Teaching Remote Sensing for lectors at University level. A project at the University of Kisangani in Congo

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Micro-project

- Sponsor: VLIR – Flemish Interuniversity Council

- Maximum amount is 100000 Euro

- Duration: 2 years

- Aim: establishing relations between Flemish and Congolese Universities.

Topic: Installing a Remote Sensing Lab at the University of Kisangani and forming lectors in the field of Remote Sensing. Also on the longer term the project aims the start of a small Remote Sensing and cartographic laboratory at the university of Kisangani.
Projet VLIR-UOS
UNIKIS (F.S.A.)-UGENT (Dpt. of Geography)
"FORMATION DES FORMATEURS EN TÉLEDÉTECTION ET SIG"
DU 25/01 au 06/02/2009
Faculté des Sciences Agronomiques
FACULTE DES SCIENCES AGRONOMIQUES

FORMATION DES FORMATEURS EN TELEDÉTECTION ET SIG
DU 25/01 AU 05/02/2009
Donated materials

• 4 PC
• Fast internet connection
• Generator
• Stabilisator
• beamer
• Airconditioning
• Printer
• Camera
• 4 hand GPS
• Building materials for the renovation of the building
Software

• ILWIS – ITC, The Netherlands
• Free-ware

Imagery

• Low cost imagery: Landsat and Aster
• From the surroundings of Kisangani

• But also MODIS, NOAA-AVHRR, SPOT-Veg.
Lecturing Time

• 2 lecturing times:
  – January 2009 (2 weeks)
  – September 2009 (2 weeks)
“The Students”

• 12 young assistants were selected from the faculty of Agriculture and from the Yangambi Agricultural Research Station.

• In addition 12 other young assistants could participate coming from other faculties and administrations.

• The lectures were given in French: English is a problem, especially scientific literature, but also text books.
Projet VLIR-UOS UNIKIS (F.S.A.)-UGENT (Dpt. de Géographie) "FORMATION DES FORMATEURS EN TÉLEDÉTECTION DU 25/07 AU 06/09/2010 Faculté des Sciences de l'Homme et de l'Environnement"
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DU 25/01 AU 06/02/2009
Faculté des Sciences naturelles
Content

• Basics of Remote Sensing
• Sensors: Landsat, Aster, Spot, Ikonos, QB, NOAA, MODIS, Spot-Veg., Seawifs
• Image processing: RCC, FCC, NDVI, image classification, georeferencing, PCA, filtering.
• Radar: ERS and SRTM
• Field excursion: to collect data for the image classification and to collect GCP by GPS.
• Overview of the websites where satellite images can be downloaded
Exercises

• All the exercises were done on images of the surroundings of Kisangani and Yangambi

• Topics:
  – Land Cover mapping
  – Mapping of agricultural areas (plantations)
  – Deforestation of the Tropical forest.
Lecturing time in September

• Topics:
  – Elementary photogrammetry
  – Integration of the obtained cartographic output (e.g. Image classification products)
  – Elementary GIS
  – Relation with remote sensing products and SRTM-DEM
The excursion

• Field sampling
• Measuring GCP’s
Conclusions & Perspectives

• Training local staff in lecturing remote sensing
• To enable the local staff to start their own mapping unit
• To enable the local staff to perform independently remote sensing studies.
• To enable the University of Kisangani to act as an advisor for local environmental authorities.
Thank you for your attention....
Questions?