

# APPROPRIATE LAND USE AND SAFE LIVING STUDY FROM RECENT NATURAL DISASTERS IN JAPAN AND THE PHILIPPINES

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# INAPPROPRIATE PLACE TO LIVE (1991)

## MANILA, THE PHILIPPINES



- Facing to Danger in case of heavy rain
- Sanitary Problem
- There are some good vacant land, but not suitable in
  - Price
  - Public Transportation
  - Will of the land owner

# TYPHOON YOLANDA

- 6300 death, 1,100 missing, 28,000 injured
- Affected by strong wind and high tide





Google map

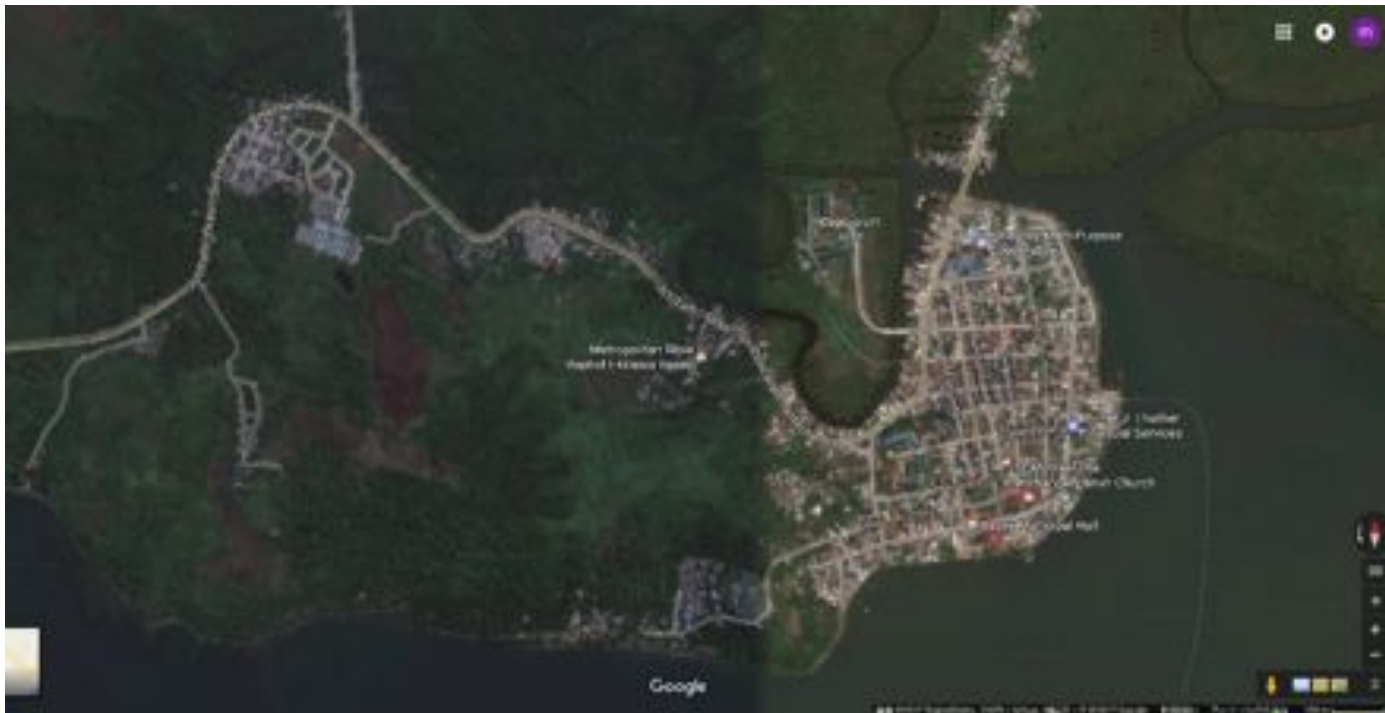
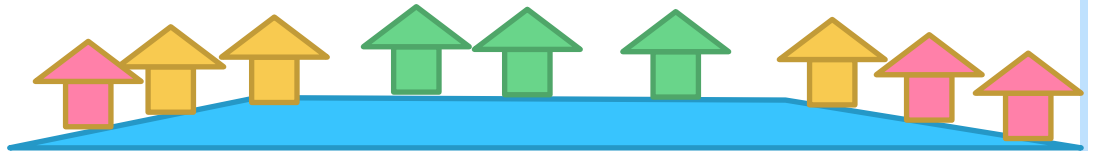


