

NAVARINO ENVIRONMENTAL OBSERVATORY

NEO Management

Thursday, 24 January 2012

NEO NEA #7 (October – December, 2012)

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!

Activities

Past

Research

- A field trip to Alepotrypa cave (Lakonia, Greece) took place on the period 22 – 25 October. PhD student Meighan Boyd and Dr. Hanna Sundqvist from the Department of Physical Geography & Quaternary Geology, Stockholm University, together with Dr. Panagiotis Karkanas from the Ephoreia of Palaeoanthropology-Speleology of Southern Greece, surveyed the cave to identify speleothems which are good candidates for paleoclimate analysis. Temperature loggers and stones collecting modern calcite precipitate were left in the cave in early July, and will provide a baseline value for the climate signal seen in the cave today. These will be surveyed, adjusted, and logger data downloaded. Measurements of cave humidity, CO₂ levels, and drip rates will be taken at logger and calcite collection sites, as well as in other cave chambers as part of the monitoring program. A few samples of speleothem material from rubble piles were extracted from the cave under the supervision of the Ephoreia.
- The Swedish Research Council has approved the application "Late Quaternary Climate Variability and Vegetation Dynamics in southern Greece with 5 000 000 Swedish crowns over a 4-year-period. The application was submitted by Prof. Karin Holmgren, NEO director, in collaboration with Dr. Panagiotis Karkanas from the Ephoreia of Palaeoanthropology-Speleology of Southern Greece and Dr. Nikos Kalivitis from the University of Crete and Dr. Elin Norström. This project will improve the knowledge of patterns and drivers behind past climate and environmental variability in southern Greece, by analyses of cave speleothems and fossil lake sediments. The research will increase the spatial coverage of annual-to-millennial-scale climate data, increase the accuracy of climate interpretations in the region, and provide data to improve climate modeling scenarios which will aid sustainable development policy decisions and climate change preparedness. The information on past climate variability and vegetation dynamics retrieved from this project will be integrated with socio-cultural information from archaeological studies carried out in parallel at the same localities. This will facilitate an holistic

non-simplistic approach towards a deeper understanding of past societies adaptation strategies to a changing physical environment.

- The Magee aethalometer, operating at the Tower Library atmospheric station to monitor light absorption by aerosols and black carbon concentration, presented malfunction and was therefore packed and sent to the National Observatory of Athens in Athens for first checking. Dr. Evangelos Gerasopoulos arranged the instrument to be send to Slovenia (Aerosol D.O.O.) for repair works and standard maintenance. The instrument is expected back within January.
- The field work on Dendroclimatology, organized for the period 28 October - 11 November was cancelled and it will be realized during spring.

Education

- A telescope was purchased by the Academy of Athens (NEO budget) after consultation by NOA's experts concerning requirements etc, and was brought to NEO for evolving educational/observational activities in the field of astronomy, linked to Natura Hall. The telescope will be operated by NEO SM and experts from NOA will provide guidance through use and operation of the instrument.
- The 2nd training course in Air Pollution took place during 8 and 9/11/2012 at NEO. The course gave the chance to 16 undergraduate students from the Physics Department of the University of Patras, Greece, to:

-Be informed about the air pollution characteristics at NEO greater area (climatology, local and regional air pollution sources, extreme air pollution events)

-Trained on chemical compound and aerosol measurements at the NEO Air Pollution Laboratory and the effects on radiative transfer in the atmosphere at the Solar Radiation Measurement Station.

-Be able to process, analyze station data and present their results.

The training course developed by Assistant Professor Andreas Kazantzidis (Laboratory of Atmospheric Physics, Physics Department, University of Patras, Greece).



Figure1: Students during their visit to the Atmospheric Laboratory at NEO (left) and working at the Computer room located at the new NEO building (right).

