

ENVR 353 - Cultural Landscapes in Greece: Appreciation and Evaluation Spring 2024

Course Instructor(s):

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Class Times (days, hours): Tuesday – Thursday: 17:15-18:45

(Office) Hours Available: On appointment

Course Description

Landscape studies bring together nature and culture; a holistic interpretation of local natural history.

This course presents the landscape approach to the environment through interdisciplinary research and field work. The course provides an introduction to landscape-based study and its applications; a main goal is building an appreciation for landscape literacy.

The course objectives are: a) the understanding and use of basic notions and terms of landscape and the values of their use; b) Familiarizing with the basic methods of landscape analysis, assessment and evaluation techniques; c) Getting to know the cultural landscapes of Greece with special emphasis on the history of their development; and d) having students develop a landscape analysis application during their research in Greece. Over 50% of the course is based on field trips in the region of Attica.

Field excursions within and around the unique Mediterranean city of Athens and its surroundings provide students with practical skills in evaluating and describing landscapes and identifying human impacts, in “interpreting” ecological patterns to “read” landscapes and become aware of the conservation challenges created by the often conflicting needs of humans and nature.

Learning Objectives

By the end of the course students will be able to

- Assessing and evaluating landscapes through desk study and field work
- Use landscape assessment protocols
- Familiarize with the Greek and Mediterranean landscapes and ecosystems
- Familiarize with the basic methods of landscape analysis, assessment and evaluation techniques
- Gain knowledge of assessing landscapes with different methods
- Organize a standard approach of landscape assessment which guides evaluators such as students, public bodies and scientists.
- Get people appreciating landscapes and nature conservation at the landscape scale
- Appreciate natural history and cultural evolution: “Cultural landscape” approach
- Preserve and plan in landscapes
- Communicate the landscape values
- Appreciate the geological history, physical geography and climatic features of Greece and Mediterranean and understand their relation to ecosystems
- Explore aspects of humankind’s long-term effects, pressures and impact on landscapes and ecosystems in general

Course Requirements

Class participation:

Students are expected to attend **all** classes and field excursions and to complete readings and assignments **before** the relevant class session. An important component of the final grade is the extent and quality of participation in course discussions.

Field participation:

A substantial part of the course is taught outdoors: The field excursions are scheduled during class hours, while students will be also be asked to integrate landscape considerations during CYA field trips. Field excursions function A few of the field excursions may need to go slightly beyond class time period. Students will be advised and must pay close attention to necessary safety measures and other precautions concerning risks related to outdoor activities.

Assignments:

Short written assignments: Students will be asked to complete three short written assignments (e.g. short answer on readings, short essay on a course discussion topic, reflection on CYA field trip or else) during the semester. To receive credit for an assignment, students must turn it in at the beginning of class on the due date. No late assignments will be accepted.

Final exam: The final exam is cumulative.

Evaluation and Grading

Grades for this course will be based on the following distribution:

- Class participation 20%
- Short written assignments 20%
- Field Participation 30%
- Final exam: 30%

CYA Regulations and Accommodations

Attendance Policy: CYA regards attendance in class and on-site (in Athens or during field study trips) as essential. Absences are recorded and have consequences.

Illness or other such compelling reasons which result in absences should be reported immediately to the Student Affairs Office.

Accommodations for Students with Disabilities: If you are a registered (with your home institution) student with a disability and you are entitled to learning accommodation, please inform the Director of Academic Affairs and make sure that your school forwards the necessary documentation.

Policy on Original Work: Unless otherwise specified, all submitted work must be your own original work. Any ideas taken from the work of others must be clearly identified as quotations, paraphrases, summaries, figures etc., and accurate internal citations and/or captions (for visuals) as well as an accompanying bibliography must be provided (Check the Student Handbook).

Use of Laptops: In-class or onsite use of laptops and other devices is permitted if this facilitates course-related activities such as note-taking, looking up references, etc. Laptop or other device privileges will be suspended if devices are not used for class-related work.

