

# Communicating Natural Disasters, Man-made Hazards and Risks



By NASA

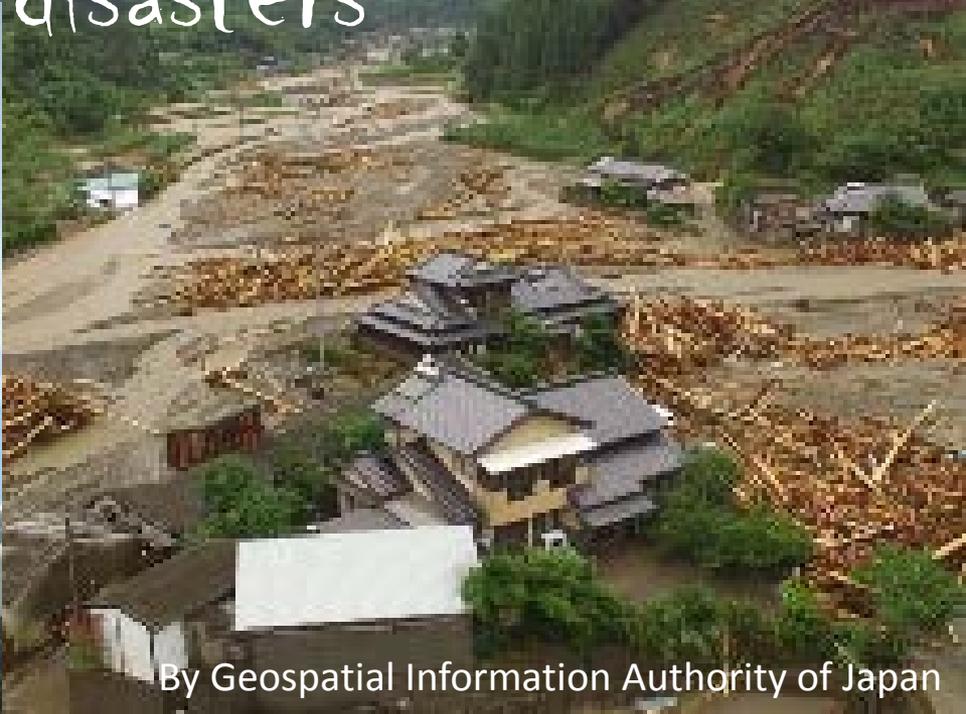


By U.S. Navy

# Natural disasters



By C.G. Newhall



By Geospatial Information Authority of Japan



By Eric Hensley



By Nils Fretwurst

# Man-made hazards



By Fukushima Central Television Co. Ltd. & NNN



By Alex Hofford/AAP

## *What we should do?*

1. Be aware that there are hidden risks.
2. Understand the nature of hazards and risks.
3. Take measures to avoid or reduce damages.

*How can we, science centers, do that?*

# Speakers

Yasushi Ikebe

(Miraikan/Japan)

Earthquakes, Nuclear disaster

Daegil Hong

(Daegu National Science Museum /Korea)

Ferry boat disaster, Earthquakes

Szu-yi Lo

(National Science and Technology Museum /Taiwan)

Typhoon, Earthquakes, Infectious Diseases

Norio Ohmagari

(Center Hospital of National Center for Global Health and Medicine)

