

# Possibility of the interdisciplinary historical tsunami research based on various historical records - Example of 1611 Keicho Oshu Earthquake and Tsunami -

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Various historical documents drawn up 1,000 years or more before exist in Japan. Especially in the 17th century, the Japanese public created a vast quantity of historical data after the Edo period. In this research, I study the technique of interdisciplinary historical tsunami research based on these various historical data in Japan. Therefore, I consider as an example "Keicho Oshu Earthquake and Tsunami" which occurred in 1611 in the Tohoku district Pacific coast of present day Japan.

In recent years, sedimentary layers on the Pacific coast of the Tohoku district from tsunamis which occurred after the 15th century have been discovered in two or more points. Opinions about the generation of this tsunami event are separated according to dates of 1454 or 1611. About this, I analyze the features based on the use of historical data. As data used as the basis of the tsunami event theory in 1454, "Oudaiki" materialized at the period is mentioned. However, "Oshu" (= the present Tohoku district) which is a stricken area of tsunami is the distant place, and the historical records described hearsay. Furthermore, when the text is interpreted, the disaster range can be interpreted as about 60 km or 400 km, and the actual condition is unclear. Two or more historical records exist that are used as the basis of the tsunami that occurred in 1611. They are various, such as a book copied down and edited by the historical records created by the time near the age that the tsunami occurred, and in later years. If the descriptive content is analyzed, I can classify the sources of information.

- (1) Historical records based on record of the "Omoto family" of Miyako-city, Iwate.
- (2) Historical records based on record of the "Muto family" of Yamada-city, Iwate.
- (3) Historical records based on the Otsuchi deputy official place in Otsuchi-city.
- (4) Historical records introduced into the Sendai han of Miyagi Prefecture.
- (5) Historical records introduced into the Soma Nakamura han of Soma-city, Fukushima.

Since two or more sources of information exist in a stricken area, it is appropriate to having brought about damage from Iwate Prefecture to Fukushima Prefecture after the 15th century to think that it is the tsunami in 1611.

Moreover, it becomes possible by restoring old geographical features from historical data to solve the aspect of a historical disaster in detail. The record and tradition about a "Keicho Oshu Earthquake and Tsunami" in 1611 exist in Miyako, Iwate. The tsunami which carried out river ascension reaches Oyamada, and it is described that the ship drifted ashore in the historical records "Kojitsu-densyoki". The tradition of having tied the ship with the willow which existed in this place once by the tsunami which occurred at the Edo period exists in Miyako Tanokami. This tsunami trace point exists in inland further from the tsunami flood range in 2011. When considered from this, the tsunami in 1611 had a scale larger than the tsunami in 2011. However, this opinion will not be realized if historical geographical features are restored and analyzed. If geographical features are restored based on "50,000-minute one topographical map" which the army ordnance survey created, Heigawa which is flowing through the center in Miyako is flowing near Oyamada's surface of a mountain. Moreover, the Yamaguchi river is flowing through the center of the Miyako city area. That is, the channels of the river differ now and in the past.

The tsunami trace points of Keicho Oshu Earthquake and Tsunami exists on the channel of the old river. Therefore, it becomes possible to explain the contents of historical records by river ascension of tsunami.

If not only the description portion about a disaster but the formation background of historical records and the historical records which are not directly related to a disaster are based on them and analyzed when analyzing a historical disaster, solving in detail will be possible.

Keywords: 1611 Keicho Oshu Earthquake and Tsunami, historical records, interdisciplinary historical tsunami research, Visualization of historical geographical feature