Tiziana Centofanti

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Website

Research and Teaching Interests

Ecosystem Restoration, Environmental Pollution, Nature-Based Solutions, Food Systems

Education

Ph.D. Environmental Sciences
Swiss Federal Institute of Technology Zurich (ETHZ), Switzerland
2001-2005

M.Sc. Agricultural Sciences (with distinction)
Marche Polytechnic University, Ancona, Italy
1998-1999

B.Sc. Agricultural Sciences
Marche Polytechnic University, Ancona, Italy
1994-1998

Employment

Assistant Professor
Dept. of Environmental Sciences and Policy, Central European University, Vienna
August 2025 -

Environmental Consultant
RTDS Group, Vienna, Austria
September 2024-July 2025

Environmental Scientist and Head of Research Division
Alchemia-nova GmbH, Vienna, Austria
2020 - 2024

Research Fellow
Environmental Social Science Research Group, Budapest, Hungary
2018 - 2021

Research Scientist
Center for Irrigation Technology, California State University Fresno (CA), USA
2012-2015

Research Scientist
Dept. of Civil and Environmental Eng., U. of Maryland, College Park (MD), USA
2007-2012

Post-doctoral Fellow
Soil and Agrifood Institute, Cranfield University, United Kingdom
2006-2007

Research Assistant
Marche Polytechnic University, Italy
1999-2001

Research consultancy/Academic visiting positions

Visiting Professor
Dept. of Environmental Sciences and Policy, Central European University, Vienna/Budapest
April 2016 - March 2025

Visiting Professor
School of Public Policy, Central European University, Vienna/Budapest
April 2017 - December 2024

Research Fellow
Center for Irrigation Technology, California State University Fresno (CA), USA
July 2020 - Present

Research Grants

SYMBIOREM (Symbiotic, circular bioremediation systems and biotechnology solutions for improved environmental, economic and social sustainability in pollution control. EU HORIZON. Advisory Board Expert and former Scientific Coordinator (until 2024), total budget €5,476,390 (2022-2026)

DIVAGRI (Revenue DIVersification pathways in Africa through bio-based and circular AGRicultural innovations). Funded by EU H2020. Scientific Coordinator (until 2024), total budget €8,956,000 (2021-2025)

Using drainage water to grow an alternative salt and boron tolerant crop-guayule- that produces natural latex and resin for the westside of the San Joaquin Valley in Central California. Funded by California Department of Water Resources. Co-investigator (with Gary Bañuelos), total budget $250,000 (2020-2022)

Greening the Margin: Building Cooperation and Public Goods among Roma and Non-Roma communities in Slovakia and Hungary. Funded by CEU ACRO Research Grant. Co-Principal Investigator (with Anand Murugesan), total budget €4,500 (2018-2019)

Integrating economic and ecological experiments to examine environmental conservation norms. Funded by CEU ACRO Research Grant.Co-Principal Investigator (with Anand Murugesan), total budget €5,000 (2016-2018)

Investigation of halophyte Salsola soda as an alternative salt-tolerant crop for phyto-management of salt-affected soils and waters high in boron and selenium. Funded by California Department of Water Resources. Co-Principal Investigator (with Gary Bañuelos), total budget $250,000 (2015-2017)

Determining nutritional quality in sustained deficit irrigated grapes. Funded by California Table Grape Commission. Co-Investigator (with Gary Bañuelos), total budget $19,000 (2013-2014)

In situ remediation of DDT and Dieldrin residues in old orchard soils at Beltsville Agricultural Research Center. Funded by U.S. Environmental Protection Agency. Co-Investigator (with Rufus Chaney), total budget $200,000 (2011-2013)

Publications

Peer-reviewed journal articles

Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Arroyo, I.S. and Wang, D. (2025). Selenium biofortification in field-grown tomatoes as affected by Stanleya pinnata-derived organic Se application, biochar and irrigation. *Journal of Agriculture and Food Research*, 102162. DOI: 10.1016/j.jafr.2025.102162

Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Arroyo, I. and Wang, D. (2025). Selenium biofortification and growth of onions as affected by Se application, biochar and irrigation. *Journal of Food Composition and Analysis*, 140, 107217. DOI: 10.1016/j.jfca.2025.107217

Bañuelos, G.S., Centofanti, T., Zambrano, M.C., Vang, K. and Lone, T. (2022). Salsola soda as selenium biofortification crop under high saline and boron growing conditions. *Frontiers in Plant Science*, 13, 996502. DOI: 10.3389/fpls.2022.996502

Centofanti, T., Murugesan A. (2022). Leader and citizens participation for the environment. Experimental evidence from communities in Eastern Europe. *Journal of Behavioral and Experimental Economics*, 100, 101915. DOI: 10.1016/j.socec.2022.101915

