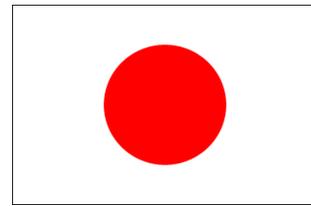


**‘Ichi-Nichi-Mae’
(the Day Before the Disaster) Project
for Inheriting Modern Indigenous Knowledge
for Disaster Awareness**

Satoru NISHIKAWA Ph.D

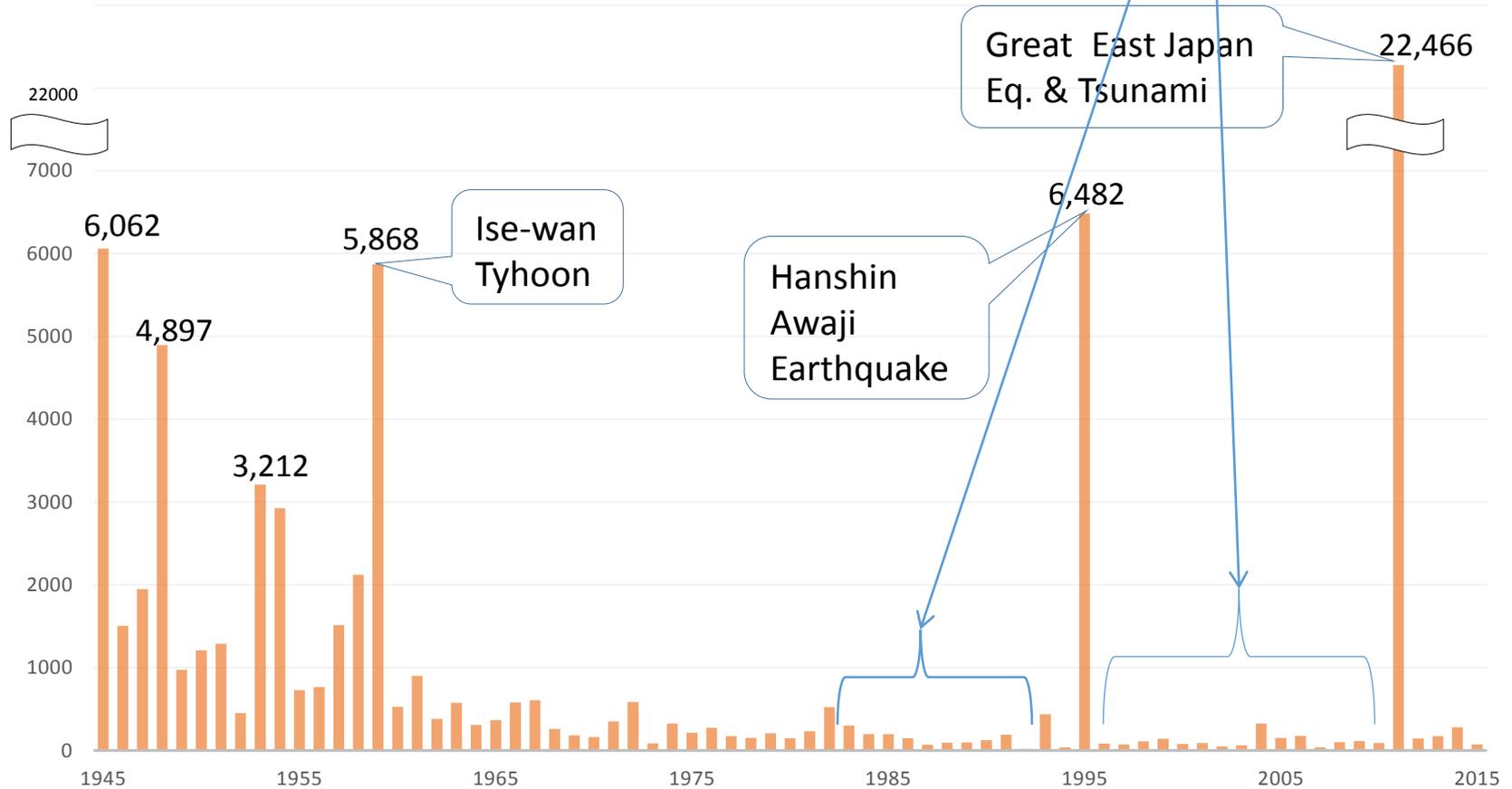
Professor, Disaster Mitigation Research Center,
Nagoya University

March 2019



How to raise disaster awareness in peaceful years?

