

CRICED-University of Tsukuba
Online Teacher Education Program

Education for Disaster Risk Reduction in Japan

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Highlights

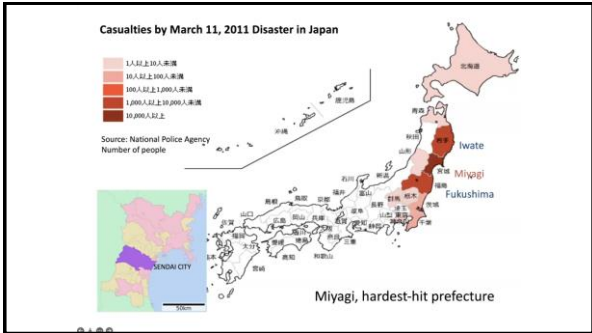
Overview: 2011 Tohoku Disaster and Schools
& Tragedy at Okawa Elementary School in Miyagi

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Post 2011 DRR (disaster risk reduction) Education at
School & Teacher Training

14:46 Tokyo

March 11, 2011
Magnitude 9.0
Earthquake & Tsunami

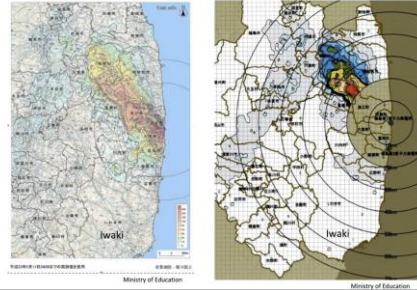


Multiple Disasters: Tsunami
Port of Onahama, Iwaki, Fukushima



Photo by T Oda

Finally getting the "spatial" info of where the actual risks were
Mapping by the governments, universities, and scientists



School and 2011 Tohoku Disaster

Damage, Tragedy, and Roles played

2011 Tohoku Disaster and School

Human Casualties as of Sept 1, 2014
 Death 19,074
 Missing 2633
 Injury 6,219

School-related
 Students (K-high school) 617 (see table(2011))
 Casualties due to school building collapse: None
 (injuries from fallen objects reports)

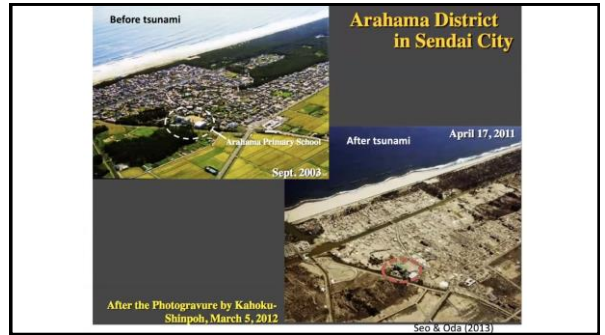
School Facilities
 7,988 Schools with some damage (22 prefs. from Hokkaido to Wakayama)
 6,284 Public Schools with some damage (K-high school and special needs)
 193 Severe damage (rebuilding or major restoration necessary)
 131 Schools inundated with tsunami
 Including 113 schools with presence of students at the time
 Including 13 schools projected on hazard map with inundation and 69 non-inundation and 9 N/A
 Most building damage with old building code (pre. 1981)
 35% evacuated to high floor or roof, 32% backyard hill or higher ground
 31% designated evacuation center

Evacuation Shelter
 622 schools used as evacuation shelter (at its peak on March 17, 2011)

School Casualties from Tohoku Disaster

Metropolis and Prefectures	Death toll (people)						Number of missing persons (people)	Total (People)
	Pre-school children	Elementary school children	Middle and high school students	University students	Faculty and staff	Total		
Iwate	10	27	41	9	8	105	28	133
Miyagi	65	165	148	38	20	436	64	500
Fukushima	4	24	48	6	3	85	12	97
Others	0	0	0	0	2	2	0	2
Total	79	206	237	53	33	628	104	732

Source: Sato 2012, Oda 2011





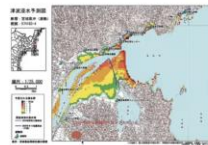
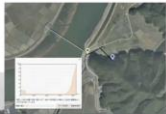
2. The Tragedy - Okawa Elementary School – City of Ishinomaki, Miyagi

March 11, 2011
after the earthquake,
tsunami hit the children, teachers and residents
killing **74 students and 10 teachers**

Tragedy at Okawa Elementary School in Ishinomaki City, Miyagi
Civil suit against the governments/BOEs
National discussion on school DRR

The school apx. 3.8 km away from the shore.

51 minutes spent to hesitate quick evacuation



Tsunami Hazard Projection before March 2011



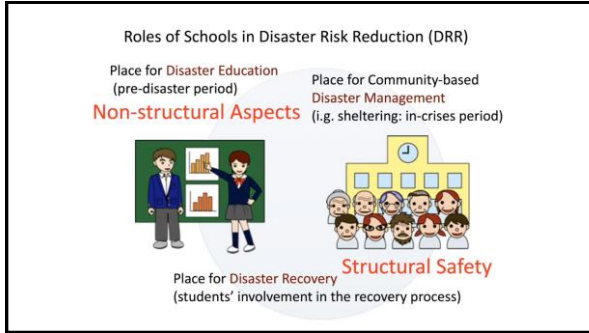
Okawa's Tragedy sparked a national debate on School Safety and Teachers DRR Competency

April 26, 2018 Sendai High Court Ruling

The court ordered to pay some **1.4 billion yen (US\$12.8 million)** in damages to the plaintiffs, holding the authorities **liable** for the tragedy.

