

January 24, 2023

# Disaster Reduction and Human Renovation Institution – Its 20-Year History and New Endeavors

Yoshiaki Kawata  
Executive Director

Great Hanshin-Awaji Earthquake Memorial Disaster  
Reduction and Human Renovation Institution

# **1. Relationships between Evaluation of the Past and Endeavors toward the Future**

# What Causes Mutation?

- A coronavirus variant, for example, is said to be generated every 50 seconds or so.
- The evolution of living things is sustained by mutation.
- It is said that mutation occurs because if a species continues to exist without mutation, the species will inevitably decline.
- A human society also needs to experience changes to ensure it continues. (Analogy)
- Changes are highly likely to occur through new endeavors.

# Why Is Evaluation of the Past Necessary?

- We need to be humble enough to recognize that things have not always proceeded smoothly over the past 20 years.
- Our “mutation” can be realized by factors that have prevented our smooth growth.
- Our reform will become possible only after we are accurately aware what is insufficient for us.
- The reform will not succeed without the cooperation of those who can acknowledge negative factors.
- The reform will not succeed without the courage to face past inconvenient truths squarely.

# Achievement of Six Targets

- We have conducted a self-inspection evaluation for the past 18 years.
- At the same time, we have been annually evaluated by the Project Evaluation Committee. We have continued operations while pursuing consistency between the results of the two types of evaluation.
- However, both are evaluations for a single year, not for the 20 years of our entire history.
- Such an entire history could be evaluated only by the Institution's Executive Director, who has administered the responsibility of managing the organization for 20 years.
- There are materials that can be used not only for subjective evaluation by the Executive Director, but also for objective evaluation.

# Reasons for Establishing the Disaster Reduction and Human Renovation Institution

- We strive to reciprocate the warm support extended from both home and abroad for recovery from the Great Hanshin-Awaji Earthquake, and to disseminate the lessons from the disaster toward the 21st century and the world.
- Of our six targets, “global dissemination” is the only target for which we have not yet generated sufficient results.
- Global dissemination means creating an environment in which the lessons that we disseminate are used in a practical sense around the world.

## **2. SDGs That Should Be Noted**

# Japan Leading International Society in Terms of “Disaster Reduction”

- Japan proposed the UN International Decade for Natural Disaster Reduction (IDNDR), with 1990 as its first year, and the proposal was adopted unanimously.
- Ironically, however, the decade from that year saw a spate of major disasters around the world, such as a storm surge in Bangladesh and the eruption of Mt. Pinatubo in the Philippines, both of which occurred in 1991.
- It was found that a major disaster in a developing country can wipe out the economic development efforts made by that country up to that time. **(Impoverishment)**
- Accordingly, economic development needs to come after disaster reduction measures. (Disaster reduction as the mainstream)
- The results have been reflected in the Millennium Development Goals in 2001, the Hyogo Framework for Action in 2005, the Sendai Framework for Disaster Risk Reduction in 2015, and the SDGs in 2015.



# 2030 Agenda for Sustainable Development

## ● Comparison between the MDGs and the SDGs

### MDGs

Millennium Development Goals  
2001–2015

8 goals and 21 targets  
(Simple and clear)

Goals for developing countries

Formulated under the lead of experts of the UN

### SDGs

Sustainable Development Goals  
2016–2030

17 goals and 169 targets  
(Comprehensive and mutually related)

Goals for all countries  
(Universality)