Materials: No specific or specialized equipment or other material is required. Yet, students are expected to be able to carry and fill many field protocols, so they are expected to be able to carry many A4 sheets and have a hard table to clip them on. They will also need to keep notes and make many field sketches, so a field notebook is useful. A "moleskin type" notebook, size A5 with white pages is ideal. Pencils for sketching needed. Photographs need to be taken. Many photographs will need to be taken – cell phone cameras sufficient. Binoculars are useful.

Course Bibliography

Readings are or will be available via Moodle. Students are asked to visit and check material uploaded in Moodle often during the semester.

Class Schedule

Class Day	Day/Date	Topic / Readings
1	Tuesday 30 Jan.	<p>Course introduction. Field Trip to Ymmitos (1) <i>Meeting and introducing in the field.</i> Purpose of the course. Basics of landscape concept and reading landscapes. First attempt to describe what we see.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Howard, P.J. (2011): An Introduction to Landscape. Ashgate, Farnham. - Catsadorakis, G., 2007. The conservation of natural and cultural heritage in Europe and the Mediterranean: a Gordian knot?. <i>International Journal of Heritage Studies</i>, 13(4-5), pp.308-320.
2	Thursday 1 Feb.	<p>Landscape: its meaning and history. Identifying natural and cultural elements: Landscape types, different landscapes. Cultural landscapes and ecosystem services.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Howard, P.J. (2011): An Introduction to Landscape. Ashgate, Farnham. - Catsadorakis, G., 2007. The conservation of natural and cultural heritage in Europe and the Mediterranean: a Gordian knot?. <i>International Journal of Heritage Studies</i>, 13(4-5), pp.308-320. - Kizos, T., P. H. Verburg, M. Bürgi, D. Gounaridis, T. Plieninger, C. Bieling, and T. Balatsos. 2018. From concepts to practice: combining different approaches to understand drivers of landscape change. <i>Ecology and Society</i> 23(1):25. - Rackham, O. and Moody, J., 1996. <i>The making of the Cretan landscape</i>. Manchester University Press. - Terkenli, T.S., 2001. Towards a theory of the landscape: the Aegean landscape as a cultural image. <i>Landscape and urban planning</i>, 57(3-4), 197-208.
3	Tuesday 6 Feb.	<p>Paleogeography and Geological History of Greece An overview of geological history. The Holocene in Greece – the importance of the last 10,000 yrs. The formation of present ecosystems in Greece. Geomythology: Greek mythology as a result of dramatic geological events</p> <p>Readings:</p> <ul style="list-style-type: none"> - Blondel, J., Aronson J., Bodiou J.-Y. and Boeuf G. (2010). <i>The Mediterranean Region; Biological Diversity in Space and Time</i> (2nded). Oxford: Oxford University Press. pp. 1-22, <u>Setting the Scene</u>. - Catsadorakis, G. (2003). <i>Greece's Heritage from Nature</i>. Athens: WWF Greece. Available from the CYA library. pp 21 – 51 (Climate, Geology).
4	Thursday 8 Feb.	<p>Terrestrial ecosystems, fauna and flora (P) An introduction to Greece's "natural" ecosystems and their dominant vegetation. Basic terms to establish a common vocabulary (native, endemic, introduced, alien, invasive etc.). Origins and evolution of the Greek biodiversity. Hotspots of biodiversity and endemism and their relationships with geological history, climate, biogeography. Introductions and alien species.</p> <p>Ecosystems and landscapes, from phrygana (low thorny vegetation) to forest and from coasts islands to montane regions.</p> <p>Terrestrial wildlife: mammals, reptiles, amphibians, invertebrates, birds; their origins and occurrence. The phenomenon of bird migration and its role in Mediterranean nature and culture. Common and widespread species. Endemism and rarity Basic conservation problems facing wildlife.</p>

