society

- Powerful influence of science and technology
- Social responsibility linked to commercialization
- Growth in diversity and complexity of issues
- Bias toward pursuit of profit

- Advances in global warming and wider pollution damage
- Inequality in resources and wealth
- Widening regional disparity
- Cooperation across industrial and academic fields

- Technological advancement with no heed to mankind
- Curiosity toward unknown materials and technologies
- Technology without a sense of reality
- Mankind led by the nose by science and technology

- Ethical issues that life sciences face
- Diseases spreading on a global scale
- Explosive population growth
- The individual approach to science and technology

## Ecotechnology

**Paradigm shift**
Changes forced us to shift in values

**Sustainability**
Departure from destruction and depletion

**Innovation**
Discoveries and inventions for human happiness

**Life Frontier**
The greatness and mystery of life

## Objective

**Creation of truly humane civilization**

# Summary of Major Activities

## Creation of Truly Humane Civilization

★**Honda Prize**

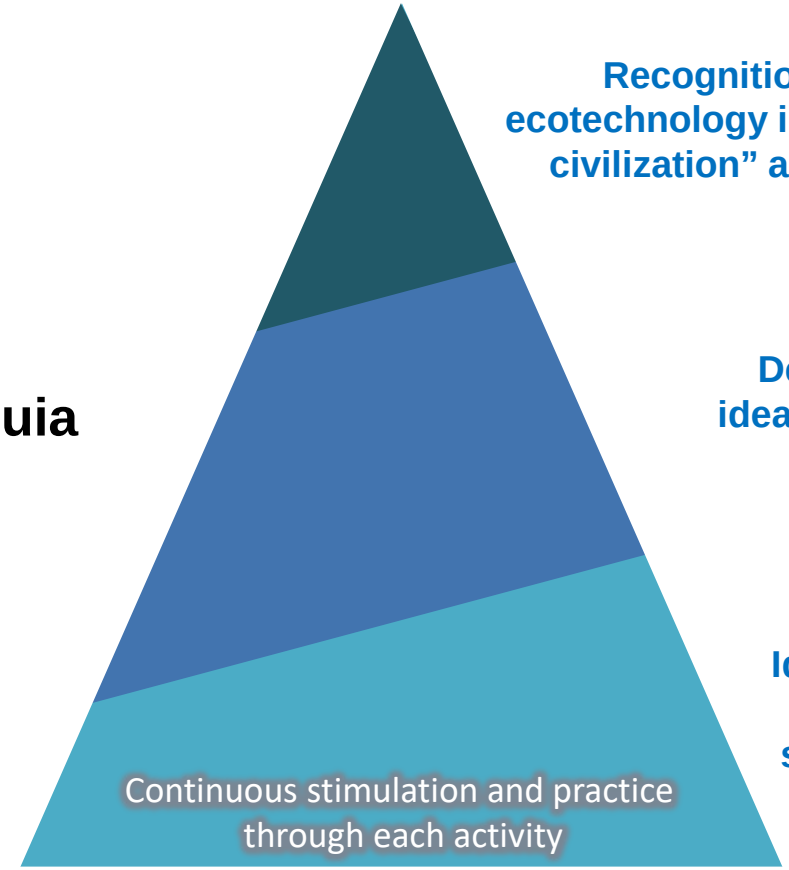
Recognition of persons practicing ecotechnology in "creation of a truly humane civilization" and support for their efforts

★**International Symposia/Colloquia**

Deliberations and creation of ideas to resolve various issues in modern society

★**Y-E-S Program**
**Honda Young Engineer & Scientist's Award Program**

Identification and development of young researchers and scientists to lead forthcoming generations in practicing ecotechnology




**Contribute to the development of science and technology and society along the vision of "ecotechnology" through activities at various level**

# Honda Prize

**Recognition of the efforts of an individual or group who contribute towards “the creation of a truly humane civilization” to introduce their values across the world.**


- Since 1980
- Acknowledgement of the efforts of an individual or group who contributes to the development of science and technology and society along the vision of “ecotechnology”.
- Not only scientific and technological achievements, but also entire processes to bring out, apply, or share new frontiers to be considered