Negotiated between all UN member countries

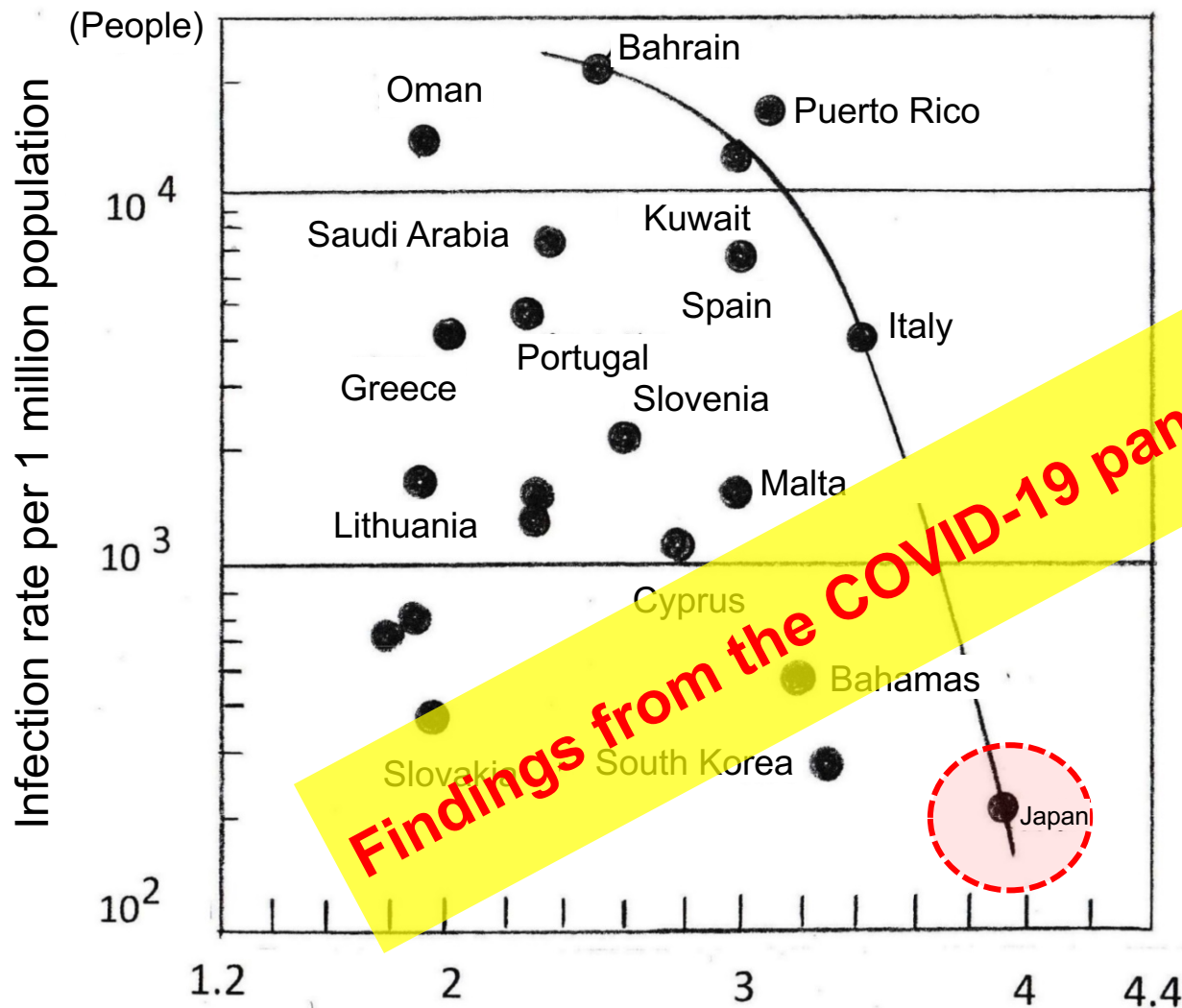
Emphasis also placed on the means  
of implementation  
(Funds, technology, etc.)



# SUSTAINABLE DEVELOPMENT GOALS



**Public Private **ACTION** for Partnership!!**  
**- SDGs to Energize Japan and the World**  
**You Are the Key Player! -**