		<p>Wetland habitats: Defining and classifying running and standing waters. Principles and challenges of the EU Water Framework Directive.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Phitos, D., 1995. <i>The flora and vegetation of Greece: a brief overview. In: The Red Data Book of Rare and Threatened Plants of Greece pp. xxiii-xxxviii.</i> - Blondel, J., Aronson J., Bodiou J.-Y. and Boeuf G. (2010). <i>The Mediterranean Region; Biological Diversity in Space and Time</i> (2nded). Oxford: Oxford University Press. <i>5.1.A succession of life zones, pp. 99-103; 6. A patchwork of habitats, pp. 118-133. Life on islands, pp. 140-146.</i> - Catsadorakis, G. (2003). <i>Greece's Heritage from Nature</i>. Athens: WWF Greece. Available from the CYA library. <i>Terrestrial Ecosystems, pp. 77-109 (right-hand pages plus 82, 90-92); Wetlands, pp.58-71; Wetlands, 135-143. Amphibians and Reptiles pp. 145-149; Birds, pp. 149-155; Mammals/Other Animals, pp. 157-165; 176 and 180</i>
5	Tuesday 20 Feb.	<p>Basic Flora: National Gardens!</p> <p><i>Fieldwork</i></p> <p>Trip to national Gardens for introduction to the main tree and bush species</p>
6	Thursday 22 Feb.	<p>Landscapes and protected areas: EU Landscape Policies and national legislation. (V)</p> <p>Legislative background: Council of Europe, landscape convention. Main national legislation referring to landscape protection. Agri – environment schemes as tools for biodiversity conservation.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Council Of Europe (2000): 'European Landscape Convention, Florence, 20.X.2000', ETS 176, Council of Europe, Strasbourg [online]. URL http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm.
7	Tuesday 27 Feb	<p>Mediterranean: Human history and the Environment (P)</p> <p>Evolution of Mediterranean, the "Mediterranean climate", Defining Mediterranean, ecological adaptations to climate, human history of land use, current environmental problems. How Greece's landscapes have evolved.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Blondel, J., Aronson J., Bodiou J.-Y. and Boeuf G. (2010). <i>The Mediterranean Region; Biological Diversity in Space and Time</i> (2nded). Oxford: Oxford University Press. <i>pp. 202-234, Humans as sculptors of Mediterranean landscapes.</i>
8	Thursday 29 Feb.	<p>Agricultural and Agro-forestry Landscapes (P)</p> <p>Agricultural ecosystems. The basic farming, shepherding and other patterns of human use on the countryside as the key factors for shaping agricultural ecosystems. The structural elements of Agricultural ecosystems / habitats and wildlife. Species and habitat management challenges. Modern Crisis: impacts on land use.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Marshal, E.J.P. and A.C. Moonen (2002) Field margins in northern Europe: their functions and interactions with agriculture. <i>Agriculture, Ecosystems and Environment</i>, 89, 5-21. - Grove, A.T. and Oliver Rackham. 2003. <i>The Nature of Mediterranean Europe: An Ecological History</i>, New Haven, CT: Yale University Press. <i>Cultivation Terraces. pp.107-117.</i>
9	Tuesday 5 March	<p>Human activities and their impact on nature and landscapes (P)</p> <p>The session provides an overview of the state of nature in Greece, Mediterranean and the EU. Which are the threats to nature and what are the main drivers leading to biodiversity loss and landscape alteration? Is climate change a threat to ecosystems,</p>