Google map





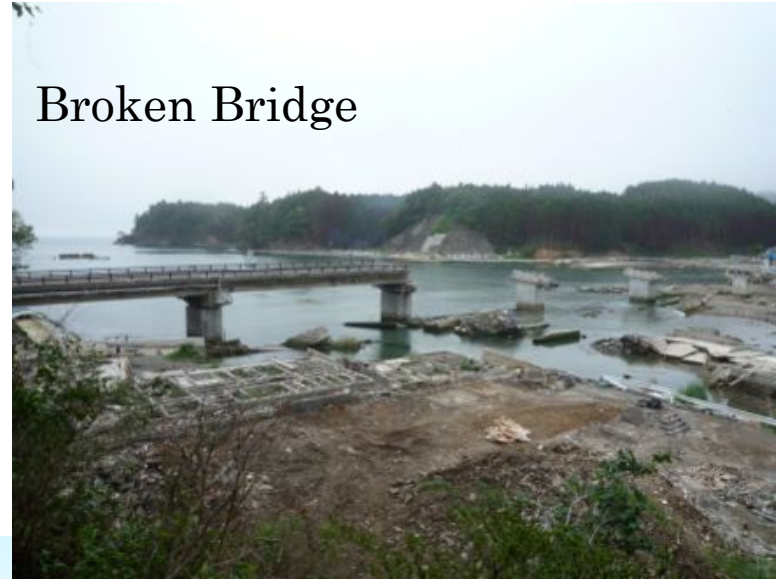
- Inappropriate place for living was rented
- Not convenient resettlement site



# Civil engineering can not win the fight against Nature



Broken Sea Wall



Broken Bridge

Un expected  
weather in  
climate change  
era

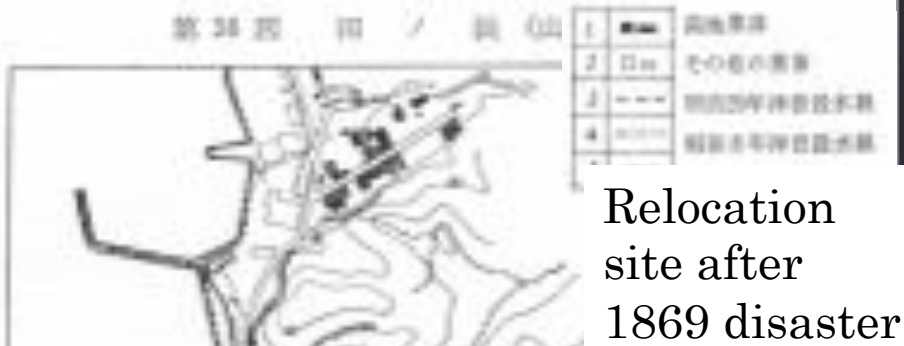


# CONDOMINIUM FOR TSUNAMI EVACUATION WAS NOT SAFE





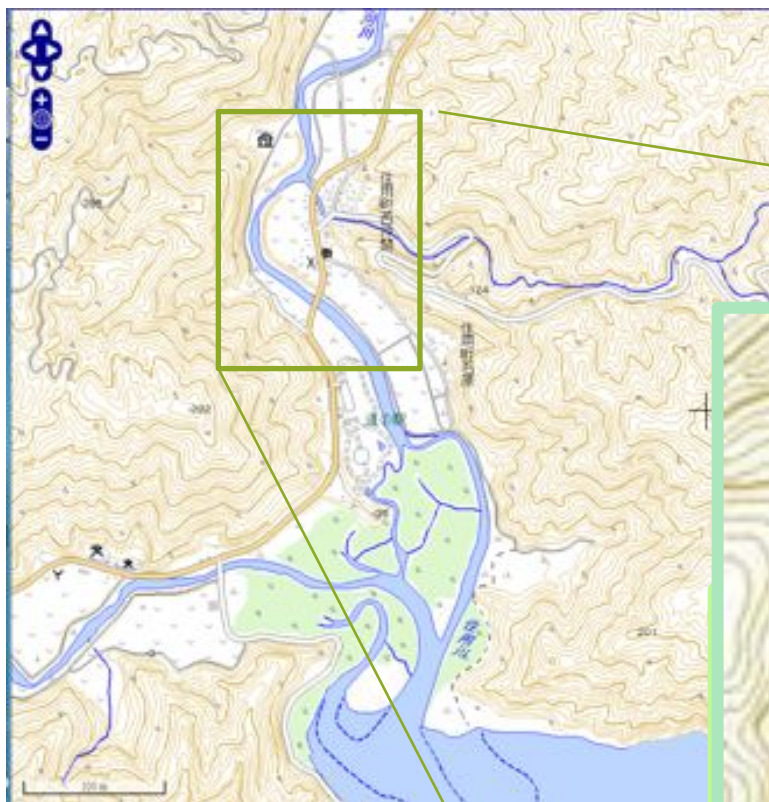
PEOPLE GO BACK TO SEASIDE!  
ESPECIALLY NEW COMER FIND  
PLACE FOR LIVING CLOSER TO  
THE SEA





