# Hydrology and climate change impacts

improve projections of hydrological responses to climate change in the S Balkans, using a novel methodology combining hydro-climate modelling and palaeo-hydrological techniques – Marie Curie CLIMHYDROLAKE 2 more years to go.

work for EMS2015 in Sofia in September. Abstract submitted: 'Reconstruction of hydro-climatic changes in the S Balkans from the MedievalWarm Period to the present based on a high-resolution lake level stage record derived from beach ridge sediments of Lake Prespa'



# Forest fire and climate change impacts

Impacts of climate change on forest fire risk (Xenios E $\Sigma\Pi$ A), vulnerability assessment (FP7 C8 project ,with Cyprus Institute, 1 more year to go) C8: Consistent Computation of the Chemistry-Cloud Continuum and Climate Change

- work underway in 2 spatial contexts: global and Mediterranean.

  Impacts calculated as a function of exposure (Fire weather index) and sensitivity (flammability characteristics of vegetation): 2 papers planned
- paper published in collaboration with Cyl on: 'the role of blocking in the summer 2014 collapse of Etesians over the eastern Mediterranean' by Tyrlis, et al., JGR
- XENIOS paper published with Uni Aegean on : 'Effect of Climate Change Projections on Forest Fire Behavior and Values-at-Risk in Southwestern Greece' Kalabokidis et al., Forests.

# **Progress – climate database**

 Expand the database of regional climate model output using new results from the CORDEX/MedCORDEX database at higher horizontal resolution reaching 11km and using the new IPCC RCP scenarios of greenhouse gases

Database used and 2 models processed for the Med region



# **Progress- other papers**

 One paper summarising the impacts of climate change on ozone exceedances in Europe with several authors from institutes across Europe

Paper published in ERL (Varotsos PhD results) on : 'Is the ozone climate penalty robust in Europe '

 One paper of the climate change impacts on health for the island of Cyprus (CYPADAPT)

paper rejected in REEC, will be resubmitted elsewhere

 One paper of the climate change impacts on tourism for the island of Cyprus (CYPADAPT)

paper ready for submission

 One paper of the climate change impacts on energy demand for the island of Cyprus (CYPADAPT)

paper accepted for publication in REEC



# **Proposals progress**

 LIFE ADAPT2CLIMA proposal to investigate the impacts and adaptation potential due to climate change on Mediterranean agriculture in 3 islands: Crete, Cyprus, Sicily with the collaboration of the Regional Authorities

Proposal accepted for funding, grant agreement received, start 1/10/15 for 3 years

 LIFE URBANPROOF proposal to investigate the impacts (on health, energy, tourism) and adaptation potential of urban areas due to climate change with the collaboration of local municipalities of Lefkosia (Strovolos), Peristeri and Vicenza

Proposal rejected, to be resubmitted with amendments

• Climate Change Risk Assessment tender of the Department of the Environment in Cyprus with Cyl, ClIM, NTUA: rejected



#### **Proposals progress**

• LIFE IP proposal on climate change adaptation for several sectors of the Greek territory with  $EE\Pi\Pi$ .

To be submitted as traditional LIFE with a focus on tourism?

 Marie Curie proposal of postdoctoral research (Dr. Tyrlis) to study dynamical characteristics of the East Med climate (eg etesians) and their variations due to climate change

Rejected but will be resubmitted with Drs Kotroni and Lagouvardos

