



Universidad de Sevilla/Faculty of Geography and History

Course GB-36

GLOBAL CHANGE IN THE MEDITERRANEAN WORLD

(45 class hours)

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INTRODUCTION

This Course, entitled Global Change in the Mediterranean World, provides students with both fundamental and applied knowledge concerning the structure and dynamics of the natural environment, while paying specific attention to how it is seen to interact with human beings. Students will be furnished with a set of basic concepts and methodological considerations with regard to the environment, as well as to the key environmental issues needing to be faced up to on a global scale in today's world, keeping in mind their specific relevance for the area of the Mediterranean.

The systemic conceptualization of the natural environment and how it is found to interact with human societies will provide students with an understanding of the real extent of the environmental predicaments facing the Planet, together with their possible historical and present-day causes. This Course aims to encourage students' capacity to think critically about environmental issues, as well as about the role of contemporary society in the handling of them.

OBJECTIVES

The main objective of the Course is to facilitate a comprehensive appreciation of the Earth's natural system in its present-day expression as an anthropic system, while weighing up the role within it played historically, and in present times, by human action. Likewise, it is to assess the available approaches and methodologies of analysis of human intervention in the physical environment, while also enabling students to grasp the cardinal aspects of the key global environmental issues: climate change, desertification, loss of biodiversity ...

With these aims in mind, robust knowledge of the main geographical and ecological concepts that make for a state-of-the-art theoretical approach to the analysis of humankind-environment interaction will be made available to students, as well as the most impact-laden methodological procedures attainable in this regard. Likewise, a further aim is the training of students in the effective handling of historical and up-to-date referents concerning the evolution of human societies, from the perspective of their impact on the structure and workings of the terrestrial ecosystem. Lastly, moreover, the aim is to enable students to apply the acquired theoretical know-how to the de facto analysis of global environmental issues.



METHODOLOGY

Besides being eminently theoretical in character, the Course will also be of a practical kind. The dynamics of the theoretical sessions will be based on key-input talks given by the lecturer concerned, along with audiovisual back-up. In this regard power point presentations will form the basis of the theoretical content which will be the subject of assessment in the compulsory mid-semester and end-of-semester examinations to be undertaken. The practical activities concerned, meanwhile, will be based on video material to be screened, while text commentaries will be undertaken during session time (scientific material, journalistic reports, etc.) and which are to be handed in at the close of each session.

Class sessions which are highly participatory in character will be aimed for, while endeavoring to involve students in critical debates with regard to the topics being addressed. Participation will imply the interaction of students and lecturer in the discussion of the more challenging aspects, or the more awareness-raising aspects, of each topic.

SYLLABUS CONTENT

Syllabus Area 1. General introduction. The Course's scientific context. Its methodological framework. Bibliographical guidance. The setting up of the Course in general.

Syllabus Area 2. The natural environment: basic concepts. Natural environment and natural system. The Natural Earth System. The structure and workings of the natural system: the ecosystem-based approach. The hierarchical classification (genetic-functional) of ecosystems and ecological regionalization. Geological, climatic and anthropic changes: the paleogeographic approach.

Syllabus Area 3. Global change and human impact on the natural environment. Global change and human impact: two sides of the same coin. Scope of, and perspectives on, the historical process of human impact. Hominization, Humanization and Anthropization: the long road taken by a differentiated species.

Syllabus Area 4. Desertification. An environmental emergency on a global scale: conceptualization and scope. The desertification paradigm. The magnitude of the problem: an environmental emergency on a global scale. Combating desertification: Mediterranean scenarios.

Syllabus Area 5. Induced climate change. Climate and climate change. Climate change and sea-level variation. Humankind and climate: recent impact scenarios. Scenario appraisal. The struggle against climate change.



Syllabus Area 6. Biodiversity loss. Conceptualization and types of biodiversity. Scope of the problem and the present-day situation. The struggle against the loss of biodiversity. Mediterranean biodiversity and uniqueness.

Syllabus Area 7. Mediterranean cultural landscapes. The Mediterranean: Humankind and the environment. Mediterranean biodiversity and uniqueness. Desertification, accelerated morphogenesis and soil loss. The effects of global change on the Mediterranean basin.

Key Bibliography

Duarte, C. (Coord.) (2006). *Cambio global. Impacto de la actividad humana sobre el sistema*. CSIC. Madrid, 171 págs.

Ibañez, J.J.; Valero Garcés, B.J. y Machado, C. (eds) (1997). *El paisaje mediterráneo a través del espacio y del tiempo. Implicaciones en la desertificación*. Geoformas Ediciones, Logroño, 462 págs.

López Bermúdez, F. (2002). *Erosión y desertificación. Heridas de la Tierra*. Ed. Nivola. Col. Matices, 3. 190 págs.

Muriel, J.L. y Casas, J. (Eds.) (2003). *Biodiversidad y espacios naturales protegidos*. Organismo Autónomo de Parques Nacionales. MMA. Madrid, 140 págs.

Spanish National Ecosystem Assessment (2014). *Ecosystem and Biodiversity for Human Well Being. Synthesis of the Key Findings*. Biodiversity Foundation of Spanish Ministry of Agriculture, Food and Environment. Madrid, 90 pp.

Evaluación de los ecosistemas del Milenio en España (2010). *Ecosistemas y biodiversidad de España para el bienestar humano*. Fundación Biodiversidad (MARM). Documento Inédito. Madrid, 704 págs. <http://www.ecomilenio.es>

ASSESSMENT AND GRADING CRITERIA

- The assigning of a Final Grade for the Course will be carried out in terms of the following criteria: the theoretical component will account for 80% of that same Final Grade, while the practical component will constitute the remaining 20%.
- The grade corresponding to the theoretical component will constitute the average of the scores obtained in the mid-semester examination and the end-of-semester examination respectively. Both of these examinations will be made up of a series of multiple-choice questions, each correct answer to be chosen from among a three-option set: one true and two false.
- The grade appertaining to the practical component will be the result of the lecturer's assessment of the commentaries submitted during the Course period.