



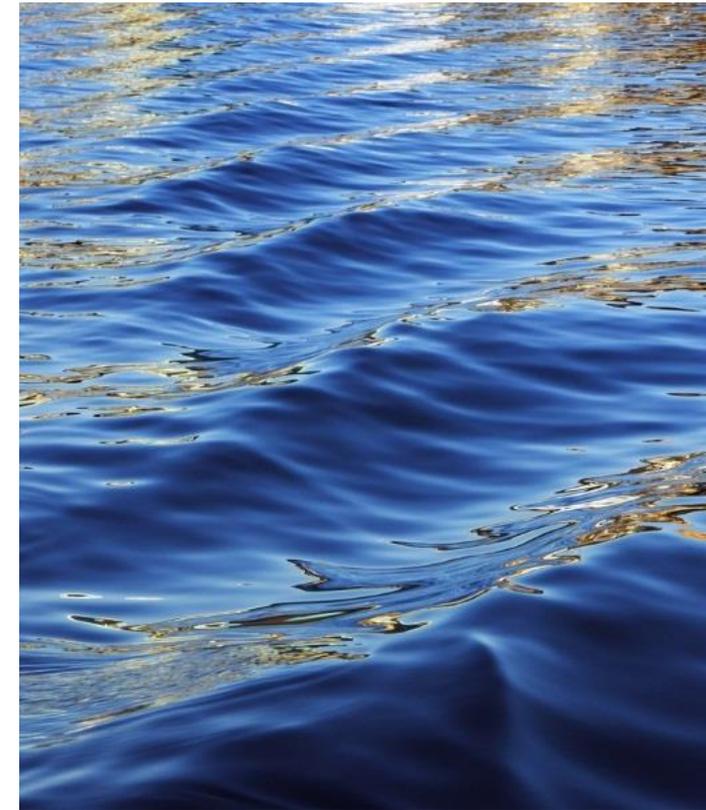
Climate Change Impacts on the MED-Agro-Food Chain



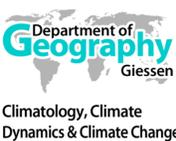


Welcome and the Way Forward

Elena Xoplaki
Dept. of Geography, JLU



VEREINIGTE HAGEL



Climatology, Climate
Dynamics & Climate Change

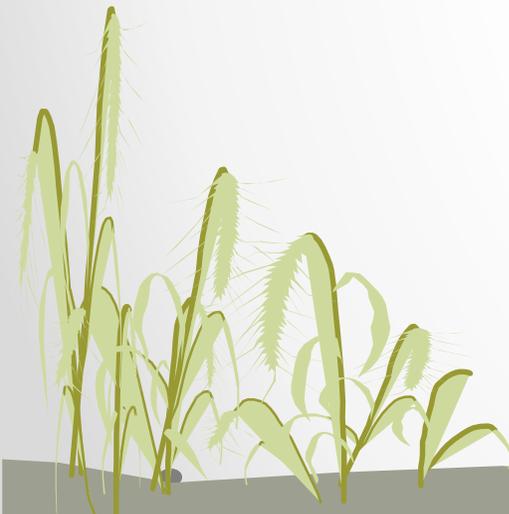
Introduction outline

- The story behind the summer school:
The Mediterranean Hot-Spot
- Why a summer school?
- What we would like to offer you and what you could offer your colleagues
- Interdisciplinarity and the “art” of talking across disciplines
- First steps into the summer school adventure
- “Agro-Food Chain Challenges in the Mediterranean”
- Guide us through the storyline



The Mediterranean Hot-Spot: Challenges and Responses in a Changing Environment

Elena Xoplaki
Department of Geography
Justus-Liebig-University Giessen



The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Aims

- Strengthening existing partnerships and initialisation of new long-lasting cooperations between JLU and AUTh in the environmental and climate sciences
- Strengthening the collaboration in research and education on various scientific topics in the frame of environmental and climate change and their impacts on societies, ecosystems, infrastructure and economy
- Improvement of the internationalisation of the German and Greek Universities
- Improvement of the working opportunities for Greek university graduates
- Improvement of the exchange possibilities of scientific staff, students, administration

The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Structure

Four interrelated and linked WPs under the umbrella thematic area of environmental and climate change and their impacts

