

# Community-based disaster risk management in Kitakyushu

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**Green Frontier**  
環境未来都市 北九州市

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# Location and Characteristics



**Industries, International Trade, Biodiversity, and Urban Development**

# June 1953: Severe Flooding in Kitakyushu



山津波により生じた濁流は延命寺住宅地帯を一帯に押流すが如き勢いで物凄い場面を呈した。(延命寺附近の惨状) (朝日新聞提供)



大門電停附近の浸水状況 (朝日新聞提供)

**Large flooded section at the Kitakyushu city center caused by river overflow**

Photographs of damage from the great flood

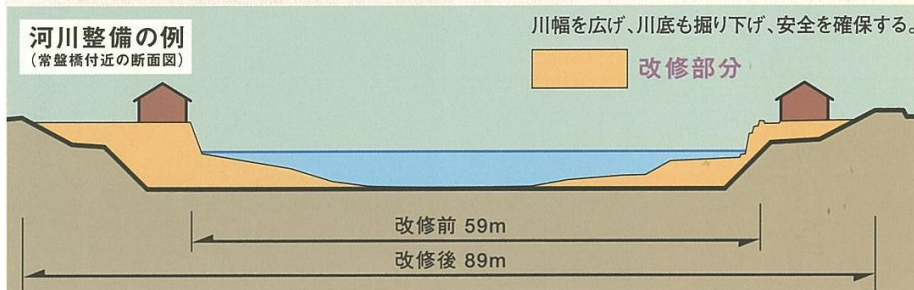
(From materials published by the former City of Kokura and the Asahi Shimbun Company)



