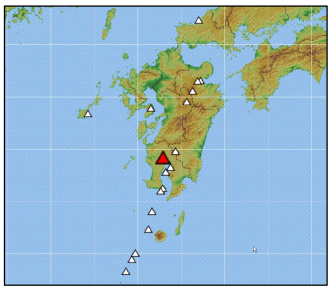

88. Yonemaru and Sumiyoshiike

Latitude: 31°46'34" N, Longitude: 130°33'55" E, Elevation: 15 m
(near center of Yonemaru)
(Measured by JMA)
Latitude: 31°46'17" N, Longitude: 130°35'31" E, Elevation: 40 m
(near center of Sumiyoshiike)
(Measured by JMA)

Yonemaru (circular rice field) and Sumiyoshiike (small lake) on August 30, 2011 by the Japan Meteorological Agency

Summary

Yonemaru and Sumiyoshiike are located on the edge of the plain that extends to the north coast of Kagoshima Bay, in the center of Kagoshima Prefecture. They consist of two maar (called the Yonemaru and Sumiyoshiike maars), lined up roughly east-west. The former is a circular depression with a diameter of approximately 1km, filled by alluvial layers. The latter is a lake, approximately 30m deep, with a diameter of approximately 500 m. The Yonemaru maar is known to have produced base surge deposits and air-fall pyroclastic materials as ejecta, and the Sumiyoshiike maar is known to have produced only air-fall ejecta. Prominent sedimentary structures have been identified for both, indicating that their ejecta were produced by phreatomagmatic eruptions (Moriwaki et al., 1986; Moriwaki et al., 2002). They are all basaltic ejecta of SiO_2 49.0 wt %.