WP1: Climate, climate change in the Mediterranean: from the past to the future
(PIs: K. Tourpali, AUTh; E. Xoplaki, JLU)

WP2: Climate change impacts in hydrology, agriculture and the natural environment
(PIs: L. Breuer, JLU; A. Mamolos, AUTh)

WP3: Socioeconomic impacts and challenges of the environmental changes
(K. Mattas, AUTh; E.-A. Nuppenau, JLU)

WP4: Coordination, dissemination, activities, collaboration
(PIs: J. Luterbacher, M. Hoehner, JLU; P. Zanis, AUTh)



The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Activities

- Block courses, summer schools on topics of common interest for both AUTh and JLU students at BSc, MSc and PhD levels, on climate, agriculture, plant sciences
- Interdisciplinary meetings and workshops @ JLU and AUTh
- Exchange visits between the two universities for students, researchers, at all levels
- E-learning, courses and seminars available online for JLU and AUTh
- ERASMUS+ agreements between all schools and departments from JLU & AUTh
- Joint research proposals
- Annual newsletters



The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Highlights 2017



Kick off meeting @JLU, 7-9 March 2017



JLU-AUTH joint excursion to Greece in the frame of the course "Climate change and impacts in Greece" @NEO, 27 September-4 October 2017



"Bridging disciplines to address the challenges and prepare responses in the Mediterranean changing environment", joint workshop @AUTH, 11-13 October 2017



"Introduction to climate methods" block course for AUTH and JLU BSc, MSc and PhD students @JLU, 19-24 October 2017

The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Highlights 2018



[Climate Dynamics](#)

September 2018, Volume 51, Issue 5-6, pp 1687-1706 | [Cite as](#)

On the ability of RCMs to capture the circulation pattern of Etesians

Authors

[Authors and affiliations](#)

Stella Dafka , Andrea Toreti, Jürg Luterbacher, Prodromos Zanis, Evangelos Tyrlis, Elena Xoplaki



“Python for Environmental Scientists” block course for JLU and ATh BSc, MSc and PhD students @JLU, July-August 2018

A joint JLU-ATh paper by Dafka et al. (2018)



Giannis Sofiadis (ATh) with the best poster prize at MedCLIVAR2018



“Climate Modelling: From Code to Simulation” block course for JLU and ATh students @JLU, 19-23 October 2018

The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Highlights 2018



Joint JLU-AUTH **Workshop**

*“Towards an
interdisciplinary approach”*



*The Mediterranean Hot-Spot:
Challenges and Responses in a
Changing Environment*

29 November 2018, 08:45

Department of Geography
Justus-Liebig-University of Giessen

Big Seminar Room, Senckenbergstr. 01
(Neues Schloss), Giessen

The Mediterranean Hot-Spot

Challenges and Responses in a Changing Environment (2017-2019)

Highlights 2019

**Block Course "Mediterranean
Weather, Climate and atmospheric
composition: Related Changes,
Impacts and Challenges in
Agriculture and Ecology"**

26-27 September 2019

Aristotle University of Thessaloniki



Climate Change Impacts
on the MED-Agro-Food Chain



INTERNATIONAL SUMMER SCHOOL
9 - 14 SEPTEMBER 2019
SCHLOSS RAUSCHHOLZHAUSEN, HESSEN, GERMANY



VEREINIGTE HAGEL



Why this summer school?

Mediterranean region and societies

- exposed to extreme weather events, economic and food crises, epidemics, social instability, political conflicts

Future climate change

- greater and unprecedented risks to human well-being, socio-economic development, ecosystems and biodiversity

Our response

- interdisciplinary, international research, improved scenarios and reliable data for adaptation, mitigation and impact studies
- ⇒ Researchers with deep knowledge of their disciplines, a broader understanding of the bigger picture, able to communicate with experts from other disciplines.

