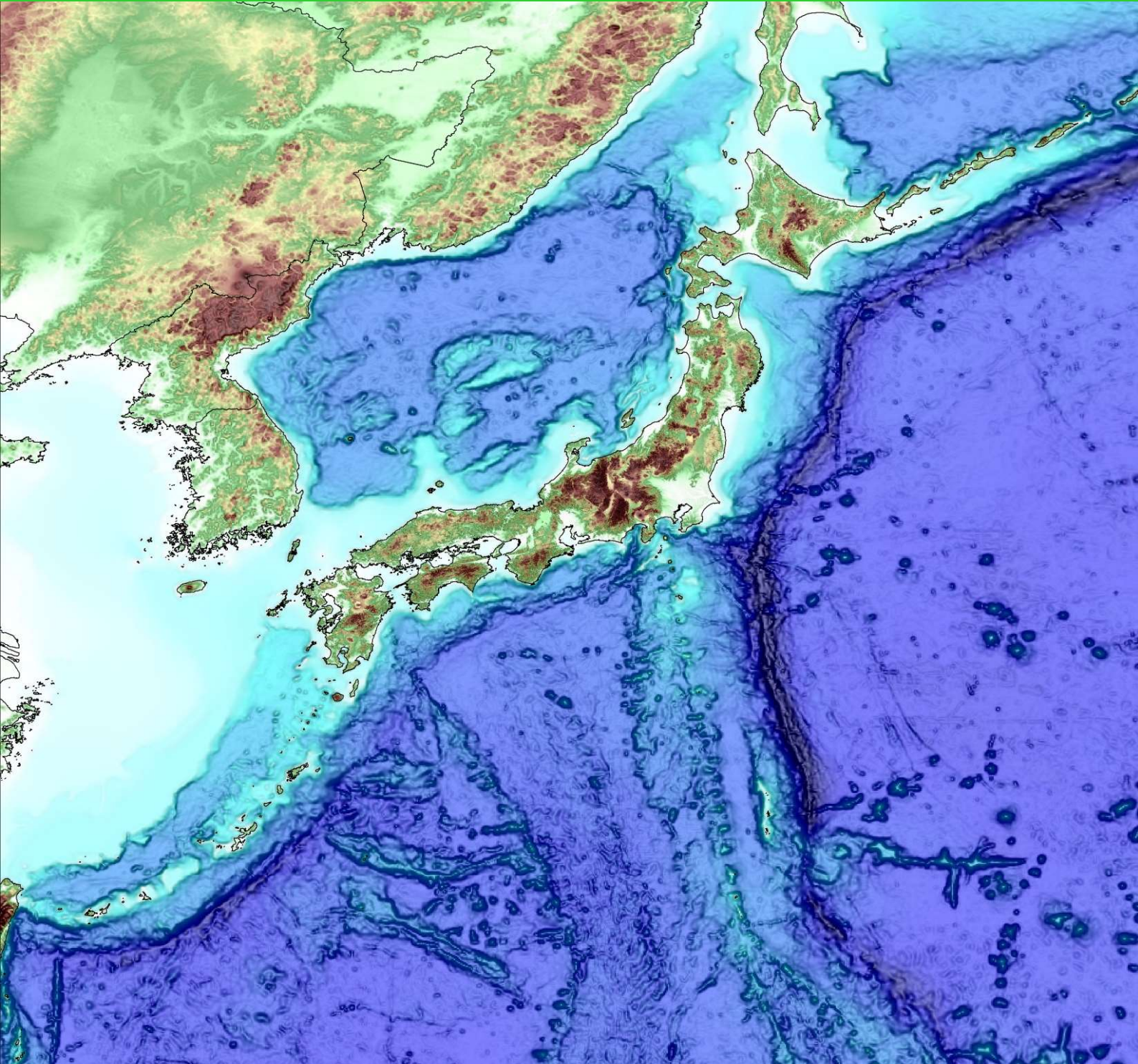




Japan Society of Engineering Geology

Since 1958

2018



Japan National Group of IAEG

IAEG-JAPAN



(The International Association for Engineering Geology and the Environment)

Chairman Greeting

The Japan Society of Engineering Geology (JSEG) was established in 1958 and it has a goal to facilitate exchange of knowledge and technology among the researchers and professionals of engineering geology. JSEG also aims to pursue the interdisciplinary and comprehensive research as well as technological development along with the specific contribution to the development of science, technology, and culture. Now, JSEG has about 2000 members, which makes the society one of the major academic societies of earth science in Japan.

