ABSTRACT

Oral Presentation

THE GLOBAL HUMAN SETTLEMENT LAYER – GHSL

Ms Matina Halkia,
Joint Research Centre, European Commission

Keywords: automatic information extraction, remote sensing, GHSL

This talk is grouped under emerging practices and its objective is to familiarize geostasticians with a new tool in the disaggregation of population data.

We will present the GHSL global concept with slides from Nairobi, comparing GHSL to other layers like MODIS and Landscan.

Then we will present the advances in satellite technology in the last 40 years.

We will then introduce the technological challenges we have to address.

One slide will be dedicated to the DG REGIO project objectives and framework of GHSL application.

Then we will present the European satellite image coverage and the challenges related to image acquisition (clouds, lack of scenes etc)

Then the main part of the presentation (which will present the use of the technology for teh disaggregation of population data in a step-by-step way) will unfold in this sequence:

1. GHSL built-up output (for example in Athens)
2. GHSL aggregation at 100m (same scene)
3. Population grid at 1km (same scene)
4. Downscaling of population grid at 100m by the GHSL output (same scene)
5. Segmentation and settlement classes (with crest lines) (same scene)
6. Overlay of the LAU2 polygons (same scene)

Finally a couple of slides will be dedicated to Pan European coverage of the GHSL settlement model (for example the dominant class output in surface area and population)