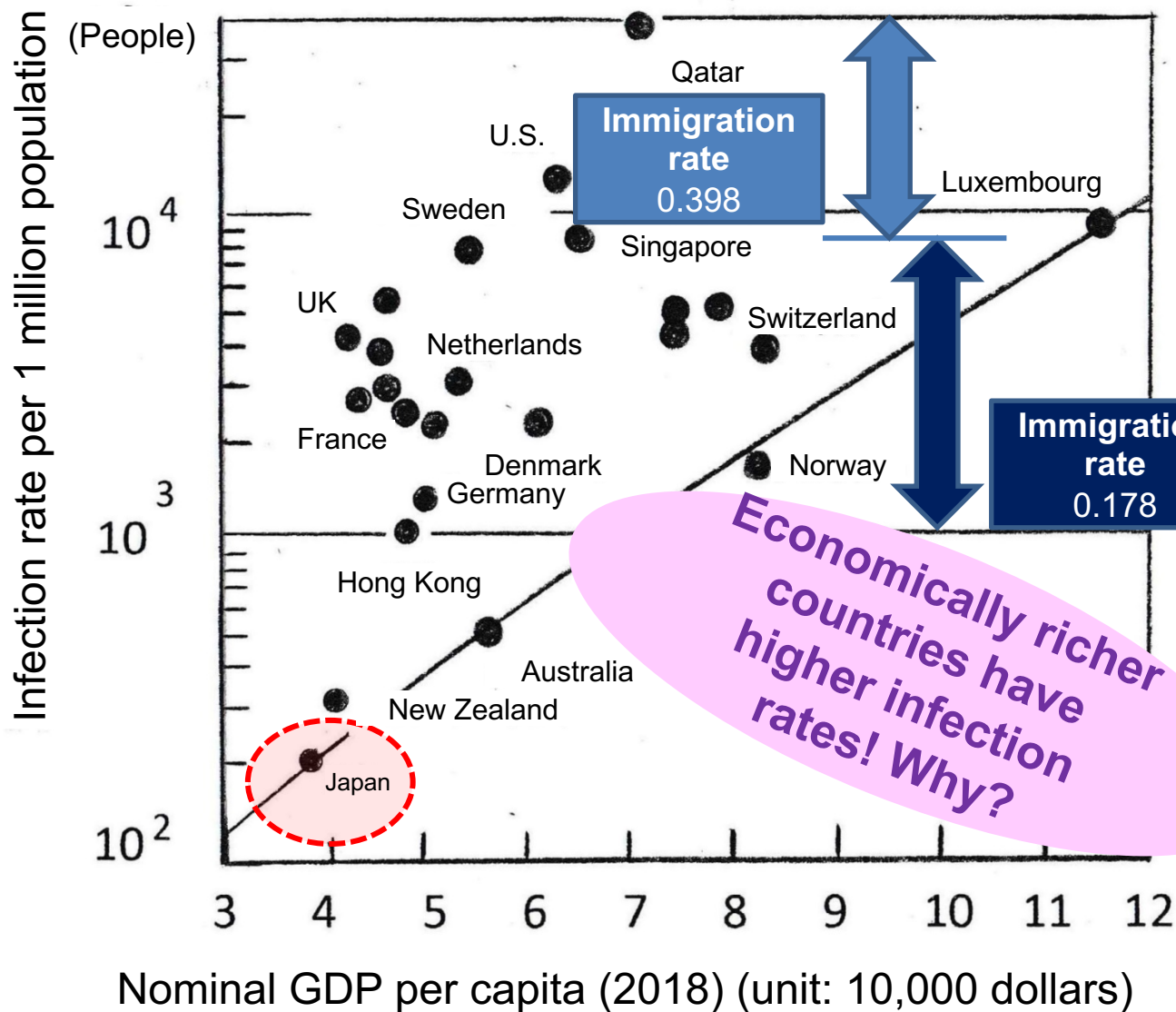


**Findings from the COVID-19 pandemic!**

Increase in civilizational disaster  
reduction capabilities



**Necessity to become economically rich**



Increase in cultural disaster  
reduction capabilities

Safe and secure communities with sophisticated life customs

# Sustainable Development Goals (SDGs)

## Sustainable “*Kaihatsu*” or “*Hatten*”?

### Science Development (Scientific “*Kaihatsu*”)

- Social life
- Endeavor
- Courage
- Inanimate
- Universal
- Funds as an essential factor

