ITINERARY

08:00 Departure by bus from the Vallehermoso student housing.

09:45 Coaching session

10:00 Visit to GuMNet station EG010-Herrería.

11:15 Talks session at the Santa María del Buen Aire campsite.

13:00 Lunch time.

14:00 Guided tour to the Real Monasterio de San Lorenzo de El Escorial.

15:30 Return to Madrid by bus.

SPEAKERS

María del Mar García Herguido
Forestry Technical Engineer.
Patrimonio Nacional

Félix García Pereira
Aerospace Engineer and Master's degree in Meteorology and Geophysics student.
Technician on the GuMNet Initiative.

Íñigo Gómara
"Juan de la Cierva" Postdoctoral.
Centro de Estudios e Investigación para la Gestión de Riesgos Agrarios y Medioambientales (Ceigram) – Universidad Politécnica de Madrid.

J. Fidel González Rouco
Teacher at the Facultad de CC. Físicas.
GuMNet Initiative coordinator.
Universidad Complutense de Madrid.

Rosa María Inclán Cuartas
Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT) researcher.

Ana María Tarquis Alfonso
Centro de Estudios e Investigación para la Gestión de Riesgos Agrarios y Medioambientales (Ceigram) researcher.
Universidad Politécnica de Madrid

Luis Torres
Fundación para la Investigación del Clima (FIC)

Cristina Vegas Cañas
Graduate in Physics and Master's degree in Meteorology and Geophysics.
Technician on the GuMNet Initiative.

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Pliease, give it back to the organization.

Climate-KIC

GuMNet Project EXCURSION: An atmosphere and subsoil observatory in the Sierra de Guadarrama + Visit to the Real Monasterio de San Lorenzo de El Escorial.

July 2, 2019

From 8:00 a 16:30 h

Organizers and collaborators:

Climate-KIC is supported by the EIT, a body of the European Union

VISIT TO SOME GUMNET STATIONS IN EL BOSQUE DE LA HERRERÍA

The GuMNet (**Gu**adarrama **M**onitoring **Net**work) initiative was established as an environmental monitoring laboratory in the Sierra de Guadarrama. The main goal when installing this network was to support research studies and data dissemination and scientific knowledge related to the Sierra de Guadarrama.

During the excursion, we will see one of the GuMNet stations, EG010-Herrería, located in El Bosque de La Herrería, in El Escorial. The instrumentation of the station will be explained and we will talk about some research studies that are being carried out using atmospheric and subsoil data from this station, such as turbulent processes, soil respiration, evapotranspiration of the plant cover and its influence on the CO_2 fixation, comparison between different kinds of pastures or mountain breezes.

Some of these studies will be presented in detail in a room located at the Santa María del Buen Aire campsite, which is within El Bosque de la Herrería.

GuMNet Station EG010-Herrería (920 m. a. s. l.)

GuMNet Station EG901-Herrería/Portátil (1006 m. a. s. l.)

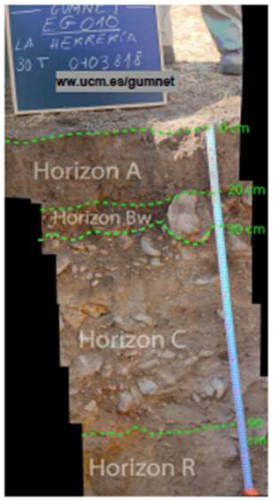
www.ucm.es/gumnet

METEOROLOGICAL STATIONS AT EL ESCORIAL [EG010-Herrería and EG901-Portable]

The EG010-Herrería GuMNet station was designed for the study of the evolution of the boundary layer by the use of wind and temperature sensors placed at 3 different heights between 0 and 10 m, range in which turbulent processes responsible for soil respiration and gas exchange take place.

This station has sensors to monitor standard meteorological variables and, in addition, it has an IRGASON that includes a sonic anemometer and a gas analyzer (for CO_2 and water vapor) that allows high frequency measurements of concentrations of these gases, wind components and temperature, as well as the calculation of turbulent flows. The EG901-Portable station has another IRGASON for the inter-comparative study of gas flows in areas with different types of vegetation.

As well as the atmosphere, the evolution of the temperature and humidity of the subsoil at EG010-Herrería is also monitored from a 2 and a 20m deep boreholes and a trench with sensors placed at 4, 20, 50 and 100 cm deep.



Trench. Soil profile at EG010-Herrería.

Some sensors at EG010-Herrería: thermo-hygrometer, IRGASON, thermometer and anemometer.

EL BOSQUE DE LA HERRERÍA

Throughout the day, we will have the chance to walk around El Bosque de La Herrería, an area where a great variety of trees coexist, such as oaks, ash trees or holm oaks, and where abundant pastures can be found in the meadows. During the visit, some of the research lines, the ecological values of the Bosque and the main management challenges will be discussed.

REAL MONASTERIO DE SAN LORENZO DE EL ESCORIAL

After the visit in El Bosque de La Herrería to the GuMNet station, a guided tour will be held at the Real Monasterio de San Lorenzo de El Escorial, a historical monument from the Spanish Golden Age of great relevance and a cultural symbol of this town located in the Sierra de Guadarrama.