

**Biocultural Diversity**

Code: 43058  
ECTS Credits: 6

Degree	Type	Year	Semester
4313784 Interdisciplinary Studies in Environmental, Economic and Social Sustainability	OT	0	1

**Contact**

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**Other comments on languages**

Readings will be all in English and Spanish.

**Use of Languages**

Principal working language: english (eng)

**Teachers**

Petra Johanna Benyei Peco

Esteve Corbera Elizalde

**Prerequisites**

The students need to be interested in the links between human cultures and biodiversity at the local and global levels. Basic knowledge on conservation science would be recommended (e.g. notions on natural resource management and/ or management of natural protected areas), since conventional approaches to conservation will be critically examined during the course. The course will also mobilise advanced concepts from Geography, Anthropology, Ecological Economics and Environmental and Social Science research in general and therefore background knowledge on these fields would also be beneficial, although not strictly required. Good command in spoken Spanish (read in English) and teamwork skills are required.

**Objectives and Contextualisation**

Biodiversity loss is a well-known phenomenon. According to most projections, over the next thirty years, 20 percent of the world's existing species may cease to exist. Less widely known, though attracting increasing attention, is the loss of the world's cultural diversity. Several authors have remarked that the overlap between biological and cultural diversity is not random and that the loss of cultural and biological diversity are linked.

In this course, we study biocultural diversity, what it is, why it's important and what factors can result in its erosion and maintenance. The course is divided in three thematic areas a) Biocultural diversity (sessions 1-4); b) Traditional Agroecological Knowledge (sessions 5-8); and c) Change, resilience and adaptation (9-11). Most of the lectures will be presenting case studies from ongoing research. Overall, the case studies have been selected to illustrate the overlap between biological and cultural diversity, how the loss of cultural diversity can affect biodiversity, and local responses to maintain biocultural diversity.

**Competences**

- Analyse how the Earth functions on a global scale in order to understand and interpret environmental changes on the global and local scales.
- Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
- Integrate knowledge and use it to make judgements in complex situations, with incomplete information, while keeping in mind social and ethical responsibilities.
- Seek out information in the scientific literature using appropriate channels, and use this information to formulate and contextualise research in environmental sciences.
- Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
- Work in an international, multidisciplinary context.

## Learning Outcomes

1. "Describe the concepts related to the idea of "biocultural diversity. "
2. Communicate and justify conclusions clearly and unambiguously to both specialised and non-specialised audiences.
3. Express ideas and opinions on a complex topic (regarding (relationships of human groups and protection of biodiversity).
4. Seek out information in the scientific literature using appropriate channels, and use this information to formulate and contextualise research in environmental sciences.
5. Solve problems in new or little-known situations within broader (or multidisciplinary) contexts related to the field of study.
6. Work in an international, multidisciplinary context.
7. Work with different case studies on the concept of biocultural diversity.

## Content

The course is divided in three thematic areas a) Biocultural Diversity (sessions 1-4); b) Traditional Ecological knowledge (sessions 5-8); i c) Change, Resistance, and adaptation (9-11).

Many of the lectures will present case studies from ongoing empirical research. Overall, the selected case studies illustrate the overlap between biological and cultural diversity, how the loss of cultures - often involving indigenous and impoverished peoples' removal from their lands, suppression of their societies, and the loss of traditional environmental knowledge- can affect both biodiversity and livelihoods. From there, local responses, often stemming from environmental conflicts occurring worldwide, help to defend and sometimes restore their biocultural diversity.

The contents of each part will be developed according to the calendar presented in the 'Bibliography' section, and include the following topics:

- 1 The overlap between biological and cultural diversity: what role for protected areas?
- 2 Loss of traditional ecological knowledge and loss of cultural and linguistic diversity
- 3 Community based management.
- 4 Deforestation, fragmentation, and loss of biological diversity
- 5 Traditional agroecological knowledge (TAeK): knowledge, practices and beliefs
- 6 TAeK erosion: Integration to the market, cultural change, and industrialization
- 7 Citizen science as tool to preserve biocultural diversity.
- 8 Environmental conflicts as driver of TAeK revitalization?
- 9 Climate change
- 10 Adaptation, coping and governance: how local communities face changes?