**Sustainable *Kaihatsu* Goals**  
(Mainly for economically poor countries)

### Culture Development (Cultural “*Hatten*”)

- Daily life
- Customs
- Growth
- Animate
- Regional and historical
- Low cost

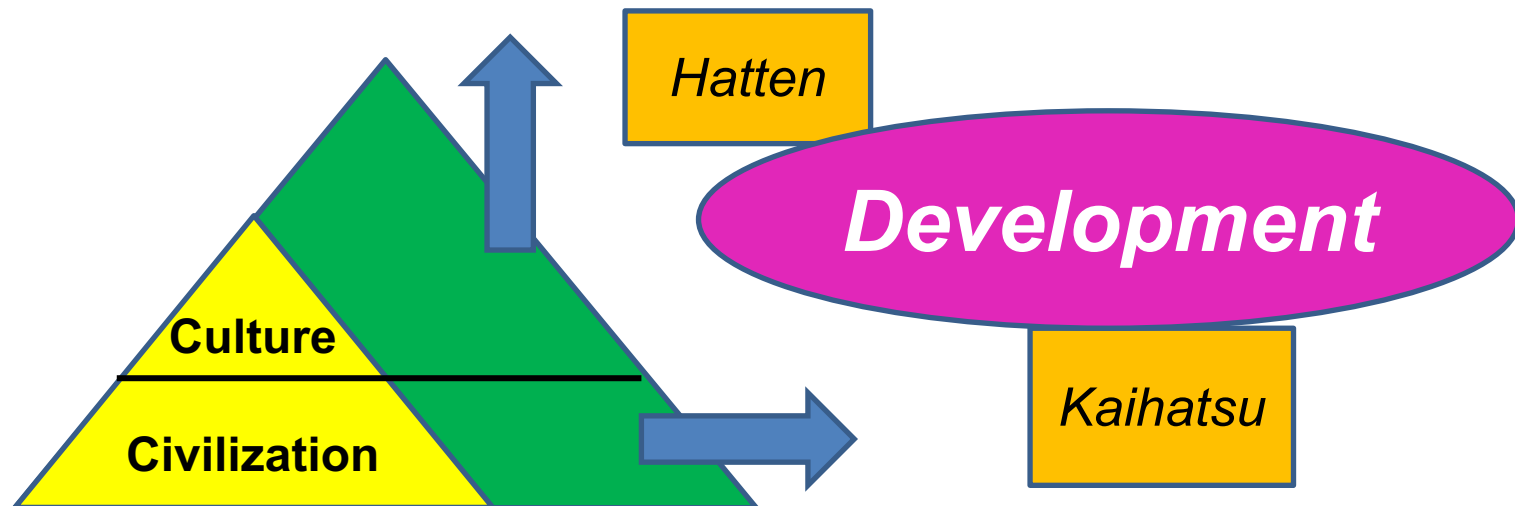
**Sustainable *Hatten* Goals**  
(Mainly for economically rich countries)



Compatible

# Increase Disaster Reduction Capabilities

- Economic growth is accompanied by an increase in civilizational disaster reduction capabilities  
--- **universal**
- Maturity of social customs is accompanied by an increase in cultural disaster reduction capabilities  
--- **historical and regional**



### **3. Project: *Disaster Reduction Picture Book for the Next 100 Years***

SDGs (Goal 4): Ensure inclusive  
and equitable quality education  
and promote lifelong learning  
opportunities for all

SDGs (Goal 4): Ensure inclusive and equitable quality **disaster reduction** education and promote lifelong learning opportunities for all

- In elementary and secondary education, students are basically taught only matters with “correct answers.”
- In society, however, there are an overwhelming number of problems without “correct answers.”
- Therefore, disaster reduction education basically needs to be practical (designed for students to find specific answers).
- It is necessary to impart not “knowledge” but “wisdom.”
- One of the ways to do so is to spread the *Disaster Reduction Picture Book*.



# Why the Disaster Reduction Picture Book?

- ★ The picture book will be translated into various languages and distributed to citizens so that its messages can be handed down even to poor families in poor countries throughout the world. (Diversity)
- ★ Even if the relevant child or adult has some disability, they can become equally wise if the messages are handed down to them. (Inclusion)
- ★ The *Disaster Reduction Picture Book* helps readers become mentally rich and deepens their understanding of self-help, mutual help, and public help, thereby helping to reinforce society's disaster reduction capabilities.
- ★ Developed countries (excluding Japan and the U.S.), which have been almost free from natural disasters, do not have sufficient disaster reduction wisdom in society. Considering the increase in global warming, the *Disaster Reduction Picture Book* will surely be of use for such countries.

B O S A I

# Project: Disaster Reduction Picture Book for the Next 100 Years

P R O J E C T

## Launched in 2022! – Project Overview



### A picture book

It provides a world where pictures and words are interconnected to deliver important messages in an easy-to-understand manner.

Leveraging the power of such a picture book, we will launch a project to equip both children and adults with the wisdom for disaster reduction and behaviors to safeguard their lives.

Our goal is to contribute to the world's disaster reduction by imparting disaster reduction wisdom toward the future over the next 100 years.