Events

- The official inauguration of the NEO Research Station was held on Saturday October 27th in Costa Navarino, in the Greek region of Messinia, by Professor Kåre Bremer, Vice-Chancellor of Stockholm University, Professor George Contopoulos, President of the Academy of Athens, Professor Gregoris Skalkeas, President of the Biomedical Research Foundation of the Academy of Athens and Mr. Achilles Constantakopoulos, President of TEMES S.A.. The ceremony's guests of honour were the President and 1st Vice-President of the Royal Swedish Academy of Sciences, Prof. Barbara Cannon and Prof. Stefan Claesson respectively, who delivered the keynote speeches. The ceremony was also honoured by the presence of the Greek Minister of Tourism, Mrs Olga Kefalogianni, the Greek Member of the European Parliament Mrs. Rodi Kratsa-Tsagkaropoulou, the Ambassador of Sweden to Greece Mr. Håkan Malmqvist, as well as by many other prominent guests.



Figure2: Prof. Claesson, Prof. Kontopoulos, Prof. Skalkeas and Mrs. Rodi Kratsa-Tsagkaropoulou at the Inauguration ceremony.



Figure3: Mrs. Sbokou-Constantakopoulou, Mr. Malmqvist, Mr. Constantakopoulos, Mrs. Kefalogianni, Prof. Bremer and Prof. Cannon at the Inauguration ceremony.

The well-attended inauguration event included scientific sessions as well as environmental and cultural activities. All this together highlighted a successful collaboration that is already an international point of reference for scientific and educational work that will contribute to the global efforts within the research field of climate change. Within the framework of the NEO inauguration, a panel

discussion on the Mediterranean Climate and Environment was also held, that was moderated by Anders Wijkman (Senior Advisor, Stockholm Environment Institute, President of the Rome Club and former Assistant Secretary General, United Nations). Furthermore, Prof. Petros Themelis (Professor Emeritus in Archaeology at the University of Crete and head of excavations and restoration at Ancient Messini) gave a lecture on the Environment and its significance for ancient Greece.

- The 2nd NEO Research Workshop, entitled Climate and Environmental Change in the Mediterranean Region was held on 26-27 October 2012 in the NEO Research Station, Costa Navarino, Messinia, Greece. With more than 35 participants coming from several Institutes and Universities, it was an international and multi-disciplinary platform for sharing latest research results and developing new research initiatives. During the first day of the workshop the research themes included Atmospheric Science, Hydrology and Geomorphology. The second day included presentations on Past Climate and Environment. Part of the NEO related research was also presented at a poster session, which is still exhibited at the research station, and is also presented [here](#).



Figure4: Participants at the 2nd NEO Research Workshop outside the new building (left). Prof. Kåre Bremer, Vice-Chancellor of Stockholm University, at the poster session (right).

Dissemination

- NEO Station Manager met with Italian journalists on the 31 October and talked with them about NEO and the research conducted under this framework.
- NEO Station Manager, gave a short interview about NEO at the National television (ET-3).
- On 13 November, Dr. Evangelos Gerasopoulos, on behalf of the Academy of Athens, visited the Hellenic National Meteorological Service at Hellinikon premises (Athens), after invitation from the HNMS Commander. He there had the opportunity to provide a presentation to HNMS staff about NEO activities and discuss with the Commander and different section Directors about potential collaboration between NEO and HNMS, given the operation of the historic and neighboring to NEO, HNMS station at “Methoni”.
- On 7 December 2012 Jonas Henningsson, a Swedish journalist, working for Aftonbladet newspaper, visited the station and Giorgos gave him a tour around...
- NEO was advertised at the American Geophysical Union fall meeting in December 2012. The AGU Fall Meeting is the largest worldwide conference in the geophysical sciences, attracting nearly 20,000 Earth and space scientists, educators, students, and policy makers.
- A press release about NEO Inauguration was send to local (Greek and Swedish) and international media after the event. The releases, in Greek and English are available [here](#).
- A press release about "Late Quaternary Climate Variability and Vegetation Dynamics in southern Greece" research project was send to local media in Greece. The release is available [here](#).
- A new video telling the story of NEO was produced by TEMES and Pan entertainment. The video, entitled ‘The story so far’ was presented during the Inauguration ceremony and it is available [here](#).
- Two more videos were produced by Gunnar Zetterberg, Roland Fredriksson & Malin Stenberg de Serves at Stockholm University, aiming to recruit students and new partners. The videos are available [here](#).

