



①Overall Research for Constructing Sustainable Circulating Society
②Clarification of Ground Formation Process and Engineering Properties of Soil

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● Research Outline

Forest Improvement and Efficient Use of Forest Resources

It can be argued that the existence of forests serve many functions, including watershed protection, soil loss prevention, biodiversity conservatory, absorption of CO₂ and so on. Additionally, these natural environments, known traditionally as ‘Satoyama’ areas, provide for a perfect platform where children can be seen playing together and people relaxing.

About 66% of Japan's land area is covered with forests, 81.8% in Gifu Prefecture (where our college is located; the second largest in Japan), and as high as 86% in Motosu City.

Our laboratory is aiming at forest improvement and restoration by means of proper tree thinning, effective utilization of the timber from thinning, and educational activities for the public.

Survey of the Nobi Plain

The Nobi Plain, where we live, is one of the major alluvial plains in Japan. It is a potential disaster area where soft ground is distributed extensively and deeply.

And so, based on the soil-boring data of the Nobi Plain and the like, we are engaged in surveys on the depositional process of the Nobi ground and the estimated effects on the environment when deposited. Furthermore, we are engaged in some engineering problems such as liquefaction assessment (when earthquakes occur) and settlement prediction (when structures are constructed).

Engineering Properties of Soil

Seen under magnification, the sand and clay that make up ground composition are a mass of individual particles. General soil, composed of the particles air and water, is a three-phase mixture, and its behavior is extremely complex. We are considering a simple way to assess its physical properties and strength.