<Award>

Diploma

Medal

Supplementary Prize:
Ten million yen

# Honda Prize

## Past laureates and their achievements

### Paradigm shift

1992
Dr. Hermann Haken
(Germany)
Suggestion of
Synergetics

1994
Dr. Benoit B. Mandelbrot
(France)
Lifelong work on the
Fractal Geometry

### Sustainability

1985
Dr. Carl Sagan
(U.S.A.)
Novel perception of
human civilization

2002
Dr. Barry John Cooper
(U.K.)
Development of three-
way catalyst

### Innovation

2000
Dr. Shuji Nakamura
(Japan)
Development of Blue
LED

2006
Dr. Richard R. Nelson
(U.S.A.)
Evolutionary Theory of
Economic Change

### Life Frontier

1991
Dr. Monkombu S.
Swaminathan (India)
Leading role in the
Green Revolution

2012
Dr. Denis Le Bihan
(France)
Water diffusion
measurement by MRI

# Honda Prize Nomination Guide

## 1. Eligibility

- An individual or a group, irrespective of nationality, who has achieved distinguished contribution toward the development of science and technology and society along the vision of “ecotechnology”
- Achievements should be not only narrow scientific / technological new discoveries and inventions but also be served to the improvement of people’s lives around the world from the view point of entire processes that would bring out, apply, or share solution for facing problems
- Target fields include the broad range of related scientific fields such as mechanical /electronic/space engineering, chemical, physics, bioscience, agriculture, economics and medicine. It also includes an individual / a group in interdisciplinary research areas

**Note: Self-nomination cannot be accepted**

## 2. How to Nominate

- Complete the nomination form that was mailed or e-mailed by Honda Foundation. (Refer to the sample form in next page and the list of past laureates)
  - Title of Achievements: Give a title that describes achievements briefly
  - Problems to solve: Explain what kind of facing problems a nominee tried to solve
  - Utilized ecotechnology: Mark perspectives of ecotechnology (Paradigm shift, Sustainability, Innovation, and Life frontier) introduced in page 6 which is applicable to nominee’s achievements. Multiple choice allowed
  - Details of contribution toward the development of science and technology and society along the vision of “ecotechnology” : Explain in detail what kind of contribution a nominee brought toward “Creation of truly humane civilization”
  - Contributions by each stage: Choose more than one stage from “Invention/ Discovery”, “Application / Development”, and “Prevalence at General Level” which applicable to nominee’s achievements contribute then describe how in detail.
- Do not add extra page
- Reference materials to support understanding can be accepted but should be less.

**Note: As this is closed nomination, please do not post its information on open website or SNS.**

# 3. Selection Procedure and Notifications

The laureate will be determined through a series of deliberations by multidisciplinary selection committee. Announcement of the laureate will be released in September.

Note: Through the whole selection procedure, we do not contact with nominees directly but contact only the laureate after the person / group is determined.

# 4. Contact

If you have a question, please contact Honda Foundation:

2-6-20, Yaesu, Chuo-ku, Tokyo 104-0028 JAPAN
Tel: +81-(0)3-3274-5125 Fax: +81-(0)3-3274-5103

E-mail: h_info@hondafoundation.jp
HP: https://www.hondafoundation.jp/en/

Submit the nomination form **no later than March 15, 2019**
either via e-mail to h_info@hondafoundation.jp
or fax to +81-(0)3-3274-5103

# Sample of the Nomination Form1(1991 Dr. Swaminathan)

| Details of Nomination | |
|---|---|
| **Achievements** | |
| **Title of Achievements** | The Green Revolution movement in the Indian subcontinent |
| **Problems to solve** | Food crisis caused by rapid population growth |
| **Utilized ecotechnology (Mark an item)** | ・Paradigm Shift ・Sustainability ・Innovation ・Life Frontier |
| **Details of contribution toward the development of science and technology and society along the vision of "ecotechnology"** | In the late 20th century, predictions that food production would not be able to catch up with the ever-growing global population were a major concern to the people of the world. And those concerns became fact. The world population quadrupled in the 100 years up to the 20th century. Although it took more than a million years to reach 100 million sometime around the year 1800, the world population increased to 3.8 billion by 1972, and exceeded 6.5 billion by February 2006. When the population reached 3.8 billion, India, where exceptionally rapid population growth continued, was threatened in 1975 with widespread famine. However, this did not happen—because of a national scheme under Dr. Swaminathan to increase food production along with security of employment at the same time. Dr. Swaminathan holds to the principle of "improving human life within the limits of the carrying capacity of the supporting ecosystems." That is, agriculture that does not impose a burden on the global environment and does not interrupt the natural cycles, which resulted in contribution toward "Creation of truly humane civilization" |

