Life-saving Information for Persons with Print Disabilities:

Lessons Learned from 11 March 2011 Disasters in Japan

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President

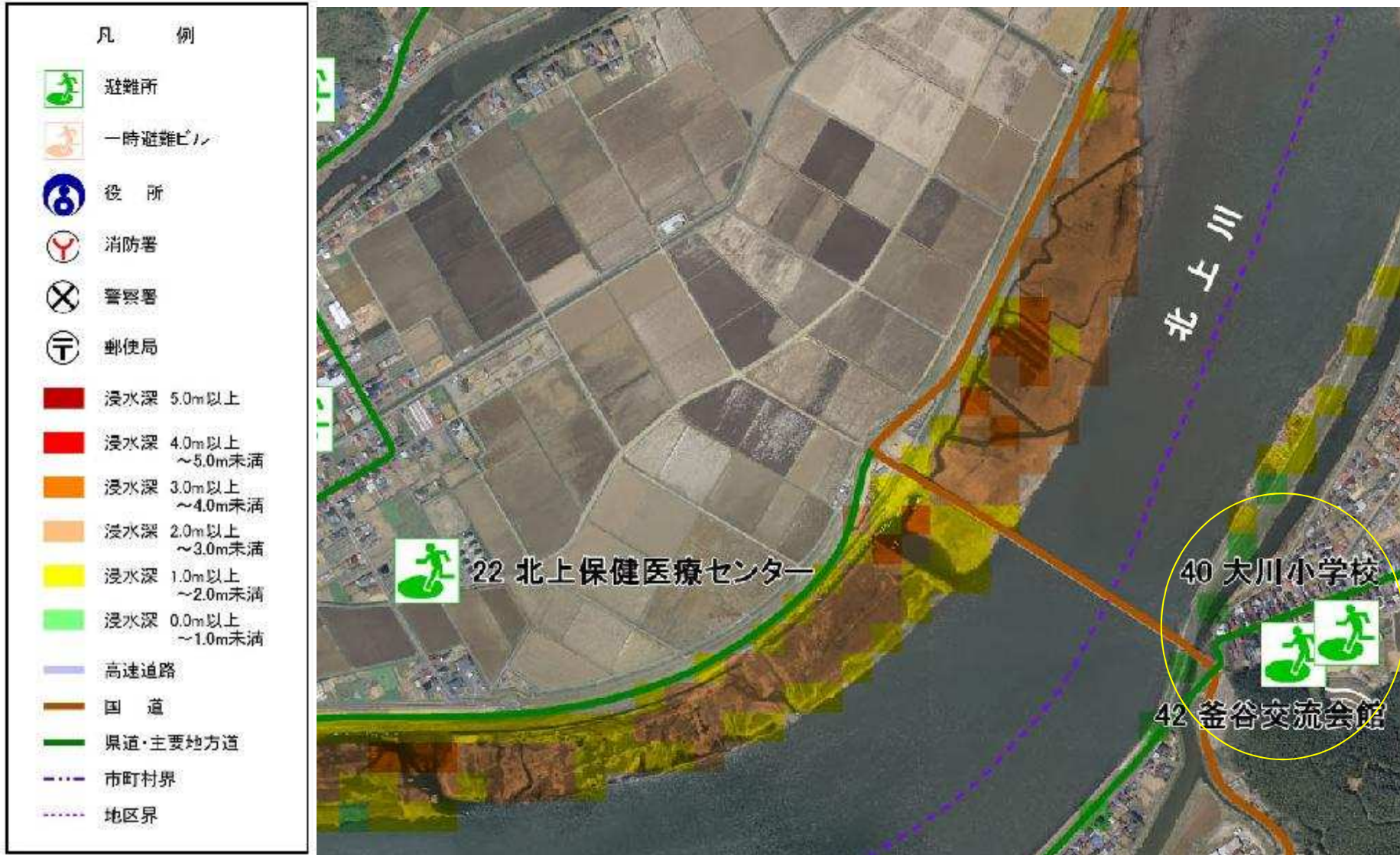**DAISY Consortium**

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Ookawa Elementary School was hit by Tsunami on 11 March 2011.
Only 34 students out of 108, and 3 teachers out of 13 survived.
photo: http://photo.sankei.jp.msn.com/panorama/data/2011/0324ookawa01/
NHK: http://www.youtube.com/watch?v=fXwu1sHoJbg&feature=related
BFMTV: http://www.youtube.com/watch?v=wpNk374GLCs&feature=related

