

Probable Damage

**Lessons learned from the 2005
Fukuoka-oki M7 earthquake**

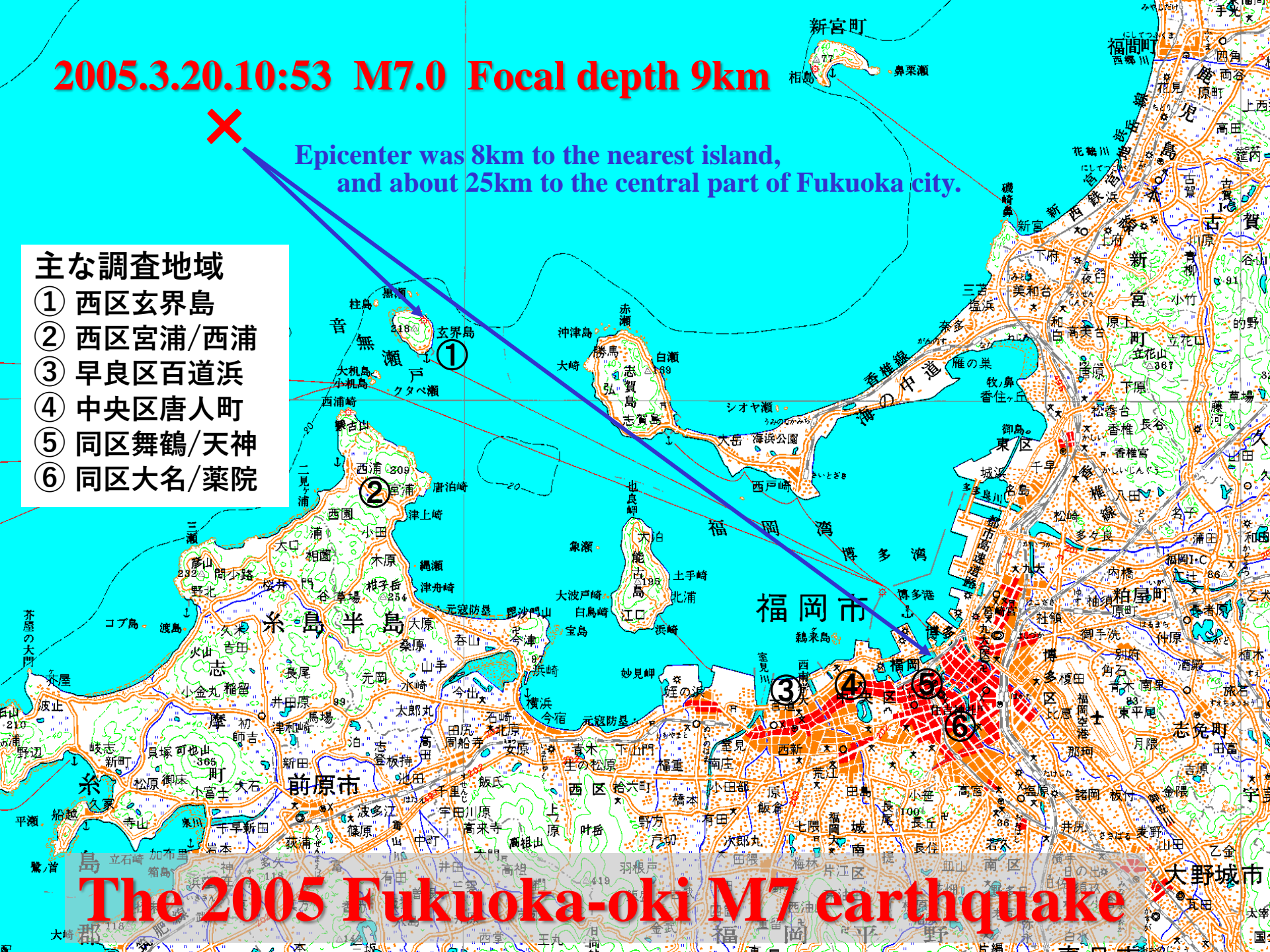
2005.3.20.10:53 M7.0 Focal depth 9km



Epicenter was 8km to the nearest island,
and about 25km to the central part of Fukuoka city.