NEO management

- The NEO management has officially taken control of the management of the new building.



Figures: NEO Research Station (even the dogs look happy)

- NEO Steering Committee was held on 29 – 30 October at TEMES offices in Athens.

Associated members

Two new associated members have joined NEO family:

- The Environmental Chemical Processes Laboratory (EPCL) of the University of Crete, running under Professor Nikolaos Mihalopoulos
- The Laboratory of Atmospheric Physics of the University of Patras (LAPUP), running under Professor Athanasios Argiriou.
- The Climatology, Climate Dynamics and Climate Change, Department of Geography - Justus Liebig University Giessen.

Upcoming

Research

- NEO will be participating in a winter intensive campaign (10 January – 10 February) focusing on the monitoring of micro-particles and their physical and chemical properties, in large cities and background locations in Greece. The experiment is organized within a THALIS project (participants: Aegean, Patras, Crete, Ioannina Universities, National Observatory of Athens, NCSR Demokritos, Georgia Tech Institute) and complements measurement performed also for a campaign by the European Monitoring and Evaluation Program (EMEP). This campaign is linked to the summer campaign ARGON (Aerosol and TRace Gases Observational Campaign at NEO, 7 June – 12 July 2012) organized by the AA and SU, to investigate and compare atmospheric composition in different seasons of the year.
- During the week 21-25 January, the atmospheric groups from SU and AA are having a working meeting at NEO on issues related to ongoing research and results, publications planning and further strategies. Instrumentation maintenance will also take place. With the opportunity of their meeting at NEO they will visit the “Methoni” meteorological station of HNMS for location/site supervision and inquiry on potential collaboration and exploitation of this National infrastructure within NEO.
- A Kick-off meeting for the project "Late Quaternary Climate Variability and Vegetation Dynamics in southern Greece" will be held at the Swedish Institute at Athens on 29 January. Karin Holmgren, Nikos Kalivitis, Takis Karkanias, Elena Xoplaki and Giorgos Maneas will attend the meeting.

Education

- The third Student Field Course at NEO will take place on 8 – 14 March 2013.
- The Botany course will take place at NEO on 20 – 27 April 2013.
- The ecohydrology course will take place at NEO on 9 – 15 June 2013.
- The Second Announcement for Bert Bolin’s summer school entitled ‘The Subtropical Frontier’ has been posted. It will take place at NEO on 23 June – 3 July.

Events

- On 7 – 10 January, a workshop is arranged for the Urban Minds steering-group in order to finalize six-year program proposals for Riksbankens Jubileumsfond (RJ) and the Knut and Alice Wallenberg Foundation. The Urban Minds project began as an idea development project (funded by MISTRA) in 2008, focused on the integration of humanities and natural science studies on the development of urbanism and climate change. The result was the book *The Urban Mind. Cultural and Environmental Dynamics*, published in 2010. From a NEO perspective Karin Holmgren and Martin Finné are actively involved in this research programme

Visits to and from NEO

- NEO management and NEO researchers attended the Colloquium on the general topic "The greenhouse effect in our planetary system" which was held at the Academy of Athens on Monday, 29 October 2012 from 09.00 am to 14.30 pm. The Colloquium was organized by The Research Center for Atmospheric Physics and Climatology of the Academy of Athens.
- On 7 November the director and the President of the Water management agency in Pylos visited the RS and discussed with Giorgos the potential of a future collaboration with NEO
- On 14 November, four Swedish living in Koroni visited the station. Giorgos saw them around and discussed about climate change and the environment of the area.
- NEO Director, Karin Holmgren, was at Messinia from 20 - 31 October and will be at NEO from 27 January to 6 February.
- During January 2013, NEO Director Karin Holmgren and NEO station manager Giorgos Maneas will have a series of meetings with researchers in Athens. Among the organized meetings the most important include:
 1. A first meeting with marine science researchers from Hellenic Center of Marine Research (HCMR) and Stockholm University (Martin Jakobsson from department of Geological Sciences)
 2. A meeting with the Rector of the University of Peloponnese