Ookawa Elementary School in Ishinomaki

Tsunami Hazard Map

Location: 4km from the mouth of Kitakami River

Magnitude 9.0 earthquake hit Ishinomaki on 11 March 2011 at 14:46

What happened on 11 March 2011

- 14:46 Magnitude 9.0 earthquake
- Immediately issued 3m Tsunami
- After electricity cut off the warning elevated to 10m+ (actually Tsunami went up to 40m+ in Miyako)
- 15:26 8.6m+ Tsunami hit Ishinomaki
- 15:30? Ookawa Elementary School   students hit by the Tsunami

The source of the simulation next page:

http://www.youtube.com/watch?v=LbSu3sEhZr4

Simulation of Tsunami Hit the School

Facts

- The school lost
  - 74 students out of 108
  - 10 Teachers out of 13
- The school was designated as a shelter
- Students stayed in the school for half an hour after grade 7 earthquake happened
- The warning on great tsunami was heard by everybody in the school

Research Questions

- Why they did not evacuate as soon as possible?

- What made a difference between those evacuated and those who did not evacuate when they received a Tsunami Warning?

- How does the Tsunami Warning trigger evacuation successfully?

Preparedness determines the reaction when information reached

Observations

- What could have been done?
  - Evacuation immediately after an earthquake
  - Designate shelters for Tsunami that are located in the safe zone
  - Exercise Tsunami evacuation at schools and communities
- Research on Profiles of victims and survivors should indicate the best way to mitigate the loss of lives at disasters

Who are Vulnerable in disasters?

- Those who are not able to:
  - Understand the situation
  - Communicate
  - Locate the evacuation route
  - Evacuate
- and Who are:
  - Isolated from the community
  - small children, travelers, pregnant, requiring medical treatment, etc.

Empowering those Vulnerable

- Why?

  Rescues may not come at the critical moment, for the first half an hour.

  Self-help in combination with community support is the key factor for survival.

- How?

  sharing knowledge = changing mindset

  → Decision making to react the warning

  → Collaboration with neighbors

  → Community support development

Multi Stakeholders Approach

- Missing link for successful evacuation and survival exists in the community level DRR

- Revisiting existing Disaster Risk Reduction, DRR, plan by all community members including diversity of persons with disabilities and other vulnerable people is the best powerful tool to mobilize the local resources and change the mindset to evacuate to shelters by themselves
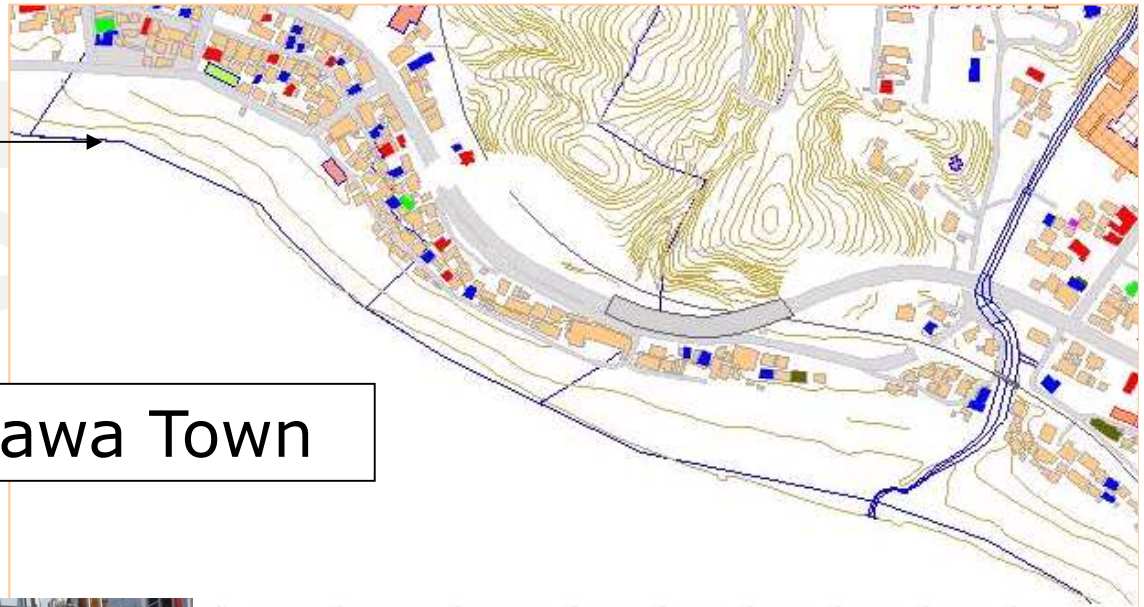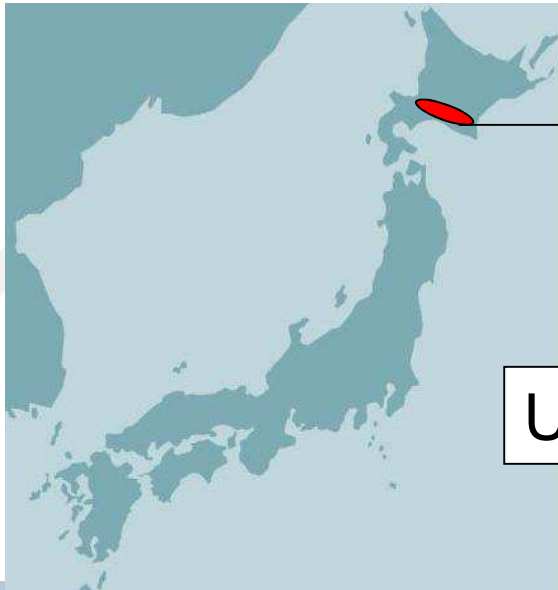
A good practice in Urakawa Town

