CITIZENS AS SENSORS AND THE POTENTIAL TO GATHER VAST AMOUNTS OF DATA: EXAMPLES FROM THE GEO-WIKI PROJECT

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Technological advances as well as web 2.0 has led to the emergence of volunteered geographic information, which breaks away from traditional map making by professional cartographers and mapping agencies and places this capability in the hands of individuals who want to share geographical information online. Moreover, mobile phone technology enables every individual to act as a sensor and to collect so called in-situ information on the ground. There are many-fold applications of volunteered geographic information also termed as crowdsourcing.

The presentation uses the example of crowd-sourcing in the field of land-cover data collection. Global land cover is one of the essential terrestrial baseline datasets available for ecosystem modeling, however uncertainty remains an issue. Tools such as Google Earth, Bing maps and orthophotos offer enormous potential for land cover validation and to collect vast amount of land cover data. Example on how the data can be used are given. In particular it is demonstrated how the data can be assimilated to derive an improved global land cover and cropland map. A future outlook on the use of mobile phone technology, gaming and data mining of crowd-sourced geo-referenced pictures is given.