

Proposal 5	Combining hard and soft countermeasures	Local governments, residents, regional communities
Promotion of multiple disaster prevention-type town planning incorporating the concept of resilience (resilience, recovery)		
➤ Refer to initiative 7	Post-2015 Framework for Disaster Risk Reduction priority action 3 (investing in economic, social, cultural, and environmental resilience)	

- Along the coast of Iwate Prefecture, Fudai Village in the north serves as an example of “hard” countermeasures. These measures include such things as the construction of seawalls and floodgates and relocation inland of houses and facilities, minimizing casualties and material damage to the towns.
- At the same time, in the coastal municipalities of Iwate, tsunami countermeasures that, along with hard measures like seawalls and moving public facilities to higher ground, are enhanced by the establishment of “soft” measures, which focus on such things as evacuation and allow us not to rely solely on hard measures. In cases such as the 2011 tsunami, which greatly exceeded the seawalls, these soft measures would lead to rapid evacuation of many residents, preventing further damage.
- Taking into account the concept of resilience, it would be effective to develop hazard-resistant towns through the combination of hard measures, such as construction of disaster risk reduction facilities and moving to higher ground, and soft measures, such as developing evacuation plans together with residents and the local community, in the event that a natural disaster occurs on a scale larger than imagined or in a way that is more complicated than imagined.



Floodgates that helped to mitigate damage from the tsunami in Fudai

Floodgates of Fudai

The Fudai floodgates (total length: 205 m) were completed in 1984. The floodgates of Fudai are noteworthy in that they are 15.5 meters high. The floodgates were originally planned to be around 10 m high, the usual height, but through the demands of the mayor at the time, the late Kotaku Wamura, the gates were made the height they are today. There was criticism about the excessive height, but the mayor vowed that Fudai would never again see a repeat of the tragedy suffered in the two past tsunamis he had experienced in his lifetime. Against objections, he worked to build what are said to be the largest floodgates in Tohoku. (Source: Written Record of Iwate Prefecture and the Great East Japan Earthquake)