Food and Agriculture Organization of the United Nations

FAO workshop in Climate and Crop modelling

Chisinau, Moldova

(December 12-16, 2022)

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Workshop's agenda and useful information

Structure

- Group of 20 participants per session (two sessions a day)
- Training focusing on hands-on exercise with a case study to work on during the last day
- Data and slides can be found in our online GitHub repository

Outcomes

- Improved understanding of climate science, climate models, and applications
- Application of crop productivity models and limitations
- Learn how to run the AquaCrop model (simplified and advanced mode)
- Learn how to interpret the results of the AquaCrop model and how to use the AquaCrop shiny app
- Learn how to use and apply AquaCrop in real case studies

Speakers

Riccardo Soldan holds a Ph.D. in Interdisciplinary Bioscience from the University of Oxford and a Master's in Crop Science. Riccardo has several years of experience in the field of ecosystem modeling. Before joining FAO in 2020, Riccardo worked at several universities, including the Brazilian Space Research Agency where he modeled soil-water fluxes in the Amazon rainforest.

Jorge Alvar-Beltrán holds a Ph.D in Environmental Sciences from the University of Florence, with an emphasis on climate-resilient crops in hot-spot regions of climate change, Burkina Faso. Prior to joining FAO in 2020, he worked for the World Meteorological Organization (WMO) to strengthen the capacities of Met Services to deliver weather-informed agricultural advisories to the last-mile.

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Workshop's agenda (two sessions a day)

DAY 1: 12th December 2022

Content	Panelists
-Welcoming remarks (15 mins) -Workshop's agenda (15 mins)	Tudor Robu Ala Druta
Climate Module 1 - Group 1: introduction to climate change -Physical science (30 min) -Socioeconomic Pathways – GCMs and RCMs (30 min)	Jorge Alvar Riccardo Soldan
COFFEE BREAK	
Crop Module 1 - Group 1: introduction to crop modelling -Installation of AquaCrop model (30min) -Introduction to AquaCrop model: climate, crop, management, and soil modules (1h)	Riccardo Soldan Jorge Alvar Gherman Bejenaru
LUNCH TIME	

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Workshop's agenda

DAY 2: 13th December 2022

Content	Panelists
Climate Module 2 - Group 1: climate data and climate science -Climate model specifications Earth System Grid Federation Node & Copernicus (1.30h)	Riccardo Soldan
COFFEE BREAK	
Crop Module 2 - Group 1: input requirements AquaCrop -Climate, crop, management, soil input requirements (30min) -Create/Import climatic files on AquaCrop (1h)	Jorge Alvar
LUNCH TIME	

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Workshop's agenda

DAY 3: 14th December 2022

Content	Panelists
Crop Module 3 - Group 1: upload data in AquaCrop -Create/upload crop, management, and soil files (1.30h)	Jorge Alvar
COFFEE BREAK	
Crop Module 4 - Group 1: simulations in AquaCrop -Interpretation of AquaCrop outputs (45min) -AquaCrop plugin and visualization of AquaCrop outputs (45min)	Jorge Alvar Riccardo Soldan
LUNCH TIME	

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Workshop's agenda

DAY 4: 15th December 2022

Content	Panelists
Crop Module 5 - Group 1: simulations in AquaCrop -Run AquaCrop simulations (45 min) -Create project files in AquaCrop (45 min)	Jorge Alvar Riccardo Soldan
COFFEE BREAK	
Crop Module 6 - Group 1: hands on-exercise -Exercise with different sowing dates and irrigation schemes (1.30h)	Jorge Alvar Riccardo Soldan
LUNCH TIME	

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DAY 5: 16th December 2022

Content	Panelists
Crop Module 6 - Group 1: hands on-exercise -Exercise (different sowing dates and irrigation schemes) (1.30h)	Riccardo Soldan Jorge Alvar Gherman Bejenaru
COFFEE BREAK	
Crop Module 6 - Group 2: hands on-exercise -Working group presentation (4 groups – 10min each) -Closing remarks	Jorge Alvar Riccardo Soldan Ala Druta
LUNCH TIME	