JSEG hosted the first Asian Regional Conference on dam geology in 1997 to develop and encourage engineering geology in the Asian region. In 1995, two years before the first Conference, the Kobe Earthquake (Mw 6.9) destructed Kobe city and took the lives of more than 6,000 people. During the last twenty years people in Asia have undergone the 1999 Chichi Earthquake in Taiwan, the 2001 Gujarat earthquake in India, the 2004 Sumatra Earthquake and Tsunami in Indian Ocean, the 2005 Kashmir Earthquake in Pakistan and India, the 2008 Sichuan earthquake in China, the 2011 Tohoku Earthquake and Tsunami in Japan and the 2015 Gorkha Earthquake in Nepal. As Asia lies in the Asian Monsoon Zone, typhoons, cyclones and torrent rainfalls have triggered massive floods and landslides every year. Therefore, Geo-disaster Risk Reduction is a very challenging task for engineering geologist in the Asian region.

JSEG also acts as the IAGG Japan National Group and it hosted the 10th Asian Regional Conference in 2015. Through this conference, JSEG provided opportunities to the academic researchers, engineers and engineering geologists to present and share the state-of-the-art views in the field of applied geology and Geohazard. The 21th century is regarded as a period of rising Asia, but Geo-disasters should not be the barriers for sustainable development in Asia. We expect more contributions of engineering geologists in the field of Geo-Disaster Risk Reduction.



Chairman of the IAGG Japan National Group
Masahiro Chigira



Mt. Fuji, view from north



Shiraito fall, south west of Mt. Fuji



Red leaves in Kamakura, west of Tokyo

About JSEG

Japan society of Engineering Geology (JSEG) was established in 1958 to achieve the following objectives.

- Progress of the research for engineering geology that relate to various exploitation and construction
- Improvement and development of technology
- Communication between members

Now JSEG has the members more than 2000 from industrial, academic, and governmental organizations, and is the leading society of engineering geology in Japan.

1992 Council meeting was invited at Kyoto together with IGC.

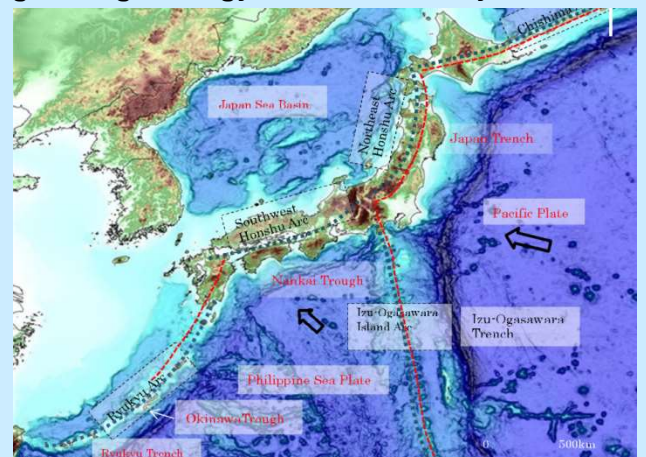
1997 The first Asian Symposium(Regional Conference) of Engineering Geology was held in Tokyo.

2008 JSEG celebrated 50th anniversary at Yokohama.

2015 Memorial 10th Asian Regional Conference in Kyoto.



Record of the movement
Of the Tanna active fault, 1932



General topographic view
around Japan



60th Anniversary Symposium of JSEG

The theme of this symposium will be “Disaster experiences during recent 10 years and message to future generation” .

Increasing number of natural disasters caused by earthquake, extreme heavy rain, and volcanism etc. occurred in recent ten years in Japan. JSEG has gained the knowledge and technology of disaster prevention, caution and forecast, through disaster investigation for Hiroshima debris flow in 2014, Kumamoto earthquake in 2016 and Northern Kyusyu debris flow in 2017. We will discuss our future action and role according to recent activities and research results of JSEG members. We will invite Dr. Toshiaki Kawada (Kyoto Univ.) and Dr. Ranjan Kumar Dahal (Tribhuvan Univ. Nepal) for special lectures and have one day excursion for disaster prevention of big Tokyo city.

Symposium: 29th June 2018 (FRI)

Field Tour: 30th June 2018 (SAT)

【Symposium】

Date : 29th June 2018 (FRI)

Program :

13:00 - 13:05 Opening Speech

13:05 - 13:10 Guest Speech (Japan Geotechnical Consultants Association)

13:10 - 14:00 Special Lecture

Ideal situation of countermeasures against national disasters required in Japan

Yoshiaki Kawata (Kansai Univ.)

14:00 - 14:50 **Special Lecture**

What did Nepal learn after the 2015 Gorkha Earthquake from engineering and geological perspectives?

