



Geo-enabling Teaching & Research

Students in University of Kabianga in Kenya are now gaining deeper research insight using the power of interactive visualization and geospatial analysis. The students in the School of Natural Resource and Environmental Management can now understand the concepts and practices of resource management better and readily conceptualize workable solutions to the many environmental problems affecting communities around them.

The Challenge

University of Kabianga, with an enrollment of over 6,000 students, is a public university located in Kericho County, Kenya. The location is agriculturally rich with extensive tea plantations. The university offers undergraduate, graduate and doctoral programs in Science, Information Technology, Education, Business, Arts and Social Sciences, Agriculture and Biotechnology, and Natural Resource and Environmental Management.

With geospatial technologies being vital in managing natural resources, land use and environmental systems the School Natural Resource and Environmental Management signed up for the Hexagon Geospatial Campus-Wide Grant for ERDAS Imagine and Geomedia.

Prior to the sign up the teaching and learning of spatial concepts as applied in natural resource and environmental management was limited to only the theoretical concepts. Challenges that the School faced were:

- Making the graduates of the School competitive in the job market since employers value candidates with practical mapping, spatial analysis and remote sensing skills.
- Helping the students conducting research using primary and secondary geographic data and implementing solutions to research problems.
- Bringing spatial thinking into the lecture room and helping the student to understand key concepts especially those on Remote Sensing and Spatial Analysis.

Success Story

Organization

University of Kabianga

Location

Kericho County, Kenya

Industry

Education

“Providing students with Remote Sensing and GIS competencies is very vital in helping them access and analyze spatial data and generate new data and information to find solutions for managing and conserving our delicate natural resources.”

Lecturer, School of Natural Resource & Environmental

What They Did

After signing up for the Hexagon Geospatial Campus-Wide Grant for ERDAS Imagine and Geomedia, the School undertook initiatives to popularize use of the now readily available GIS and Remote Sensing software resources.

The School together with Oakar Services Ltd., the regional Hexagon Geospatial distributor, organized several hands on trainings on fundamentals of ERDAS Imagine and Geomedia attracting excellent participation from students and faculty. They installed ERDAS Imagine and Geomedia software in the main teaching computer lab as well as on faculty and students' laptops allowing them access to the software all the time.

"The Educational Outreach Program from Oakar Services Limited and the grant from Hexagon Geospatial has given us adequate hands-on training and vital GIS and Remote Sensing software resources. Our students are now poised to conduct research and provide real solutions to the myriad natural resource management and conservation challenges around them.", says Sheila Wachiye, a lecturer in the School's Department of Environmental Management.

Why You Need This Too

Hexagon Geospatial software offers support and tools for academic research projects and teaching, including rich documentation and deep insights so students understand how to apply these technologies into key industry sectors. Hexagon Geospatial offers universities an educational campus-wide grant of GeoMedia Essentials and IMAGINE Essentials. As part of this package, students benefit from a yearlong offering of GIS and Remote Sensing software on their personal laptops, along with online tutorials.

Student research projects. Students of the School are now able to practically and comfortably undertake research projects on suitability analysis e.g. of the tea plantations, crop yield predictions and estimations, forest inventory and analysis, and resource mapping on their own.

Spatial thinking. Using GIS and Remote Sensing resources now available, students of the School can now comprehend and understanding the location, scale, patterns and trends of geographic and temporal relationships among data, phenomena and issues. This makes them excellent solvers of the many natural resource and environmental challenges facing communities within and without the university.

Career-Ready graduates. Graduates of the School are now more confident of the skills and competencies they have because they are not only equipped with the right GIS and Remote Sensing skills but can as well demonstrate them practically. They are now ready for innovative and problem-solving careers in agroforestry, forestry, environmental and integrated natural resource management.

Teaching. Spatial concepts, in the School's resource and environmental management curriculum, that were previously difficult to teach because much was left to the student's mental imagination are now easier to teach and for student to comprehend because the software renders visualization of geographic data, models and imagery possible.