- In Urakawa Town where 2.8 m Tsunami hit on 11th March 2011, a group of 150 psycho-social disabilities conducted a showcase evacuation.

- The group has been active to develop each member's ability for Tsunami evacuation through Social Skill Training and development of their own evacuation manual in the format of Digital Accessible Information System, DAISY.

  http://www.dinf.ne.jp/doc/japanese/resource/disaster/sympo20100312/index.html

- DAISY Consortium has been developing use cases for DAISY Standards to address requirements of persons with disabilities to share knowledge based on Tsunami evacuation requirements of all community members in Urakawa Town.

Urakawa Town

Tsunami Evacuation Manual Development in Urakawa

Site visit of DAISY Developers in May 2005

Presentation of Urakawa Bethel's House reporters at 2nd International Conference on Disaster Preparedness of Persons with Disabilities in Phuket 2009.
http://www.dinf.ne.jp/doc/english/prompt/cdppd/newprogram.html

DAISY multimedia manual for Tsunami Evacuation in Urakawa

- Go straight to the point
- Tell what to do rather than what should not be done

- Use favorite or familiar
  - characters
  - pictures
  - drawings
  - voices
  - favorites
  - places
  - tastes
  - Music, rhythms

- Understanding by brain and by body both

Digital Inclusion in Disaster Risk Reduction

- Sharing life-saving information and knowledge through inclusive ICT is the key to empower everybody including those who are vulnerable in disasters

DAISY multimedia resources on disaster preparedness and support for victims are available at: http://www.dinf.ne.jp/doc/daisy/jdc/index.html

cf. HIV/AIDS resource manual in 4 South African official languages are available at: http://www.normanet.ne.jp/~atdo/english.html#download

Accessible ICT Standards

"Two important developers of technical standards for accessible ICT products and services are the W3C Web Accessibility Initiative and the DAISY Consortium."

WHO/World Bank, *World Report on Disability*, 2011. p214
(http://www.who.int/disabilities/world_report/2011/report/en/)

DAISY Standards: http://www.daisy.org/

Web Accessibility Guidelines: http://http://www.w3.org/WAI/

Conclusion

- Digital Inclusion to share knowledge is the most realistic approach to save lives of people who are most vulnerable at disasters

- Promotion of use of accessible ICT standard such as DAISY and Web Accessibility Guidelines for disaster concerned information dissemination with emphasis on preparedness is the best measure to empower most vulnerable people in disasters

- Implementation of Convention on the Rights of Persons with Disabilities, WSIS Plan of Actions, and Hyogo Framework for Action 2005 – 2015: Building the Resilience of Nations and Communities to Disasters need to give clear emphasis on preparedness of persons on the ground hit by severe disasters

Information Sources for further readings

- World Summit on the Information Society Geneva 2003-Tunis 2005 and Follow-up Activities (http://www.dinf.ne.jp/doc/english/prompt/wsisindex.html)

    A comprehensive information source on disability in the context of the World Summit on the Information Society and its follow up activities including 2 international conferences on disaster preparedness of persons with disabilities held in Phuket in 2007 and 2009.

- DAISY Consortium official website (http://www.daisy.org/)

    The DAISY Consortium has been developing standards for global knowledge sharing. Disaster preparedness and other basic life-saving information need to be shared in an accessible format for every individual regardless of disabilities and language. New DAISY4 standard aims at addressing accessibility requirements of everybody at emergency as well as at disaster preparedness development stage.

- World Wide Web Consortium Web Accessibility Initiative (WAI) website (http://http://www.w3.org/WAI/)

- United Nations Enable (http://www.un.org/disabilities/)

- Hyogo Framework for Action (http://www.unisdr.org/we/coordinate/hfa)