# WEST NAKAMA VILLAGE, AMAMI-OSHIMA







# WELFARE FACILITIES, HOUSE FOR YOUNG PEOPLE ARE LOCATED ON FLOODING ZONE

- 2 elderly people died .



13 時 30 分頃



15 時 30 分頃

画像 3-1. 浸水時のわだつみ苑の様子



Relatively  
new housing  
sites

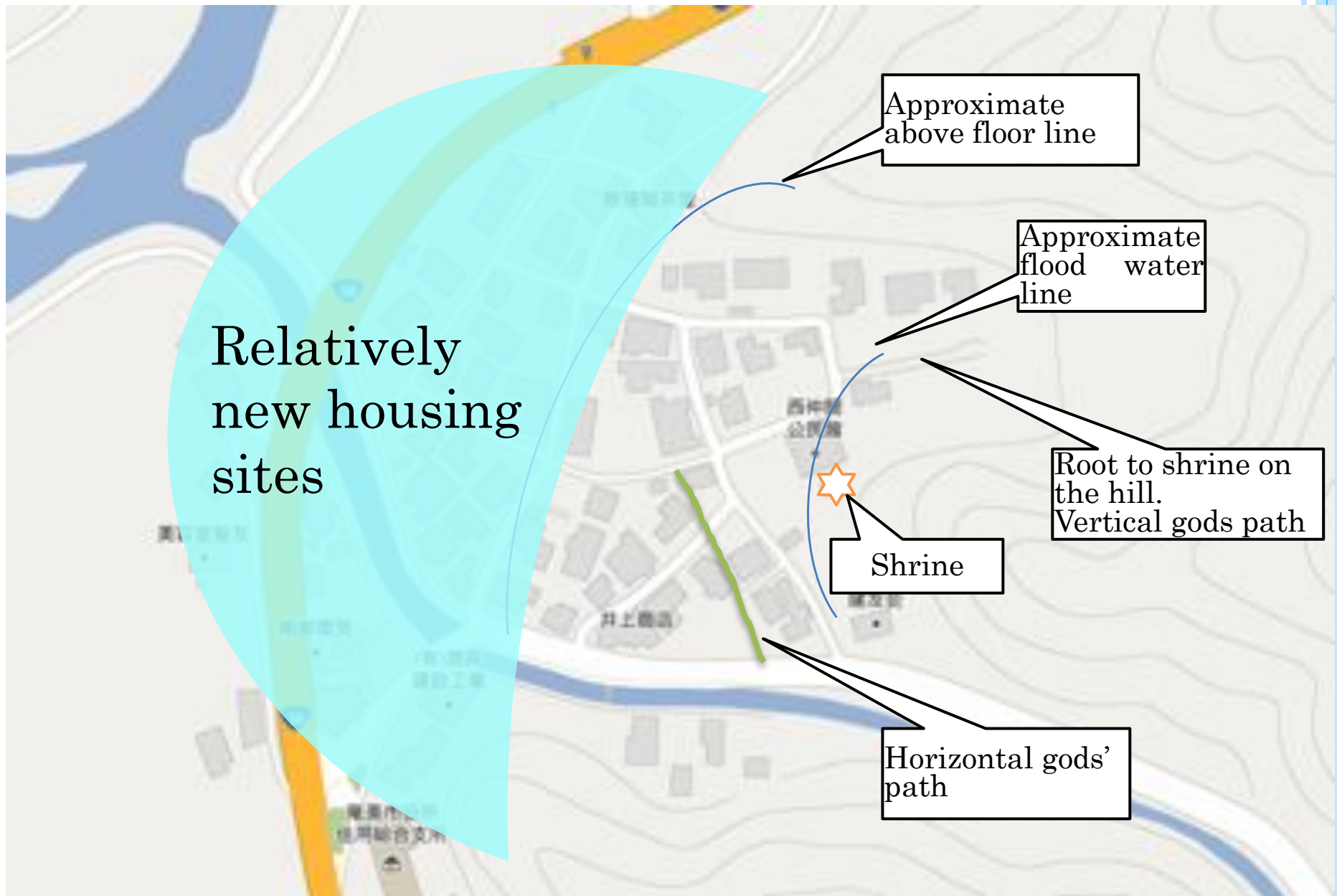
Approximate  
above floor line

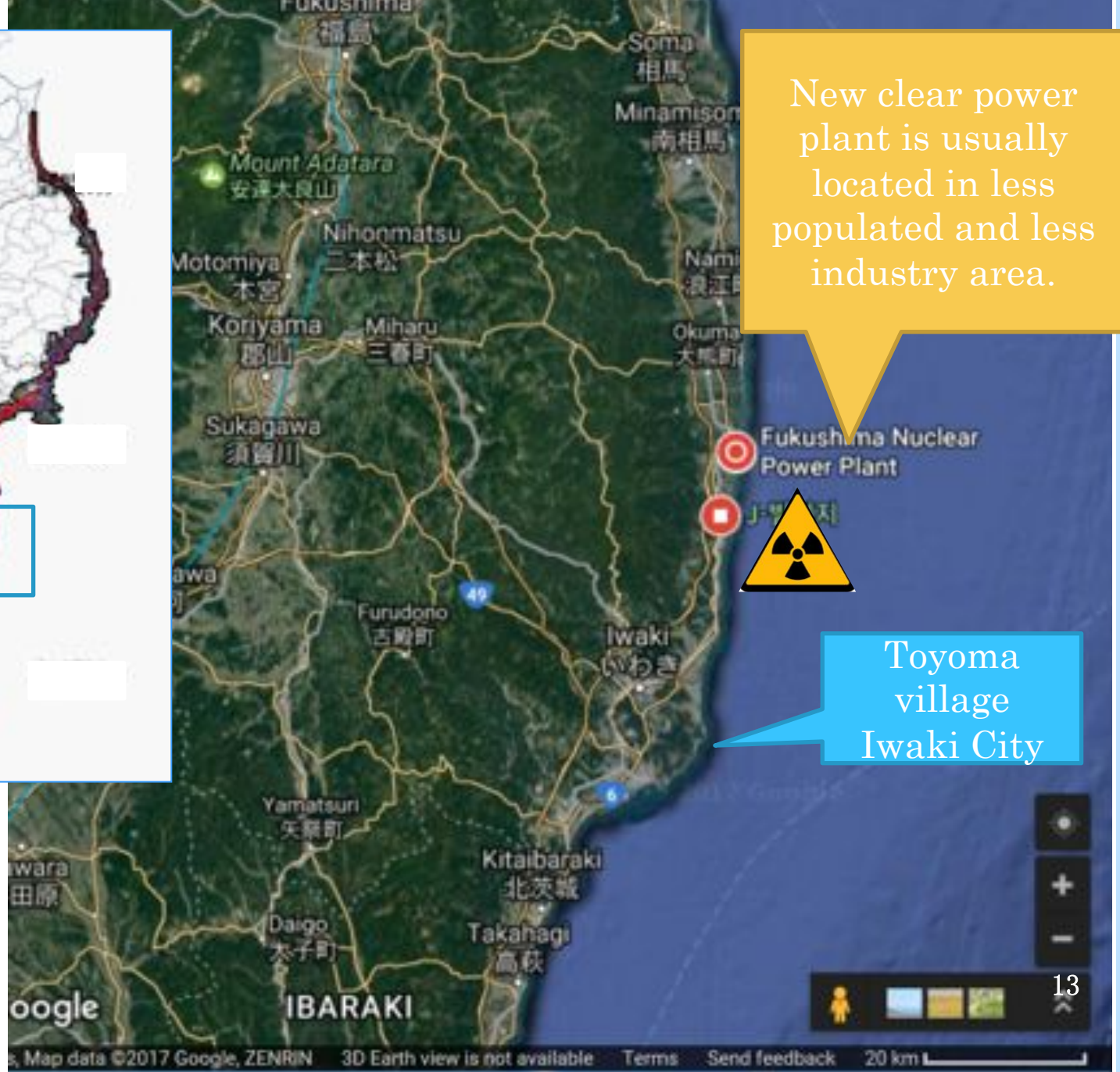
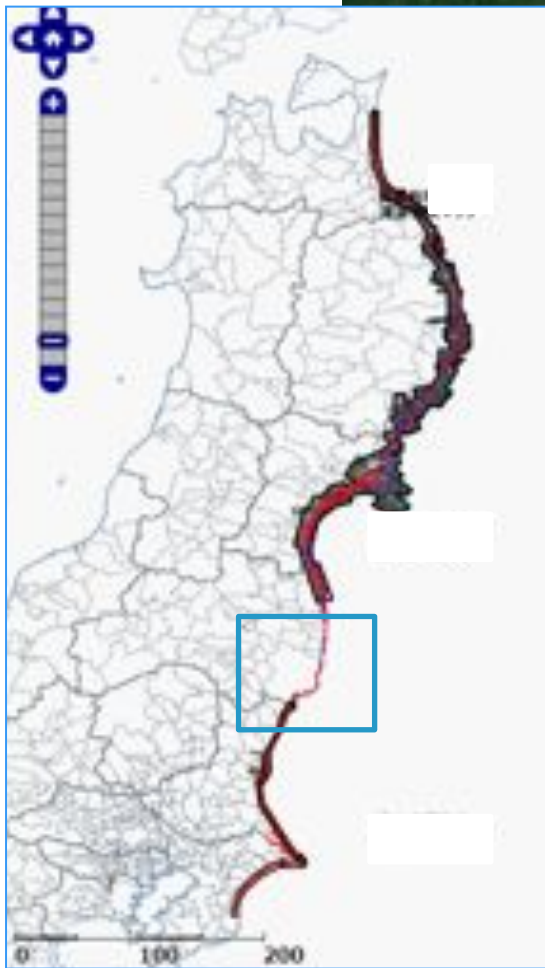
Approximate  
flood water  
line