Balasz, B., Kelemen, E., Centofanti, T., Vasconcelos, M. W., Ianetta, P. M. (2021). Integrated policy analysis to identify transformation paths to more-sustainable legume-based food and feed value-chains in Europe. *Agroecology and Sustainable Food Systems*, 45(6), 931–953. DOI: 10.1080/21683565.2021.1884165

Balázs, B., Kelemen, E., Centofanti, T., Vasconcelos, M.W., Iannetta, P.P.M. (2021). Policy Interventions Promoting Sustainable Food- and Feed-Systems: A Delphi Study of Legume Production and Consumption. *Sustainability*, 13(14), 7597. DOI: 10.3390/su13147597

Zhu H., Bañuelos G.S., Centofanti T. (2019). Feasibility of growing halophyte agretti (Salsola soda) as an alternative boron-tolerant food crop in unproductive boron-laden regions. *Plant and Soil*, 445, 323–334. DOI: 10.1007/s11104-019-04280-x

Centofanti T., Bañuelos G.S., Ayars J.E. (2019). Fruit nutritional quality under deficit irriga-

tion: the case of table grapes in California. *Journal of the Science of Food and Agriculture*, 99(5), 2215–2225. DOI: 10.1002/jsfa.9415

Centofanti T., Bañuelos G.S., Wallis C. E. (2018). Fruit quality of pomegranate grown in arid environment and irrigated with saline water. *Sustainable Water Resources Management*, 4(4), 951–964. DOI: 10.1007/s40899-017-0191-7

Centofanti T., Bañuelos G.S., Wallis C. E., Ayars J.E. (2017). Deficit irrigation strategies and their impact on yield and nutritional quality of pomegranate fruit. *Fruits*, 72(1), 47–54. DOI: 10.17660/th2017/72.1.5

Centofanti T., McConnell L.L., Chaney R.L., Beyer N.W., Davis A.P., Jackson D. (2016). Assessment of trace element accumulation by earthworms in an orchard soil remediation study using soil amendments. *Water, Air & Soil Pollution*, 227, 350. DOI: 10.1007/s11270-016-3055-0

Centofanti T., Andrade N.A., McConnell L.L., Chaney R.L., Hapeman J.C., Torrents A., Beyer N.W., Nguyen A., Anderson M.O., Novak J.M., Jackson D. (2016). Organic amendments for risk mitigation of organochlorine pesticide residues in old orchard soils. *Environmental Pollution*, 210, 182–191. DOI: 10.1016/j.envpol.2015.11.039

Centofanti T., Bañuelos G.S. (2015). Evaluation of the halophyte Salsola soda as alternative crop for saline soils high in selenium and boron. *Journal of Environmental Management*, 157, 96–102. DOI: 10.1016/j.jenvman.2015.04.005

Centofanti, T., Sayers, Z., Davis, A.P., Sicher, R.S., Cabello-Conejo, M.I., Kidd, P.S., Kakei, Y., Nishizawa, N.K., Chaney, R.L. (2013). Xylem composition and root-to-shoot Ni translocation in Alyssum species. *Plant and Soil*, 373, 59–75. DOI: 10.1007/s11104-013-1782-1

Cabello-Conejo, M.I., Centofanti, T., Kidd, P.S., Prieto-Fernandez, A., Chaney, R.L. (2013). Evaluation of plant growth regulators to increase Ni phytoextraction by Alyssum species. *International Journal of Phytoremediation*, 15(4), 365–375. DOI:10.1080/15226514.2012.702806

Centofanti, T., Siebecker, M.G., Chaney, R.L., Davis, A.P., Sparks, D.L. (2012). Hyperaccumulation of nickel by Alyssum corsicum is related to solubility of Ni mineral species. *Plant and Soil*, 359, 71–83. DOI: 10.1007/s11104-012-1176-9

Centofanti, T., Tappero, R.V., Davis, A.P., Chaney, R.L. (2011). Chelator-buffered nutrient solution is ineffective in extracting Nickel from seeds of Alyssum. *International Journal of Phytoremediation*, 13(5), 434–440. DOI: 10.1080/15226514.2010.483264

Chaney, R.L., Fellet, G., Torres, R., Centofanti, T., Green, C.E., Marchiol, L. (2009). Using chelator-buffered nutrient solution to limit Ni phytoavailability to the Ni-hyperaccumulator Alyssum murale. *Northeastern Naturalist*, 16(Special Issue 5), 215–222. DOI: 10.1656/045.016.0517