| Details of Nomination | |
|---|---|
| Contributions by each stage | *Describes what the nominee and his/her/their achievements contribute at each phase. |
| | **Invention/ Discovery**<br>At a meeting of the International Commission on Peace and Food held under Dr. Swaminathan's chair in Madras in October 1991, participants agreed to work to achieve the following targets. A plan was made to address increases in food production and security of employment for the growing population at the same time. |
| | **Application / Development**<br>(a) Raise food grain by increasing per hectare yields of wheat and rice from 1.76 tons to 2.15 tons, and bringing another 2 million hectares of irrigated land under high yielding varieties of wheat and rice. It will increase employment per hectare by 50%. (b) Triple the area under irrigated cotton to raise total production from 13.3 million bales to 26 million bales. This and other measures generate employment for 11 million persons. (c) Extend the area under sugarcane by an additional 1.6 million hectares and raise average yields from 60 to 80 tons per (d) Raise fruit production by 50% and vegetable production by 100 (e) Raise inland fish production by 4.5 million tons through development of 50,000 hectares of intensive fish(f) Double mulberry silk production by establishing 500 integrated sericulture estates (g) Expand the area under irrigated oil seeds by 3 million hectares (h) Reclaim and utilize 4.5 million hectares of wastelands to meet the entire projected ( i ) Increase the number of milch animals by 18% in the country to generate 11.6 million additional jobs. |
| | **Prevalence at General Level**<br>Wheat production in India increased from 12 million tons in 1964 to 55 million tons in 1990. |

# Sample of the Nomination Form2 (2005 Dr. Reddy)

| Details of Nomination | |
|---|---|
| **Achievements** | |
| **Title of Achievements** | Pioneering research in robotics and computer science |
| **Problems to solve** | Resolution of differential of human response capabilities caused by various gaps between region, race, language and age |
| **Utilized ecotechnology (Mark an item)** | ・Paradigm Shift ・Sustainability<br>・Innovation ・ Life Frontier |
| **Details of contribution toward the development of science and technology and society along the vision of "ecotechnology"**<br>Over the past 50 years, robotics and intelligent systems have made great advancements. Once, the main purpose of robotics and intelligent system was to provide solutions to specific technological problems. But with the exponential advances in information technology, extensive systems and solutions that greatly affect our lives were developed. Dr. Raj Reddy has made great contributions to advanced technologies, such as human interface, artificial intelligence, speech and vision and other areas which particularly serves humanity. His research is based on the belief that the capabilities of robotics and intelligent systems should be shared equally regardless of nationality, language, age, gender or economic status. Integrated with evolving information technology, he has contributed to construct the humane civilization. | |

| Details of Nomination | |
|---|---|
| Contributions by each stage | *Describes what the nominee and his/her/their achievements contribute at each phase. |
| | **Invention/ Discovery** |
| | **Application / Development**<br>(1) robots that can care for the elderly in aging societies all over the world, (2) rescue robots that can work in disaster situations that are too dangerous or inaccessible to humans, (3) speech and reading tutors that can support the illiterate with advanced speech recognition and synthesis technologies, (4) computer vision and intelligent cruise control to prevent traffic accidents, improve fuel efficiency and reduce driver fatigue, (5) computer systems that enable the illiterate to use voice mail and other functions, (6) digital libraries where anyone can access archived publications, and (7) artificial intelligence to resolve the rural digital divide, such as expert systems and knowledge based systems that can be used in medical diagnosis and therapy applications. |
| | **Prevalence at General Level**<br>His achievements accelerated global researches in many fields turning into realization, which accordingly reduced burden of humanity. |

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