

1 "Tokyo Earthquake Panel"

Professor Yoshiaki Kawata, Kansai University (left) and Professor Kimiro Meguro, the University of Tokyo (right) at the Foreign Correspondents' Club of Japan, Professional Luncheon on May 24, 2012



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The March 11 earthquake and tsunami has prompted the Japanese government to reassess its disaster risk and management plan – in particular for Tokyo. In January 2012, numerous Japanese media scrambled to report the disturbing prediction released by the Tokyo University Earthquake Research Institute that there is a 70% probability that Tokyo will experience a magnitude 7 quake within the next four years and a 98% probability within the next 30 years. The question now is - are we ready for Tokyo's "Big One"?

1.1 Damage reduction should be approached from damage results – Professor Kawata

- Natural disasters can be classified into five levels starting from rural disaster (cyclone in Myanmar, 1980), urbanizing disaster (earthquake in Sichuan, China, 2008), urbanized disaster (earthquake in Los Angeles, USA, 1994), urban disaster (earthquake in Kobe, Japan, 1995) to super-urban disaster. The Tokyo Metropolitan Earthquake (TME) is considered to be the worst.
- Statistically, 0.1% of the population of the damaged area will be killed, based on data compilation from past earthquakes in Kobe (1995), Turkey (1999), Taiwan (1999) and China (2008). The population of Tokyo is about 22 million; meaning 22 000 would likely be killed, if only statistics and not earthquake preparedness, i.e. building standards, emergency procedures, etc. are accounted for.
- Two important approaches when considering damage reduction, is to always assume worst case scenario and to consider mitigation from the perspective of damage result. Damage prediction should consider all aspects from hazard (direct damage), vulnerability (structural, environmental factors) and social aspects (domestic/international media coverage, riot, citizen mentality etc.)
- It is also important to understand that damage reduction is an ongoing effort. Simultaneously, damage reduction measures are effective even if they are not fully completed; a half-built dike can still mitigate damage from tsunami.
- Solutions for better management: collaboration between central and local government, information sharing, understanding the important information, etc.

1.2 The importance of “disaster imagination” – Professor Meguro

- In order to reduce damage, the following self-efforts must be taken:
To increase “disaster imagination” capacity and to live in housing built after 1981, preferably 2000. The importance of these actions is proven by data below.
- Data from the Kobe earthquake
 - 92% of deaths occurred within 6 minutes after the quake, according to medical examiners. This teaches us that no matter how hard we try, we cannot save everyone - early self-preparation is what counts.
 - Deaths in age group 60-75 were highest in number. Simultaneously, deaths in age group 20-25 were noticeably high compared to other age groups in 10-15 or 25-30. This is because the age group 20-25 consisted mostly of students who lived in affordable, single flat poor-quality houses that could not endure the quake.
 - 83.3% of deaths were due to suffocation and crush injuries from collapsing of houses. In addition, out of all deaths due to fires, 16.7% were from being trapped inside houses, unable to escape. Building structure matters.
 - On the day of the quake, over 100 fires broke out, with 53 fires occurring minutes after the quake. If under normal circumstances, it is wise to let the professional firefighters do their job – in occasions like this, they cannot. Small fires should be dealt by citizens, if possible. You must learn to change your perception.
- **Some suggestions to increase your “disaster imagination” capacity:**
Make a timetable of your daily schedule, and plan what you will do if an earthquake occurs at every hour. Try to expand your imagination to make it more real to you and to regard it as your own issue so that you can surpass the “unimaginable.” Understand the disaster life cycle and use time efficiently.

1.3 Reference

- FCCJ Website: Professional Luncheon
- <http://www.fccj.or.jp/node/7442>
- Profile of Professor Kawata, Kansai University (Japanese)
- http://www.kansai-u.ac.jp/Fc_ss/staff/y_kawata.html
- Profile of Professor Meguro, Tokyo University
- <http://gpes.c.u-tokyo.ac.jp/faculty-staff/health-and-security/meguro-kimiro.html>