

# Maria Vrachioli

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## EDUCATION

- 2014 - 2018 Ph.D. in Food and Resource Economics – University of Florida, FL, USA
- 2009 - 2011 M.A. in Economics – University of Macedonia, Thessaloniki, Greece
- 2005 - 2009 B.A. in Economics – University of Macedonia, Thessaloniki, Greece

## FIELDS OF INTEREST

Production Economics; Water Economics and Policy; Natural and Resource Economics; Water Use Efficiency and Productivity; Applied Econometrics

## PROFESSIONAL EXPERIENCE

- 05/2018 - Present Postdoctoral Researcher - Agricultural Production and Resource Economics, Technical University of Munich, Germany
- 08/2015 - 04/2018 Graduate Research and Teaching Assistant - Food and Resource Economics, University of Florida, Gainesville, FL, USA
- 08/2014 – 07/2015 Research Assistant - Agricultural, Environmental and Regional Economics, Pennsylvania State University, University Park, PA, USA
- 04/2011 – 03/2014 Research Assistant - EU project: “**FADNTOOL**: Integrating Econometric and Mathematical Programming Models into an Amendable Policy and Market Analysis Tool using Farm Accountancy Data Network (FADN) Database.”

## SCIENTIFIC PAPERS

- Halytsia, O., **Vrachioli, M.**, Janik, K., Sitek, S., Wojtal, G., Imig, A., Rein, A. and Sauer, J. (forthcoming) “Assessing economic feasibility of managed aquifer recharge schemes: Evidence from cost-benefit analysis in Poland”, *Water Resources Management*.
- Rodríguez, O., **Vrachioli, M.** and Sauer, J. (2022) “Payments for environmental services and coffee production in Colombia: Technical efficiency across the world heritage status borders”, *Ecological Economics*, 200, 107531.
- Canessa, C., Vavvos, A., Triliva, S., Kafkalas, I., **Vrachioli, M.** and Sauer, J. (2022) “Implementing a combined Delphi and Focus Group qualitative methodology in Nexus research designs The case of the WEF Nexus in Apokoronas, Crete”, *PLoS ONE*, 17(7), pp. 1-24.
- Imig, A., Szabó, Z., Halytsia, O., **Vrachioli, M.**, Kleinert, V. and Rein, A. (2022), “A review on risk assessment in managed aquifer recharge”, *Integr Environ Assess Manag*, pp. 1-17.
- Kardung, M., Cingiz, K., Costenoble, O., Delahaye, R., Heijman, W., Lovrić, M., van Leeuwen, M., M'Barek, R., van Meijl, H., Piotrowski, S., Ronzon, T., Sauer, J., Verhoog, D., Verkerk, P.J., **Vrachioli, M.**, Wesseler, J.H.H. and Zhu, B.X. (2021) “Development of the Circular Bioeconomy: Drivers and Indicators”, *Sustainability*, 13, pp. 413-437.
- Gondhalekar, D., Hu, H.Y., Chen, Z., Tayal, S., Bekchanov, M., Sauer, J., **Vrachioli, M.**, Al-Azzawi, M., Patalong, H., Uhl, H.D., Grambow, M. and Drewes, J.E. (2021) “The Emerging Environmental Economic Implications of the Urban Water-Energy-Food (WEF) Nexus: Water Reclamation with Resource Recovery in China, India, and Europe”, *Oxford Research Encyclopedia of Environmental Science*.

- **Vrachioli, M.**, Stefanou S. and Tzouvelekas V. (2021) “Impact Evaluation of Alternative Irrigation Technology in Crete: Correcting for Selectivity Bias”, *Environmental and Resource Economics*, 79, pp. 551–574.
- West A.P. W., Wilson C., **Vrachioli, M.** and Grogan, A. K. (2019) Carbon payments for extended rotations in forest plantations: Conflicting insights from a theoretical model, *Ecological Economics*, 163, pp. 70-76.

