



INSTITUTE OF
MARINE BIOLOGICAL RESOURCES
AND INLAND WATERS



Call for applications

5th Summer School on Aquatic and Social Ecology Island of Samothraki, Greece

3-12 June 2018



Organized by: the Vienna Institute of Social Ecology (Alpen Adria University),
and the Hellenic Centre for Marine Research

Introduction

Samothraki is a Greek island in the north-eastern corner of the Aegean archipelago endowed with high cultural and natural assets. However, there is at present a fragile situation of slow decline of population and ecological challenges that might possibly be brought to a tipping point by impacts of the Greek economic and governance crisis, as well as climate change.

The *Vienna Institute of Social Ecology, Alpen Adria University* (www.aau.at/socec) has been conducting research on the social metabolism of the island of Samothraki since 2007, acknowledged by the Sustainability Award 2010 received by the Austrian Ministry of Science and Research. This interdisciplinary research on energy, material flows, land use and the

island economy, and the simultaneous networking with local civil society and stakeholders, prompted the communal administration, unanimously, to make an effort at turning the whole island into a UNESCO Biosphere Reserve.

The *Hellenic Centre for Marine Research* (HCMR, www.hcmr.gr) *Institute of Marine Biological Resources and Inland Waters*, (IMBRIW, www.imbriw.hcmr.gr), has been studying the island's freshwaters for 15 years. Since 2013, HCMR initiated an inland waters and coastal zones research initiative, investigating springs, streams, wetlands, lagoons and coastal areas for their chemical-physicochemical and ecological quality. Moreover, a Memorandum of Collaboration between HCMR and the Municipality of Samothraki has been signed to establish the Samothraki Nature Observatory (SNO, 16.12.2013) on the island aiming to research, promote, manage and protect its natural heritage. Since 2016 the SNO is a member of the LTER Greece network.

In the course of the last years, fuelled by a vision of a sustainable Samothraki, an elaborated research agenda has been developed. A momentum has been reached, where long-lasting research efforts are bearing fruits and contribute to several policy achievements, but that is also critical in the sense that certain institutional constraints still need to be overcome. Our current aim is, through an enlarged consortium, to further consolidate a research agenda for a sustainable island focused around restoring degraded ecosystems and reducing future environmental pressures, while securing a satisfactory level of well-being for the local community.

The course

The course is designed as a ten-day excursion to Samothraki with the aim to learn and apply aquatic ecology and social ecology approaches in a local setting while supporting current research and building synergy with the UNESCO Biosphere Reserve process. The course gives students the opportunity to engage in a real-life project and utilise their scientific training to support the process further, namely the creation of a management plan with a set of activities towards sustainability, and a science plan for further research on the island that would also meet local interests. This will provide students the experience of participating in a transdisciplinary research process, being exposed to a search for solutions for sustainability and development challenges, and learning to interact with stakeholders in a culturally challenging environment.

The course will conclude with a reflection on the experiences and written student reports on the results of their specific research. We will make an attempt to interpret these results within the framework of sustainability and development studies. The course primarily addresses Master's Degree students from both the natural and social sciences (environmental sciences, environmental sociology, aquatic ecology, human and social ecology, environmental sociology, water resources management, development studies, etc.) with an interest in sustainability and local developmental challenges.

Lectures and methods

Theoretical input will be provided by several members of the research consortium presenting different aspects of current and future research undertaken on the island. Confirmed speakers include: **Prof. Marina Fischer-Kowalski** (Vienna Institute of Social Ecology, Alpen Adria University), **Dr. Nikolaos Skoulikidis** (Research Director, Institute of Marine Biological Resources and Inland Waters, Hellenic Centre for Marine Research, Greece), **Dr. Simron Singh** (Associate Professor, Faculty of Environment, University of Waterloo, Canada), **Dr. Marjan Jongen** (Forest Research Center, Instituto Superior de Agronomia and Department of Mechanical Engineering, Instituto Superior Técnico) - **(More TBA!)**.