Climate Change Impacts on Food Systems

- Human induced **climate change**
- Food security
 - availability (production and trade)
 - access to food
 - stability of food supplies
 - food utilisation
- Agriculture: main water consumer
- Agro-food supply chain
 - farmers
 - ...
 - food processors
 - distributors networks



Sustainable and Resilient Agro-Food Systems

- Mediterranean agro-food systems
- Future challenges
 - growing and urbanised population
 - changing dietary needs
 - low environmental impact
- Resilient, sustainable food systems
- Food security and nutrition for all
- Future generations
- Sustainable and climate-friendly



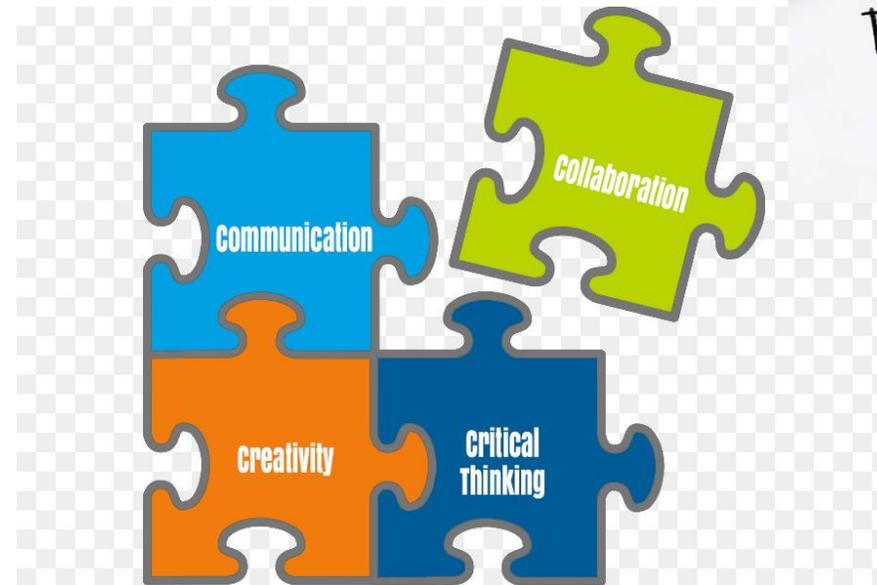
Modelling the Impacts of Climate Change

- Agricultural land pressure
- Food security risks
- Water scarcity
- Environmental sustainability
- Adaptation strategies
- Process-based plant simulation models
- Climate impact assessments
- Economic risk quantification
- Yield variability estimation



Your interests, your research, your science

- Knowledge
- Experience
- Abilities
- Questions
- Discussion
- Vision
- Passion
- Motivation
- ...



Interdisciplinarity and the “art” of talking across disciplines

- Interdisciplinary means “combining subjects together in new ways.”
Interdisciplinary means “working between different academic disciplines.”
- Interdisciplinarity is a powerful driver of knowledge creation, research and innovation

but

- Without thorough disciplinary knowledge it is not possible to conduct interdisciplinary research



Talking across disciplines

- Take time to talk with your colleagues about the meaning of their science
- When talking with people from other fields, spend some time learning about how their disciplines are similar to or significantly different from your own. As in any negotiation, start by looking for common ground.
- Take the time to develop a clear sense of how the various disciplines can contribute to the larger goal.
- When you are planning interdisciplinary work, create well-defined roles for the participants that draw upon their skill sets and different perspectives. Make sure to be mutually beneficial for the people in the project.
- Take time to decide what evidence you will collect to guide your efforts and to measure your progress toward your goals. What you want to know may be different from what your colleagues care about.
- Open your mind, open your ears and learn from the other disciplines
- Avoid jargon, use words also outside the strict meanings of your discipline
- There is no good or bad science, questions are answered with different aspects and views
- The missing puzzle might be the finding of the next discipline

First steps into the summer school adventure

- Your name
- Your home institute, university
- Your research
- Your project
- Your poster
- Exchange - communicate questions/suggestions/objections