Infectious Diseases

# Lessons learned: The 3.11 disaster

Yasushi Ikebe



By Fukushima Central Television Co. Ltd. & NNN



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# M=9 earthquake & Tsunami



# Nuclear reactor melt down

By Fukushima Central Television Co. Ltd. & NNN



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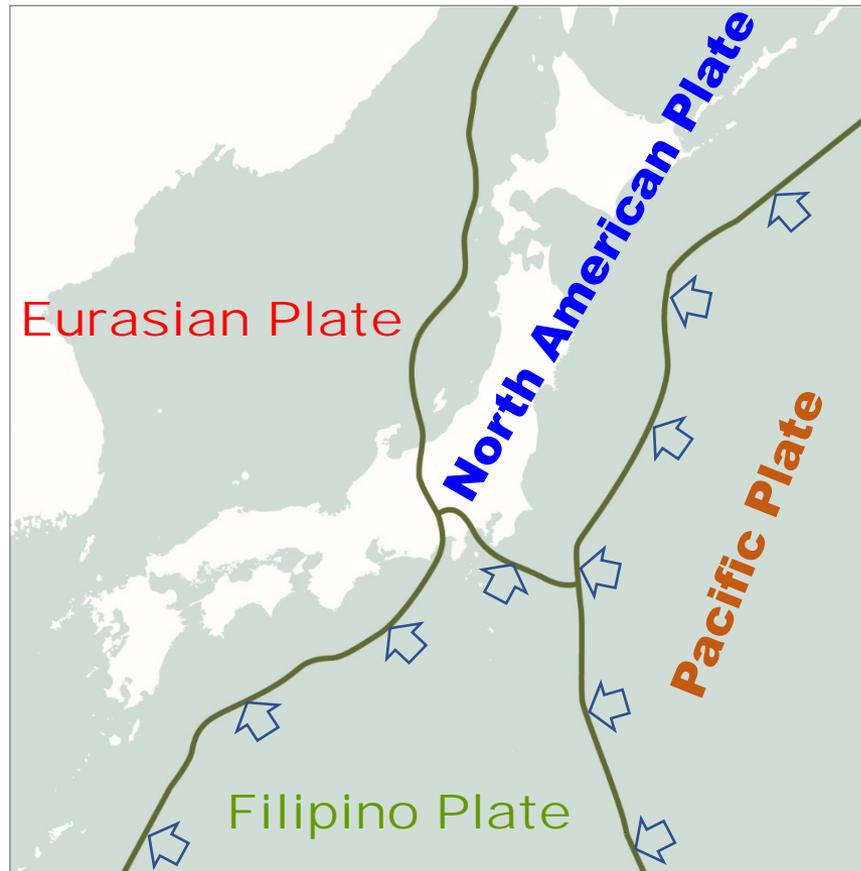
One lesson learned:

“Imagine hidden risks and prepare for them”

1. “Unexpected”
2. Fundamental
3. What we should know?  
Miraikan’s activities

# “Unexpected”: earthquake

We thought we knew



# “Unexpected”: nuclear power plant

Absolutely safe?



# “Unexpected” on radiation We were confident



Hiroshima atomic bombing  
on August 6, 1945.

Nagasaki atomic bombing  
on August 9, 1945.

By Charles Levy



By Fukushima Central Television Co. Ltd. & NNN



Fukushima  
on March 14, 2011

By Fukushima Central Television Co. Ltd. & NNN

# Fundamental problems

We naively believed

We relied on someone else

Must not let just specialist work, but we should.

“Imagine hidden risks and prepare for them”