# Disaster-Prevention Measures by Infrastructure Improvement

## ◆ Advance comprehensive and unified measures on river, sewage, and road.

### River: River improvement



Broadening river channel



Improvement on the flow of water

### Sewage: Installation of Rain Water Pipes and Pump Stations Construction of Balancing Reservoirs



Rain Water Pipe



Pump Station

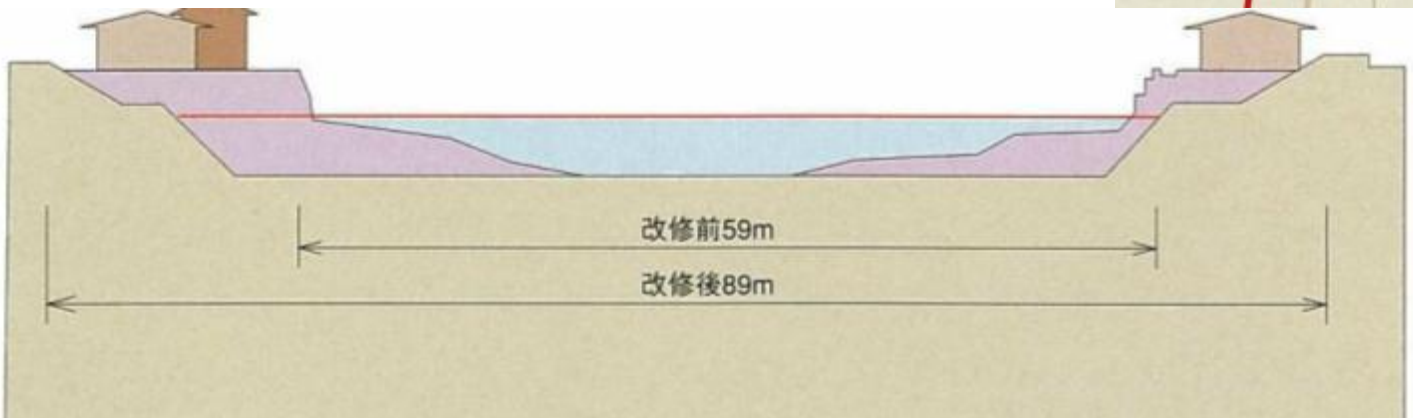
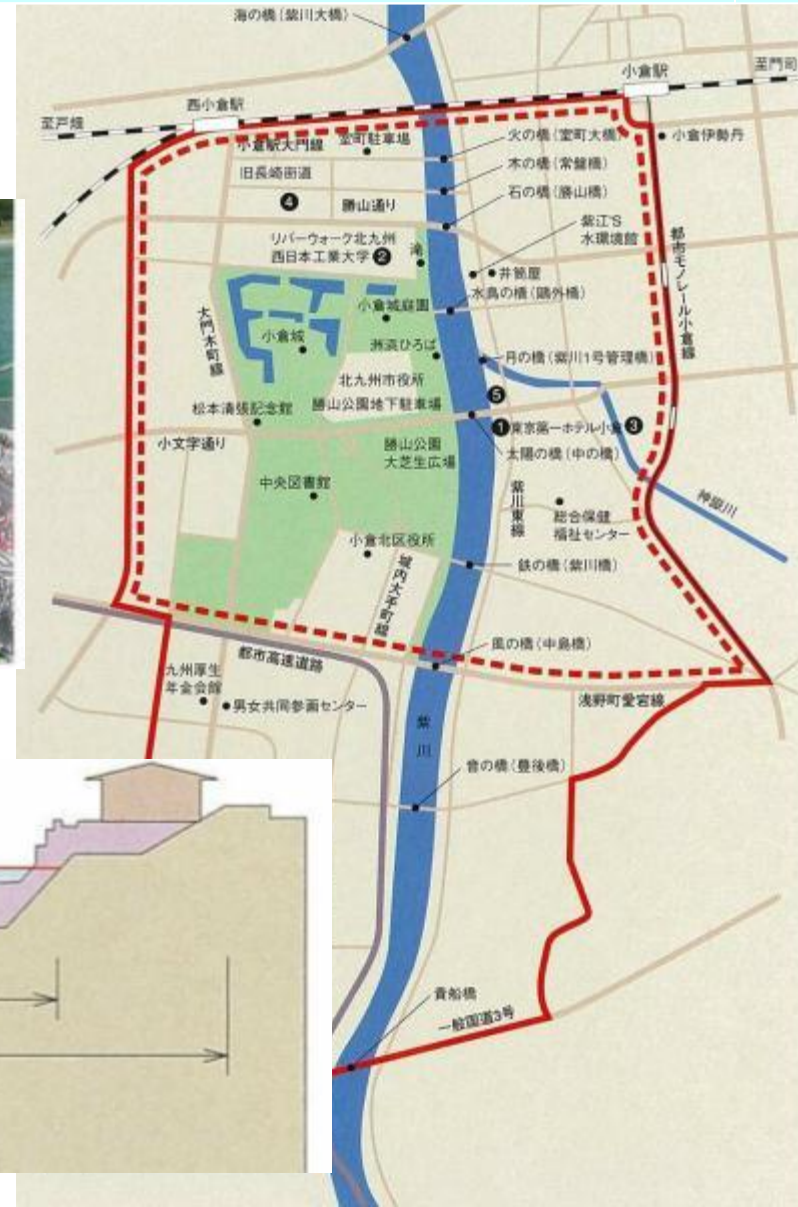


Balancing Reservoir

### Road: Digging Roadside Ditches and Installation of Joint Boxes for Effluent

# Disaster-Prevention Measures by River Improvement

## “My Town/My River Development Project”



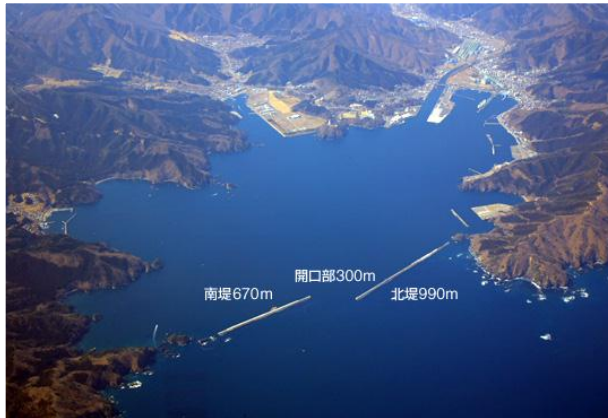
# Limitations of Disaster Prevention Measures

## Focused on Infrastructure

Disaster  
prevention

Measures to prevent damage from disasters

- ▪ ▪ Uniform application of costs to prevent damage

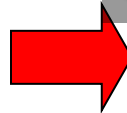


Kamaishi Port  
Seawall at bay entrance

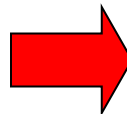


Photos:  
Kamaishi Port Office

Constructed in 1978 and completed in 2009 (31 years)  
Total construction cost: Over JPY 120 billion



**Damage exceeds the local disaster prevention capacity  
(Great East Japan Earthquake, heavy rains in July 2009 and 2010)**



**Impossible to completely prevent damage.  
There will never be enough money or time available to  
completely prevent all damage.**

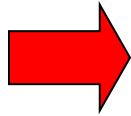


# Disaster Prevention & Reduction

## Disaster Reduction

- ▪ ▪ Efforts to minimize the damage that may occur during a disaster. Improves local disaster prevention capacity with the cooperation of the government and community.

