Enhancing geographic imagination of "satoyama" landscape using high-definition land surface data and three-dimensional landform models

*Takuro Ogura[2], Yuichi S. Hayakawa[1], Yasutaka Nakata[2], Yasuhiko Tamura[1], Chiaki T. Oguchi[3], Kisara Shimizu[3], Hiroyuki Yamauchi[1], Takashi Oguchi[1]

1. Center for Spatial Information Science, The University of Tokyo, 2. Graduate School of Frontier Sciences, The University of Tokyo, 3. Graduate School of Science and Engineering, Saitama University

High-definition topographic data by SfM-MVS photogrammetry, UAS (Unmanned Aerial System) and TLS (Terrestrial Laser Scanning) have become widely available but still been limited to be used as learning materials for earth and planetary sciences. Here we demonstrate a class activity to enhance the "geographical imagination" using high-definition landscape data for elementary school students. 3D print models, as well as cut-and-built topographic models of the Satoyama landscape, were effectively used to assist the students to imagine and understand the geographical landscapes of their town.

Keywords: UAS, point cloud, three dimensional

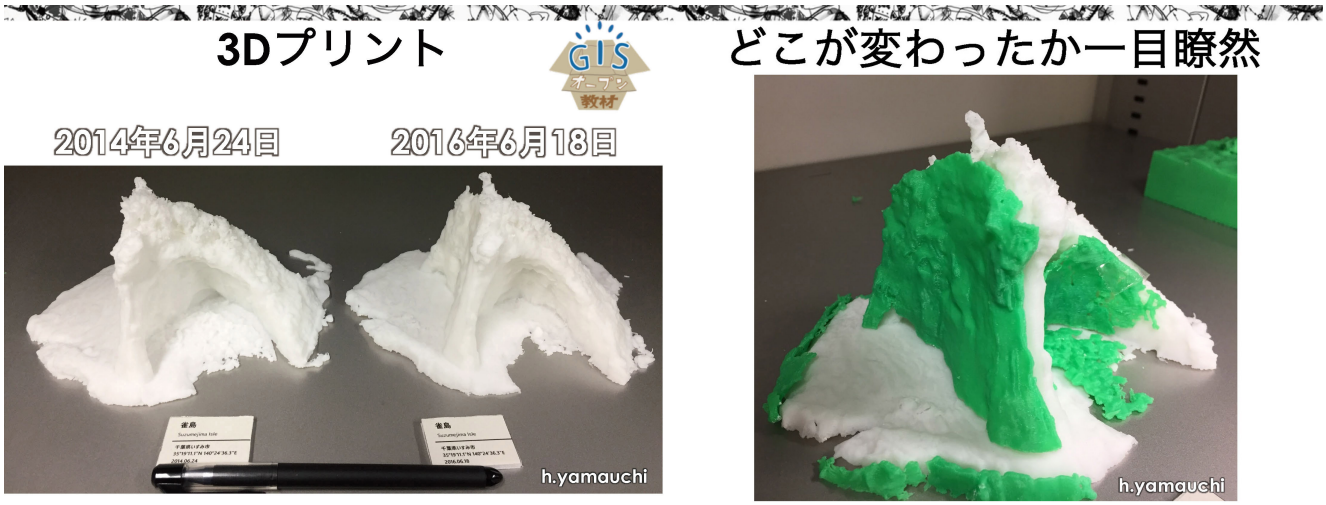

図 1. 実際に授業で用いた 3D プリントモデル。左が 2 時期のデータであり，右では差分をとった箇所（侵食・堆積が進んでいる箇所）を別の色で印刷して表示した。

