GEOG 27500 Geography of Sub-Saharan Africa Name-----Spring 2024 Dr. Mohamed Babiker Ibrahim

Question (1) Mid term exam

Write an essay in which you explain the mismanagement and overexploitation of the natural resources by the African people may affect their physical environment and their livelihood? <u>Give at least 4 examples from peer reviewed articles</u>.

- People affect the environment and make it less productive.
- This takes place when people <u>mismanage</u> their resources or <u>overexploit</u> them.
- Commercialization and use of technology increase farm size which results in clearing large areas from trees, a process that called <u>over-cultivation</u>.
- Concentration of a large number of animals around water points resulted in consumption and removal of vegetation cover; a process that called <u>over-grazing</u>.
- Cutting of trees for different purposes such as cooking and building huts will result in deforestation.
- Therefore, over-cultivation, over-grazing and deforestation will result in **desertification**.
- <u>Desertification</u> means <u>desert-like</u> condition, where productive land turned **into bare land** and does not allow growth of crops.
- Bare land reduces humidity and evapotranspiration on the atmosphere which hinders cloud formation and ultimately rainfall.
- **Desertification** also means the removal of the vegetation cover such as grasses, shrubs and trees.
- Therefore, the top soil which contains **nutrients** (plant food) will be drifted away by wind..
- As a result, horizon "B" will be exposed to wind and becomes the top soil which <u>does not</u> <u>support plant growth.</u>
- This is because horizon "B" is a zone of poor soil (does not contain nutrients).
- This process is called <u>soil erosion</u>.
- Another form of <u>environmental degradation</u> is through the use of chemicals to increase crop production.
- These include chemical fertilizers, herbicides and pesticides which are used in large-scale irrigated farming.
- Large-scale irrigated farming where large dams are built to provide water for agriculture.
- Dams cause environmental problems such as <u>water-related diseases</u>, increase of water tables and <u>water pollution</u>.
- These chemical will be carried by water down stream and causes the pollution of the fresh water in water sources such as rivers, streams and lakes.
- As a result, people will get sick.

Suggested references

Dodd, J. 1994. Desertification and Degradation in Sub-Saharan Africa. BioScience 44 (1):28-34.

- Stringer, L., Dyer, J., Reed, M. S., Dougill, A. J., Twyman, C., & Mkwambisi, D. 2009. Adaptations to climate change, drought and desertification: insights to enhance policy in southern Africa. *Environmental Science and Policy* 12(7):748-765.
- Warren, A., Batterbury, S., Osbahr, H., 2001. Soil erosion in the West African Sahel: a review and an application of local political ecology approach in South West Niger. *Global Environmental Change*11(1):79-95.
- Snow, R. W. and Marsh, K. 2010. Malaria in Africa: progress and prospects in the decade since the Abuja Declaration. *Lancet* 376: 137–39.
- Yabe, J., Ishizuka, M. and Umemura, T. 2010. Current levels of heavy metal pollution in Africa. Journal of Veterinary Medical Science 72:1257-1263.
- Musingafi, M. C. C. and Tom, T. 2014. Fresh Water Sources Pollution: A Human Related Threat To Fresh Water Security in South Africa. *Journal of Public policy and Governance* 1 (2):72-81.