

2nd

International

AGROECO  **INFO**

Symposium

30/6/22 - 1/7/22

Park Hotel | Volos | Greece

FINAL PROGRAMME

Day 1: Thursday 30-6-2022

09:00-09:45 – Greetings

ORAL SESSIONS

1. Climate Change (09:45-11:30)

Chair-persons: *Branislava Lalic and Andreas Karamanos*

09:45-10:00	Assessment of climate change impacts on soil degradation and the performance of the principal field crops in Thessaly, central Greece - Karamanos, A.J., Voloudakis, D., Kairis, O., Kosmas, C., Kapsomenakis, J., Douvis, C., and Zerefos, C.
10:00-10:15	Adapting to a climate wildfire resilient future with proactive fuel management - Kalabokidis K., P. Palaiologou and O. Roussou
10:15-10:30	Climate change projections of crop-specific temperature- and precipitation - related indices for Greece from EURO-CORDEX simulations in the 21st century - Mavrommatis T., A.K. Georgoulas, D. Akritidis, D. Melas, P. Zanis
10:30-10:45	Evaluation of Rainwater Harvesting Systems' Efficiency for Domestic Water Needs in Greek Islands under Climate Change Scenarios – P.T. Nastos and E. Feloni
10:45-11:00	LIFE ADAPT2CLIMA tool: A decision support tool for adaptation to climate change impacts on the Mediterranean islands' agriculture-C. Giannakopoulos, A. Karali, G. Lemesios, C. Papadaskalopoulou, Konstantinos V. Varotsos, M. Papadopoulou, M. Moriondo, C. Dibari, M. Loizidou
11:00-11:15	Climate change mitigation through enhanced weathering: agricultural field trials in Greece - Evangelou, E., I. Smet, C. Tsadilas, and M. Tziouvalekas
11:15-11:30	Does changing climate in Serbia affect codling moth presence in Serbian orchards? -Marcic M. and Lalic B.
11:30-11:45	Climate change and water resources management impacts on a water-stressed agricultural watershed - Tzabiras J. and Loukas A.

COFFEE BREAK

2. Ecological Management (12:00-13:30)

Chair-persons: Pavol Nejedlik and Evangelia Golia

12:00-12:15	FAIRness of micrometeorological data and responsible research and innovation (RRI) - interplay for the future - Lalic B. and Koci I. (Invited).
12:15-12:30	Monitoring the effect of foliar application of cysteine and methionine in combination with hydrogen peroxide as potential crop boosters during low temperature regime, on optical properties of durum wheat (<i>Triticum durum</i> cv. antalis) leaves - Andriani Tzanaki, Despina Dimitriadi, Styliani N. Chorianopoulou, Dimitris Bouranis
12:30-12:45	Microalgae production using waste nutrient sources: effect on environmental impact indicators – S. Bouras, G. Kountrias, I. T. Karapanagiotidis, D. Antoniadis, D. Papanastasiou, V. Anestis, N. Katsoulas
12:45-13:00	Coping with urban soil pollution by heavy metals in Volos, Greece - P. S. C. Aslanidis, E. E. Golia, S. G. Papadimou, O. D. Kantzou, A. M. Charitodiplomenou, K. Parcharidou, M. Androudi and N. G. Tsiropoulos
13:00-13:15	Biodiversity through a diverse agrifood value chain: the BioValue project - Konstadinos Mattas
13:15-13:30	Silvopastoralism in the Mediterranean with special emphasis in Greece – A. Pantera, K. Mantzanas, V. Papanastasis, A. Papadopoulos

