

## Challenge of Environmental Remote Sensing in the 21st Century

# Akihiko Kondoh[1]

[1] CEReS, Chiba Univ.

<http://dbx.cr.chiba-u.jp/>

After LANDSAT-1 in 1972, humankind acquires the bird's eye placed in space. Satellite remote sensing now become an important tools to study environment. At present, we have vast amount of satellite data, which should be used to understand and solve global environmental problems.

Global warming may be the most serious problem to be solved immediately. Research and settlement, however, are rather different, because the problem appears at a region as a compound of many factors which include both natural and human factors. We should consider how satellite remote sensing serve to resolution of the problems.

A system to extract knowledge form archives of satellite data over 30 years is made experimentally. Inspection of satellite images by persons from many fields or different sectors enables the creation of new recognition or new knowledge.

At first, browse system by using NASA Geocover TM Mosaic data is developed on WWW. This system enables the comparison of circa. 1990 and circa. 2000 images. For details, refer to <http://dbx.cr.chiba-u.jp/GDES/>.

Many phenomenon can be found on the system, such as coastal erosion, shift of river course, cutting of tropical and boreal forests, urbanization, desertification, and so on. If persons with different sectors inspect the same image at the same time, new findings or new recognitions for understanding and solution to the problems are possible.

Currently, the browse system of LANDSAT TM/ETM+ received in Japan are under development by the support of JAXA(Japan Aerospace Exploration Agency). System itself is still imperfect, however, the goal is the creation of new knowledge by collaboration of different sectors. Environmental remote sensing should be used to manage problems in the regions at many places on the globe.