Casualties by Natural Disasters in Japan



2011 Great East Japan Earthquake & Tsunami

14:49 JMA issues first Tsunami Warning to Pacific coast of Japan

14:50 Tsunami Warning Screen Aired on NHK



15:14 JMA upgrades Tsunami Warning based on the off shore GPS buoy sea level observation. NHK immediately airs screen.

Tsunami Warning → Run! Disaster Education Tested!



Junior high school students helping elementary school children to run to high grounds in Kamaishi City.

Massive Evacuation !

Emergency Sirens for
Tsunami Warning



Elementary School on hilltop



Signs of Tsunami Evacuation Building



Approx. 500,000 people in the Tsunami inundated area. Majority escaped.

But 20,000 did not make it!

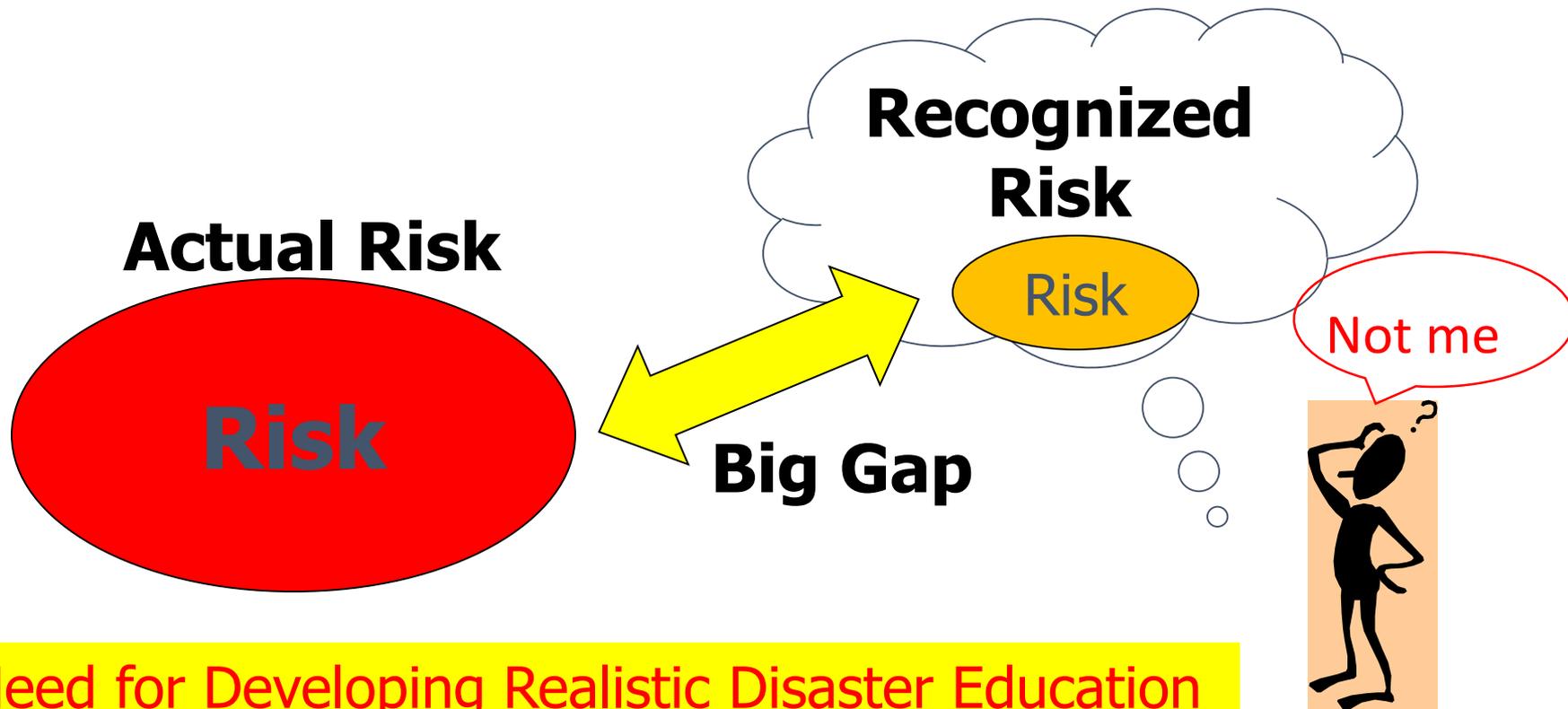
Mortality rate of Tsunami Inundated area

Indian Ocean Tsunami: 40%

Great East Japan EQ&Tsunami: 4%

Why are people Reluctant to take Preventive Action?