Red Relief Image Map

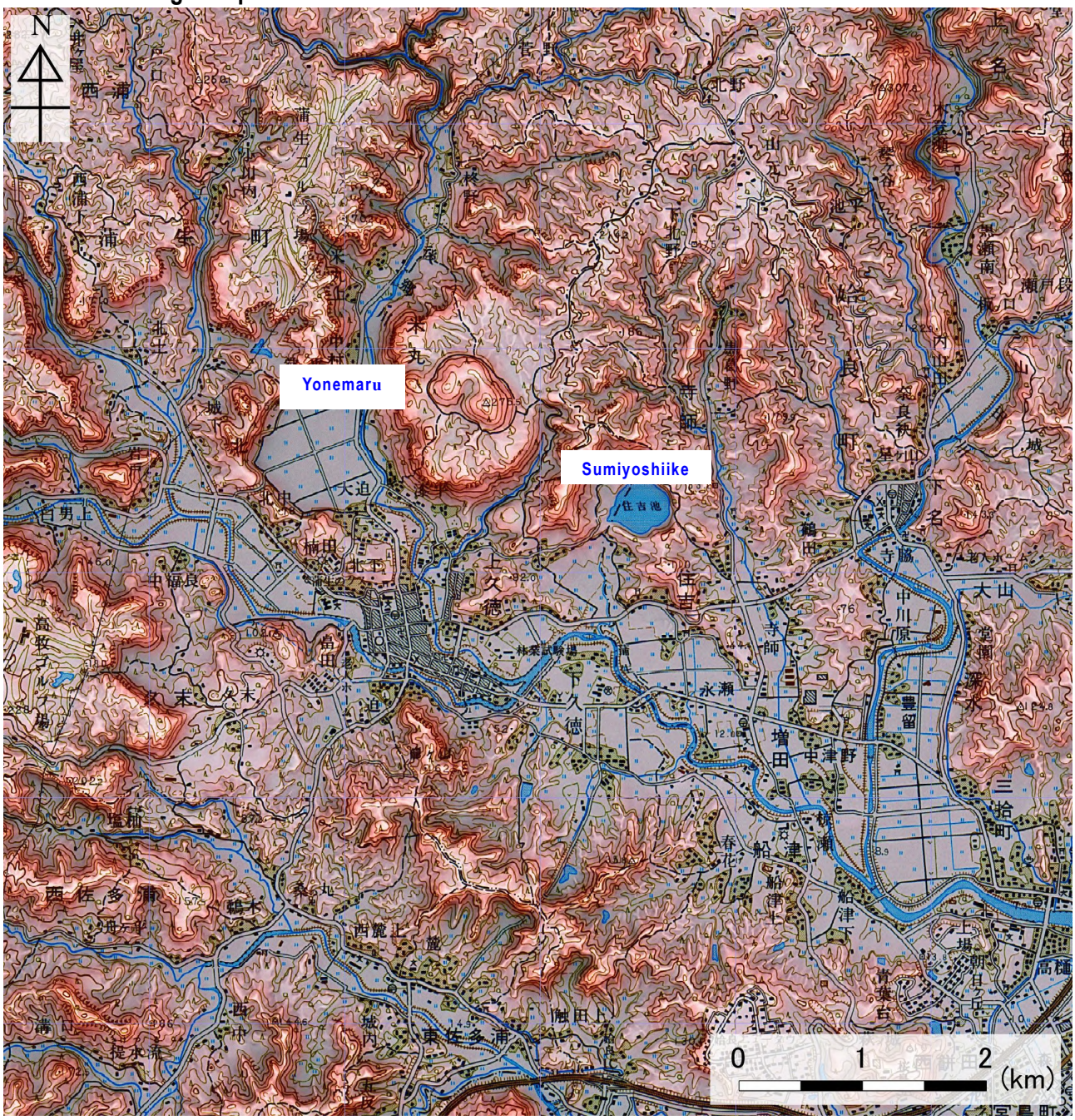

Figure 88-1 Topography of Yonemaru and Sumiyoshiike.

1:50,000 scale topographic map (Kajiki) and digital map 50 m grid (elevation) published by the Geospatial Information Authority of Japan were used.

Chronology of Eruptions

・Volcanic Activity in the Past 10,000 Years

The two maars are considered to have erupted suucessively about 8,000 years ago, first the Sumiyoshiike, then the Yonemaru maar (Moriwaki et al., 2002; Kobayashi et al., 2004). Aojiki volcano, located between the two maars, was formed about 100,000 years ago (Nagaoka et al., 2001).

Period	Area of Activity	Eruption Type	Main Phenomena / Volume of Magma
8.2ka	Sumiyoshiike maar	Phreatomagmatic eruption	Tephra fall. Magma eruption volume = 0.002 km^3 DRE. (VEI 2)
8.1←→8ka	Yonemaru maar	Phreatomagmatic eruption	Pyroclastic surge, tephra fall. Magma eruption volume = 0.016 km^3 DRE. (VEI 3)

* Reference documents have been appended with reference to the catalog of eruptive events during the last 10,000 years in Japan, database of Japanese active volcanoes, and AIST (Kudo and Hoshizumi, 2006) for eruptive period, area of activity and eruption type. All years are noted in calendar years. "ka" within the table indicates "1000 years ago", with the year 2000 set as 0 ka.
A←→B: Eruption events taking place at some point between year A and year B

・Historical Activity

There are no records of volcanic activity.

Recent Volcanic Activity

See Sakurajima

Information on Disaster Prevention

①Hazard Map

None

Social Circumstances

①Populations

Aira City: (75,747: as of November 1, 2011 - from Aira City website)

②National Parks, Quasi-National Parks, Number of Climbers

Number of mountain-climbers and sight-seers:
4,300 (Sumiyoshiike campsite users - 2010) * According to Aira City

③Facilities

None

Monitoring Network

See Sakurajima

Bibliography

Moriwaki, H., et al. (1986): J.Geogr., **95**, 94-113 (in Japanese with English Abstract).

Moriwaki, H. (2002): The. Quaternary. Research., **41**, 253-268 (in Japanese with English Abstract).

Nagaoka, S., et al. (2001): J.Gcol.Soc.Japan., **107**, 432-450 (in Japanese with English Abstract).