Fellet, G., Centofanti, T., Chaney, R.L., Green, C.E. (2009). NiO(s) (bunsenite) is not available to Alyssum species. *Plant and Soil*, 319, 219–223. DOI: 10.1007/s11104-008-9863-2

Centofanti, T., Hollis, J.M., Blenkinsop, S., Fowler, H.J., Truckell, I., Dubus, I.G., Reichenberger, S. (2008). Development of agro-environmental scenarios to support pesticides risk assessment in Europe. *Science of the Total Environment*, 407, 574–588. DOI: 10.1016/j.scitotenv.2008.08.017

Centofanti, T., Flühler, H., Frossard, E. (2007). Time-dependent distribution of surface-applied radionuclides and their recovery in maize during the growing season. *Journal of Environmental Quality*, 36, 280–290. DOI: 10.2134/jeq2006.0056

Centofanti, T., Frossard, E. (2006). Uptake and translocation of 134Cs by maize roots as affected by heterogeneous distribution of 134Cs. *Plant and Soil*, 284, 293–303. DOI:

10.1007/s11104-006-0048-6

Centofanti, T., Penfield, R., Albrecht, A., Pellerin, S., Flühler, H., Frossard, E. (2005). Is the transfer factor the relevant tool to assess the soil-to-plant transfer of radionuclides under field conditions? *Journal of Environmental Quality*, 34, 1972–1979. DOI: 10.2134/jeq2004.0412

Book Chapters

Vasconcelos, M.W., Grusak, M.A., Pinto, E., Gomes, A., Ferreira, H., Balazs, B., Centofanti, T., Ntatsi, G., Savvas, D., Karkanis, A., Williams, M. (2020). The Biology of Legumes and Their Agronomic, Economic, and Social Impact. *In*: The Plant Family Fabaceae. Hasanuzzaman, M., Araujo, S. and Gill, S.S. (eds.) Springer, Singapore. DOI: 10.1007/978-981-15-4752-2$_1$

Centofanti, T., Bañuelos, G.S. (2019). Practical uses of halophytic plants as a source of food and fodder. *In*: Halophytes and Climate Change: Adaptive Mechanisms and Potential Uses. Hasanuzzaman, M., Shabala, S. and Fujita, M. (eds.) CABI, Wallingford, UK. pp. 324–342. DOI: 10.1007/978-981-97-3157-2$_1$5

Centofanti, T. (2015). Phytoextraction of trace metals – principles and applications. *In*: Environmental Sustainability: the role of green technology. Thangavel, P. and Sridevi, G. (eds.) Springer Publishing, New York, USA. pp. 217–227. DOI: 10.1007/978-81-322-2056-5$_1$3

Chaney, R.L., Broadhurst, C.L., Centofanti, T. (2010). Phytoremediation of soil trace elements. *In*: Trace Elements in Soils. Hooda, P.S. (ed.) John Wiley & Sons, Ltd., Chichester, UK. pp. 311–339. DOI: 10.1002/9781444319477.ch14

Multimedia

Centofanti T., Bañuelos G.S., Wallis C., Ayars J.E. 2015. Deficit irrigation: is it impacting yield and nutritional quality of fruits? *New Ag International Magazine*, English edition, March-April 2015, pp: 54-56. *Invited paper.*

Kohkha S. October 20, 2014. Drought-stressed crops may be better for you. The California Report Statewide Radio Program/KQED Public Radio. *Invited interview.*

Mentoring and Supervision

Supervised Master's students in Environmental Sciences and Public Policy at CEU (2017–2022)
Mentored undergraduate interns through national programs (USDA, ACS, 2014)
Trained research assistants in laboratory settings (California State University Fresno, 2012–2015)
Hosted visiting Ph.D. students for research stays (2008, 2010)

Teaching

Central European University, Austria
Introduction to Environmental Sustainability (2025) Undergraduate
Global Environmental Change, Health, and Policy (2019, 2022-2025) Undergraduate

Introduction to Quantitative Methods (2025) Graduate
Green Technologies for Environmental Pollution (2025) Graduate
Introduction to Circular Economy (2023, 2024, 2026) Graduate
Environmental Pollution and Biological Remediation Methods (2016-2024) Graduate
Agroecology and Organic Farming Systems (2018, 2019, 2020, 2022, 2023) Graduate
Food Policy and Politics (2018, 2019, 2020) Graduate
Science, Society, and Environmental Policy (2017 & 2018) Graduate

Szent István University, Hungary
Environmental Management (co-taught with György Végvári) (2016) Graduate

California State University Fresno, USA
Plant Nutrition and Soil Chemistry (co-taught with Gary Bañuelos) (2014) Graduate