

Study Trip Report on
EVACUATION SITUATION OF MINAMISANRIKU TOWN
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The 2011 off the Pacific coast of Tohoku Earthquake is considered one of the most destructive earthquakes to have happened in the history of seismology. The phenomenon was coupled with the massive tsunami waves that struck along the east coast of Japan. The tsunamis claimed thousands of lives, washing away houses and infrastructure.

The seismology group and the earthquake engineering group had the opportunity to observe first hand wrought by these mega-tsunamis many exceeding 4 meters in height. We had a 3-day visit to Miyagi Prefecture which was worst hit with tsunamis as high as 16 meters. This report specifically discusses the

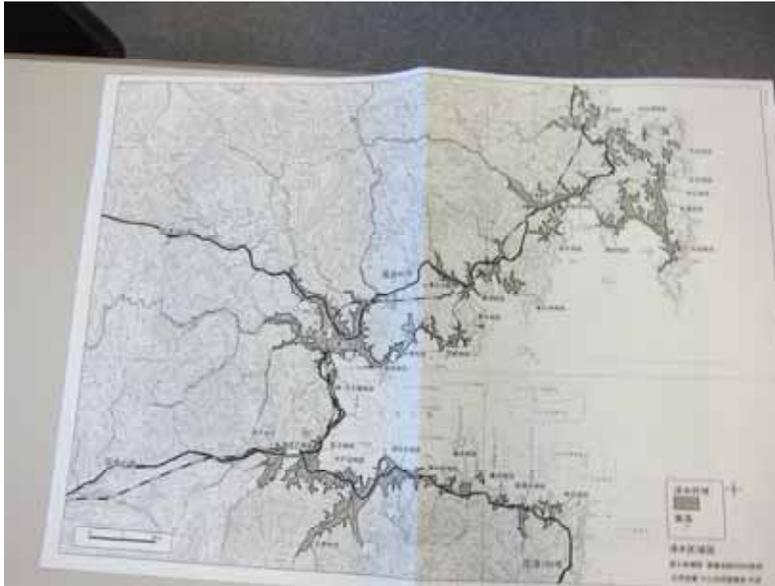


Figure 1. Dark grey indicates tsunami inundation area.

evacuation situation in Minamisanriku Town. Travelling to Minamisanriku was a mixture of unexplained feelings. Questions lingered as to what the town looks like; will the people of the Minamisanriku welcome us students and do we have the courage to see the devastated town.

Minamisanriku is located on the northeast coast of Honshu island, Japan. It was known as an energetic town prior to being stricken by the tsunamis. The town's main industry is culture of seashells and oysters and is the main source of income for most households. Actually the people at Minamisanriku have experiences with the tsunami, such as the Jogan earthquake occurred

about 1,140 years ago ruined Minamisanriku. At least 5 times of tsunami hit this area in the last 150 years. The last time was the Chile earthquake (1960); the generated tsunami hit this area with height of 2.6m. Due to this experience and advanced technology in Japan, the government built sea wall for a 50 year tsunami plus 50cm to protect the town. This situation made some people in Minamisanriku area feel safe. But the power of natural disaster is unpredictable. On March 11, 2011 it was beyond expectation.

Prior to the March 11 event, the town's population was 17, 620. The tsunami reached this area 20 minutes after the earthquake. The tsunami took 558 lives while 437 remain missing. Of the 5,300 homes 3,300 were swept away by the tsunamis. 9,000 residents were forced to stay in evacuation centers. At one point there were 1,500 evacuees staying in the gymnasium which now serves as the municipal facility. Currently there are still 100 evacuees in evacuation centers, while the majority has relocated to temporary housing. After the earthquake, Minamisanriku was totally isolated due to no means of communication or electricity. The first outsiders to arrive to relay their plight to the rest of Japan and the world were foreign journalists. They found a battered but determined and united people braving cold wintery nights without blankets, and nothing but cardboard to sleep on. Soon after rescue teams from Germany and New Zealand arrived. Upon hearing of their plight, many people sent relief goods so finally they could eat onigiri (rice bowl) and have blankets. Food was scarce and in some instances a family of 5 had to share a meal meant for one person. An Indonesian together with his friend came to this area to feed to those suffered people. Now, the people favour one Japanese word 'kizuna' which means not alone, linked connected, tied. As

they realize the importance of linking with each other. Not only with people from neighbouring towns but with those from other countries too.

Six months on the ripple effects of the tsunamis continue, many are worried about the future and daily living is still a challenge. Getting goods and supplies is not easy. The shops and malls no longer exist and many have no cars to travel to neighbouring towns and cities. How will they survive with no income? The 1.5M yen each household received is now depleted, the mortgages for homes that no longer exist remain, their boats are gone, it takes a year to see any profit if they resume aqua-culture. October will be octopus season. If they succeed in going out to sea where will they sell their catch? There is no market.

The important point from this experience was revealed by Mr. Goto a tsunami survivor. He lost his own house and presently living in the temporary house. Prior to the tsunami he was engaged in agriculture and fishing; he was also a community leader and served as a tourist guide impart the history and culture of Minamisanriku. Mr. Goto said that the high technology and our superiority were destroyed by tsunami (nature). Our technology has advanced at some point. We can predict roughly, but it is nothing because we could not protect our town and our lives. What we can do is just run away from tsunami. We should keep humble mind, nature always has super power. This is the lesson from the Minamisanriku people who experienced the tsunami.

