

TARGET GROUP

Bachelor of Environmental Science students from sub-Saharan Africa

HABITAT BIODIVERSITY : Vertical Heterogeneity

THE PROBLEM

Biodiversity is important for healthy ecosystems. Biodiversity loss across vertical gradients, related to human population growth, affects ecosystem functionality, reducing ecosystem services.

LEARNING OUTCOMES

- Measuring
 - Analyzing
 - Creating and
 - Presenting
- biodiversity data using in-situ techniques and geospatial technology

SUBJECT MATTERS

- Biodiversity field monitoring and analysis techniques
- Application of geospatial technologies in biodiversity management

WHY IS THIS COURSE IMPORTANT?

(Educational concern)

The course is aimed at filling the technical ability gap of Environmental Science students, to practically apply monitoring methods required for biodiversity conservation research in sub-Saharan Africa.

LEARNING ENVIRONMENT

1. Educational background: The summer school will provide technical training for field technique methods and analysis in biodiversity, conservation, environmental and resource management.

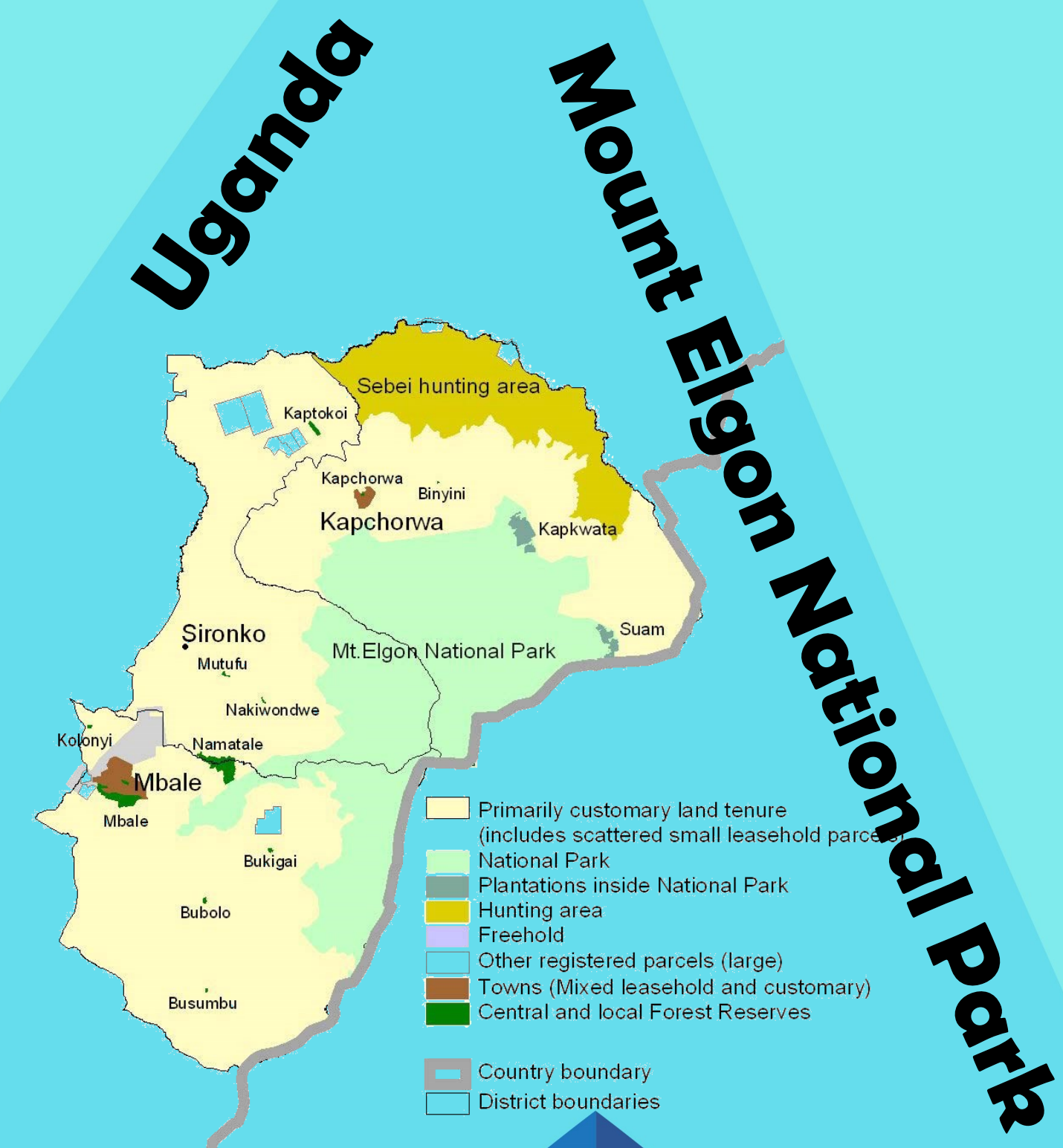
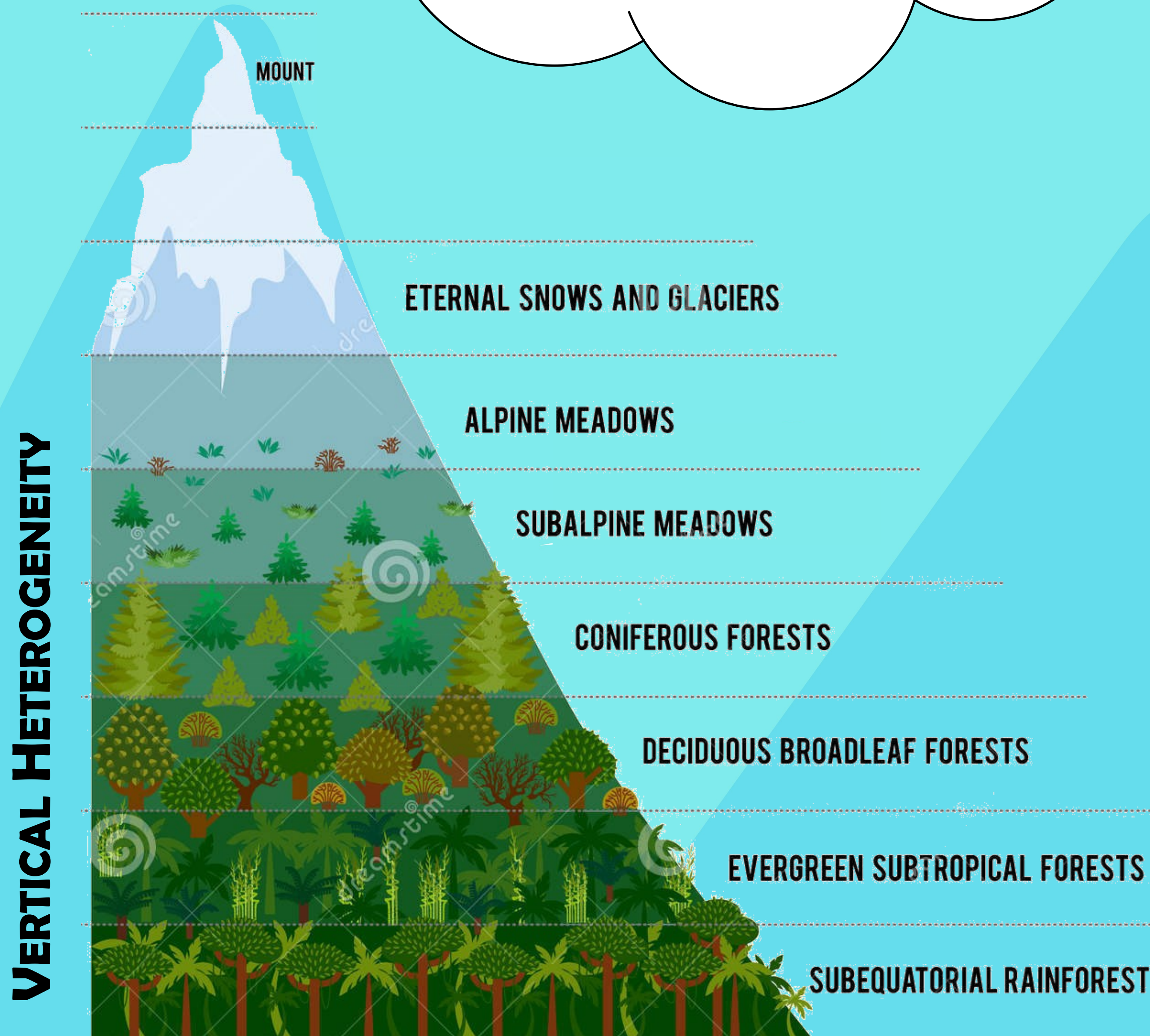
2. Forms of teaching:

- Combination of didactical approaches - cognitivism, constructivism and PBL (Problem Based Learning)
- Presentations
- Exploratory learning - worksheets and assignments
- Project work - research problem and field work PBL- through project work

3. Materials used: GPS, textbooks, measuring tape, eBee drone, 2m poles, Sherman traps and bait, data sheets

4. Media used: Excel, PowerPoint, Story map, poster, QGIS, Pix4D mapper, laptops, summer school website

5. Time Frame: 5 days (Monday - Friday)



References

Hooper, D. U., Chapin, F. S., Ewel, J. J., Hector, A., Inchausti, P., Lavorel, S., ... & Schmid, B. (2005). Effects of biodiversity on ecosystem functioning: a consensus of current knowledge. *Ecological monographs*, 75(1), 3-35.

Mugagga, F., Kakembo, V., & Buyinza, M. (2012). Land use changes on the slopes of Mount Elgon and the implications for the occurrence of landslides. *Catena*, 90, 39-46.

Edwards, D. P., Tobias, J. A., Sheil, D., Meijaard, E., & Laurance, W. F. (2014). Maintaining ecosystem function and services in logged tropical forests. *Trends in ecology & evolution*, 29(9), 511-520.

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