

University of Algarve and UNESCO International Centre for Coastal Ecohydrology



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International Summer Course in ECOHYDROLOGY: FROM RIVER TO COASTS

Course Contact : summercourse.ecohydrology_2012@yahoo.com

Cost

Early inscription - 500 Euros
Late Inscription - 750 Euros

Deadlines

Early inscription - 25th June 2012
Late Inscription - 10th July 2012

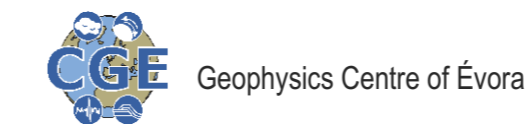
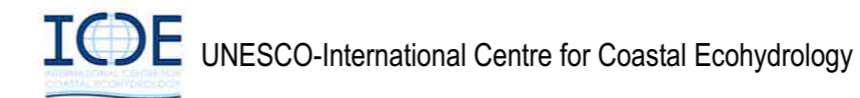
The value of the fee include accommodation, lunches during field trips, opening and closing dinners, classes materials and transport for course activities.
Non-European Union students may apply to a travel subsidy. In such a case, two letters of recommendation and one motivation letter are required for evaluation.
Students not requiring accommodation will have a reduction on the value of the fee of 40%.

Payment should be made by bank transference to the Organizer account:

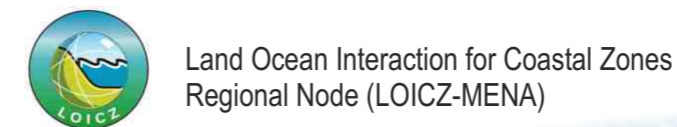
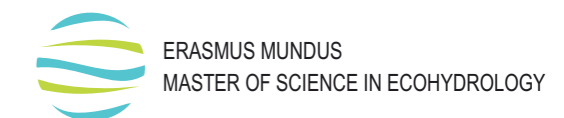
BANK NAME: BANCO SANTANDER TOTTA
AGENCY NAME: FARO – S. ANTÓNIO
ACCOUNT HOLDER NAME: ASSOCIACAO I.I.C.F.C. ECO HYDROLOGY
ACCOUNT NUMBER: 0003.19706449020
SWIFT/BIC CODE: TOTAPTPL
N.I.B. 0018 0003 19706449020 73
IBAN: Pt50001800031970644902073

Faro, Portugal, 22 July - 4 August 2012

ORGANIZERS:



European Regional Centre for Ecohydrology under the auspices of UNESCO
Polish Academy of Sciences



Organisers

SCIENTIFIC COMMITTEE:

Prof. Luis Chicharo - Univ. Algarve, UNESCO-ICCE, CIMA, LOICZ-MENA
Prof. Maciej Zalewski - Univ. LODZ, UNESCO-ERCE a/u UNESCO PAS
Prof. Michael McClain - UNESCO-IHE
Prof. Wilhelm Windhorst - CAU zu KIEL
Dr. Radhouan Ben-Hamadou - CCMAR
Prof. Tomasz Boski - UALG-CIMA
Prof. Manuela Silva - UALG-CIMA
Prof. Rui Cortes - UTAD-CITAB
Prof. Manuela Morais - Univ. Évora, Water Lab.

ORGANIZING COMMITTEE:

Prof. Luis Chicharo
Ms. Aithzan Kulumzhanova
Ms. Sónia Elói

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About Ecohydrology

Ecohydrology is an integrated new approach to aquatic ecosystems health and sustainability. Ecohydrology have been fostered by UNESCO IHP and have been considered in the Strategic Phases, approved by UNESCO 193 member states. Ecohydrology establishes a new paradigm for aquatic ecosystems management since it considers the **dual regulation** between hydrology and biota, also integrating the human dimension, as fundamental driver of changes. Thus, applying this concept at the riverbasin scale it is possible to restore the long-term evolutionary established processes of aquatic ecosystems. This will increase or reinstate the carrying capacity of ecosystems, allowing them to be sustainable and resilient to increasing anthropogenic impacts.

About the course

Aims

The Summer Course in Ecohydrology: from river to coast, aims to provide the understanding of the main ecological and hydrological processes occurring at the river basin, from upstream to downstream, how these processes are affected by human activities and climate change, how they interact in time and space, and how they can be managed. Therefore, the course is organized in 4 modules: 1 - Introduction to Ecohydrology; 2 - Freshwater Ecohydrology and River Restoration; 3 - Dynamics of River-Coast Interactions; and 4 - Management of River-Coast Systems.