LUNCH

3. Environmental Hazards and Extremes (15:00-16:30)

Chair-persons: Josef Eitzinger and Dimitris Bouranis

15:00-15:15	HAZE: An Agent-Based Methodology for Dealing with Environmental Hazards in Agriculture - K. Kravari, C. Badica and A. Kravaris
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15:15-15:30	Derivation of the Z-R Relationship for an X-Band Weather Radar System, in the Region of Athens, Greece - A. Bournas, K. Lagouvardos, E. Baltas
15:30-15:45	Application of the Canadian Fire Weather Index at the Mediterranean area of Greece- N. Ntinopoulos, M. Spiliotopoulos, L. Vasiliades and N. Mylopoulos
15:45-16:00	An integrated hydrologic/hydrodynamic analysis of the Medicanne "Ianos" flood event in Pamisos river basin, Greece - Vasiliades L., P. Sidiropoulos and N. Mylopoulos
16:00-16:15	Evaluation of the performance of agrometeorological indicators in lead times of weather forecasts - Eitzinger J., Thaler S., Kubu G., Manschadi A., Palka M. and S. Schneider
16:15-16:30	A geographical analysis of wildfire fuel characteristics by cover type in Greece – P. Palaiologou, K. Kalabokidis and C. Vasilakos

COFFEE BREAK

4. Water Management for Agriculture (17:00-18:45)

Chair-persons: Athanasios Loukas and Radouan Nsiri

17:00-17:15	Water for agricultural needs A Brief History of Wastewater Reclamation and Reuse - A. Aggelakis and V. Tzanakakis (Invited)
17:15-17:30	Development of a decision support system for the irrigation and the control of Helicoverpa Armigera in Greece – D. Leonidakis, V. Papakonstantinou, N. Katsenios, C.-N. Kasimatis, E. Psomakelis, G. Mavrellis, C. Lekarakos, A. Efthimiadou
17:30-17:45	Scenario-Wise Comparison of Water Balance and Seawater Intrusion in the Coastal Agricultural Watershed of Almyros Basin in Greece. Lyra A. , A. Loukas, N. Mylopoulos, G. Tziatzios, P. Sidiropoulos, A. Alamanos, L. Vasiliades
17:45-18:00	Collective pressure irrigation networks: Monitoring and Analysis for Management improvement - N. Dercas and A. Stefopoulou
18:00-18:15	Derivation of the Z-R Relationship for an X-Band Weather Radar System, in the Region of Athens, Greece - A. Bournas, K. Lagouvardos, E. Baltas
18:15-18:30	Earth observation techniques for the assessment of water surfaces quality. A review of current methodologies - Samarinas N., M. Spiliotopoulos, D. Malamataris, N. Tziolas, G. Zalidis and A. Loukas
18:30-18:45	Water-saving irrigation practices for maize and cotton crops using the FAO Aquacrop model – P. Sidiropoulos, G. Tziatzios, M. Spiliotopoulos, I. Faraslis, N. Dercas, N.R. Dalezios

DAY 1 - POSTERS SESSIONS

Climate change projections of wheat development and yield with Ceres-Wheat over north Greece from EURO-CORDEX simulations with two calibration strategies - Nikou M., Mavrommatis T.

An easy-to-use climate service tool for the olive and wine sectors -results from the Med-Gold project - Varotsos K. V., Gratsea M., Giannakopoulos C., Alessandro Dell'Aquila; António Graça; Marta Teixeira; Natacha Fontes; Nube Gonzalez-Reviriego; Raul Marcos-Matamoros; Chihchung Chou; Marta Terrado; Federico Caboni; Riccardo Locci; Martina Nanu; Sara Porruó; Giulia Argiolas; Marta Bruno Soares; Michael Sanderson, Javier López Nevado, Silvia López Fera.

The Growing Degree Days' evolution for viticulture over the Mediterranean area via a high spatial resolution dataset. - Charalampopoulos, I, I. Polychroni, P.T, Nastos.

The use of the VIIRS active fire product for the determination of fire occurrence per land cover type and seasons for Thailand – J. Borgman, D. Stratoulis, A. Aekakkararungroj, P. Towashiraporn, N. Adaktylou.

Seasonal Standardized Precipitation Index (SPI) over the Mediterranean region - I.D. Polychroni, I. Charalampopoulos, P.T. Nastos and M. Hatzaki.

Impact of heavy metal contamination to the hydrodynamics of a layered soil sample -Angelaki A., Dionysidis A. I, Golia E.E.

Water and nutrients use efficiency in Aquaponics - Aslanidou M., Mourantian A., Levizou E., Mente E., Katsoulas N.

Monitoring urban soil pollution using bioindicators: trees and shrubs - E. E. Golia, P. S. C. Aslanidis , I. Papadopoulos , K. Kanelli , E. Argyraki , R. Vogia , Th. Arnaoutopoulou , N. Paraskevaidou , K. Varvetsioti , V. Gkinou , P. Vasilikiogiannaki.

Levels of Potentially Toxic Elements in Urban Soils of Thessaloniki (northern Greece) - E. E. Golia, P. S. C. Aslanidis , M. Androudi, M. Mamopoulos , M.L. Takatzoglou , A. Koropouli, I. Chatzisavvas, Th. Vretta , K. Livogianni , E. Tzika , O. Karadedos , M. Kontosis, C. Adamantidou.

Flood hazard modelling and mapping of the Medicane "Ianos" in Kalentzis River Basin, Greece - Vasiliades L., E. Farsirotou and A. Psilovikos.

Frost climatology over southeastern Europe via a high spatiotemporal resolution gridded dataset – Charalampopoulos I, F. Droulia, I. Tsiros.

Water Resources Management Scenarios in a Mediterranean Xirias Watershed - M. Kollaiti, A. Lyra, G. Tziatzios, P. Sidiropoulos, N. Mylopoulos, A. Loukas, L. Vasiliades.

Day 2: Friday 1-7-2022

ORAL SESSIONS

5. Digital Agriculture-Geoinformatics (9:00-11:30)

Chair-persons: *Nicolas Danalatos and Alfonso Domínguez Padilla*

9:00-9:15	The Environmental Justice Atlas: a GIS tool for Monitoring Global Environmental Justice Challenges – N. E. Adaktylou, R. E. Landenberger (Invited)
9:15-9:30	Evaluation of applying foliar fertilizers using an Unmanned Aerial Spraying Systems (UASS, drones) in a high-density olive grove based on aerial photos and NDVI mapping- A. Gertsis, S. Tsimpliaraki, I. Logotheti, K. Tsarsitalidis, A. Panagopoulos and P. Tziachris
9:30-9:45	Monitoring of broccoli crop before and after biofortification: Toward revealing potential transient stressful periods during development – D. Bouranis, E. N. Karousis, G. Stylianidis, A. Tzanaki, D. Dimitriadi, V. Siyiannis, S. Chorianopoulou
9:45-10:00	Modeling and Estimation of Actual Evapotranspiration in 3 Mediterranean agricultural areas in France, Greece, and Portugal by the aspect of the Sentinel 2 and 3 observations - Alpanakis N., G. Tziatzios, I. Faraslis, M. Spiliotopoulos, Pantelis Sidiropoulos, S. Sakellariou, A. Blanta, V. Brisimis, N.R. Dalezios, N. Dercas
10:00-10:15	Machine learning in agriculture, Petros Spachos
10:15-10:30	Development of two regional-level yield estimation systems for apple orchards and tomato fields in Azerbaijan using Sentinel - 2 imagery- S. Fountas, V. Psiroukis, P. Trojacek, I. Bakhishand A. Yashar
10:30-10:45	Impact of defoliation during the grain filling period on the yield of durum wheat in central Greece - D. Leonidakis, D. Bartzialis, K. Giannoulis, I. Gintsioudis, E. Skoufogianni and N.G. Danalatos
10:45-11:00	Smartphone and sensor-based system for Forest Management tasks - Maras J. G., Andreopoulou S. Z.
11:00-11:15	Agronomic simulation in a Mediterranean agricultural watershed. The case of Lake Karla G. Tziatzios, P. Sidiropoulos, L. Vasiliades, A. Lyra, M. Spiliotopoulos, N. Mylopoulos, A. Loukas.
11:15-11:30	Combining the use of Sentinel-2 radiance and Sentinel-3 thermal bands to retrieve actual evapotranspiration values. Application in central Spain - M. Spiliotopoulos, I. Faraslis, Alpanakis N., G. Tziatzios, I., P. Sidiropoulos, S. Sakellariou, A. Blanta, V. Brisimis, G. Karoutsos, N.R. Dalezios, N. Dercas

COFFEE BREAK

6. Ecosystems Sustainability (12:00-13:45)

Chair-persons: Anne Gobin and Fadi Karam

12:00-12:15	The role of US private land in ecosystem sustainability: a case study of the West Virginia Land Trust - R. Landenberger & N. Adaktylou (Invited)
12:15-12:30	Do the democratic regime and the magnitude of the informal economy determine human impacts on the environment - an extreme bounds analysis – A. Kampas , M. Vourvoulia
12:30-12:45	Spatial crop N management in the Thessaly plain using variable-rate technology - S. Stamatiadis , J. S. Schepers and E. Evangelou
12:45-13:00	Weather and satellite sensor data assimilation for monitoring crop performance - Anne Gobin
13:00-13:15	Micrometeorological studies in the Thrace part of Turkey – L. Şaylan
13:15-13:30	Exploring weaknesses and prospects for the sustainable rural development through smart farming technologies – E. Koutridi, O. Christopoulou
13:30-13:45	BTS signal multi-frequency passive monitoring for rainfall detection - P. Fabo, P. Nejedlik

LUNCH

7. Projects

Chair-persons: Nicolas Dercas and Tarjuelo Martín-Benito

HubIS

15:00-15:10	Open innovation Hub for Irrigation Systems in Mediterranean agriculture (HubIS): a mid-term perspective on a Research & Development project - G. Belaud, L. Mateos, S. Bouarfa, C. Leauthaud, K. Daudin, J. Leconte, A. Zairi, T. Hartani, H. Gomez-Mac Pherson, A. Hammani, M. R. do Cameira, N. Dalezios, P. Gavilan, P. Paredes, A. Kettani, I. Ferchichi, P. Vandôme
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15:10-15:20	From farm to district and basin levels: social technical and environmental efficiency of irrigation systems - The Crau case study-K. Daudin, P. Vandôme, A. Berkaoui, F. Charron, G. Belaud
15:20-15:30	Catchment-scale water accounting and quality monitoring. A Fab Lab for improving irrigation performance – D.Carretero and L. Mateos
15:30-15:40	Performance assessment of the district C3 irrigation system undergoing shifting from sprinkler irrigation to drip irrigation – A. Kettani
15:40-15:50	Innovations of “Hubis” Project to be tested at the field/basin and farm level - Sidiropoulos, P., N.R. Dalezios, N. Dercas, M. do Rosario Cameira, Paula Paredes
15:50-16:00	A participatory process for exploring sustainable groundwater management options: A case study in Northern Tunisia – I. Ferchichi,, I. Mekki, M. Elloumi, A. Zairi

16.00 – 16.15 - Discussion-questions

SUPROMED

Chair-persons: Nicolas Dercas and Tarjuelo Martín-Benito

16:15-16:30	SUPROMED project: improvement of the economic and environmental sustainability of Mediterranean agroecosystems - A. Domínguez, R. López-Urrea, R.A. Ferrer, E. Mino, N. Dalezios, D. Skepastianos, F. Karam, H. Hawwa H. Amami, R. Nsiri
16:30-16:40	Developing decision support tools for irrigation scheduling in Tunisia -Bouselmi, R. Nciri, R. Kalboussi, M. Mark Dougherty, T. Jarrahi
16:40-16:50	Setting out a Decision Support System for farmers in South Bekaa Irrigation Scheme through the involvement of SUPROMED innovative platform-F. Karam, V. Kaspard, N. Nassif, A.H. Mouneimne, C. El Hachem, S. Samaha
16:50-17:00	Remotely sensed Agroclimatic Classification and Zoning towards sustainable agriculture: the case of La Mancha Oriental (Albacete) region in Spain- I.,Faraslis, N. Alpanakis, G. Tziatzios, M. Spiliotopoulos, S. Sakellariou, P. Sidiropoulos, V. Brisimis, A. Blanta, N. Dercas, N.R. Dalezios

17:00-17:10	Sustainable production of barley in a water-scarce Mediterranean agroecosystem - J.J. Pardo, J.A. Martínez-López, R. López-Urrea, A. Martínez-Romero, J. Montero, J.M. Tarjuelo, A. Domínguez
17:10-17:20	Improvement of Key Performance Indicators in vine crop using a regulated deficit irrigation scheduling tool in a water-scarce Mediterranean agroecosystem J.A. Martínez-López, H. Martínez-López, R. López-Urrea, A. Martínez-Romero, J.J. Pardo, C. Casas – Selva, J. Montero, J.M. Tarjuelo J.M. A. Domínguez

17:20-17:30 - Discussion-questions

Closing Session 17:30 – 18:00

Chair-persons: Nicolas Dalezios and Alfonso Dominguez

Official Dinner: “FILIA GI” Restaurant, Alli Meria, Volos 21:00 – 24:00

DAY 2 - POSTERS SESSIONS

Compliance of EU Water Framework Directive by using Sentinel-2 data - O. R. Belfiore, C. Gandolfi, C. De Michele, G. D'Urso.

Monitoring of broccoli crop before and after biofortification: The use of photochemical reflection index – E.N. Karousis, G. Stylianidis, A. Tzanaki, D. Dimitriadi, S. Chorianopoulou, D. Bouranis.

Assessment of digital promotion of alternative tourism: case study of the Greek island Evia - Andreopoulou Z., Kamila M.

Impact of defoliation during the grain filling period on the yield of irrigated maize in central Greece - D. Leonidakis, D. Bartzialis, K. Giannoulis, I. Gintsioudis, E. Skoufogianni and N.G. Danalatos.

Evaluation of three gridded data sets in reproducing wheat development and yield with Ceres-Wheat model over the Mediterranean region - Liakopoulou K.S., Mavrommatis T.

Agroclimatic classification towards sustainable agriculture based on geoinformatics: the case of Sidi Bouzid region in Tunisia - Faraslis, I., N. Alpanakis, G. Tziatzios, M. Spiliotopoulos, S. Sakellariou, P. Sidiropoulos, V. Brisimis, A. Blanta, N. Dercas, N.R. Dalezios.

Monitoring crop phenology applying biophysical parameters from Sentinel-2 data. The case of Albacete region in Spain in Spain - Faraslis, I., N. Alpanakis, G. Tziatzios, M. Spiliotopoulos, S. Sakellariou, P. Sidiropoulos, V. Brisimis, A. Blanta, N. Dercas, N.R. Dalezios.

Identifying agroclimatic zoning for sustainable agriculture, using remote sensing and GIS approach: the case of Bekaa governorate in Lebanon - Faraslis, I., N. Alpanakis, G. Tziatzios, M. Spiliotopoulos, S. Sakellariou, P. Sidiropoulos, V. Brisimis, A. Blanta, N. Dercas, N.R. Dalezios.

Monitoring crop phenology applying biophysical parameters from Sentinel-2 data. The case in "Beqaa Valley" in Lebanon-Faraslis, I., N. Alpanakis, G. Tziatzios, M. Spiliotopoulos, S. Sakellariou, P. Sidiropoulos, V. Brisimis, A. Blanta, N. Dercas, N.R. Dalezios.

Modeling of actual evapotranspiration in the Mediterranean agricultural areas by the aspect of the Sentinel 2 and 3 observations. The case of Beqaa Valley in Lebanon- M. Spiliotopoulos, G. Tziatzios, I. Faraslis, N. Alpanakis , P. Sidiropoulos, S. Sakellariou, A. Blanta, V. Brisimis , G. Karoutsos, N.R. Dalezios, N. Dercas.

Actual evapotranspiration estimation in semi-arid areas using a combination of Sentinel-2 and Sentinel-3 data. The case of Sidi Bouzid, Tunisia- M. Spiliotopoulos, I. Faraslis, N. Alpanakis, G. Tziatzios, P. Sidiropoulos, S. Sakellariou, A. Blanta, V. Brisimis, G. Karoutsos, N.R. Dalezios, N. Dercas.

Practices and success factors of business models of Greek agricultural cooperatives- I. Ath. Sfougaris .

Large-scale habitat description: utilizing GIS classification tools to describe lesser kestrel foraging habitat in the eastern Thessaly plain - Christakis C., S. Sakellariou, O. Christopoulou, A. Sfougaris.

Calibration and validation of MOPECO as sustainable water management tool within South Bekaa Irrigation Scheme in Lebanon-F. Karam, N. Nassif1, A.H. Mouneimne, C. El Hachem, L. Moussawi.

Tool for irrigation scheduling in herbaceous and woody crops. Supromed project. Martínez-Romero, A., Tarjuelo J.M., López-Urrea R., Martínez-López J.A., Pardo, J.J., Montero, J.1, Montoya, F. and Domínguez A.

Remotely sensed drought assessment in agricultural ecosystems under a climate change environment (1982-2020). The case study of Albacete, Spain - Sakellariou S., Alpanakis N. , Faraslis I., Spiliotopoulos M. , Sidiropoulos P. , Tziatzios G., A. Blantam V. Brisimis, Dalezios N. & Dercas N.3.

Spatiotemporal analysis of drought/wetness extremes in the light of climate change (1982-2020). The case study of Sidi Bouzid Governorate, Tunisia - Sakellariou S., Alpanakis N. , Spiliotopoulos M. , Faraslis I., Tziatzios G., Sidiropoulos P. , Eklisiarchi P. , Tyreli V. , A. Blanta, V. Brisimis, Dalezios N. & Dercas N.

Long-term assessment of environmental extremes to enhance spatial resilience. The case of drought in Bekaa Valley, Lebanon - Sakellariou S., Alpanakis N. , Sidiropoulos P. , Tziatzios G., Faraslis I., Spiliotopoulos M. , A. Blanta, V. Brisimis, Dalezios N. & Dercas N.

Climate change adaptation: water availability in Albacete (Spain) through spatial and temporal drought analysis - Sakellariou S., Alpanakis N., Spiliotopoulos M. , Faraslis I., Tziatzios G., Sidiropoulos P. , A. Blanta, V. Brisimis, Dalezios N. & Dercas N.
Projecting the environmental extremes (wetness / drought) under climate change uncertainty. A valuable tool for spatial resilience enhancement - Sakellariou S., Alpanakis N. , Spiliotopoulos M. , Faraslis I., Tziatzios G., Sidiropoulos P., A. Blanta, V. Brisimis, Dalezios N. & Dercas N.

Assessing the future drought hazard under a framework of climate change adaptation in Beqaa Valley, Lebanon - Alpanakis N., Sakellariou S., Faraslis I., Spiliotopoulos M., Sidiropoulos P., Tziatzios G., A. Blanta, V. Brisimis, Dalezios N. & Dercas N.

Estimation of Nitrogen requirements through remotely sensed sources. The case of Albacete, Spain - Sakellariou S., Alpanakis N., Faraslis I., Spiliotopoulos M., Sidiropoulos P., Tziatzios G., A. Blanta, V. Brisimis, Dalezios N. & Dercas N.

Determination of Growth Stage-Specific Crop Coefficients (Kc) of durum wheat and oat in the region of Sidi Bouzid – Tunisia-R. Nciri, A. Bouselmi, T. Jarrahi, F. Ghdif.

Analysis of land use in Sidi Bouzid region central Tunisia – I. Mekki, R. Z. Chebbi, H. Amami, A. Touaiti, N. Taouajouti, A. Zairi.

Greece Coastline Fractal Dimension Calculation - N. Gkitsakis
Digital Climate Data Organization in Renewable Energy Policies Varvaris, Z. Andreopoulou, P. Strantzali and E. Varvari.

Day 3: Saturday 2-7-2022

9.00-13.00 Training session

Training session in the computer room of UTH (addressed to Greek farmers, technicians etc. on methodologies and tools used in SUPROMED and HubIS). This training session will be held in English and Greek languages by the corresponding scientists, who have developed these methodologies and tools (e.g., MOPECO, Fab-Labs, Irrigation models etc.) and translated in Greek by the UTH research team participating in the two PRIMA projects.