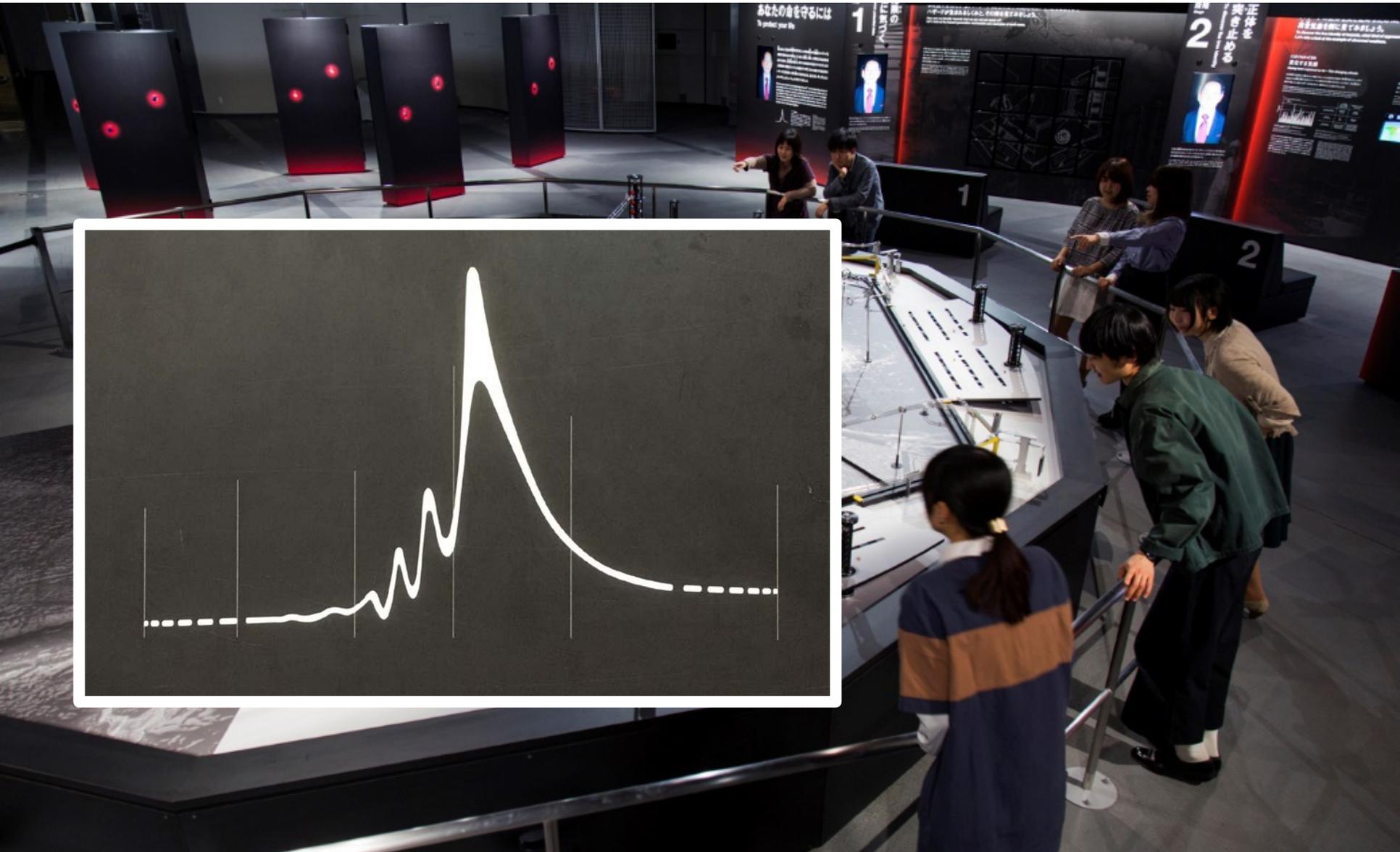
Risk literacy

- (1) Be aware that there are hidden risks.
- (2) Understand the nature of hazards and risks.
- (3) Take measures to avoid or reduce damages.

## Our activities

(Permanent Exhibitions, Special Exhibitions, Workshops, School Programs)