Acknowledge the concept of “self-protection”  
Acknowledge the concept of  
“protecting our communities ourselves”



- **Disaster prevention measures at home that can be taken immediately**  
(Secure furniture and stockpile daily necessities, confirm family contact methods and set meeting locations, other)
- **Become a part of the residents' association or neighborhood association (=Community Disaster Prevention Association)**  
(Organization of disaster prevention trainings and lectures)
- **Know your immediate neighbors**  
(Residents' association (=Community Disaster Prevention Association), assistance provided to persons needing support in a disaster)
- **Checks of dangerous local areas (DIG)**

# Community Disaster Drill Using the Early Warning Message System (September 1, 2014)

## 1 At 10:30...Act immediately to protect yourself (ShakeOut drill)

**[Protect yourself]**  
You can do these three actions in 1 minute right where you are!

Conduct independent drills since early warning messages will not reach participants by 10:30. See back cover \*1



## 2 5 min. after 10:30...Info communication drill using early warning messages and disaster prevention speakers

### Transmission of early warning message

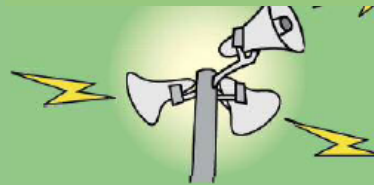
Compulsory early warning messages for the drill are simultaneously transmitted to all cell phones in the Kitakyushu area. See back cover for important points. \*2

**[Message (Example)]**  
[Drill] Evacuation order (Kitakyushu)  
[Disaster Drill] This is the City of Kitakyushu. A strong tremor is predicted to hit the city area at 10:30. Evacuate to a safe place in preparation for aftershocks. People that are near the coastal areas should evacuate to higher ground because of the risk of a tsunami occurring. This is a disaster drill (City of Kitakyushu).



### Start broadcast with speakers

Thirty-eight groups of speakers for use in tsunami disaster prevention (sirens, announcements) that have been installed on the coastal areas of Moji and Kokuraminami wards, and on Ainoshima and Umashima in Kokurakita ward will sound simultaneously and evacuation information will be broadcast.



## 3 Another addition to the first and second drills!

September 1st is Disaster Prevention Day. Please conduct your own evacuation and disaster prevention drills, and carry out activities to raise awareness on disaster prevention in conjunction with the above actions. Visit Kitakyushu's website for more information.

### For example...

- Schools, kindergartens, and daycares can conduct evacuation and mapping drills.
- Companies can confirm emergency contact systems in the event of an earthquake.
- Communities can check emergency shelters and organize disaster prevention lectures.
- Households can check that furniture is secure and confirm the locations of emergency shelters and escape routes.



## Date of Drill

September 1, 2014 (Mon)  
“Disaster Prevention Day”  
10:30~

## Number of Participants

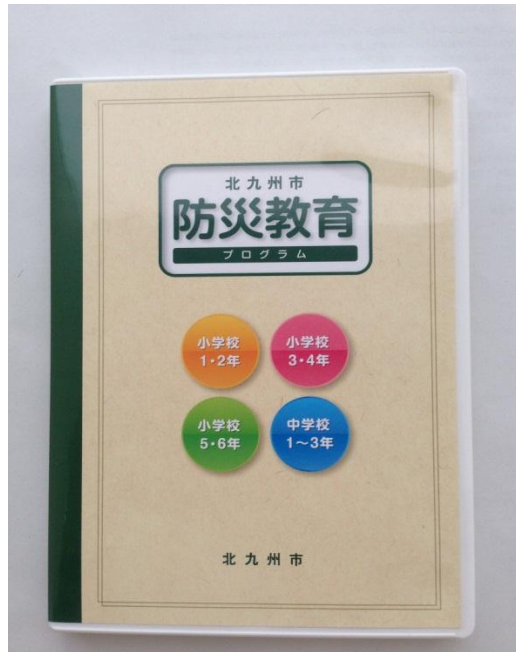
■ 523 groups

■ 107,536 people

(※As of 8:00 AM, September 1<sup>st</sup>)



# Disaster Prevention Education Programs and Educational Pamphlets



## Disaster Prevention Education Programs in Kitakyushu

### <Purpose>

- Training of children and students that can take action in the event of a disaster
- Training of future disaster prevention leaders