Root to shrine on  
the hill.  
Vertical gods path

Shrine

Horizontal gods'  
path



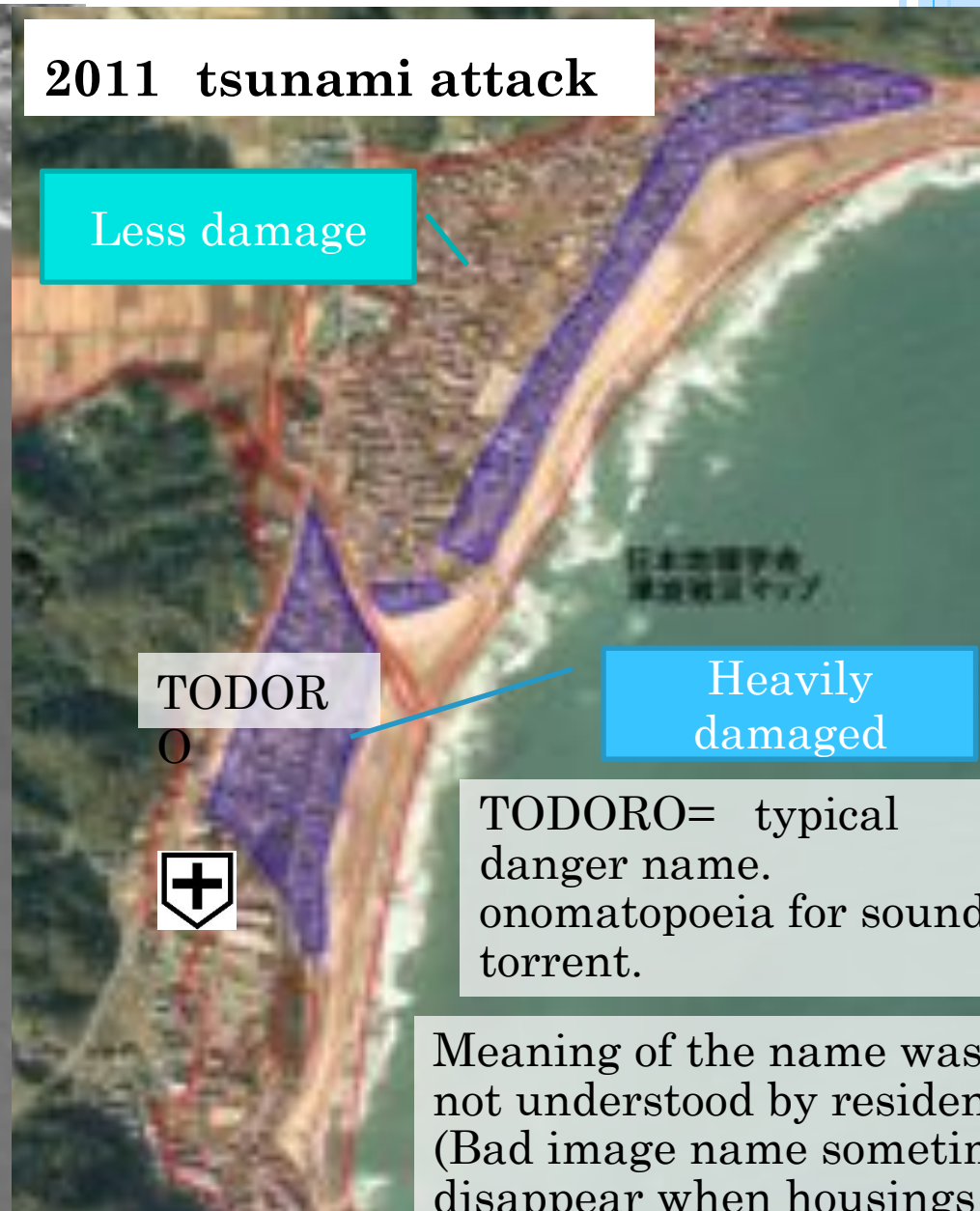


New clear power plant is usually located in less populated and less industry area.

Toyoma village  
Iwaki City



# Previous study shows that “very local names” indicate disasters in old days







Old chateau site



Housing site existed  
Before Mid Yedo Period



Straight path from  
the sea to the  
shrine used for  
religious activity  
(bring sea water)



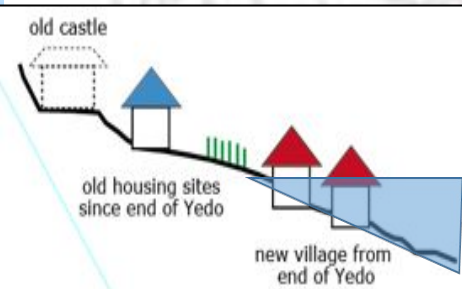
Safe housing sites existed  
since Mid Yedo period.



old castle

old housing sites  
since end of Yedo

new village from  
end of Yedo




# WHY BECOME AN VICTIM OF DISASTER?

## ○ Social system

Safe area not used  
because of owner's  
profit

Not enough public  
investment for basic  
transportation



Appropriate  
planning  
system

Loss of long period  
(several hundred years  
or more) knowledge of  
ancestors

## ○ Personal skill

Not enough  
understanding of  
natural disaster

In appropriate information



Empowerment  
of people



# LAND USE AND DISASTER

## *Findings*

### *Safe Housing Sites*

- Old Housing Sites (e.g. since Mid-Edo period) are relatively safe but many vacancy
- Young and low income families tend to live in danger zone
- Traditional shrines (respect nature) are located Safe place, but inconvenient for daily life. (not temples)
- Religious activities were hidden knowledge for disaster prevention.

## *proposal*

### *Our Land Use Plan should be*

- Build houses where people started to live
  - There are vacant safe sites.
  - Land should not be a property to produce money, but place for living
- Enjoying festivals, keeping Sacred paths shall let the people safe
- People's power to understand their landscape and agree to