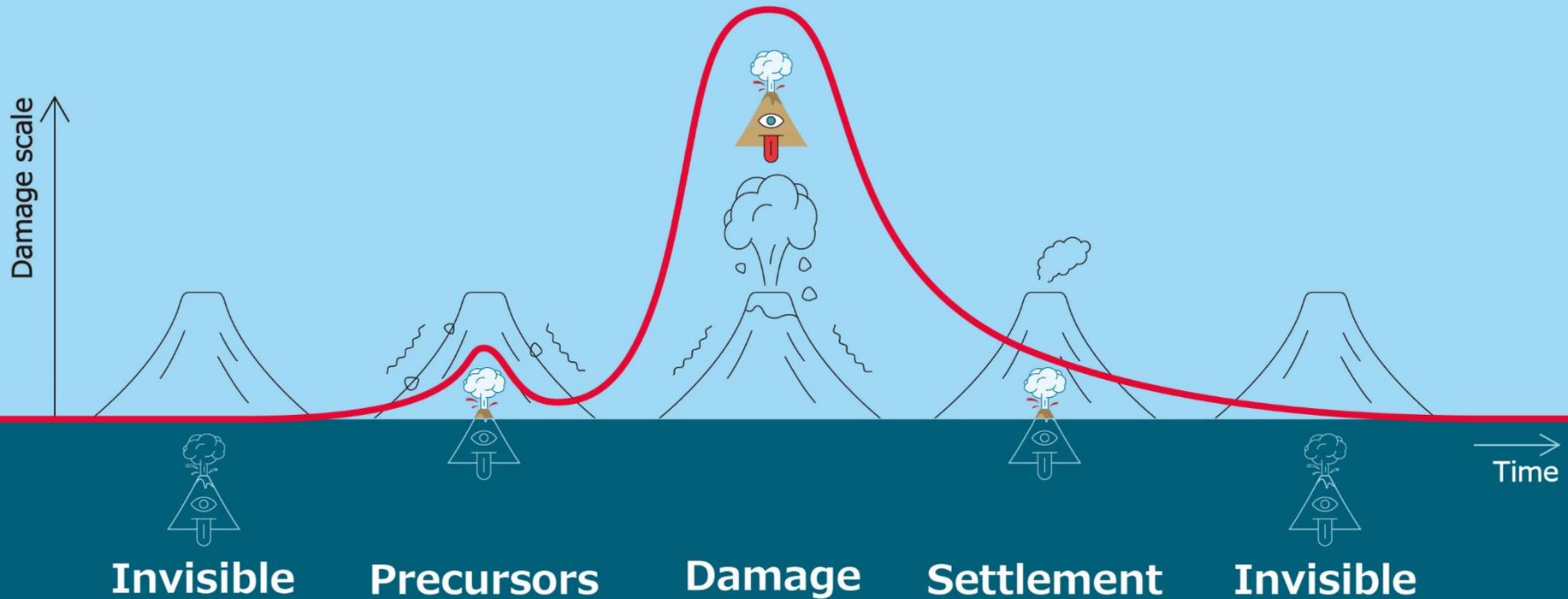
# Permanent exhibition: “Mission Survival:10 billion”



# Permanent exhibition: "Mission Survival:10 billion"

(1) Be aware that there are hidden risks.

