

NAVARINO ENVIRONMENTAL OBSERVATORY

NEO Management

Friday, 26 May 2017

NEO NEA #24 (January - March 2017)

NEO stands for Navarino Environmental Observatory. But NEO in Greek (νέο) means news as well and NEA is its plural. So this is our news!

Foreword

2017 started with some exciting ideas and visions for new research at NEO. These were captured in a number of EU proposals, which were submitted during the period of January to March. Much work has been invested in these proposals and important networks with other academic institutions around Europe has been built, focusing both on research and higher education. It is increasingly being seen that the environment around NEO could provide a “living laboratory” where researchers from different disciplines could interact with a variety of stakeholders to develop new joint responsible research and innovations for a sustainable future. Two MSc students from SU initiated some new research related olive farming and bird monitoring in the Gialova wetland. You can read more about this research and ongoing activities at NEO below.

Happy Reading!



Figure 1: Flamingos feeding in the lagoon (photo: Dimitris Bousbouras)

Activities

Research

- *Research proposals*

The follow up of the NEO workshop, “Achievements and future perspectives”, which was held at Stockholm University in November, 2016 has successfully resulted in the submission of several EU research proposals. All these proposals are joint initiatives between academy, NGOs, small-medium-size enterprises, farmer organizations etc., at local, regional and international levels.

- *Paleoclimatology*

Lab-work

Lab-work and analysis of material from a core taken in the central part of the Gialova lagoon has been performed at the Department of Physical Geography, SU. The core covers the last 3600 years BP and gives information on environmental changes in the Gialova area since the Bronze Age.



Figure 2: Martina Hättestrand preparing pollen slides for microscope analysis

- *Environmental monitoring and management of the Gialova Lagoon*

Bird monitoring, Water Quality Monitoring January – March 2017

Bird monitoring in the area was continued during this period on a scheduled monthly basis. Giorgos Maneas and Dimitris Bousbouras completed the Mid-Winter Counting in January (wintering season) and in February. Among other species, several duck species, small waders, herons, raptors and the always impressive flamingos were observed in different areas around the wetland. Compared to January when no

less than 3217 individuals were counted, in February there were more species but fewer in number indicating early signs of spring migration.



Figure 3: Viggo Norby during fieldwork in Gialova lagoon

In March, a more frequent monitoring focusing on migratory species was conducted by Viggo Norby, a master student at SU. A total of 120 species were identified during one weeks monitoring and 24 species were of higher conservation value according to the EU Bird directive. Also a spur-winged lapwing, a rare species to Greece that breeds in the north, was observed.

Water quality monitoring was continued on a daily basis. First results covering almost a year of monitoring will be presented by Agnes Classon in her master thesis.

Education

Field Courses

- *"Course in Physical Geography"*
Bachelors' course, Stockholm University (March 17-23)



Figure 4: A lecture on the stone bridge at Lousios River.

The seventh Physical Geography course took place at NEO. Ingmar Borgström, Martin Finné and Simon Jakobsson were the instructors of the field course and 25 bachelor students from Stockholm University attended the course. Topics that were covered were how different processes like tectonics, erosion, humans, etc. shape the landscape and how climate change and land use processes might shape the landscape in the future. During the excursion they visited a number of sites mainly in Messinia. Among them are the Gialova/Navarino Bay area, Artemisia, Verga, Loussios River, Kapsia Cave, Mesochori, Methoni and Finikounda. The students studied different subjects e.g. tectonics, geomorphology, land use changes, erosion and deposition, forest fires, biodiversity and hydrological processes

Field Studies

- *"A comparison of conventional and organic olive farming in the catchment area of Gialova Lagoon, south-west Greece"*

Amanda Salguero Engström and Viggo Norby visited NEO station for 3 weeks during March in order to do fieldwork for their master thesis in the Master's Program *Environment and Health Protection*. Amanda worked with the project *"A comparison of conventional and organic olive farming in the catchment area of Gialova Lagoon, south-west Greece"*, and during her fieldwork she focused mainly in conducting interviews with farmers. Her results showed that organic farmers used less agrochemicals and water and had a significant higher net income per hectare than conventional farmers.

Viggo's fieldwork focused mainly in bird counts in the Gialova lagoon area. His topic was: *"An evaluation of Gialova lagoons importance as an stop-over area for spring migrating birds in relation to other wetlands along the west coast of Greece"*. Both students were supervised by Hakan Berg and Giorgos Maneas and they are expected to present their thesis in June.

Upcoming

Research

- Two interns Bojing Hu and Eirini Makopoulou will be at NEO for three weeks in April. The students, following “Geomatics” Master course at Stockholm University will focus in producing maps with available data from the Gialova area. Ian Brown, Hakan Berg and Giorgos Maneas are their supervisors.
- Bird-monitoring in the Gialova lagoon area on a monthly basis. The aim of the monitoring is to record the bird species, their habitats and their behavior and produce a data base which will be used for scientific and popular publications.
- A first try to fly drones over Gialova lagoon will take place in April.

Education

- Students and teachers from the master course Cultural Heritage Materials and Technology will visit NEO in April for a week as part of their studies. The master course is oriented from the Department of History, Archaeology and Cultural Resources Management, University of the Peloponnese and operates in collaboration with the National Center for Scientific Research Demokritos, the Navarino Environmental Observatory (through the National Observatory of Athens) and key lecturers from other academic institutions in Greece.
- Students and teachers from a course in Past Climate variability will visit NEO in May
- The first HAAR (Hellenic Association of Aerosol Research) Summer School will take place at NEO in May
- The Eco-hydrology course, which is held every second year, will be held at NEO in June

Events

- An interactive seminar titled “Bridging between science and business”, will take place at the Swedish residence in Athens in April.
- The ERD (Environmental Research Dynamics) group of the Physical Geography department, Stockholm University, will meet at NEO in April.
- A café-NEO with Prof. Nikos Mihalopoulos (National Observatory of Athens) will be held in Kalamata in May.

NEO management

A NEO Steering Committee meeting will be held in Athens in April in connection the event at the Swedish Residence in Athens