Risk Perception Gap



Need for Developing Realistic Disaster Education Materials Tailored to Attract Adults

How can we motivate individuals to take preventive action ?

- Disasters are not somebody else's affair.
- Do's and Don'ts preaching style educational materials do not attract adult's attention.

The tragic footages are not isolated events, it may be right behind you !

(the award winning poster of the 2005 competition)



'Ichi-Nichi-Mae (the Day Before) Project'

Application of Psychology

- Sincere personal stories generate sincere empathy to individuals in similar circumstances.
- This empathy will make them aware that they do have a possibility to be personally affected by a disaster.
- Once they recognize this risk, they will feel that they do not want to suffer similarly.
- This will work as a wake-up call for their preventive action.

➤ Interview people who were seriously affected by a disaster, who have responded to a disaster, by posing the question;

“ **What would you do if you were back**

the day before the disaster (Ichi-Nichi-Mae) ?”

➤ Edit the most impressive personal stories into 200 to 600 word short stories; Add an indicative illustration

➤ Publish it on the Cabinet Office Disaster Management Website
<http://www.bousai.go.jp/kyoiku/keigen/ichinitimae/index.html>

➤ **Free to download and use**

➤ **Conduct Workshops**

1. Interview & Edit Personal Stories

Step	Standard Procedure	Action Points & Tips
1	Identify Interviewer	Find good volunteers. Interviews to be conducted by 2 to 3 interviewers
2	Identify Storyteller	Request assistance from local community centers, school PTA, volunteer firefighters, and local shop leaders to indentify storytellers who experienced the disaster. Include volunteer firefighters and responders.
3	Group Interview	Find a relaxing place. Set a voice recorder. Bring news photos and news articles on the disaster. Don't interrupt the storyteller.
4	Extract Stories	Note down keywords. Try to pick up moving stories, mistakes and the wishes they want to convey.
5	Edit Stories	Edit the stories each into 200 to 600 words. One story should focus on one topic. Correct dialects if they are difficult to understand.
6	Add Headlines	Interviewers to agree on each headline. Headlines should be in oral tone.
7	Selection by Expert	Ask the disaster experts in the region to participate in the selection process. Don't add didactic modification. Make clear that mistakes are mistakes.

2-1. Stories Published by situation

Situation	Number of Stories (as of March 2017)
Home	224
Community & Neighborhood	283
While Commuting	42
Schools	22
Office & Workplaces	157
Government Offices	74

Efforts made to collect stories encountered at various situations where adults reside; not only at home but at offices, schools, commuting rail stations, neighborhoods, etc.

2-2. Stories Published by Disaster Type

Disaster Type	Number of Stories (as of March 2017)
Earthquake & Tsunami	403
Flooding, Typhoon and Inundations	274
Heavy Snow	32
Volcanic Eruption	61
Tornado	5
Stories Common to Disaster Type	39

Efforts made to collect stories of various disaster types which adults encountered.

Landslides, It is too dangerous to flee after the event

It was like messenger from hell; woods, rocks & debris smashed into my house

(Torrential Rains in July 2009) (Story by a man in the 50s, Hofu City, Yamaguchi)

A horrific noise like the theme music of messenger from hell blasted from the ground. The noise was approaching and when I looked out of my window, brown avalanche was pressing towards me. Fallen woods, numerous rocks and voluminous debris rushed to me.

Oh! My house will be crushed! The moment I fell back, something smashed my house, breaking noise, I was immersed up to my waist. The shattered window glass attacked me, my leg was cut, mud water turned red with my blood.

How can I escape out? "Oh I need shoes!", came to my mind. I snatched one of my shoes adrift on mud water, hardly put them on, waded through fallen sofa and chairs, found another shoe, put it on and tried to escape out of the patio door, but the door sill was crooked and couldn't open.

I barely escaped out of the main door, where the debris broke in. Just outside of my doorsteps, torrents of mud water dug the ground for 4 to 5 meters like a river, roared noisily.

My house was new, but to my grief, I could never come back and live in my house again.



