Summary of our activities and the future direction in the Woods for Field Practice Owned by Sagano High School

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The purpose of this thesis is to summarize our research activities in the Woods for Field Practice Owned by Sagano High School (WFS) which is a forest in which more than 80 students have conducted research within over a 5-year span. We wanted to propose a future direction for the WFS. The location of the WFS is recognized as a "Local Forest Area", which means a place that borders an urban area and a mountainous district. Since Japanese cedar and Japanese cypress were planted there around 70 years ago, proper forest management has not been conducted there at all. We have surveyed about half of the 1.9 ha WFS area and processed this data in Geographic Information System (GIS) software. Although the slant is 20 to 40 degrees, there is no clear soil outflow classified as "Moderately Moist Brown Forest Soil". On the other hand, harmful animal damage by deer (*Cervus nippon*) is remarkable, and so we are concerned if, for example, soil erosion occurs due to a decline in understory vegetation. We cannot expect the soil to be a soil seed bank because the pH level of the soil is low and the germination inhibition effect is strong. According to aerial image videos taken by drone, we found the canopy was extremely dense and it is urgently necessary to thin the forest. From the viewpoint of recent landslide disasters within forests, we conducted research on both the soil profile and the soil permeability. As a result, it turned out that the soil can hold rainfall to a certain level. We considered, however, that landslide disasters are likely to happen in the case of heavy rain because the soil permeability is relatively high and the rain passes through the soil (or the pedosphere) and reaches to the lithosphere. In the future, we will approach our research from the viewpoints of both hydrology and forest information analysis in the WFS.

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