## BOOK CHAPTERS

- **Vrachioli, M.** and Tzouvelekas, V. (2022) “Non-commodity (bad) outputs: Water quality”, In: Bureau, J.C. and Antón, J., *Insights Into the Measurement of Agricultural Total Factor Productivity and the Environment*, OECD Food, Agriculture and Fisheries Papers, pp. 140-154, OECD Publishing, Paris.
- Ait Sidhoum, A. and **Vrachioli, M.** (2022) “Agriculture and Sustainability” In: Brinkmann, R. (ed), *The Palgrave handbook of global sustainability*, pp. 1-23, Palgrave Macmillan, Cham.
- Ait Sidhoum, A., **Vrachioli, M.** and Sauer, J. (2021) ”Chapter 7: Agricultural mechanization and farm labor development”, in: James, Jr., H. S. (ed.), *Handbook on the Human Impact of Agriculture*, pp. 102-118, Edward Elgar Publishing.
- **Vrachioli, M.** and Stefanou S. (2021) “Water’s Contribution to Agricultural Productivity over Space”, Springer Proceedings in Business and Economics, in: Christopher F. Parmeter and Robin C. Sickles (ed.), *Advances in Efficiency and Productivity Analysis*, pp. 103-123, Springer.

## WORK IN PROGRESS

- Zhu, B., Venus, T., Vrachioli, M. and Sauer, J. “Bioeconomy Policy and Market Interactions – The Case of EU Biofuel and Bioplastic” (RR- *Journal of Cleaner Production*).
- Cortés Valderrama, G., Vrachioli, M., Benjamin, E. and Sauer, J. “Climate adapted Women’s Empowerment in Agriculture Index (clima-WEAI) as a novel approach: A Ugandan case study” (submitted to *Journal of Agricultural Economics*).
- Zhu, B., Vrachioli, M. and Sauer, J. “Biorefineries – One of the solutions to the EU’s sustainable development challenges Labour Economics” (*submitted to the Journal of Regional Studies*).
- Behrendt, L., Kolossa, S., Vrachioli, M., Abate Kassa, G., Ayenew, H., Gedrich, K., Crinot, F., Houssou, P. and Sauer, J. “Assessing the impact of a personalised application-based nutrition intervention on carbohydrate intake in rural Benin” (submitted to *Agriculture & Food Security*).
- Rodriguez, O., Vrachioli, M., Wuepper, D. and Sauer, J. “World Heritage status and Farmers’ Income: a Regression Discontinuity Design in Colombia” (RR - *European Review of Agricultural Economics*)
- Ait Sidhoum, A. and Vrachioli, M. “The role of rational decisions in technical inefficiency analysis of Spanish pig farms” (submitted to *Agricultural Economics*).
- Vrachioli, M. and Ait-Sidhoum, A. “Water in pesticide application and rational inefficiency: The case of Spanish crop producers” (draft).
- Vrachioli, M., Venus, T., Khatri-Chettri, A. and Sauer, J. “Climate-smart adaptation in India: Implications for irrigation water use efficiency” (draft).
- Bosche, F., Venus, T., Vrachioli, M., Sauer, J. and Khatri-Chettri, A. “Measuring the climate dimension of women’s empowerment in agriculture: comparative studies from Nepal” (draft).
- Vo, T., Vrachioli, M., Frick, F. and Sauer, J. “Socio-economic or environmental benefits from ponds? Deriving stakeholder preferences using analytic hierarchy process and compositional analysis” (draft).
- Capel, L., Iwanaga, T and Vrachioli, M. “Socio-economic and environmental trade-offs under climatic variability: The case of the Campaspe Basin” (draft).
- Halytsia, O., Vrachioli, M., Nivievskiy, O. and Sauer, J. “Environmental performance of Crop Producers in Ukraine: A Parametric Approach” (draft).

## CURRENT RESEARCH PROJECTS

- 01/2023 – 12/2027 Horizon Europe project: “**RETOUCH Nexus**: REsilienT water gOvernance Under climate CHange within the WEF NEXUS.”  
**Coordinator** - 3 million euros
- 11/2022 – 10/2024 DLR project: “**NetCSA-Bio**”: Weiterentwicklung des Forschungsnetzwerks zur Evaluierung klimasmarter Landwirtschaft: Integration von Biodiversität und Ökosystemerhaltung.”
- 12/2020 – 11/2024 H2020 EU project: “**Ponderful**: POND Ecosystems for Resilient FUture Landscapes in a changing climate.”
- 03/2020 – 02/2024 H2020 EU project: “**SIGMA Nexus**: Sustainable Innovation and Governance in the Mediterranean Area for the WEF Nexus”  
**Coordinator** - 1.7 million euros
- 06/2018 – 11/2022 H2020 EU project: “**BioMonitor**: Bio-based innovation for sustainable goods and services - Supporting the development of a European Bioeconomy”