		<p>species and habitats? What global policies are in place? What are recent and upcoming developments?</p> <p>Modern land use changes and their effects on ecosystems and landscapes. Nature conservation vs. sustainable development or economic growth. The "struggle for water".</p> <p>Readings:</p> <ul style="list-style-type: none"> - <i>IPBES. 2019. Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, pp. 2-3, 10-14, 22-39. (Note: pages refer to the document pagination, not the pdf)</i> https://ipbes.net/sites/default/files/inline/files/ipbes_global_assessment_report_summary_for_policymakers.pdf - <i>EEA. 2020. State of Nature in the EU. Report No 10/2020, pp. 5-8, 9-12, 14-21, 34-50, 71-87 (boxes included on these pages are additional reading) . (Note: pages refer to the document pagination, not the pdf)</i> https://www.eea.europa.eu/publications/state-of-nature-in-the-eu-2020 - <i>Chasek, P. S., et al. 2020. Global Environmental Politics (8thed). Boulder, CO: Westview Press, pp. TBA.</i> - <i>CBD. 2020. Global Biodiversity Outlook - Summary for Policymakers.</i> https://www.cbd.int/gbo/gbo5/publication/gbo-5-spm-en.pdf - <i>Salafsky N. et al. 2008.A Standard Lexicon for Biodiversity Conservation: Unified Classifications of Threats and Actions. Conservation Biology: 22: 897-911.</i> - <i>UNEP-WCMC, IUCN and NGS. 2018. Protected Planet Report, pp. v, 2, 5-12.</i> https://livereport.protectedplanet.net/pdf/Protected_Planet_Report_2018.pdf - <i>CBD. Updated zero draft: https://www.cbd.int/article/zero-draft-update-august-2020</i>
10	Thursday 7 March	<p>Landscape assessment tools: The LAP (Landscape Assessment Protocol) I. (V)</p> <p>A field survey method to assess the conservation condition of landscapes, using 15 criteria or metrics. Using a popular rapid assessment format, the assessment defines observable "stressed states" identified and evaluated to gauge landscape degradation. Working towards a Landscape Assessment Protocol in the context of evaluation and education.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Fry, G.; Tveit, M.S.; Ode, A.; Velarde, M.D. The ecology of visual landscapes: Exploring the conceptual common ground of visual and ecological landscape indicators. <i>Ecol. Indic.</i> 2009, 9, 933–947 - Vlami, V., Zogaris, S., Djuma, H., Kokkoris, I.P., Kehayias, G. and Dimopoulos, P., 2019. A field method for landscape conservation surveying: The landscape assessment protocol (LAP). <i>Sustainability</i>, 11(7), p.2019. - Vlami, V., Morera Beita, C. and Zogaris, S., 2022. Landscape Conservation Assessment in the Latin American Tropics: Application and Insights from Costa Rica. <i>Land</i>, 11(4), p.514.
11	Thursday 14 March	<p>Landscape assessment tools: The LAP (Landscape Assessment Protocol) II. Field Trip to Ardyttos. (V)</p> <p><i>Fieldwork</i></p> <p>The introduction to LAP is completed with a field trip to Ardyttos Hill (next to DIKEMES, over the stadium) for completing the first protocols</p>
12	Tuesday 19 March	<p>Field Trip Ymmitos (2)</p> <p><i>Fieldwork</i></p> <p>Assessing the landscape with the LAP on Mediterranean inland habitats and suburban areas. LAPs used at 2 different spots. Discussion on assessing different Landscape elements and human activities.</p>