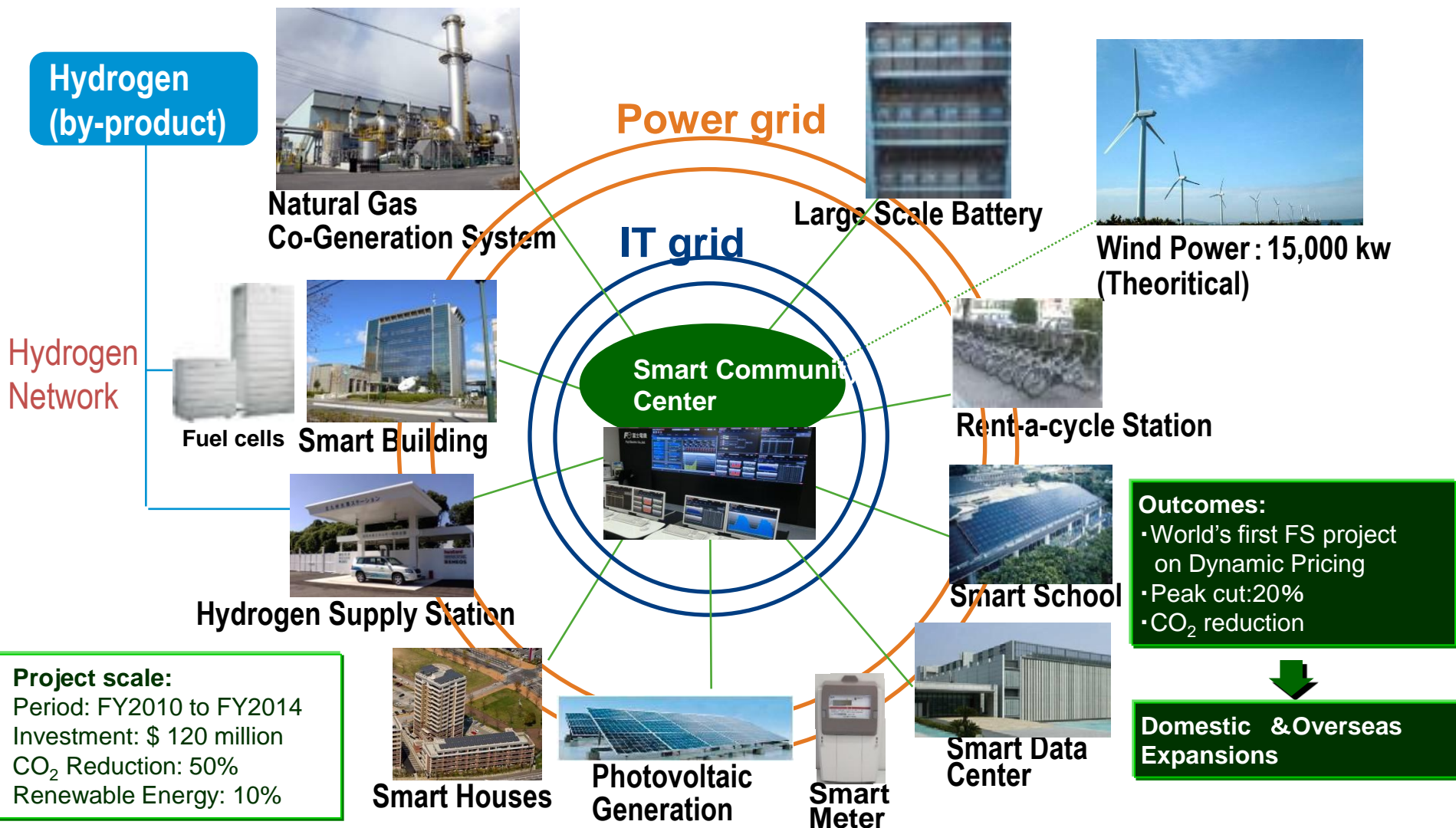
## Disaster Prevention Preparation “Protect yourself and your Family”

### <Purpose>

- Protect your life: “Develop self-awareness”
- Help one another: “Create a climate of cooperation”

# Potentials and Resources for Resilient and Smart Communities 4: Infrastructure

## Kitakyushu Smart Community



*Realization of optimized energy use per region, through coordination between new and mainstay energy sources and introduction of a control system for both energy supply and demand.*

Thank you for your attention!

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