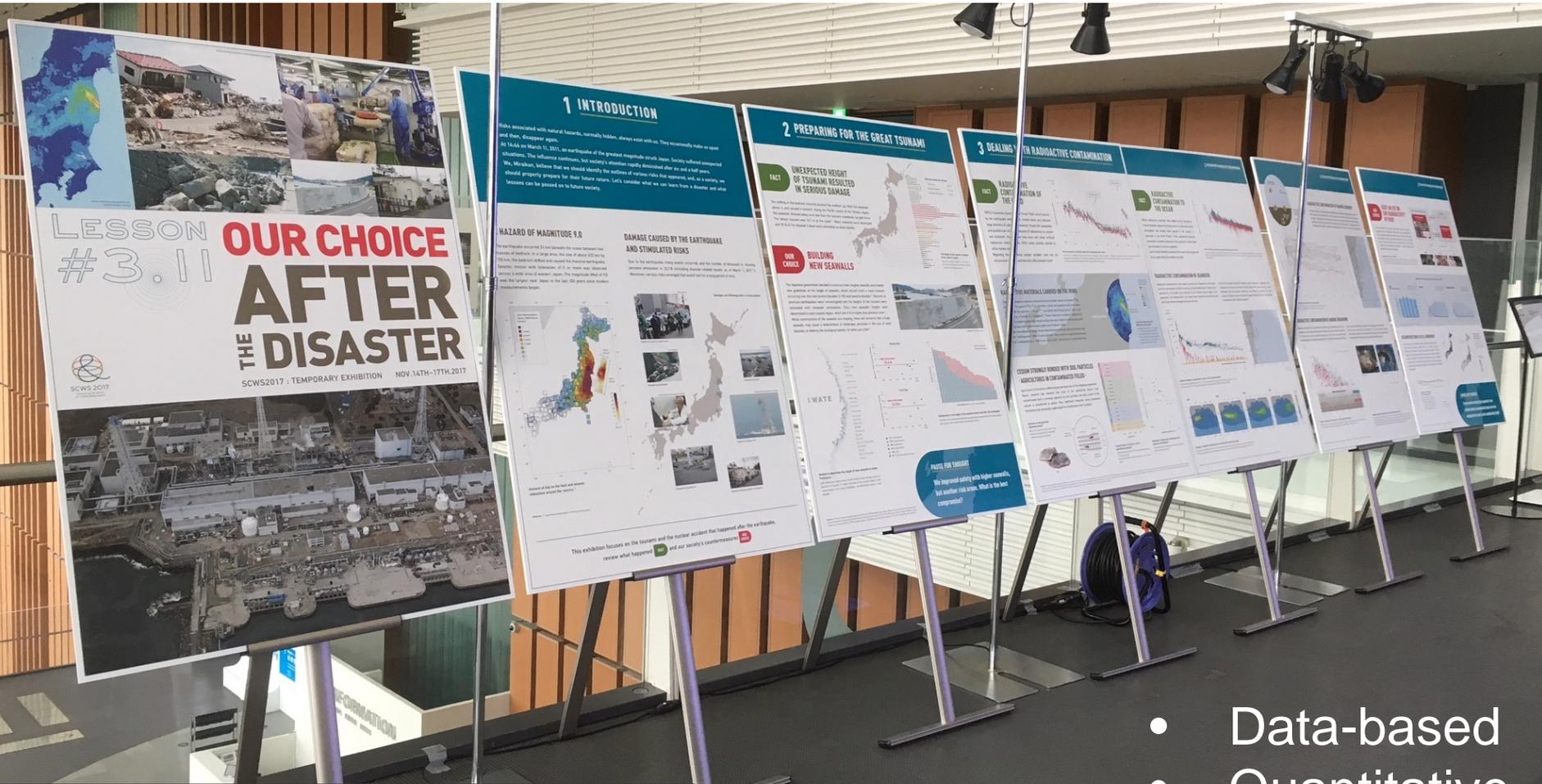
Risk development curve



# LESSON #3.11

## Special exhibition: “Lesson #3.11”

2) Understand nature of hazards and risks.