## STUDENT SUPERVISION

### PhD Students

Yang Liu:	Economic and environmental assessment of the food sector dynamics in China	In progress
Gaofei Yang:	Sustainable production technology and efficiency The case of Chinese agriculture	In progress
Tien Vo:	The economic efficiency of environmental solutions for climate change adaptation and mitigation	In progress
Olha Halytsia:	Sustainable natural resource management in the agricultural sector	In progress
Orlando Rodriguez:	World heritage status as a criterion for the allocation of payments for ecosystem services at the Colombian Coffee Cultural Landscape	In progress
Benz Xinqi Zhu:	Sustainable bioeconomy development in the EU	In progress

### Master Students

Ongoing	Carlos Imery, Ericka Castellero, Bettina Benner
2022	Carolina Lopez
2021	Sam Blake, Sarfraz Hasan, Rishabh Roda
2020	Inken Andrian, Louise Capel, Carolina Gutierrez Cardona, Fredrick Boshe, Gina Gortez
2019	Dasom Kim, Jan Kaebel, Mizra Novokmet, Tiantian Wang

## TEACHING EXPERIENCE

- Instructor: *Advanced Seminar Economics & Policy: Advanced Resource Economics* (Master), Technical University of Munich, Summer 2022.
- Instructor: *Advanced Seminar Economics & Policy: Productivity, Efficiency and Risk* (Master), Technical University of Munich, Winter 2021.
- Instructor: *Introduction to Life Science Economics and Policy* (Master), Technical University of Munich, Winter 2019-2022.

- Instructor: *Economics of Water, Regulation and Markets* (Master), Technical University of Munich, Summer 2019-2022.
- Instructor: *Technology and Innovation in the Agricultural Sector – Theoretical and Empirical Approaches* (PhD), Technical University of Munich, Winter 2018-2021.
- Instructor: *Production and Resource Economics* (Master), Technical University of Munich, Winter 2018-2020.
- Instructor: *Econometrics* (Advanced Undergrad), University of Florida, Spring 2017.
- Instructor: *Mathematics Camp for Economists* (PhD), University of Florida, Summer 2016 & 2017.
- Teaching Assistant: *Math Optimization and Economic Analysis* (PhD), University of Florida, Fall 2017.
- Teaching Assistant: *Agricultural Macro* (Undergrad), University of Florida, Spring 2015 & Fall 2016.
- Teaching Assistant: *Economic Issues, Food and You* (Undergrad), University of Florida, Fall 2015.

## AWARDS

- Anthony Grano Fund grant, AAEA, 2017-2018.
- A.S. Herlong Scholarship, College of Agricultural and Life Sciences, University of Florida, 2017-2018.
- Harold B. Clark Award, Food and Resource Economics, University of Florida, 2016-2017 and 2017-2018.
- Food and Resource Economics Travel Grant for AAEA 2016 and AAEA 2017 meetings, 2016 and 2017.
- Gerondelis Foundation Scholarship, U.S.A., 2016.
- Irrigation Foundation Conference, Education & Travel Award Winner, Las Vegas NV, 2016.
- IFAS Travel Grant for AAEA 2016 meeting in Boston MA, 2016.
- Award for Excellent Academic Performance, M.A. in Economics, University of Macedonia, 2009-2011.

## PROFESSIONAL AFFILIATIONS

Agricultural and Applied Economics Association  
 International Association of Agricultural Economists  
 European Association of Environmental and Resource Economists  
 American Association of Agricultural Economists  
 European Association of Agricultural Economists  
 Agricultural Economics Society  
 International Water Resource Economics Consortium  
 Committee on Women in Agricultural Economics

## PROFESSIONAL SERVICE

Reviewer: Journal of Productivity Analysis, American Journal of Agricultural Economics, Agribusiness, Environmental and Resource Economics, Empirical Economics, Food Policy, Q Open, Agricultural Water Management, Water and Resource Economics.  
 External Reviewer for H2020 proposals.  
 Service on the OECD Network on Total Factor Productivity and Environment (2019-present).  
 External PhD Committee Reviewer for Wageningen University, Netherlands, 2019 and 2022.  
 Member, Women in Social Sciences (WiSE), University of Florida, 2015-2017.  
 President of Graduate Student Organization, Food and Resource Economics, UF, 2017 - 2018.