Tsunami Survivor

I Tumbled Round and Round in the Seawater (Nankai Earthquake & Tsunami 1946)

(Story by a female survivor in the 70s, Tokushima Prefecture)

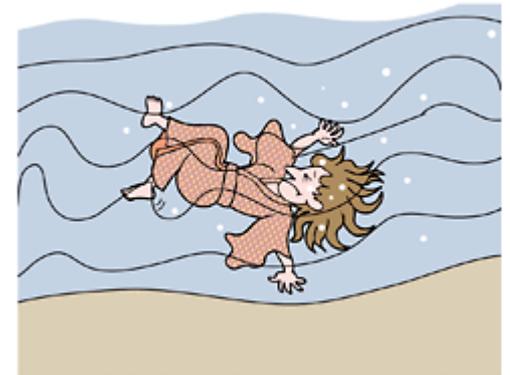
After the big shake, seawater surged in waves into my house. We had 4 family members at home. They all shouted, “Hurry! Hurry!” and ran. But the waves hit us from the back and from the side and made us so difficult to move.

The next moment, all four of us were swept away by a big wave. I tumbled round and round as if I was put in a washing machine. My mouth was filled with seawater, almost suffocated. Unless I can pop my head out the seawater, I will die! This is the end! This might be my last breath! That was all I could think in the salty whirlpool.

Luckily the next moment my head popped out of the waves! Oh my goodness! I can breathe. I am still alive. That was all I could think.

Drifting for awhile, my hand touched something like a wood. I grabbed it. Since my feet were still wandering in the water, my hands ached to keep hold of it. But if my hands let it go, I would be swept away to nowhere. I held on like grim death.

Then dim light came. I nervously looked around to see my whereabouts. Surprise! I was hanging onto the doorsill of my next door neighbor’s entrance.



Office workers caught in a stupor by Earthquake

I felt the shake and knew that I should protect myself but couldn't move

(Niigata Chuetsu-oki Earthquake July 2007) (Story by a male office worker in the 40s,
Kashiwazaki City, Niigata)

It was Sunday, but I was in my office on the 2nd floor, working in my desk.

Suddenly shake came. I recognized that it was an earthquake, but did not expect it to be such a big one and kept on sitting in my chair. But the shaking continued and got bigger and bigger, and finally I was barely grasping my desk with all my might.

Since we experienced the 2004 Niigata Chuetsu Earthquake, my company had emergency evacuation procedure. We were to, put on our helmets, all the staff on 2nd floor was supposed to gather and evacuate to the outside vacant parking space.

So I shouted, "Put on your helmet !" " We shall evacuate downstairs !"
But many of my colleagues seemed to be in a stupor, and did not take action.

I shouted again and again and urged them to move.
At last we were able to evacuate.

The shaking lasted quite long. I should have ducked under my office table to protect myself from falling objects.



A Single facing Starvation after Earthquake

I Really Regret Unprepared Single's Life (The Great East Japan Earthquake, March 2011)

(Story by a company employee in the 30s, Sendai City)

The Earthquake came when I was working in my office. Everything in the office turned over and fell down. Fortunately nobody was injured in my office. I reported to the main office that we were all safe. I informed my parents that I was safe. I was lucky to get my e-mail messages through and felt relieved. Then I went home to my dormitory room. It was a terrible mess! Since I am single and living alone, I do not cook. I always dined outside or bought lunch boxes at nearby convenience stores. My refrigerator was always empty.

I asked my parents in the countryside to send me some food. But immediately after the earthquake, the package delivery service was not available.

So my relief food supplies did not reach me. Supermarkets and convenience stores had empty shelves. I nearly starved to death. I really recognized the importance of food stockpiling. If I was back the day before the Earthquake, I would buy canned food.



Application of 'Ichi-Nichi-Mae' for awareness of Mayors

Case study edited by FDMA Japan

Mayor regrets heavy drinking

It was mere luck that we had no casualties, Our initial response failed due to my drinking

(The Mt. Usu Volcanic eruption, March 2000) (Story by former mayor of Sobetsu Town, Hokkaido)

The response to the volcanic eruption of Mt. Usu in 2000 is often quoted as a success story of early warning and evacuation. But it was a mere luck, I must say.

The 1977 volcanic mud flow killed one of my daughter's classmate. This made me serious about volcanoes and I kept insisting that our town has to co-exist with the volcano. Our response to the 2000 volcanic eruption was a mere product of chance, and we barely secured our safety.

Before dawn on 28 March 2000, when I was informed that volcanic earthquakes are sharply increasing, I was heavily drinking in a local bar and was not able to rush immediately to my town office. I was aware that Mt. Usu tends to erupt within a few hours of volcanic earthquakes, but I couldn't make it to my office because of drinking.

