

Syllabus Sustainability of land resources

Course title	Sustainability of land resources
Credits number	26
Year	2022/ 2023
Instructor	Amira HADDARAH

Brief description

This course is basically about Land-use planning and land resource planning that are tools for achieving the sustainable and efficient use of land, biodiversity, climate change, taking into account biophysical and socioeconomic dimensions. Since the increasing and convergent challenges of population growth, demands on limited resources by diverse actors (land degradation, biodiversity loss and climate change) require the rational use of such resources to sustain and enhance productivity and maintain resilient ecosystems.

Sessions

Session 1. Land functions: Productive, Biotic environmental, Climate regulation Hydrologic Storage, Waste and pollution control Living space and others.

Session 2. Land degradation, and the size of the issue: symptoms of the problem of pressure on land resources.

Session 3. From land management to sustainable land management: concepts and definitions.

Session 4. Environmental issues in land use: Global warming, Water air and land pollution, ozone depletion, reduction of biodiversity and other issues.

Session 5. The different types of land degradation: deforestation, desertification and soil erosion, and others.

Session 6. Impacts of land use: degradation of natural land watersheds and water quality, degradation of air and atmosphere and global warming.

Session 7. Effects of impervious cover on waterway health and its relation to surface runoff.

Session 8. The effects of soils use toward hydrological cycle and impacts on stream and function.

Session 9. Land degradation: contamination from waste, impacts of mining on air quality, wildlife, soil quality and environmental risks related to the management of local public services.

Session 10. Governments' responses to the environmental issues related to land use. International conventions, legislation and regulations, economic tools and incentives, policies and programs.

Session 11. Planning and zoning, use of spatial technologies GIS and remote sensing.

Session 12. Auditing land use/land management issue(s).

Session 13. Case studies in sustainability practices of some sectors.

References

Bojo, J. (1996). The Costs of Land Degradation in Sub-Saharan Africa. *Ecological Economics* 16: 161–73.

Enemark, S. (2007). *Integrated Land-Use Management for Sustainable Development*.

FAO (1993b). FESLM: an international framework for evaluating sustainable land management, Smyth, A.J., & J. Dumanski, J. (eds.) (year). *World Soil Resources Report 73*, FAO, Rome. 74 p.

Gisladottir, G. & M. Stocking (2005). Land Degradation Control and Its Global Environmental Benefits. *Land Degradation and Development* 16: 99–112.

UNEP/WGEA (2010). *Auditing the implementation of MEAs, the Primer for Auditor*, pp 25-34.

UN (2001). Commission on Sustainable Development (acting as the preparatory committee for the World Summit on Sustainable Development). *Agriculture, land and desertification*.

UN (2005). *Management of land based resources for sustainable development*.

Van Meijl H., van Rheenen T., Tabeau A., Eickhout B. (2006). The Impact of Different Policy Environments on Agricultural Land Use In Europe. *Agriculture, Ecosystems and Environment*, vol. 114, n. 1, p. 21-38.

Wu, J. & S.H. Cho (2007). The effect of local land use regulations on urban development in the western United States. *Regional Science and Urban Economics*, vol. 37, n. 1, p. 69-86.