Target

The course is aimed to university students of any level and also for professionals dealing with aquatic ecosystems management and conservation.

Location / VENUE

The course will be held in different locations in Portugal, along the Guadiana river-coast gradient. Classes and field trips will be held at the Alqueva dam and Guadiana River, at the Guadiana estuary and at the adjacent coastal zone. Students will be observing, in loco, the characteristics of different aquatic ecosystems, analysing the problems and discussing solutions.

Duration

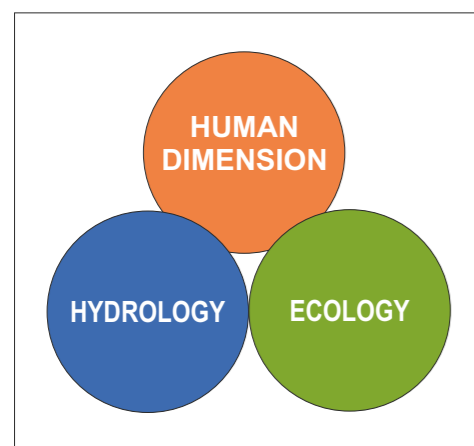
The Course will have a duration of **12 days**, uninterrupted. Classes start the 23rd of July and end the 3rd of August. Accommodation for students is organized from the 22nd July (arrival date) until the 4th of August (departure date).

Certificates

Certificated of presence will be issued.

The course is accounted as **6 ECTS** *.

* 10 ECTS could be accounted in case extra report is delivered



Scheme, L.Chicharo

Course week 1

MODULE 1 - INTRODUCTION TO ECOHYDROLOGY

23.07 (Monday)

Registration

Welcome and Information about the course

Open lecture : The Ecohydrology Program at the UNESCO

Open lecture: Freshwater Ecohydrology

Open lecture: Coastal Ecohydrology

Group photo and coffee break

Visit to Faro (History of Portugal, Algarve and of the city of Faro)

Visit to Faro beach

Ice-breaking dinner

24.07 (Tuesday)

Trip to Alqueva by bus

Visit to Alqueva Power Station and Educational Centre

Introduction to Ecohydrology

MODULE 2 - FRESHWATER ECOHYDROLOGY AND RIVER RESTORATION

LECTURES

25.07 (Wednesday)

Dam management and river ecohydrology

River restoration

26.07 (Thursday)

Field work on restoration of freshwater ecosystems

Field work on restoration of freshwater ecosystems

27.07 (Friday)

Field work on restoration of freshwater ecosystems

Visit to Aldeia da Luz and Monsaraz

Field trip to Alqueva lake by boat - ecohydrological processes in dams

28.07 (Saturday)

Visit to Évora

Trip to Faro

29.07 (Sunday)

Free time

Students presentations (5 min presentation on projects to be prepared by students on applying EH principles from students home countries).

FIELD TRIP: Alqueva

Travels and accommodation: Faro, Aldeia da Luz and Monsaraz, Alqueva, Évora.

Course week 2

MODULE 3 - DYNAMICS OF RIVER-COAST INTERACTIONS

LECTURES

30.07 (Monday)

Biogeochemical processes and climate change in estuaries

Upstream-downstream nutrients dynamics

Phytoplankton Dynamics and HABS

Macroalgae dynamics

Zooplankton dynamics

Field sampling and processing

31.07 (Tuesday)

Macrobenthos dynamics

Fishes dynamics

Coastal acidification

Groundwater discharge in coastal areas

Field visit to coast. Coastal erosion

Field sampling and processing

MODULE 4 - MANAGEMENT OF RIVER-COAST SYSTEMS

LECTURES

01.08 (Wednesday)

Integrated river basin management

Wetland management

Coastal zone management

Landscape management

Visit to Ria Formosa coastal system - boat trip to Farol island

02.08 (Thursday)

Urban ecohydrology: a management of coastal cities

Evaluating ecosystem services at river basin scale

Urban ecohydrology DPSIR models: the Guadiana case

Stakeholder involvement and Governance

Tutorial for support project presentations

03.08 (Friday)

Students presentations (10 min each)

Delivery of Certificates

Boat trip at Algarve coast

Farewell dinner

04.08 (Saturday)

Departure from Faro

FIELD TRIP: Rio Formosa coastal lands

Travels and accommodation: Faro