Local mayors like me have many parties they must attend, so we must take caution. I really regret that I was in such a bad condition when I had to cope with a volcanic crisis.

Luckily, as a result, there were 3 days before the real eruption and we were able to manage. But I still regret why I was in such a shameful condition on that day.



3. Conduct 'Ichi-Nichi-Mae' Workshops

Step	Action	Action Points & Tips
1	Read	Divide the participants into small groups of 4 to 7. Let the participants do self-introduction, chat and small games for ice-breaking. Read carefully the disaster experience story. It would be effective to watch a video footage of the disaster, prior to reading.
2	Write	Underline the points in the story where it was a surprise, a sorrow and a joy. Write memos on Post-It tags and put them on where the participant found important.
3	Discuss	Group members tack tags on a large piece of paper in turn. If there are same content tags, place them together. Classify the tags by, things to be done by individuals, things to be done in the community, things to be done as the society, and discuss among the group what should be done to reduce disaster risks.
4	Present	Discuss among the group and select several action points which the group thinks important for disaster reduction, and present.
5	Act	Execute the action points identified by your group and the attractive action points which were identified by other groups. Action points which can be easily executed by oneself, for example affixture of furniture for earthquake safety, should be done on return to home.

'Ichi-Nichi-Mae' workbook published by the Cabinet Office

Pose a Question, **What would you do in such situation?**

あなたなら、どうする？



あなたは、山に囲まれた町に住んでいる。 You are a resident of a town in a valley.

土砂崩れ発生
半日前

土砂崩れ発生
数時間前

土砂崩れが発生して…

TIME



数日前から雨が
降り続けている

Rain continued
for 3 days



自宅近くの川は、
よく氾濫するので
大雨が降ると
心配になる

The river nearby has
often overflowed

自宅の裏山で、
過去に土砂崩れが
起きたことを
知っている？

Are you aware of
past landslides of
your nearby slopes ?

Yes



昔、この地域で土砂崩れが
起きたことを祖母から
聞かされていた

Grandma told
me about past
landslides

Yes



昔と同じように土砂崩れが
起きるかもしれないと思い、
雨が激しくなる前に早めに避難した

No



家は鉄筋造りで頑丈だが、
激しい雨が降り続けているので、
土砂崩れが心配になり、
山とは反対側の部屋に移動した



家に帰ると、
家は土砂に埋まっていた
早めに避難したので、
家族全員無事で良かった



山側の部屋に土砂が
流れ込んできたが、
自分たちがいた部屋は
無事だった

'Ichi-Nichi-Mae' Episode of landslides

No



自分の住む地域で発生した
過去の土砂崩れについて
何も聞いていなかった

Never heard
of landslides



裏山が崩れるとは
思いもよらなかったため、
山の変化に注意を払わず、
避難もしなかった



ゴーッと高い音が
聞こえた瞬間に、家の中に
土砂が押し寄せたので、
土砂に埋もれた

あなたに出来ることは何ですか？ (次ページへ) ▶

エピソード episode やっていたのは川の洪水対策
～土砂災害は予測せず～ (山口県防府市 60代 男性)

地域を一般河川の佐波川が流れているのですが、あの日めちゃっと水が増えているかなといった程度でしたし、水害のことなんて全然頭にありませんでした。昭和26年に氾濫して大きな被害が出て以来、堤防を高くしたり、ダムをつくらったり、対策はできていましたから、「よほどのことがない限り大丈夫」という気持ちでした。ところが、今回、川の本流で土石流が発生してしまったのです。

最近、雨が降るたびに音掻石場だったところから赤い水が出ていたので、「どうなるのかな」という懸念は少し持っていました。それが原因でもないようです。とにかく、今回被害にあった老人ホームも避難場所に指定されていたくらいですからね。こんな大規模な土砂災害が起こるなんて、誰も予想できなかったと思います。自然の力の大きさをあらためて思い知らされました。

一日前プロジェクト エピソード (平成21年7月中国・九州北部豪雨) より

JICA program on
Earthquake
Reconstruction for
Nepal
September 2017



JICA training course
on development of
Disaster Awareness
Education program
for Mongolia
October 2017



Proverb by Japanese Physics Scientist
Dr. Torahiko TERADA (1878-1935)
who investigated the damage by
1923 Great Kanto Earthquake



「天災は忘れた頃にやってくる」

**“Natural Disasters will hit us by the Time
people have forgotten about it”**

How to foster & inherit the Culture of Prevention

