

Maria Vracholi

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[Website](#)

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

- 10/2021 - Present Senior Researcher and Senior Lecturer - Production and Resource Economics, Technical University of Munich, Germany
- 05/2018 - 09/2021 Postdoctoral Researcher - 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.”

CURRENT RESEARCH PROJECTS

- 09/2025 – 08/2029 Horizon Europe project: “**WATERGRID**: Nature Based Smart Water Grids for Integrated water and drought management.”
- 01/2023 – 12/2027 Horizon Europe project: “**RETOUCH Nexus**: REsilienT water gOvernance Under climate CHange within the WEFEX 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

SCIENTIFIC PAPERS

- Sidhoum, A. A., and **Vrachioli, M.** (2025). Technology adoption and assessment of eco-efficiency in water management. *Environmental Impact Assessment Review*, 112, 107799.
- Liu, Y., **Vrachioli, M.**, Li, H., Wang, Y., and Sauer, J. (2025). Sustainable water and emissions management in agriculture: The water-emissions-food nexus in China. *Resources, Environment and Sustainability*, 19, 100187.
- Halytsia, O., **Vrachioli, M.**, Nivievskiy, O., and Sauer, J. (2024) Assessing the Environmental Performance of Agricultural Production Using a Parametric Approach: An Application for Crop Producers in Ukraine. *Eastern European Economics*, 1-23.
- Halytsia, O., **Vrachioli, M.**, and Sauer, J. (2024) Assessing performance of crop producers from Water-Energy-Food-Environment Nexus perspective: A composite indicator approach. *Science of The Total Environment*, 935, 173436.
- Ait Sidhoum, A., **Vrachioli, M.**, Guesmi, B. and Gil, J. M. (2023) “The role of rational decisions in technical inefficiency analysis of Spanish pig farms: The influence of water use management”, *Resources, Conservation and Recycling*, 199.
- Vo, T., **Vrachioli, M.**, Frick, F. ... and Sauer, J. (2023) “Socio-economic or environmental benefits from pondscapes? Deriving stakeholder preferences using analytic hierarchy process and compositional data analysis”, *Journal of Environmental Management*, 342.
- Zhu, B., **Vrachioli, M.** and Sauer, J. (2023) “Regional Employment Impacts of Biorefineries in the EU”, *Eurochoices*.
- Behrendt, L., Kolossa, S., **Vrachioli, M.**, Abate Kassa, G., Ayenew, H., Gedrich, K., ... and Sauer, J. (2024). Assessing the impact of a personalised application-based nutrition intervention on carbohydrate intake in rural Benin. *Agriculture & Food Security*, 13(1), 15.
- Halytsia, O., **Vrachioli, M.**, Janik, K., Sitek, S., Wojtal, G., Imig, A., Rein, A. and Sauer, J. (2022) “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

- Ait Sidhoum, A. and **Vrachioli, M.** (2022) “Agriculture and Sustainability”. In: *The Palgrave Handbook of Global Sustainability*. Springer International Publishing.
- **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.

STUDENT SUPERVISION

PhD Students

Juan P. Henao:	Economic analysis of water governance and management alternatives within the WEFE Nexus approach	In progress
Pietro Sala:	Robust management of complex natural resource systems from an economic point of view: a WEFE NEXUS perspective	In progress
Yang Liu:	Economic and environmental assessment of the food sector dynamics in China	In progress
Gaofer Yang:	Sustainable production technology and efficiency The case of Chinese agriculture	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

Master Students

2024	Paloma Acosta Rivera, Cian Twohig, Manuel Bauder
2023	Ericka Castillero, 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

- *Advanced Seminar Economics & Policy: Advanced Resource Economics* (Master), Technical University of Munich, Summer 2022-2024.
- *Advanced Seminar Economics & Policy: Productivity, Efficiency and Risk* (Master), Technical University of Munich, Winter 2021-2025.
- *Introduction to Life Science Economics and Policy* (Master), Technical University of Munich, Winter 2019-2022.
- *Economics of Water, Regulation and Markets* (Master), Technical University of Munich, Summer 2019-2024.
- *Technology and Innovation in the Agricultural Sector – Theoretical and Empirical Approaches* (PhD), Technical University of Munich, Winter 2018-2024.
- *Production and Resource Economics* (Master), Technical University of Munich, Winter 2018-2025.
- *Econometrics* (Advanced Undergrad), University of Florida, Spring 2017.
- *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.