

Landform features of Okinoshima of Munakata city

*Takahito Kuroki¹

1. Faculty of Education, Univ. of Teacher Edu. Fukuoka

The Sacred Island of Okinoshima and Associated Sites in the Munakata Region was registered as a World Heritage in July 2017. Okinoshima located about 70 km northwest of Kyushu main island is a small island with maximum altitude above sea level of about 240 m and an area of about 960,000 m². The island consists of a steep cliff and gentle slope and the area of the plain is small. It consists of shale in the southwest part, quartz porphyry in the northwest part, and talus deposit in the southeast part, which has a unique landform distribution. Many historical relics were discovered and investigated there. Many precious votive offerings were conducted to pray for safety ocean voyages from the 4th to the 9th centuries and a sacred place, Okitsu-miya of Munakata Taisha is settled on the gentle slope on the south side of this island. Residents have unwritten taboos that forbid actions such as removing anything from the island, or revealing anything seen or heard there.

From the GIS analysis of various kinds of geographic information, I created maps of land and seabed of it and examined the features of the landforms. Furthermore, I carried out morphological and geological surveys on site. Fundamental geospatial data of GSI, map information related to isobaths of JHA and airborne laser scanner data of Munakata city are used as the geographic information. Basic ground elevation maps, slope maps, relief maps and 3D images were created. A landform classification map of land was made by interpretation of each basic map and field survey. Especially in the southwest part, the distribution of steep cliff and landslide lobe, which indicates the existence of landslides, is distinctive. In addition, the three groups of lineaments that trend west-southwest can be interpreted on the ground. From the 3D images etc., it can be identified that the altitude of Okinoshima is about 340 m above the flat seabed. The topography of seabed in the southern part of Okinoshima, is a shallow flat table in the west side and a concave area inclining to the east in the east side. Other landform features that should be investigated in the future are also confirmed in Okinoshima.

In this presentation, I would like to introduce features of the landforms clarified from the analysis of maps by GIS on Okinoshima where access is restricted.

Keywords: Okinoshima, map, landform, landslide