Even if there is a call for evacuation due to torrential rain, few people heed the call. Why? This is because evacuation has not become a part of their daily life habits.

If adults read the picture book to children, who have a flexible mind, the children will subconsciously acquire the disaster reduction wisdom, which they will not forget even after they grow up.

Ensure that disaster reduction culture takes root in society so that citizens can withstand disasters. To achieve this ambitious goal, why not join the project?

**- Leverage the Power of the Picture Book to Ensure that the Disaster Reduction Culture Takes Roots in Society – Executive Committee of the Project “Disaster Reduction Picture Book for the Next 100 Years”**

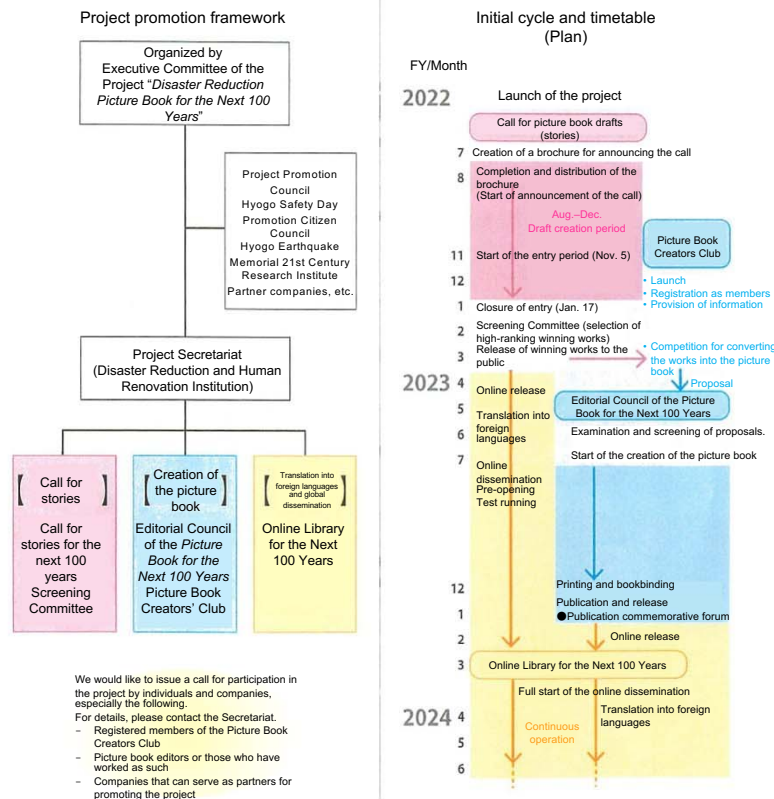
Secretariat: Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution

B O S A I

Project: Disaster Reduction Picture Book for the Next 100 Years

P R O J E C T

## Project: Disaster Reduction Picture Book for the Next 100 Years Launched in 2022 Phase 1 (FY2022–FY2023) Project Schedule/Promotion Framework



<https://bosai100nen-ehon.org> (plan)

Secretariat of the Project "Disaster Reduction Picture Book for the Next 100 Years"  
(Operation Section, Business Department, Great Hanshin-Awaji Earthquake Memorial Disaster Reduction and Human Renovation Institution)

Email (planned to be newly set)

Fifth floor, West Wing, 1-5-2 Wakoinhamakaigan-dori, Chuo-ku, Kobe, Hyogo, 651-0073

Tel: 078-262-5502

July 12, 2022

# Expected Disaster Reduction Culture to Be Formed

- If adults read the *Disaster Reduction Picture Book* to children, a wide variety of lessons will be handed down from generation to generation. In addition, if adults read the picture book for themselves, it will help them increase their knowledge. (Expansion of the metaverse world)
- After learning about the lessons, the adults and children will visit disaster museums around the world and understand what actually happened. (Events in the real world and recognition)
- Alternatively, the transfer of live lessons will establish a link between the metaverse world and the real world.

