



International hands-on course

SIZING THE BLUE CARBON

Estimating carbon stocks and fluxes in seagrass and saltmarsh ecosystems

Aim: The attention to biospheric carbon sinks has been growing during the last few decades as a means to decelerate the increase of CO₂ in the atmosphere. The potential of Blue Carbon in this endeavor is being actively explored in the last few years with important efforts both in quantifying the stocks and fluxes and in setting the mechanisms for monetization in the international carbon markets. As a first key step, in this workshop we will focus on the necessary technical knowledge to estimate the size and rate of growth of the carbon sink associated to seagrass meadows and saltmarshes, including (i) sampling design, (ii) field works, (iii) laboratory works, and (iv) numerical procedures. This is a 20 h course

Dates: 28 – 30 October 2019

Place: [Centre for Advanced Studies of Blanes \(CEAB-CSIC\)](#)

Acc. Cala S. Francesc 14. 17300 Blanes, Girona, Spain

Organizes: Group of Aquatic Macrophytes Ecology (CEAB-CSIC), a partner of [Life Blue Natura](#) (LIFE14CCM/ES/000957).

Participant profile: The workshop welcomes (i) researchers and postgraduate students with a special interest in learning about this area of the coastal carbon cycle, (ii) coastal managers of public or private institutions interested in learning how to estimate the potential economical benefit that could be derived from enhancing or protecting their Blue Carbon ecosystems, (iii) members of NGO's, nature conservation institutions, etc., and (iv) scientific advisors and journalists. Other profiles will be considered as well.

Fee: Free. Lunch and coffee breaks will be also provided for free during the course. Attendees have to cover their own travel and subsistence expenses. The admission is limited to 15 attendees.

Deadline: 21st October 2019 (on a 'first come first served' basis; applications beyond 15 registrations will be placed in a waiting list).

To apply, please send and email to npineiro@ceab.csic.es

Course content

DAY ONE (9:00 to 18:00)

Session 1: Introduction

The Blue carbon concept

Seagrass meadows and tidal marshes.

Formation processes and biogeochemistry of the blue carbon soils

Stocks and fluxes (long and short term accumulation)

Session 2: Sampling design and field and laboratory techniques

Identification of goals and sampling design

Field techniques

Laboratory analysis

DAY 2 (9:00 to 18:00)

Session 3: Numerical techniques

Core decompression

Dating the samples and chronological models

Estimation of carbon stocks and fluxes

Practical session to estimate carbon stocks and fluxes using real data obtained from the Life Blue Natura Project

DAY 3 (9:00 to 18:00)

Session 4: Dedicated talks and general discussion

(this session can be modified discretionally depending on the availability of the speakers)

Non-destructive techniques to quantify seagrass carbon stocks

The “Carbonates Issue” in seagrass meadows

Emission of methane from Blue Carbon ecosystems

Emissions of nitrous gases from Blue Carbon ecosystems

Upscaling and mapping Blue Carbon stocks

Macrophyte carbon storage in the deep ocean

Monetizing the Blue Carbon

General discussion and closure of the course

(No later than 18:00 h)