

Algorithm development of monitoring terrestrial environment using satellite image data and study on terrestrial environment

Kanako MURAMATSU [Environmental Sciences Course]

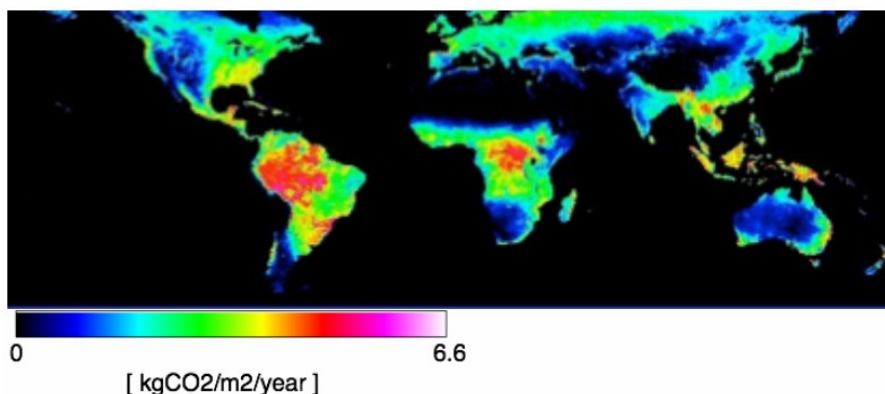


Fig. 1 Annual net primary production from satellite image.

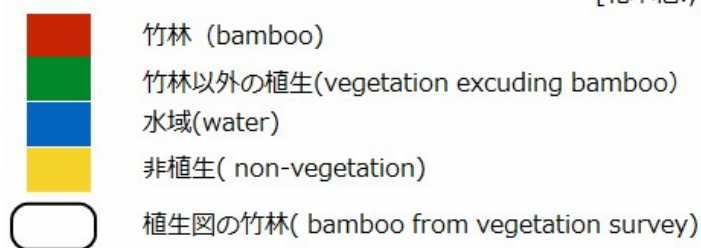
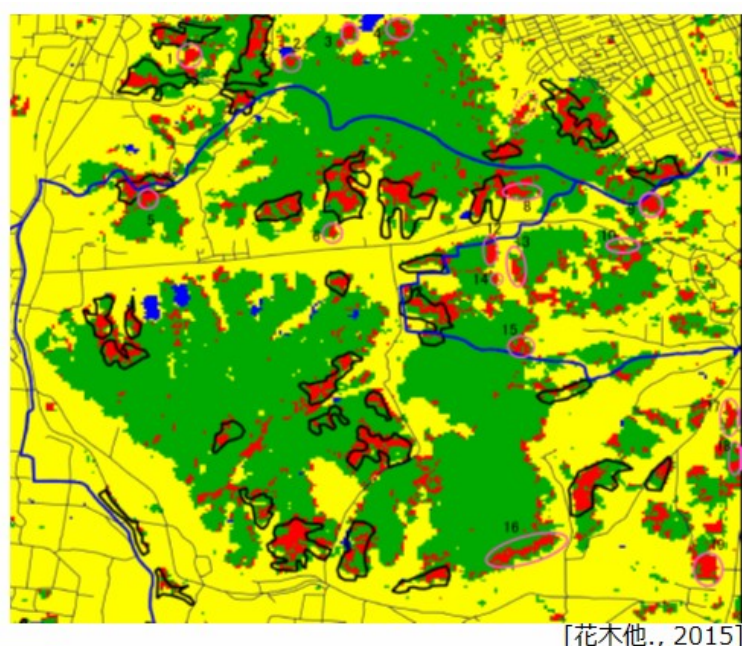


Fig. 2 Bamboo distribution from satellite image and it's comparison with vegetation survey.

To understand vegetation's abilities of environmental mitigation and land cover changes, we use satellite image data. We have been developed algorithm for estimating global terrestrial gross primary production using satellite image with high frequency observation, and mapped the spread of dead Japanese oak trees by disease-causing germs and bamboo using high spatial resolution satellite image. We also Fomeasure photosynthesis and spectral reflectance, and survey land cover for getting high quality analysis results.

Keywords : remote sensing, gross primary production, net primary production, land cover mapping