

## Digital compilation of old maps of Mashiki Town stricken by the 2016 Kumamoto Earthquakes

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Old maps of Mashiki Town, severely damaged by the 2016 Kumamoto Earthquakes, were digitally compiled using commercial 2D mapping software (Surfer 15). Present GSI's Fundamental Geospatial Data were used for the georeferencing. The maps were produced in Meiji Era (Ca. 1880s), and recently unveiled by Kumamoto Prefectural Government Office (2016). A total of 17 segments corresponding to old villages, now forming Mashiki Town, were scanned and imported as digital images. Because the maps were drafted by plane-table surveying, it was essential to adjust positions of control points. The georeferenced compiled map clearly showed land use, distribution of residence area, and road network in Mashiki Town 140 years ago. Compared with the present geospatial information or a map on building damage by the Earthquakes, we could be able to interpret on ground conditions which would affected to building damage.

The GSI's Fundamental Geospatial Data were also useful to understand tectonic setting around Mashiki Town. For example, surface of Takuma upland, on which Mashiki Town is situated, gently tilts toward southwest direction, a remnant valley is recognizable at the southeastern margin of the upland. This indicate the margin is tectonically active.

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