The school should have **reviewed the reliability of the hazard map** on its own and worked out an **emergency evacuation plan** based on the assumption that the school could be hit by a tsunami.

The court also faulted the municipal **board of education** for failing to provide appropriate instructions to the school.



Global Framework:
Education in Sendai Framework for Disaster Risk Reduction

Goal of SFDRR 2015-2030
Seven Global Goals...

(d) Substantially reduce disaster damage to critical infrastructure and disruption of basic services, among them health and educational facilities, including through developing their resilience by 2030.

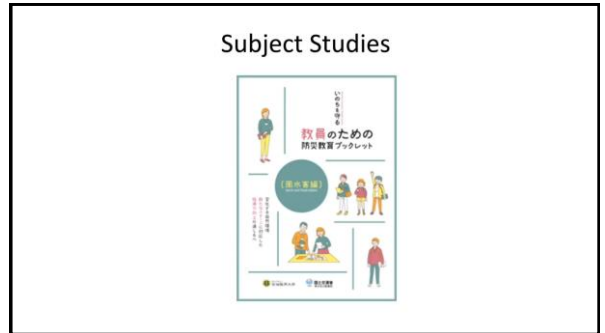
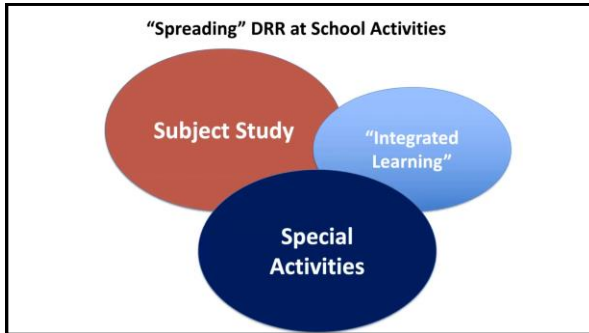
World Conference on Disaster Risk Reduction
2015, Sendai, Japan

Sendai Framework for Disaster Risk Reduction
2015-2030

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Post 2011 DRR Education at School & Teacher Training



Recent History of M.U.E.'s Practice for Pre-and In-Service Trainings for Disaster Risk Reduction

- 2011** Tohoku Earthquake **Magnitude 9.0**
Center for Disaster Education and Recovery Assistance established
- 2013** **Compulsory Course** for ALL First Year Pre-Service Undergraduate Students at MUE
"Environment and Disaster Education" 2 credits/30 hours
- 2015** Center for Disaster Education and Future Design established
- 2019** **311 Disaster Risk Reduction Learning Institute for Educators (DRR-LIFE)** established
for both Pre-service students and In-service teachers

(2019 All teacher-training programs in Japan are required by the national government to deliver a school safety class with limited hours.)



Compulsory/elective courses related to school safety for undergraduate students

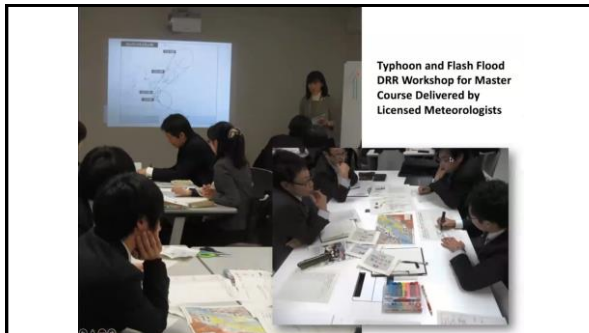
Courses

Environmental and Disaster Risk Reduction Education (Fiscal 2015-15) Disaster Risk Reduction Education (Fiscal 2022)	Required for all	
Introduction to School Disaster Risk Reduction Education (established in 2020)	Compulsory elective	
School Disaster Risk Reduction Practice Seminar (established in 2020)	Compulsory elective	

Related compulsory subjects: "Introduction to Teaching", "Health and Exercise Theory", "Study of the Curriculum (including special activities)".
Compulsory elective subjects: "Education System and Management", "Education and Local Communities".
Optional subjects: "Educational Settings and Law", "School Lunch", "Education System Lecture", "School Health", "Instructional Method for the Period of Integrated Studies", etc.

Second-year career development training:

In principle, all 2nd-year undergraduate students will visit disaster-stricken areas (earthquake remains, etc.)



Roles of Geography for DRR Education and School Safety
Geography Education essential...for Teachers

BIG PROBLEM!


No DRR Teacher is geographer. (traditionally, PE and science etc)

Younger teachers did not even study geography in high school.

Many teachers cannot read maps in general.

50 in-service teachers training "Bousai Shunin Workshop"

Understanding Hazards and Risks Using Hazard and Topographic Maps
June 14, 2019



Challenges for mainstreaming DRR at School in Japan

- **School administrators and teachers are too busy**

- With increasing hours of teaching additional subjects such as new English program at elementary school, ICT and moral and ethics education...
- With serious problems faced by students such as bullying and missing schools (truancy), and "helicopter parents"

Curriculum
Management
Working env
Improvement

- **Teachers are worried about their lack of DRR-related knowledge and experience.**

- Some in-service training opportunities but limited and not systematically organized.
- Teachers are reshuffled every few years within a prefecture and thus they are not familiar with every natural hazard prone to a particular school district (topic to deal with for teaching DRR).

Trainings
Textbook
Guidebook
Helpdesk
Supporting
Network

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