# Features of Use of the *Disaster Reduction Picture Book*

- ★ The use of the *Disaster Reduction Picture Book* is educationally effective especially for babies and little children, and the effects will continue for the rest of their lives.
- ★ Babies and little children will regard what has been read to them as things they have actually experienced. (Events not in the metaverse world, but in the real world)
- ★ A wide variety of media will be adopted to spread lessons from disasters, such as not only the *Disaster Reduction Picture Book*, but also online and other digital tools for providing information, and cultural methods such as picture card shows.
- ★ The *Disaster Reduction Picture Book* will serve as a model for implementing the SDGs with the target set on poor families in developing countries.
- ★ The *Disaster Reduction Picture Book* will respond to the globalization of disasters due to global warming. (For example, the G7 countries will become prone to disasters.)

## **4. Sustainable Research on National Crisis Disasters**

SDGs (Goal 1): End poverty in  
all its forms everywhere  
(End disasters)

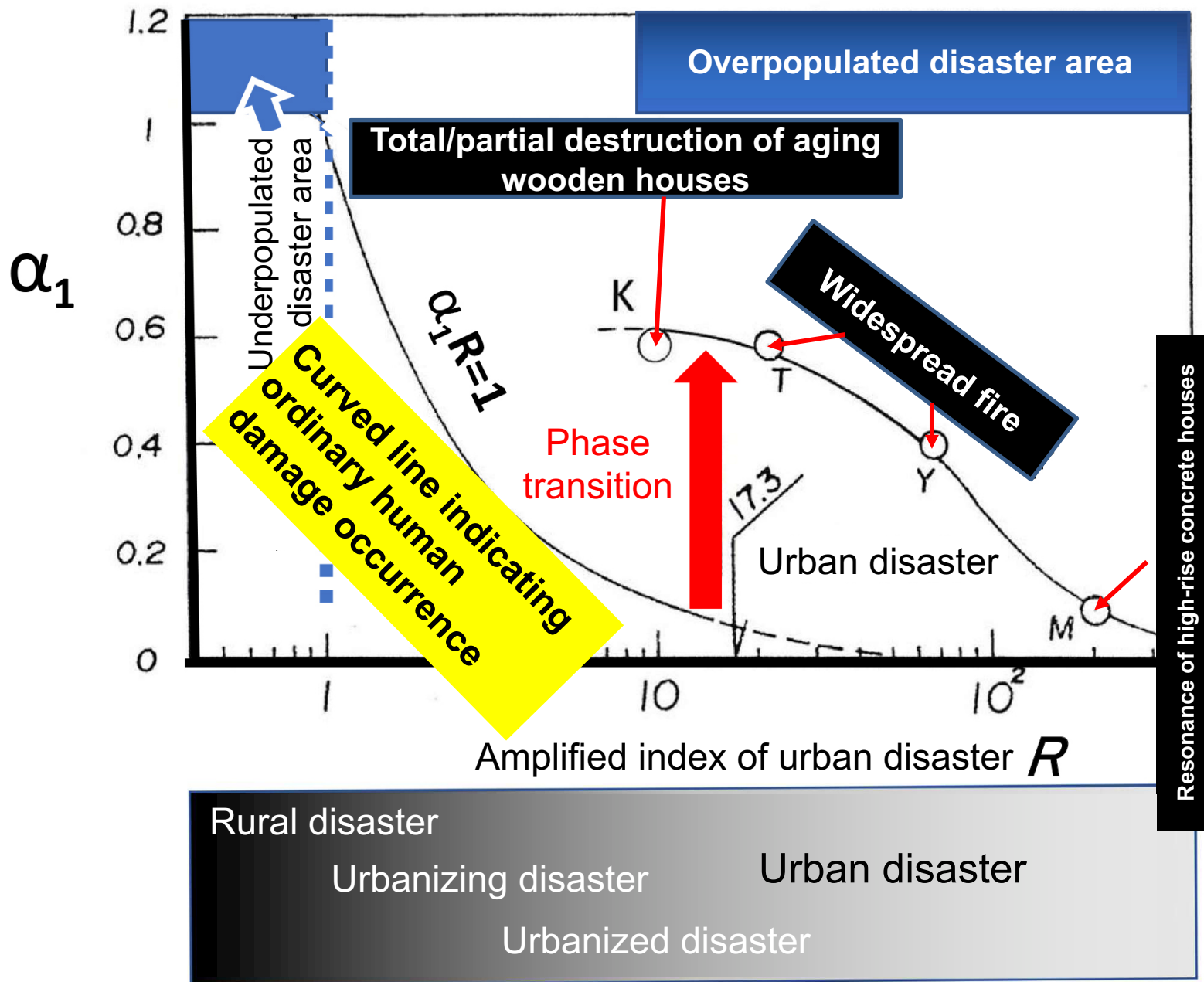
# What Has Made “End Poverty” Goal 1 of the SDGs?

