

Tsunami trace height of the AD 1854 Ansei Tokai tsunami around the lake Hamanako inferred from historical maps

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We analyzed the trace of tsunami from historical maps "Maisaka-syuku tsunamizu" and "Ansei Tsunami saigai ezu" (in Hamamatsu museum) drawn about the tsunami damages around Hamanako in the Ansei Tokai earthquake occurred in 1854.

"Maisaka" (present Maisaka-cho Nishi-ku, Hamamatsu-shi, Shizuoka-ken) located in the "Hamanako" east shore is the area which prospered as a post town in "Tokaido". According to "the history of Shizuoka" (1996), which was drawn by Hachiro Watanabe, who was a resident of "Maisaka" and drew the "Maisaka" tsunami figure. This picture shows that the appearance of Maisaka inundated by tsunami, or people who evacuated. On the east side of a highway, tsunami has reached to near night-lights. Moreover, in the west side, stairs around "Shigetuin" were inundated. This is a place called "Ohkonoboriba" by "Toukaido-bungen-nobe-ezu". It becomes clear that from here to several east sides of a subsidiary inn or an administration office were inundated by tsunami.

"Ansei zisin tsunami saigai ezu" shows the time when the tsunami hits "Okuhamanako and Kiga" area and after the situation of the tsunami. Here, we can find some points reaching tsunami by considering "Himekaido" north side passes as a mark. Although seeing from the historical map, tsunami reached the front of "Kigasekisyo" but tsunami was not flooded in the barrier main part. Moreover, "Komorizawa" near "Ninomiyasya", and "Iwanasawa", near "Himekaido" were drawn as reaching points of the tsunami. Furthermore, signs that the circumference of a mountain where "Daienzi-temple" located in

"Ikutagawa-river mouth-of-a-river part which flows into "Okuhamanako" name lake serves as a cemetery in the case of tsunami has sunk are drawn. "Dainenji Temple" in the area of mouth of "Ikutagawa River" was inundated by tsunami but only the hill used as the "Dainenji Temple Cemetery" was not. There are few documents described accurate places which was reached by the tsunami around Lake Hamanako, especially Lake Okuhamanako. However, we identified those based on historical maps. We hope that our results will contribute to future interdisciplinary research including tsunami engineering on the past great earthquakes along the Nankai Trough.

Acknowledgement

This research was supported by MEXT ("Research project for compound disaster mitigation on the great earthquakes and tsunamis around the Nankai Trough region").

Keywords: Ansei Tokai earthquake and tsunami, Lake hamanako, historical maps