Ranjan Kumar Dahal (Tribhuvan Univ.,Nepal)

14:50 - 15:20 Break & Poster presentation

15:20 - 15:40 Presentation

History of groundwater utilization and underground environment in Tokyo

Groundwater research group: Akinobu Miyakoshi (AIST)

15:40 - 16:00 Presentation

Achievements and lessons learned from the disaster investigation after the inauguration of disaster geological research group, and its future tasks

Disaster geological research group: Takashi Inokuchi (NIED)

16:00 - 16:20 Presentation

Situation and problems of disaster responses in major geological disasters in the last 10 years that caused damage to civil engineering structures

Civil engineering research group: Yasuto Sasaki (PWRI)

16:20 - 16:40 Presentation

Topography interpretation using high precision topography information and its utilization for disaster prevention

Applied geomorphology research group: Toshihiko Shimokawa (Kankyo chisitu)

16:40 - 17:00 Presentation

Symbiosis of disaster prevention education and geo merit

Environmental geology research group: Atsuko Kiyosaki (Cross-Engineering)

17:00 - 17:10 Break

17:10 - 18:00 Panel Discussion

Coordinator: Shuichi Hasegawa (Kagawa Univ.)

Panelists:

Akinobu Miyakosi, Takashi Inokuchi, Yasuto Sasaki, Toshihiko Shimokawa, Atsuko Kiyosaki

【Field Tour - Relationship between living in modern Japan and geography and geology】

Date : 30th June 2018 (SAT)

Route & Schedule :

8:30 - 10:00 (Town walk) Asakusa area
10:00 - 13:30 (Cruise) Sumida river & Water front (with Lunch)
14:00 - 16:00 Edo Tokyo Museum

Highlights :

① Town walk in Asakusa area

Asakusa area has been prospering as a surrounding town of Sensoji Temple since 17th century. The land use is closely related to topography and geology. Sensoji Temple is located on the right side, not on the left side of the Sumida River. The left side is the flood area of the Sumida River. On the right, there are fine high lands by natural embankment. Sensoji Temple is located on a fine high land. Settlement near Sensoji Temple in 17th - 19th century was spreading on the fine high lands. These topographic features are due to the geological structure. The basal depth of alluvial is different on the left and right side of the Sumida River. The basal depth of alluvial on the left side is deeper than right side. Then, the thickness of alluvial clay layers differs on the left and right of the Sumida River. On the right side, the thickness of clay layer is around 10m. On the other hand, the thickness is around 20m on the left side. Due to the consolidation subsidence of the clay layer, the right side where Asakusa area is located has slightly higher than the left.

In the Edo period (17th to 19th century), the low lands were wetlands and the fine high lands were used as people's living areas. Sensoji Temple which is an important religious facility is also located on fine high lands of natural embankment. As shown in figure 4, housings were lined up on the fine high lands. The altitude of Mt. Matsuchi is the highest in Asakusa area (about 10 m). This is not an artificial mountain made by dredged soil but natural ground. This can be confirmed on the town walk.

In town walk, the participants will walk imaging the relationship between altitude and land use in old days. (Explainer: Dr. Kimura (AIST))

② Sumida river & water front cruise (See figure 1)

Most of the waterfront area is a landfill, part of Tsukuda-jima is the only natural ground. In this cruise, the natural topography around Tsukuda-jima and the history of waterfront development will be explained.

(Explainer: Dr. Kimura(AIST), Prof. Yamazaki (Tokyo Metropolitan Univ. emeritus prof.),
Mr. Tsuchiya(Tokyo Metropolis))

③ Edo-Tokyo Museum

Edo-Tokyo Museum exhibits the lives of people from the Edo period (17th century) to the present day. In this museum, Prof. Yamazaki will explain about the history and topographical features of Tamagawa waterway.

Tamagawa waterway was built in 1653. This supplied water to Edo (Tokyo), taking water in Hamura village where was 43 kilometers west from Edo. Although it is considerably away from Edo, Hamura village was only water intake points to supply water by natural flowing down. Tamagawa waterway used skillfully the slope of the plateau to supply water into the city of Edo. This waterway runs by choosing a divide ridge, in order to supply water to rice fields on both sides of the divide ridge. Thanks to this waterway, many rice fields were developed. Considering the situation at the time without accurate altitude data, the planning and technical ability at that time was amazing.

In addition, the participants will see the exhibition about the damage of the Great Kanto Earthquake occurred in 1923. By the earthquake, more than 100,000 people died due to fire. Fire broke out from wooden houses collapsed by the earthquake. The firefighting ability did not catch up, because there were many fire points. Fire surrounded people, and many people died losing their escape way. The earthquake progressed the fire prevention measures in Japan.