<p>13</p>	<p>Thursday 21 March</p>	<p>Nature policies in Greece and EU (V & P) European Union policies and legislation for Nature and the Environment. EU Directives and the Natura 2000 network. European funds and the environment. The 2030 EU Biodiversity Strategy. The EU "Green deal". Biodiversity conservation in a world of instability and economic "chaos". Environment and nature protection policies and legislation in Greece. The implementation of Natura 2000 in Greece. The evolution of protected area concept in Greece and in EU. The role of protected areas; habitat management issues</p> <p>Readings on the EU:</p> <ul style="list-style-type: none"> - European Commission, 2020. The EU: What is it and what it does. pp. 7-11, 16-22, 57-62 (or 65): https://op.europa.eu/webpub/com/eu-what-it-is/en/ - European Commission, 2014. The Birds and Habitats Directives, pp. 5-25: http://ec.europa.eu/environment/nature/info/pubs/docs/brochures/nat2000/en.pdf - European Commission. 2019. A European Green Deal: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal_en - European Commission. 2020. The EU 2030 Biodiversity Strategy: https://ec.europa.eu/info/strategy/priorities-2019-2024/european-green-deal/actions-being-taken-eu/eu-biodiversity-strategy-2030_en <p>Readings on Greek N.p.:</p> <ul style="list-style-type: none"> - National Center for the Environment and Sustainable Development Center (2018). State of the Environment - Greece. Summary. Chapter 5 – Nature – Biodiversity. pp. 77-95 - European Commission. 2019. The Environmental Implementation Review - Greece. pp. 3, 10-14.
<p>14</p>	<p>Tuesday 26 March</p>	<p>(Methods) of reading the landscape: The transect method (V) The concept of transect method in landscape research is not a static or standardized method. Landscape transect methods differ according to the purpose of the research and their analytical applications. To define the application of the transect method, we need to define the specific context and objectives of the research. It is a rapid landscape assessment taking "samples" of landscapes to understand the special qualities and sensitivities of specific landscapes.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Diedrich, L., Lee, G. and Braae, E., 2014. The Transect as a Method for Mapping and Narrating Water Landscapes: Humboldt's Open Works and Transareal Travelling. NANO: New American Notes Online, (6). - Hemmersam, P. and Morrison, A., 2016. Place Mapping–transect walks in Arctic urban landscapes. <p>Further Landscape Assessment tools: LCA (Landscape Character Assessment) protocol (V) Landscape character assessment (LCA) is the process of identifying and describing variation in character of the landscape. LCA documents identify and explain the unique combination of elements and features that make landscapes distinctive by mapping and describing character types and areas. They also show how the landscape is perceived, experienced and valued by people. Capture the characteristics of the landscape includes topographic features, flora and fauna, land use, sights, sounds, touch and smells, cultural associations, history and memories. The completed LCA will be a document detailing the character of the landscape and an annotated map showing the character areas or types. You can also include photos, diagrams and survey results.</p> <p>Readings:</p>

		<ul style="list-style-type: none"> - Bartlett, D., Gomez-Martin, E., Milliken, S. and Parmer, D., 2017. Introducing landscape character assessment and the ecosystem service approach to India: A case study. <i>Landscape and Urban Planning</i>, 167, pp.257-266. - Farrell, H., Boyle, K. and Rybaczuk, K., 2006. Landscape character assessment in the Republic of Ireland. <i>LCN News, The Landscape Character Network Newsletter</i>, 21, pp.10-12. - Gkoltsiou, A. and Mougiakou, E., 2021. The use of Islandscape character assessment and participatory spatial SWOT analysis to the strategic planning and sustainable development of small islands. The case of Gavdos. <i>Land use policy</i>, 103, p.105277. - Griffiths, G., 2018. Transferring landscape character assessment from the UK to the Eastern Mediterranean: Challenges and perspectives. <i>Land</i>, 7(1), p.36.
15	Thursday 28 March	<p>The Urban Ecosystems (P) Natural habitats and wildlife in modern and old cities, villages and archeological sites. Conservation and management of urban wildlife, restoration of urban habitats. Urban Planning for Humans and Wildlife. The Landscape concept in urban planning.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Rose Buchanan in Landscapearchitects Network: 10 reasons why cities should daylight rivers: http://landarchs.com/10-reasons-why-cities-should-daylight-rivers/ - Elmqvist, T et al (2015). Benefits of restoring ecosystem services in urban area. Current opinions in Environmental Sustainability, 14: http://www.sciencedirect.com/science/article/pii/S1877343515000433 - American Society for Landscape Architects: Designing neighborhoods for people and wildlife: https://www.asla.org/sustainablelandscapes/Vid_Wildlife.html (summary)
16	Tuesday 9 Apr.	<p>Field Trip Filopappou (<i>on foot, from DIKEMES</i>) <i>Fieldwork</i> Field sheets completed on assessing habitats and wildlife in urban parks and other open areas. LAPs completed at 2 spots</p>
17	Thursday 11 Apr.	<p>Field Trip Acropolis Pnyka area (<i>on foot, from DIKEMES</i>) <i>Fieldwork</i> Field sheets completed on assessing habitats and wildlife in both urban parks, traditional areas and archaeological places. LAPs completed in 2 spots</p>
18	Tuesday 16 Apr.	<p>Fire in the Mediterranean (P) How natural history interpretation may help manage a natural catastrophe. The adaptation of Mediterranean ecosystems to fire. Vegetation succession and return of wildlife after fire.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Grove, A.T. and Oliver Rackham. 2003. <i>The Nature of Mediterranean Europe: An Ecological History</i>, New Haven, CT: Yale University Press. <u>Fire: Misfortune or Adaptation?</u> pp.217-240.
19	Thursday 18 Apr.	<p>Field Trip Kareas <i>Fieldwork</i> Assessing the landscape with the LAP on Mediterranean inland habitats heavily affected by forest fires. LAPs used at 2 different spots. Discussion on assessing effects of fire on landscapes.</p>
20+21	Friday 19 Apr.	<p>Field Trip East Attica (Marikes beach and Penteli mount) <i>Fieldwork</i> A six hour excursion for assessing the landscape with the LAP on Mediterranean coastal and inland habitats and rural areas. LAPs used at 5 - 7 different spots.</p>

