
<https://sheepfireice.org>

About this course

Sheep in the Land of Fire and Ice is a short Massive Open Online Course (MOOC) about sheep grazing in Iceland.

As humans, we use natural resources to sustain our daily lives. How much of these resources we use and how we obtain them will determine how long they will last. Sustainable management practices aim at ensuring that natural resources are not depleted for us and for future generations. Unsustainable land uses can lead to environmental degradation, which compromises the future use of resources. The aim of this short course is to provide you with an overview of the impacts of an important land use in many regions of the world, sheep grazing.

In this course we use Iceland as a case study because here, traditional sheep grazing has been associated with extensive environmental degradation. Sheep grazing is an important economic activity in Iceland, mainly for meat but also for wool products, and it is also an important part of Icelandic culture. However, the sustainability of sheep grazing has been questioned, because it has been linked to vegetation degradation and soil erosion. In this course you will gain an understanding of basic ecological principles that underlie sheep grazing systems, their complexity and their dynamics. We will discuss the cultural, historical and economic relevance of sheep grazing in Iceland, as well as current issues, initiatives and approaches. We will also explore some of the theory that has shaped the application and management of grazing resources.



Sheep farming is an important cultural and economic activity in Iceland, but also one with important environmental consequences. Sheep in the Land of Fire and Ice is a short online course that discusses the sustainability of an important land use in many regions of the world: sheep grazing.

Accessing the course

The online course is free for anyone to take. You will be able to access the course through a unique URL that is available on the [course website](#). Enrollment starts **January 1, 2019** but you can take the course any time, and at your own pace! To enroll the course, you will need to create an account as an individual, or as a group. When you log in to the platform with your account, you will have access to all the course materials.

Course structure

The course is divided into five parts: **Part 1** provides a general overview. **Part 2** covers general concepts about grazing in northern ecosystems, the particular conditions of Iceland and one of the main problems associated with sheep grazing in Iceland, soil erosion. **Part 3** provides an overview of the historical influences of sheep grazing in Iceland since the human settlement to the present. **Part 4** focuses on the present and the future of sheep grazing in Iceland. Finally, **Part 5** brings sheep grazing back to a broader picture, in the context of natural resource management in a changing Arctic and a changing world.

Each part of the course contains one or more sections that are built around *short videos* that provide an overview of the topics. For each of the sections, you can find more information and additional reading materials in the Course Notes and the Glossary, which can also be used as a standalone teaching material. Throughout the course you will find two types of interactive activities: knowledge checks and discussion boards. Knowledge checks aim at assessing your understanding of the main concepts. Discussion boards will allow you to get to know other course participants, ask questions, and get help. At the end of the course there will be a final quiz.

The language of the course is English, and the estimated time of completion of the whole course is *2 hours*. Of course, you are free to take only parts of it too! For example, if you are interested in the generalities of grazing, we would suggest you take Part 2; if you want to know more about historical aspects, take Part 3, and if you want to discuss future options for sustainable management practices take Part 4.

For EDU-ARCTIC users

If you are an instructor using EDU-ARCTIC (<https://edu-arctic.eu/>), we would like to invite you to take the course (or parts of it) online, as an in-class activity. We will then be happy to organize an online Q&A session with the online course instructors. The suggested dates for these sessions are **March 15, 2019 at 15:00 UTC** and **May 6, 2019 at 8:00 UTC**. If you wish to suggest an alternative date, please get in touch with us (isabel@lbhi.is or agata.gozdzik@igf.edu.pl).

Course instructors



ISABEL C BARRIO, AGRICULTURAL UNIVERSITY OF ICELAND

Isabel is an Associate Professor at the Agricultural University of Iceland where she teaches a course in Rangeland Ecology and Management. Her research focuses on the ecological impacts of sheep grazing in Iceland.



DAVID HIK, SIMON FRASER UNIVERSITY

David is a Professor in Ecology at Simon Fraser University, Canada. He has been studying plant-herbivore interactions in the North for several decades, including snow geese in La Pérouse Bay and collared pikas in the Yukon.