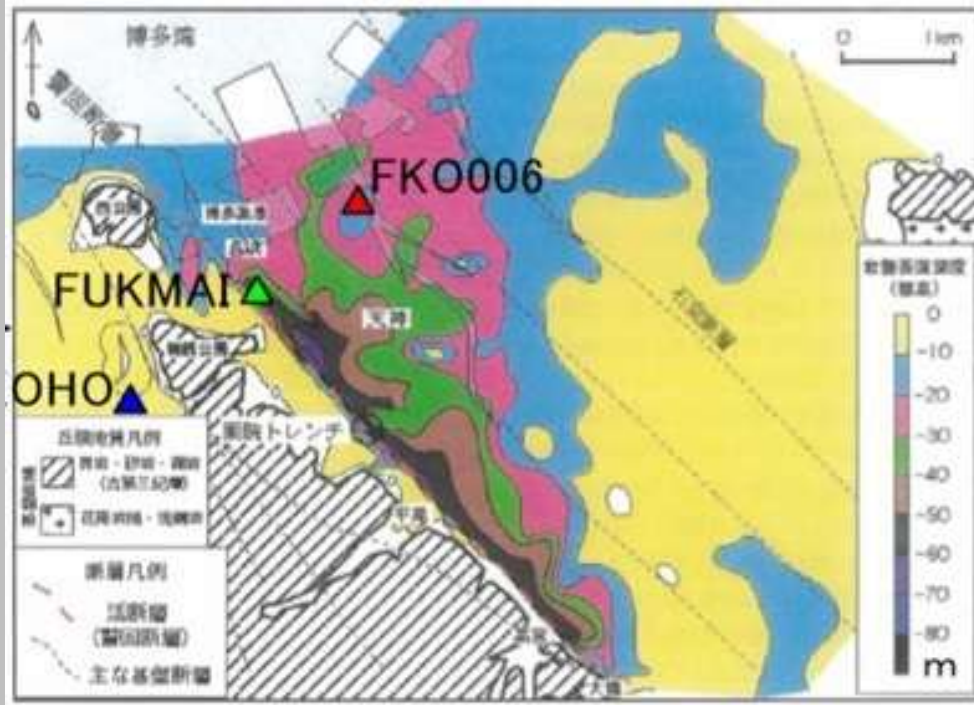
主な調査地域

- ① 西区玄界島
- ② 西区宮浦/西浦
- ③ 早良区百道浜
- ④ 中央区唐人町
- ⑤ 同区舞鶴/天神
- ⑥ 同区大名/薬院

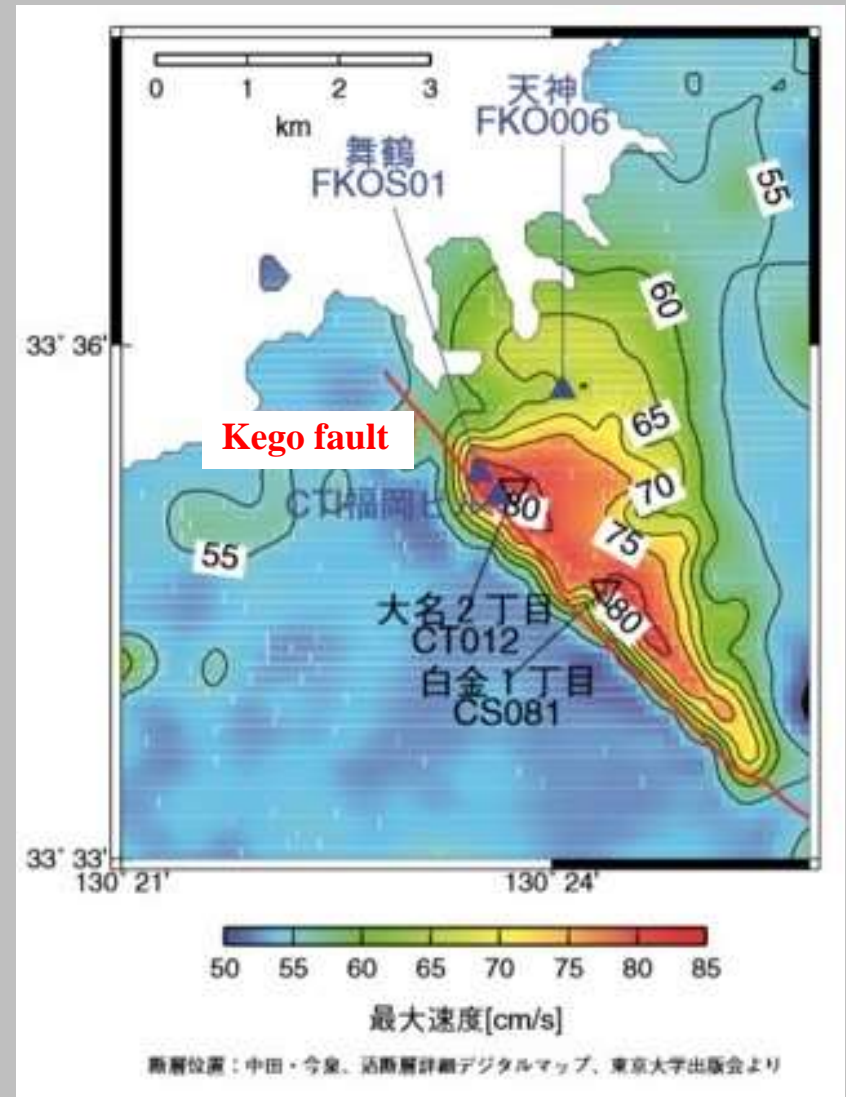


The 2005 Fukuoka-oki M7 earthquake

Soil condition and Seismic fault



Surface geology and basement depth



Distribution of PGV in the 2005 earthquake

after AIJ report(2005):Field survey of the 2005 Fukuoka-oki M7 earthquake



Damage features those could be seen in photos

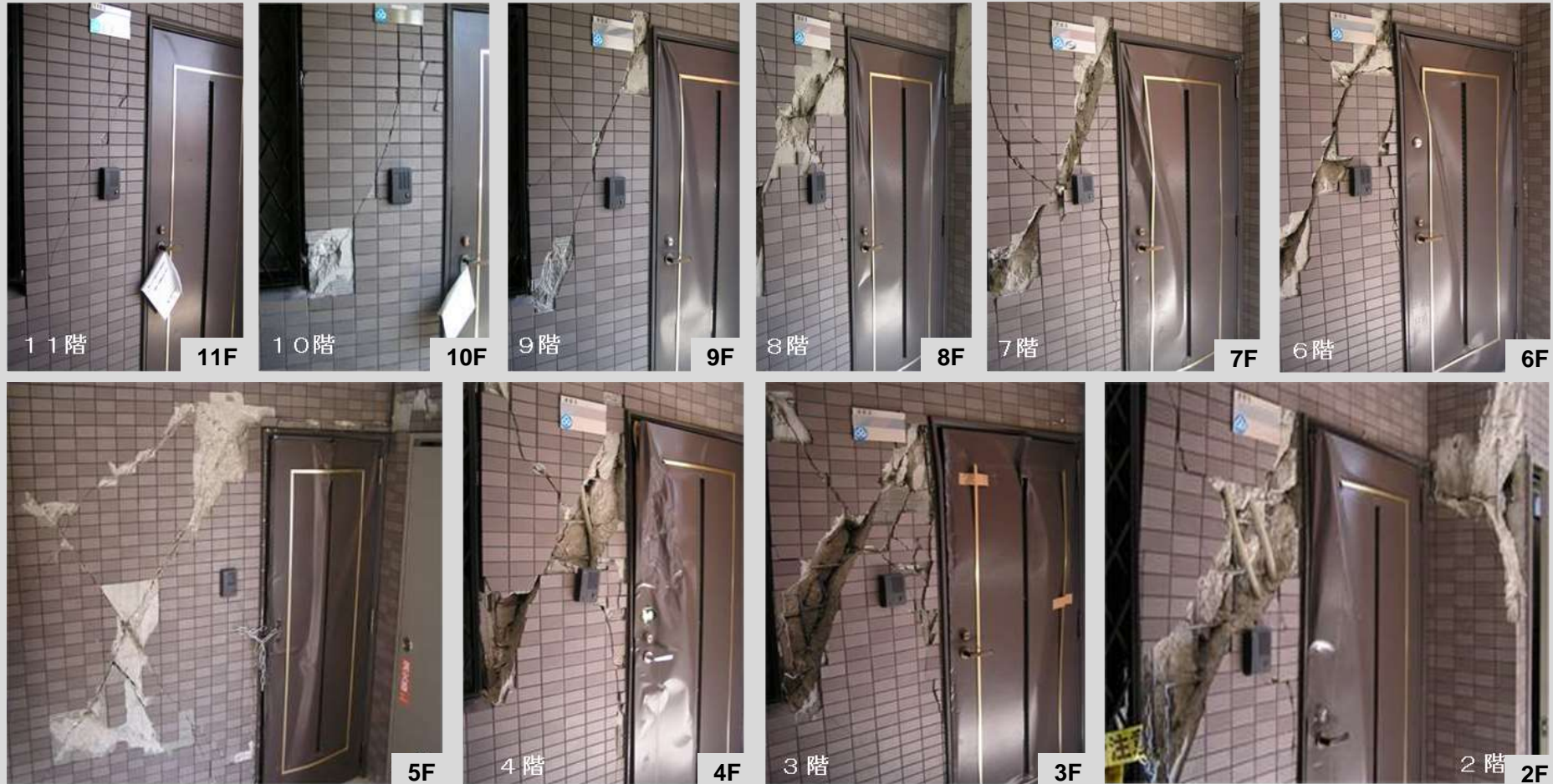
Damaged building showing the detail in the next page



Tomb-stones overturned

Damaged main building of a temple

Non-structural damage of a 14-storyed residential building, during the 2005 Fukuoka-oki M7 earthquake



**Building dispute may happen between the construction company and the residents.
Will the residents in Tokyo metropolis permit similar damage? Maybe no!**



Similar damage had been found in Sendai already in the 1978 earthquake. At that time, the construction company paid the expense for repairing the building. Unfortunately this building had suffered more severe damage in The 2011 earthquake, and finally demolished.

Concluding Remarks

We need to remind first, that we are living in very difficult circumstances, such as high seismicity, soft soil condition, high density of population and transportation, and very vulnerable buildings and houses.

Therefore, seismic microzoning process should be taken into account effectively in every safety city planning.

The lesson from the 2005 Fukuoka-oki earthquake should be very important in this process, because we can see numbers of similar buildings in Tokyo metropolitan area.

At this moment, we need to ask the government to make as possible as enforcement of existing buildings against a future M7 earthquake. But in the future, we must improve national building code itself not to get damage so easily.

Recent Topics

Kumamoto

Sendai

Hokkaido

Kumamoto castle after 2 years since the 2016 earthquake



A view from the 14th floor of Kumamoto city hall



Visit : July 16, 2018