Detection of natural events and disasters from known historical records

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There have been many studies on natural events and hazard occurred in historic times. Catalogs in various research fields, such as earthquake, volcano eruption, weather and astronomy, are compiled and published. In these catalogues, an article about events in different field is often cited from the same historical literature. For example, an earthquake and flood are extracted from different part of the literature. Diary-style literatures tend to record events range over wide filed. Each catalog has its own editorial policy that constrained by target event, interests and limitation of page space. Articles about events in different field are not usually collected in catalogs. A known article in one research field can be unknown article in the other field. It is possible that a lot events are left as unknown.
Enormous data on historical events and disasters can be used via online database. The data includes geographic information such as places where an event occurred or observed and where the records are owned. The impacts of an event usually recorded in a certain geographic area. It is possible to find a new article to detect unknown events or to increase data on known events based on geographic information of known articles and records. Mapping and geographic information system is useful to arrange and search the information related to known historical records.
A good example of searching known records is a mud rain event that is observed in February, 1882 across a wide area of Japan's main island. Records and articles in several newspapers that written at At Osaka, Kyoto, Mie, Gifu, Aichi, Nagano, Tokyo, Chiba, Ibaraki Prefectures and so on, are transcribed to characterize the mud rain event. The records mostly described that something like ash, sand or mud fallen and accumulated. One article described that the night is like the one without moon. Although there was a rumor that the mud rain is caused by a volcano eruption, volcano eruption is not officially reported in the period. The point of observation seems to migrate from west to east in three days. The mud rain estimated to be brought by (1) ash fall from a volcano eruption, (2) Asian dust, or (3) local dust storm.

Keywords: historical record, February 1882, volcano eruption, Asian dust

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