INTERNATIONAL WORKSHOP ON HIGHER RESOLUTION LAND COVER MAPPING FOR THE AFRICAN CONTINENT

Organizers: RCMRD, UNEP, Tsinghua University, and U.S. Department of the Interior

Dates: June 25th – 27th, 2013
Location: UNEP Nairobi, Kenya

Introduction:

Land use and land cover (LULC) are critical components for analysing the complex interactions between human activities and environmental issues. Patterns, characteristics and changes of LULC are increasingly useful indicators of economic health, ecological health, and sustainability that may be exacerbated by climate change. Therefore the latest data are needed inputs for government policies, environmental monitoring reports, and science studies. Producing accurate LULC maps, and studying rates, magnitude, duration, causes and consequences of LULC change at the national and global scale are identified as a high priority by the science community. Such studies require integration of multiple disciplines and scientists from leading fields of different nations.

The continent of Africa is among the most complicated areas in the world in diversity and patterns of land cover and presents various challenges for land cover mapping. Particularly, conducting accuracy assessment of available global LULC map products is an urgent need, along with development of collaborative plans for producing more accurate high resolution land cover maps for the African continent. Scientists, land managers, and other users of the map products in Africa will be better served by having access to validated LULC maps, understanding the methods and challenges of producing such maps, and developing ideas for applications of the map products.

Workshop Objectives:

1. Discuss, demonstrate and review the methods, qualities, innovations and technical issues involved in the new global LULC mapping products – the 30 m satellite derived global land cover map completed through international collaboration between China and the USA with particular reference to Africa.
2. Discuss and develop a plan for validating and improving the 30 m land cover map product over the African continent.
3. Define regional training needs for building capacity to improve the national and regional land cover datasets for Africa
4. Discuss data sharing and applications for the high resolution global land cover map for carbon cycling, biodiversity monitoring (particularly Aichi Targets) greenhouse gas monitoring, and other environmental issues. This may include a demonstration of carbon accounting applications.

Workshop Outline:

1. Progress review and status of various high resolution global land cover datasets.
2. Progress review and status of regional land cover mapping and land cover change monitoring by African, European, and academic institutions.
3. Land Cover Change presentations by invited guests
4. Discussions about international cooperation on land cover mapping in Africa and capacity building needs for African institutions

Expected Outcome:

1) International collaboration among global land cover mapping programs and products in the world.
2) Increasing participation of the African remote sensing community in production, validation, and improvement of the Global Land Cover dataset for Africa
3) Consolidating a working group under an international framework to work on the various collaborative ideas.

Major Workshop Topics:

- LULC classification systems for contemporary applications
- Satellite image data: acquisition and processing issues in Africa
- Methods and algorithms for land cover mapping, and monitoring LULC change in Africa
- Validation and uncertainty analysis
- Continental scale studies of LULC change, their causes, rates, and consequences
- Large-scale applications of LULC maps, change data, and study results
- Discussion of lessons learned and future issues related to LULC mapping, change detection, and applications using land cover data
- Required reporting for climate monitoring, including maturity of input data for greenhouse gas inventory reports

Workshop Co-Chairs:

Hussein Farah, Regional Centre for Mapping of Resources for Development
Peng Gong, University of California Berkeley
Ashibindu Singh, United Nations Environment Programme
Zhiliang Zhu, United States Geological Survey
Jean Parcher, U.S. Department of the Interior

Venue: UNEP HQ Gigiri