For the most part, students will then be split in small groups and conduct fieldwork in an array of social and natural science methods frequently used in socioecological and aquatic research. Five modules will be performed in parallel, each consisting of an information block, participating field research, data analysis and reporting. Each method will be practically demonstrated by a tutor guiding the small student groups throughout the field work. Each student participant will focus on one of the following methods and research questions:

- (1) **Landscape assessment in an insular protected area.** This module will: a) apply landscape assessment through field surveys and use of questionnaires, and b) assess landscape integrity particularly from proposed wind farms within the protected area (Samothraki Natura 2000 sites). Methods will include an analysis of cultural landscape attributes and cultural ecosystem services framework (Tutors: Vasiliki Vlami, Stamatis Zogaris)
- (2) **Coastal morphodynamics of Samothraki and management of anthropogenic activities using the principles of Integrated Coastal Zone Management (ICZM):** Coastal morphodynamics through a holistic view including land area and submarine zone will be surveyed. Field observations and in situ measurements as well as data analyses will be carried out. Moreover the module will attempt to integrate anthropogenic activities and coastal areas mainly using the adaptation principle (Tutor: Christos Anagnostou)
- (3) **Hydrometeorological investigations and monitoring infrastructure for adaptive water management:** The aim of the module is to present ways of hydrometeorological investigations through installation of automatic monitoring stations and use of models that can provide important information about the optimization of water resources management plans. Meteorological and hydrological equipment will be presented and installed in a case study area while the role of the atmospheric forcing and topography on the local water and energy cycle will be discussed. Optimization of existing or future water management plans will be attempted by considering socioeconomic and climate change scenarios (Tutors: Anastasios Papadopoulos, Elias Dimitriou, Nikolaos Skoulikidis)
- (4) **Sustainable livestock farming:** The small ruminant population on Samothraki reached unprecedented levels during the 1990s, causing widespread overgrazing and erosion. Still today, livestock numbers by far exceed sustainable levels and impede a recovery of the local ecosystems. In this module, we will engage in a dialogue with local small ruminant farmers to learn more about the reality of their everyday lives, opportunities and obstacles for more sustainable farming practices. With help of our local partners we will arrange interviews with farmers to collect socio-metabolic and qualitative data that contribute to ongoing research efforts (Tutor: Dominik Noll)

- (5) **Energy metabolism:** How much energy does Samothraki need, and where does it get it from? In this module we will provide a set of existing statistics and previous research results. The task for the students will be to integrate those data into meaningful information and to complement them with estimates on missing parameters (such as fuelwood use for heating etc) by interviews with local experts and possibly a few sample households (Tutors: Simron Singh, Marina Fischer-Kowalski)

Practical information

Location and access: The island of Samothraki is located 25 miles south of the coastal city Alexandroupolis, the only entry point to the island. There are daily ferries connecting Alexandroupolis with Samothraki. The trip lasts approximately 2 hours and 15'. For a ferry schedule visit: <http://www.saos.gr>. You can reach Alexandroupolis by plane changing in Athens; alternatively you can fly to Thessaloniki or Kavala and continue by bus. Due to infrequent boat connection (usually once per day), plan your trip in advance, keeping in mind you might require an overnight stay in Alexandroupolis.

Accommodation: Accommodation will be provided at the island's municipal camping site, a unique 20.000 m² area shaded with native plane trees reaching all the way to the sea. Please bring your own tent!

Student fees: There is a fee of €350 that will cover attendance to theoretical and practical lectures, teaching of field work, accommodation at the camping site, local transportation, half board (breakfast and lunch), an official dinner, and a two-day trekking tour.

Student credits: Participants successfully attending the Summer School will be awarded a certificate of attendance which will provide them with 6 ECTS

Deadline for applications: **15 February 2018**. Please send a short CV and motivation letter (max 1 page), **together with an indication of one or more preferences from the above listed methods to:** panos.petridis@aau.at and alampou@hcmr.gr.

More information: <http://sustainable-samothraki.net/>
<http://samothraki-observatory.hcmr.gr/>