		Landscape sketching attempted! Discussion on assessing different Landscape elements and human activities.
22	Thursday 25 Apr.	<p>Biodiversity Loss and Climate Change: Two distinct crises? (C) How can we connect policies for biodiversity with those for the climate crises? The role of habitats and biodiversity (Ecosystem Services) in the climate change mitigation and adaptation policies. The Landscape concept in a world of radical land use changes. Assessing cultural landscape features and their cultural values (cultural ecosystem services) in the major protected areas of Greece. Promoting a more holistic evaluation and management of biodiversity-centered protected areas, where until recently cultural landscapes were rarely appreciated.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Natural History Museum: How are climate change and biodiversity loss linked? https://www.nhm.ac.uk/discover/how-are-climate-change-and-biodiversity-loss-linked.html
23	Tuesday 7 May	<p>Communicating and protecting landscapes (V) Case study: Industrial wind farms are being developed within many protected areas, such as in EU Natura 2000 sites. This may have serious negative societal impacts. Resident's perceptions are very important in the wake of such a proposal. A critical review of wind farm planning in protected areas is presented in light of insights gained from a local resident's survey and other relevant studies.</p> <p>Readings:</p> <ul style="list-style-type: none"> - Kaldellis, J.K. Social attitude towards wind energy applications in Greece. <i>Energy Policy</i> 2005, 33, 595–602. - Jerpåsen, G.B.; Larsen, K.C. Visual impact of wind farms on cultural heritage: A Norwegian case study. <i>Environ. Impact Assess.</i> 2011, 31, 206–215. - Betakova, V.; Vojar, J.; Sklenicka, P. Wind turbines location: How many and how far? <i>Appl. Energy</i> 2015, 151, 23–31. - Vlami, V., Danek, J., Zogaris, S., Gallou, E., Kokkoris, I.P., Kehayias, G. and Dimopoulos, P., 2020. Residents' views on landscape and ecosystem services during a wind farm proposal in an island protected area. <i>Sustainability</i>, 12(6), p.2442. <p>Course wrap-up</p>
24	Thursday 9 May	<p>Field Trip Vravrona <i>Fieldwork</i> Assessing the landscape with the LAP on Mediterranean coastal and wetland habitats (and rural). LAPs used at 2 different spots. Discussion on assessing different Landscape elements and human activities. Learning about the natural history of the place and its cultural heritage.</p>

N.B.: The course schedule, in terms of subjects and readings, may be subject to change to benefit student learning and to keep up to date with current research.