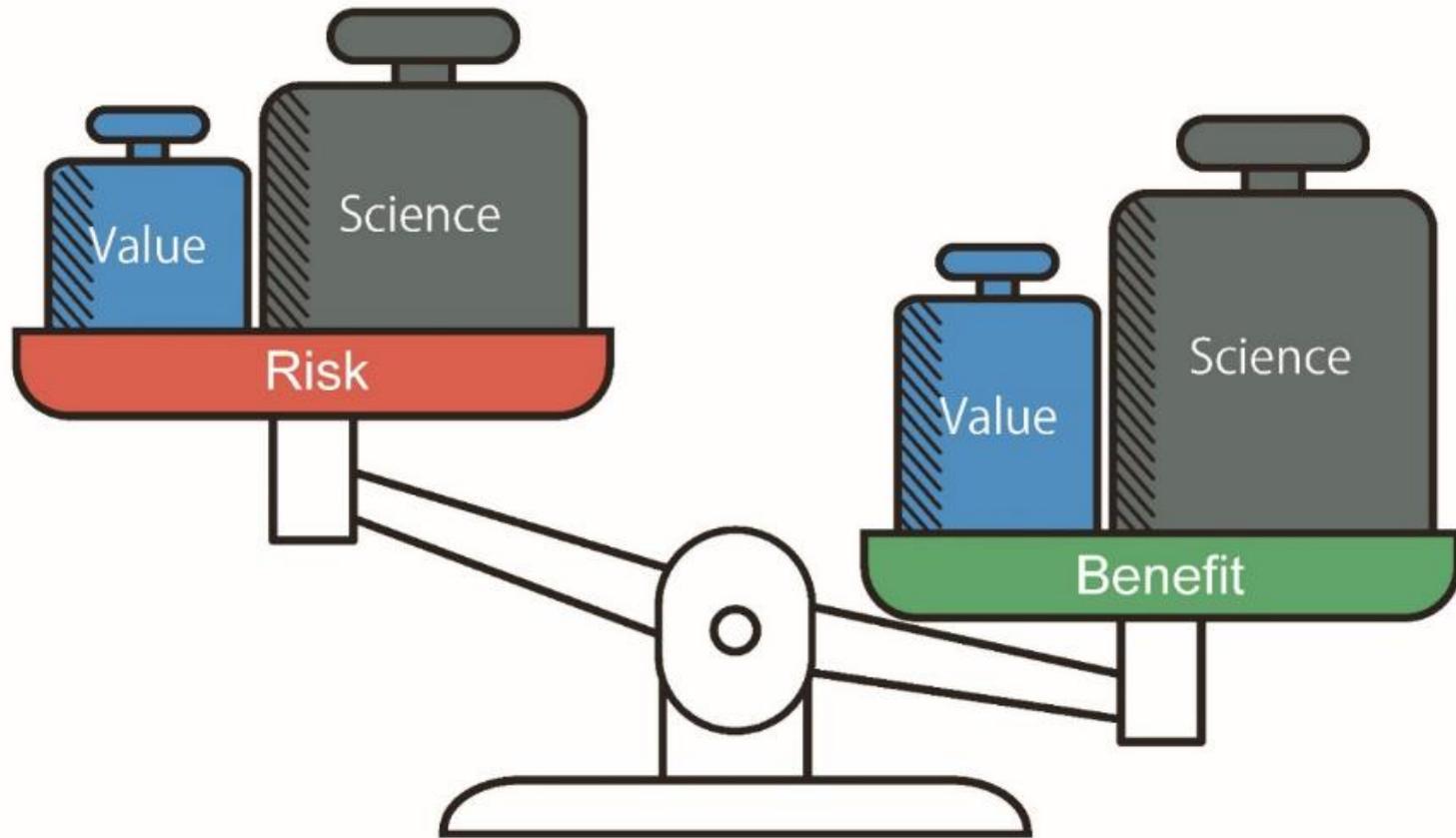


- Data-based
- Quantitative

In front of Coffee shop on the 5th floor

# Workshops: “Radiation”

(2) Understand the nature of hazards and risks.



# School programs: “Make your own manual”

(3) Take measures to avoid or reduce damages.



# School programs: "Make your own manual"

## (3) Take measures to avoid or reduce damages.

場所                      メンバーの名前

Lesson learned from the 3.11 disaster

“Imagine hidden risks and prepare for them”

“To imagine the unimaginable is the highest use of the imagination”.

Cynthia Ozick

# Speakers

Yasushi Ikebe

(Miraikan/Japan)

Earthquakes, Nuclear disaster

Daegil Hong

(Daegu National Science Museum /Korea)

Ferry boat disaster, Earthquakes

Szu-yi Lo

(National Science and Technology Museum /Taiwan)

Typhoon, Earthquakes, Infectious Diseases

Norio Ohmagari

(Center Hospital of National Center for Global Health and Medicine)

Infectious Diseases

# Discussion

What should we do?

1. Be aware that there are hidden risks.
2. Understand nature of hazards and risks.
3. Take measures to avoid or reduce damage.

How can we do?

- Exhibition
- Workshop
- School program
- Drill
- Cooperation

Share your ideas: