

AGROECO INFO

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

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| 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 (*Triticum durum* 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

15:15-15:30 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.
- 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 Water Resources Management Scenarios in a Mediterranean Xirias Watershed - M. Kollaiti, A. Lyra, G. Tziatzios, P. Sidiropoulos, N. Mylopoulos, A. Loukas, L. Vasiliades
- 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 Porru6; Giulia Argiolas; Marta Bruno Soares; Michael Sanderson, Javier López Nevado, Silvia López Feria

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

Does changing climate in Serbia affect codling moth presence in Serbian orchards? - Marcic M. and Lalic B.

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. Stratoulas, 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.1, 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. Vasilikogiannaki.

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

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. Tsimliaraki, 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 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
- 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

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| 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
- 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, A., A. Hammani
- 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
- 16:00-16:10 TOEV Tavropou Karditsas: A modern approach to irrigation management - Maria Koufopoulou, Eleni Alexiou and Kostas Kiourtsis
- 16.10 – 16.25 Discussion-questions**

SUPROMED

Chair-persons: Nicolas Dercas and Tarjuelo Martín-Benito

- 16:25-16:35 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

- 16:35-16:45 Developing decision support tools for irrigation scheduling in Tunisia – A.Bouselmi, R. Nciri, R. Kalboussi, M. Mark Dougherty, T. Jarrahi
- 16:45-16:55 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
- 16:55-17:05 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
- 17:05-17:15 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
- 17:15-17:25 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. Martinez-Romero, J.J. Pardo, C. Casas – Selva, J. Montero, J.M. Tarjuelo J.M. A. Domínguez
- 17:25-17:35 Effects of smart irrigation technologies on water value and the resilience of increase in energy prices: case of Supromed project in Sidi-Bouزيد (Tunisia)
Author(s): Ali Chebil and Hacib El Amami
- 17:35-17:45 Improve farming systems resilience through smart irrigation management in water limited areas: A Tunisian case study.
Author(s): Hacib El Amami, Ali Chebil, Abdelaziz Zaïri, Rim Zitouna, Insaf Mekki

17:45-18:00 Discussion- questions

Closing Session 18:00 – 18:30

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. , Ekklesiarchi 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. Ghdifi

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