Five-Line Poem

DARK FOREST

By: Mrs. Mayumi Kudo, 34 years old, wife of a priest (read by Mr. Goto*)

While shopping
alone
A big quake happened
I squatted down and called
the name of my little child

Quickly got home and
I ran up to a hill
carrying my child
Nothing I had
just carrying my child

It snowed a little
Immediately after
we reached a hill
Waves rushed and
surged toward us

Voice of a lady
who was announcing
evacuation publicly
from Town Hall
abruptly stopped

Brown hands of waves
destroying our town
Houses were
drifted away
as they were

Stop it
stop it
Shouting at
tsunami
We ran away

Dodging utility poles
that were falling
down toward us
and passing under
electric wires

Running away
and fleeing
to higher places
Higher and higher
much higher place

We escape to the
back hill of the shrine
Screaming of the town
sounds under us
Though we're also crying!

We escape with my family
in the snow
Even the dark forest is
regarded as a lamp
to protect our lives

Ducking at a corner
of an elementary school gym
which we arrived at
I hug my child
every time we feel aftershocks

Sharing a few blankets
each other and we
sleep
Putting legs covered with sand
one another

Tsunami has left and
dawn came we found
horrible
Birds of migrant
confusedly flew away

Our town
has disappeared
Too heartless and

we cannot utter a word
also cannot be in tears

My home
on a hill was
final destination
Unfamiliar house
rushed into my home

Windows are broken
the curtain is
calmly swaying
Wind is crying
as well

Waves have come
to the foot of Torii gate of a shrine
Upward from there is another world
Pink plums are blooming
Early spring flowers are blooming

Ocean is
heartlessly
calm spring ocean
and is shining
Telling that it's a lie?

Those who lost their children
and who cannot meet their husbands
Nothing can
be said
Blank town

The night
of my birthday
at the evacuation site
My child kissed me
shifting his mask

The time of return
I don't know when
We left our town
apologizing and apologizing
to God (in shrine of my home)

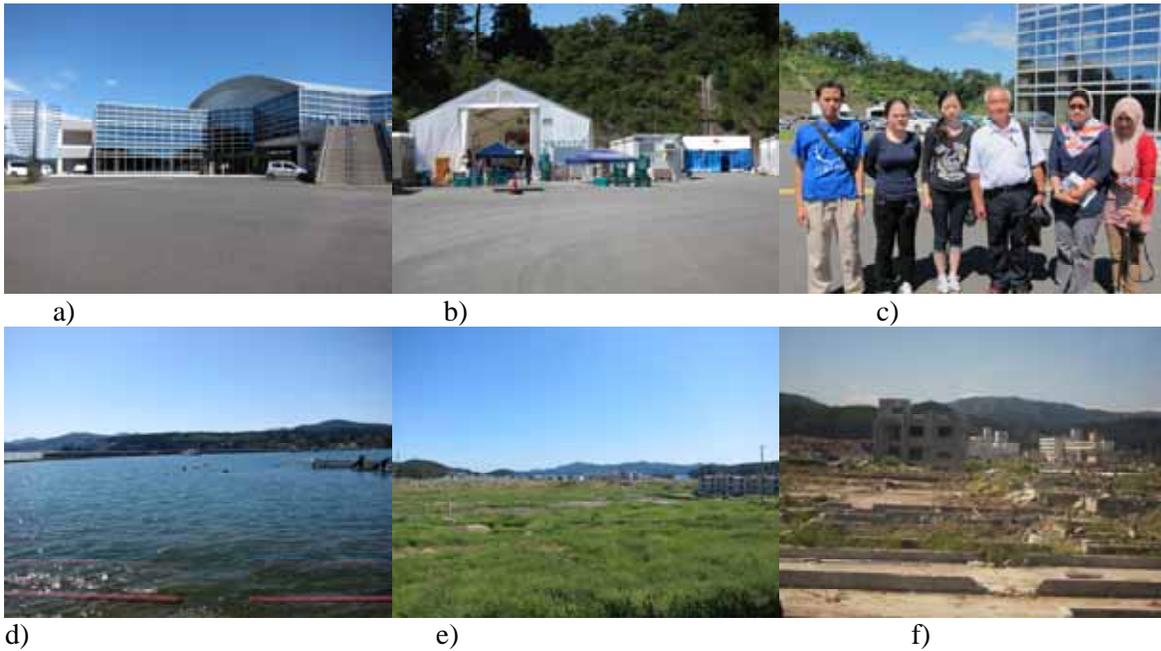
Costumes of priest
tools for ceremony and
seal of priest
were safe, which means
We are told to make the best

My child calls

names of all family members and says
Just tried calling names
There are persons
who respond

My husband wept
in the night
ten days after the disaster
bearing
quietly

My life is not only mine
from now on
Realizing
numerous dreams
of those who went to the heaven



Details of the figures:

- a) The Gymnasium which serves as evacuation shelter for the tsunami victims
- b) Tent used for sorting of aid
- c) Students of DMP and Mr. Goto (3rd from right)
- d) Vast ocean facing Minamisanriku Town
- e) Swept town of Minamisanriku
- f) Scenery of Minamisanriku after 6 months