(Explainer: Prof. Yamazaki (Tokyo Metropolitan Univ. emeritus prof.))



Fig. 1 Field Tour route

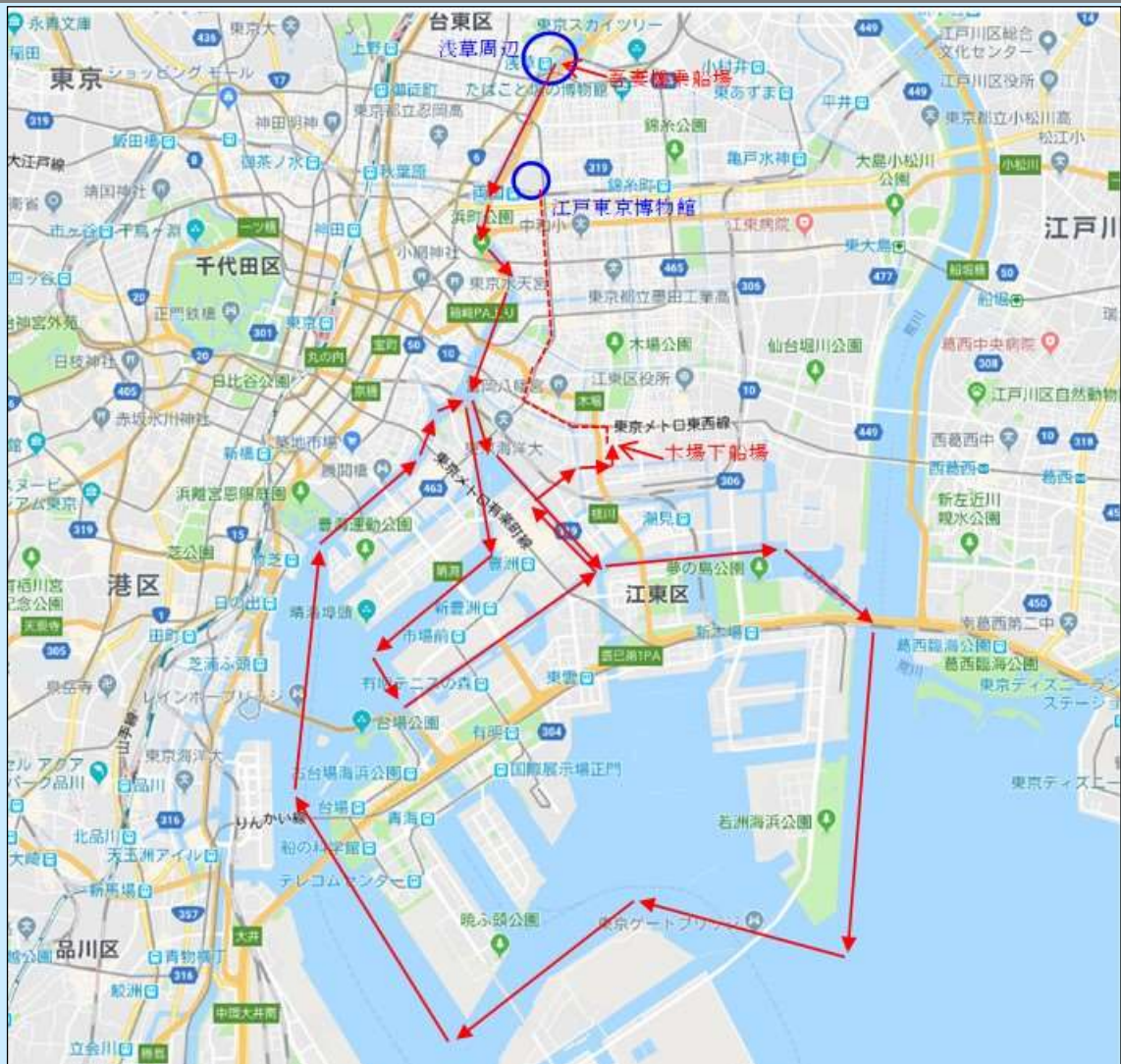


Fig. 1 Field Tour route



Fig.2 Asakusa Area (altitude and town walk route)



The cover explanation: color altitude inclination chart (ELSAMAP) around the Japanese Islands . Color altitude inclination chart ELSAMAP is new geographical features expression technique for uniting "Change in the altitude" and "Change in the inclination". DEM used is SRTM3(Japanese Islands) and ETOP2(Surrounding of the Japanese Islands).
(KOKUSAI KOGYO Co.,LTD. offered)



Japan Society of Engineering Geology

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