## Methodology

The module is composed of 12 3-hour sessions. Each session is divided in two parts. During the first part (1.5h), students will attend a lecture and discuss associated readings (see program in bibliography). Students are expected to have read the 2 articles associated to each lecture before the class. During the second part (1.5h), students will work on systematic literature review (meta-analysis) on a topic related to biocultural diversity.

## Activities

Title	Hours	ECTS	Learning Outcomes
Type: Directed			
Lecture and reading discussion	18	0.72	1, 3, 5, 2, 7
Type: Supervised			
Systematic literature review	18	0.72	4, 7, 6
Type: Autonomous			
Essay writing and oral presentation	34	1.36	4, 3, 5, 2, 6
Search and reading of scientific texts	80	3.2	4, 7, 6

## Assessment

The final grade of the course will include the following parts:

15%: Active participation in theoretical part of the class, showing understanding of the topic and readings.

15%: Presentation of work during the practical part of the class.

35%: 2.000-word essay on a topic to be chosen by the student.

35%: 15-minute oral presentation of the essay. Creative presentation formats are welcome.

Attendance is mandatory. If a student misses any part of a class, s/he will have to write a 500-word critical essay on the corresponding readings.

Topic of the essay must be communicated to professors by 13<sup>th</sup> December (latest). Essay is due on 29<sup>th</sup> January 2018.

## Assessment Activities

Title	Weighting	Hours	ECTS	Learning Outcomes
Essays	35%	0	0	4, 3, 2, 7
Oral presentation of the final essay	35%	0	0	3, 7
Participation in the class	15%	0	0	4, 1, 3, 5, 6

## Bibliography

Agrawal, A. Perrin, N. 2008. Climate adaptation, local institutions, and rural livelihoods. International Forestry Resources and Institutions Program, IFRI. *Working Paper W08I-6*.

Berkes, F., Colding, J., & Folke, C. (2000). Rediscovery of traditional ecological knowledge as adaptive management. *Ecological Applications*, 10(5), 1251-1262.

Burke, B. J., & Heynen, N. (2014). Transforming participatory science into socioecological praxis: Valuing marginalized environmental knowledges in the face of neoliberalization of nature and science. *Environment and Society: Advances in Research*, 5, 7-27.

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Gomez-Baggethun, E., & Reyes-Garcia, V. (2013). Reinterpreting Change in Traditional Ecological Knowledge. *Human Ecology*, 41(4), 643-647.

Gómez-baggethun, E., Mingorría, S., Reyes-garcía, V., Calvet, L., & Montes, C. (2010). Traditional Ecological Knowledge Trends in the Transition to a Market Economy: Empirical Study in the Doñana Natural Areas. *Conservation Biology*, 24(3), 721-729.

Klein, J.A., Hopping, K.A., Yeh, E.T., Nyima, Y., Boone, R.B., Galvin, K.A. (2014) Unexpected climate impacts on the Tibetan Plateau: Local and scientific knowledge in findings of delayed summer. *Global Environmental Change* 28, 141-152.

Maffi, L. (2005). Linguistic, Cultural, and Biological Diversity. *Annual Review of Anthropology*, 34, 599-618.

Marin, A. (2010) Riders under storms: Contributions of nomadic herders' observations to analysing climate change in Mongolia. *Global Environmental Change* 20, 162-176.

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Reyes-García, V., L. Aceituno-mata, L. Calvet-Mir, T. Garnatje, E. Gómez-Baggethun, J. J. Lastra, R. Ontillera, M. Parada, M. Rigar, J. Vallès, S. Vila, and M. Pardo-de-Santayana. 2014. Resilience of traditional knowledge systems: The case of agricultural knowledge in home gardens of the Iberian Peninsula. *Global Environmental Change* 24:223-231.

Reyes-García, V., P. Benyei, and L. Calvet-Mir. 2018. Traditional Agricultural Knowledge as a Commons. Page in J. L. Vivero Pol, T. Ferrando, O. de Schutter, and U. Mattei, editors. *Routledge Handbook of Food as a Commons*. Routledge, London, UK.

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