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Macroscopic analyses on habitat environment by remote sensing and GIS - example of raccoon and snapping turtle-

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To consider conservation of biodiversity is the same as to consider future of human and ecosystem. It is urgent issue in international community as can be seen from the COP10 of biodiversity treaty in Nagoya. Factors that determine the existence of a living thing is extremely various. Understanding is possible by examining the relationship among many factors, however, it is very difficult in actually. Geographic Information Systems (GIS) enables such a complicated analyses.

Various land information are accumulated on the basis of so called 1km mesh(3rd mesh) in national standard mesh system of Japan. These data are open to public as national numerical land informations. Various attributes on land surface can be extracted from these data by using GIS.

Biodiversity center, Chiba Prefecture, stores information of the existence of many species on the 3rd mesh as biodiversity database. Land information can be added to the database, and it enables the analyses on the condition that determines the existence of a living thing.

We collect many numerical informations on 3rd mesh, they are information of topography, land use, road density and length, climate, population, vegetation. More layer will be added to the system continuously. Raccoon and snapping turtle are taken as examples of analyses, and results will be presented in the meeting.

Keywords: biodiversity, Chiba biodiversity database, geographic information systems, remote sensing, raccoon, snapping turtle