MAP-MAKING FOR TAITA HILLS

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CONTENT

NEEDS FOR MAPS
TYPES OF MAPS
BASE DATA
FIELDWORK
NEEDS FOR MAPS

• The making of a map starts with the need of a representation of a geographic area

• Map reading assists in understanding the qualities of the represented area

• Maps of Taita Hills are used by
  - researchers to find their way around
  - tourists to traverse without harming delicate natural areas
  - school classes familiarizing themselves with nature

• Future digital map GNSS navigation
  - Wildlife sighting recording
  - Tourist navigation
TYPES OF MAPS

- Maps conforming to International Standards
- Maps for specific purpose -> cartography accordingly
- Uniform representation throughout map
- Thematic / topographic
NGANGAO ORIENTEERING MAP

- Topographic
- Elevation & vegetation
- Track & road network

- Drawn according to the International Standard of Orienteering Maps (ISOM) in 2010

- Base material: Orto-rectified airborne digital camera image mosaic 2004 (Pellikka & Lanne)

- Fieldwork using real-time tablet-GPS mapping
Classification based on the United Nations Food and Agricultural Organization Land Cover Classification System
A2

Forest structure
Topographic
Author; 7.10.2015
TAITA HILLS & LUMO WILDLIFE SANCTUARIES

Taita Taveta, Kenya

Legend
- Contour 20m
- Road
- Gate
- Building
- Bridge
- Rock
- Fence
- Water
- Wastewater
- Main river
- Stream
- Minor watercourse
- Wetland
- Lane

Cartographer: Märten Boström
Copyright: Taita Research Station, Wamanyi
http://blogs.helsinki.fi/taita-research-station
Data sources: LIDAR & Aerial photographs by University of Helsinki 2014, NASA Landsat, Bing Aerial, Taita DEM by University of Helsinki, Topographic map - Maktau 189-3,
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Coordinate Reference System:
WGS84/UTM37S
(World Geodetic System 1984 / Universal Transverse Mercator zone 37 South)
A3

Navigation (roads & signpost)
Topographic
Vegetation

Author; 7.10.2015
BASE DATA

- Acquired through remote sensing, from aircraft & satellite
  - Laser (LiDAR) data & aerial & satellite imagery

- Collects large amounts of data in short time

- Raw data require calculation & interpretation

- Reduces tedious fieldwork
CANOPY HEIGHT MODEL (CHM), VURIA
DIGITAL TERRAIN MODEL (DTM), VURIA
AERIAL IMAGE, NGANGAO (2004)
**FIELDWORK**

- Panasonic Toughpad tablet
- OCAD 10 software / Quantum GIS 2.6.0
- GNS2000 GNSS receiver (Bluetooth)
- Botanist, Park ranger & village elders for local knowledge
NO MAP IS PERFECT
ALL MAPS REQUIRE INTERPRETATION

THANK YOU!

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