Use 5 min to present your colleagues the science on your poster

Consider that your open question can be answered by your neighbour

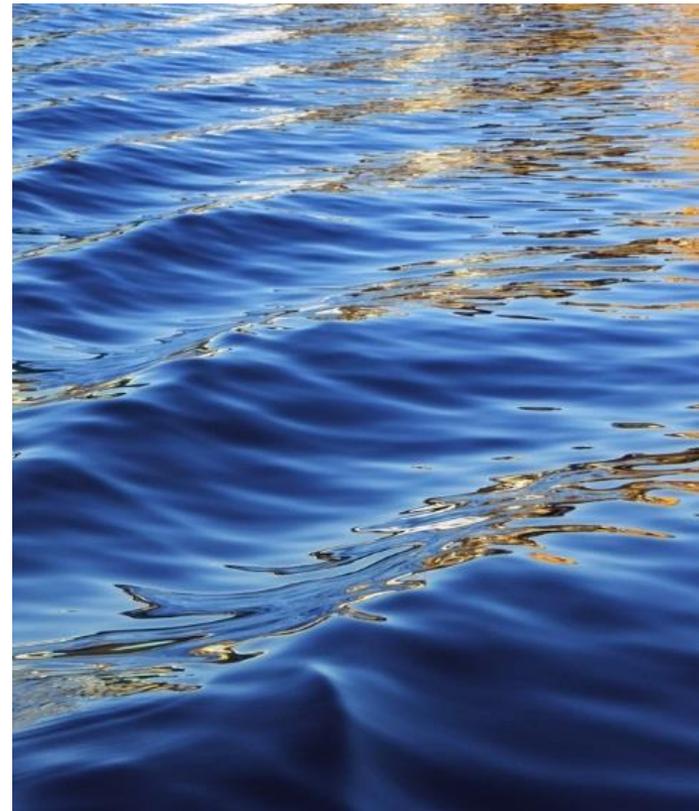
Get to know each other!





Your posters

135 min



Agro-Food Chain Challenges in the Mediterranean

- Prepare a research project under the umbrella theme “Agro-Food Chain Challenges in the Mediterranean”
- Make interdisciplinary teams of 5-6 members
- Choose your topic
- Choose an interdisciplinary topic
- Prepare the proposal for a H2020 call – Part B

Guide us through the storyline – on Saturday 14/9/2019

- Prepare your research proposals and present your storyline
- Comprehensive proposals
- Well balanced consortia
- Excellence
- Implementation
- Milestones, deliverables
- Management
- Impact
- Communication/dissemination
- Budget / workload (person months)
- ...

Reading Material & Abstracts

<https://www.uni-giessen.de/fbz/zentren/zeu/summerschool/downloads>

Benutzername: zeusummerschool

Passwort: xoplaki#19

Clustered by lecturer (on file name)

Summer_School_Abstracts.pdf

Network: ugitag

Username: wlan-rhh

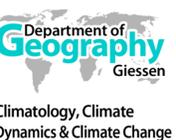
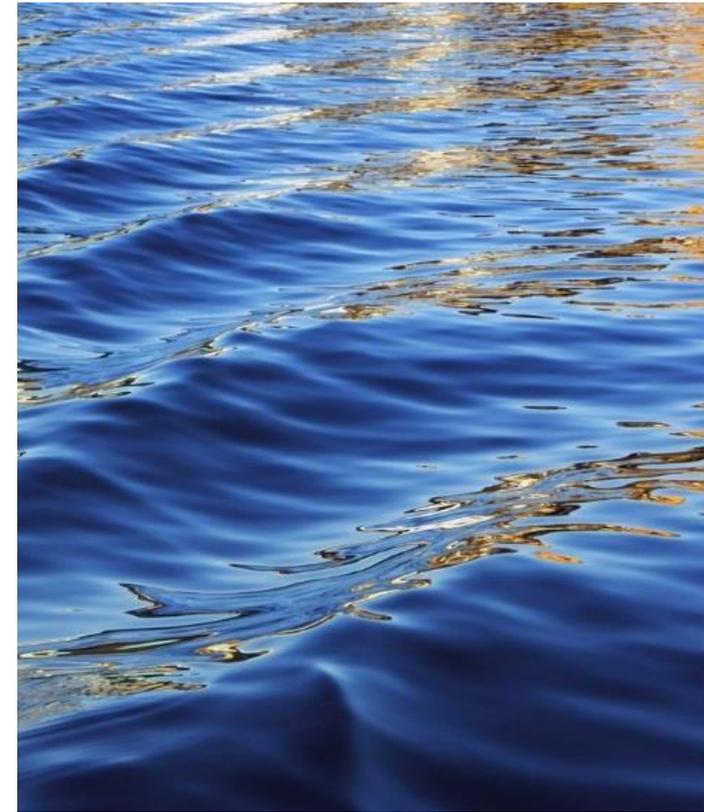
Password: 0815gastrhh



Climate Change Impacts
on the MED-Agro-Food Chain



Welcome!
Enjoy
Our Summer School!



VEREINIGTE HAGEL

Climatology, Climate
Dynamics & Climate Change