- From the 1990s, the two targets of **improving the natural environment** and **promoting disaster reduction** were set internationally.
- It was found that environmental degradation increased the likelihood of disaster occurrence.
- Against this background, the two targets were integrated into the disaster reduction target. However, it was difficult to formulate agreements on the disaster reduction target from all the UN members, because only one-third of the approximately 200 member countries were prone to disasters. Accordingly, based on the theory that **a disaster makes the affected country poor**, “End poverty” was set as Goal 1.

# National Crisis Disasters Devastating Japan!

Disaster example	Scale	Likelihood of occurrence within 30 years	Seismic intensity	Population of affected area	Expected death toll	Debris volume	Damage value	Notes
<b>Earthquake directly under Japan's capital</b> (Damage: released by the government)	M7.3	70%	7	Approx. 25.4 million people (With intensity of "lower 6" or higher)	Approx. 23,000 people	98 million tons	<b>95 trillion yen</b>	Super-scale urban disaster entailing the loss of function of the capital
<b>Nankai Trough earthquake</b> (Damage: released by the government)	M9.0	70~80%	7	Approx. 40.73 million people (With intensity of "lower 6" or higher)	Approx. 231,000 people	310 million tons	<b>220 trillion yen</b>	Affected population (tsunami flooding depth: 30 cm or higher): 60.88 million people  Super-scale regional disaster with the Disaster Relief Act issued in 707 municipalities
<b>Submergence of Tokyo</b> (Damage estimated by the writer on the assumption that the center of Tokyo is flooded to a depth of 3 m or more due to a storm surge, flood, or tsunami)	-	-	-	Approx. 3.78 million people	159,000 people	54.1 million people	<b>91 trillion yen</b>	Complete or partial destruction: approx. 730,000 buildings  Super-scale environmental pollution due to the spread of pollution substances accumulated in the affected water areas







# Examples of Phase Transition in Nankai Trough Earthquake and Earthquake Directly under Japan's Capital

## Nankai Trough Earthquake

- New complex disasters due to delayed evacuation right after the earthquake
1. Earthquake and tsunami: The lives of approximately 220,000 people who need support for evacuation will be claimed.
  2. Damage to evacuation shelters: Elementary schools and junior high schools will not be able to be used as evacuation shelters due to liquefaction and power failure.
  3. Poor progress in searching for the missing: It will take long time to search for approximately 46,000 missing people.
  4. Disaster where safety confirmation is almost impossible: There will be delays in safety confirmation due to power failure, communications failure, road block, etc.

## Earthquake Directly under Japan's Capital

- New complex disasters caused by power failure
1. Hospital disaster: 1,673 hospitals (68%) will need to transfer 260,000 inpatients to other hospitals in the case of an earthquake with an intensity of "lower 6" or higher.
  2. Transportation disaster: Fuel supply will be suspended (32%) due to the failure of petroleum refining (31%).
  3. Food disaster: Supply for approximately 20,000 tons of consumption per day will be suspended in the metropolitan area.
  4. Evacuation shelter disaster: The Disaster Relief Act will not work any longer, leading citizens to evacuate from the metropolitan area to a wide variety of regions around the country.

# Disaster Reduction Framework to Respond to National Crisis Disasters

## Disaster Civilization (Science)

1. Discovery of phenomena of phase transition
2. Implementation of measures to reduce extreme damage
3. Implementation of measures to reduce standard damage
4. Establishment and sharing of standard crisis management methods
5. Agreement on how to solve problems
6. Implementation of proactive measures

**Progress in modern science**

## Disaster Culture (Law- Abiding State)

1. Inclusion of an emergency clause in the Constitution of Japan
2. Formulation of a contingency plan (on the assumption that a disaster occurs)
3. Cabinet Disaster Reduction Ministry (Agency) + regional organizations (involvement of local governments)
4. Drastic revision of the Basic Act on Disaster Management and the Disaster Relief Act
5. Establishment of an environment for implementing proactive measures

**Sophistication of civil culture**