

Professor Meryem Beklioğlu

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Education & Experience

I received my PhD degree from Environmental and Evolutionary Biology Department, the University of Liverpool, UK, in Freshwater Ecology "Whole Lake and Mesocosm Studies on the Role of Nutrients and Zooplankton Grazing in a system of Shallow and Deep lakes". She did two short post docs in 1996 and 1997 in Liverpool Univ., UK, and Freshwater Research Institute, Denmark, respectively.

Onward 1997, she has been employed at Middle East Technical University, Ankara, Türkiye and she has founded the Limnology Laboratory and since then she has been heading the laboratory. Her research focuses on ecological structure, function, and diversity of lake and pond ecosystems, which are hotspots for maintaining biodiversity, ecosystem functions and processes. Our research aims to understand the impact of global changes (e.g., climate change, land and water uses, eutrophication, salinization, brownification) on lake and pond ecosystems through funding obtained from international (EU-Framework and Horizon 2020) and national projects. The impact of these drivers was investigated using multiple approaches on-land and in-situ mesocosm experimental systems to develop a mechanistic understanding of ecosystem processes (Please see METU-Mesocosms System I and II). Long-term ecological monitoring has also been employed in our research, providing high temporal resolution. When combined with the "space for time substitute" approach, the increased spatial resolution allows for a comprehensive understanding of the impact of global changes on ecosystem structure, function, and diversity. Modeling and paleoecology approaches are also implemented in our research when necessary.

Onward 2019, she has actively been involved in Saline lakes research especially the impact of freshwater salinization on ecosystem structure, function and diversity. METU Mesocosms System II specifically focuses on experiments on saline lakes. Dr. Beklioğlu is also the founder and the leader of the Centre for Ecosystem Research at METU that focuses on research on different ecosystems and in there she has been coordinating the research on aquatic ecosystems.

Five Representative Publications

David Cunillera-Montcusí, **Meryem Beklioğlu**, Miguel Cañedo-Argüelles, Erik Jeppesen, Robert Ptacnik, Cihelio A. Amorim, Shelley E. Arnott, Stella A. Berger, Sandra Brucet, Hilary A. Dugan, Miriam Gerhard, Zsófia Horváth, Silke Langenheder, Jens C. Nejtgaard, Marko Reinikainen, Maren Striebel, Pablo Urrutia-Cordero, Csaba F. Vad, Egor Zadereev, Miguel Matias, Freshwater salinisation: a research agenda for a saltier world, Trends in Ecology & Evolution, Volume 37, Issue 5, 2022, Pages 440-453, ISSN 0169-5347, <https://doi.org/10.1016/j.tree.2021.12.005>.

E Jeppesen, **M Beklioğlu**, K Özkan, Z Akyürek. **2020**. Salinization increase due to climate change will have substantial negative effects on inland waters: a call for multifaceted research at the local and global scale. The Innovation, 1 August, 1-2. <https://doi.org/10.1016/j.xinn.2020.100030>

Özkan, K.; Korkmaz, M.; Amorim, C.A.; Yılmaz, G.; Koru, M.; Can, Y.; Pacheco, J.P.; Acar, V.; Çolak, M.A.; Yavuz, G.C.; et al. Mesocosm Design and Implementation of Two Synchronized Case Study Experiments to Determine the Impacts of Salinization and Climate Change on the Structure and Functioning of Shallow Lakes. *Water* 2023, *15*, 2611. <https://doi.org/10.3390/w15142611>

Gültekin Yılmaz, Mehmet Arda Çolak, İbrahim Kaan Özgencil, Melisa Metin, Mustafa Korkmaz, Serhat Ertuğrul, Melisa Soyluer, Tuba Bucak, Ü. Nihan Tavşanoğlu, Korhan Özkan, Zuhale Akyürek, **Meryem Beklioğlu**, and Erik Jeppesen (2021). Decadal changes in size, salinity, waterbirds, and fish in lakes of the Konya Closed Basin, Turkey, associated with climate change and increasing water abstraction for agriculture, *Inland Waters*, 11:4, 538-555, doi: 10.1080/20442041.2021.1924034

Çolak, M.A.; Öztaş, B.; Özgencil, İ.K.; Soyluer, M.; Korkmaz, M.; Ramírez-García, A.; Metin, M.; Yılmaz, G.; Ertuğrul, S.; Tavşanoğlu, Ü.N.; Amorim, C.A.; Özen, C.; Apaydın Yağcı, M.; Yağcı, A.; Pacheco, J.P.; Özkan, K.; **Meryem Beklioğlu**, Jeppesen, E.; Akyürek, Z. Increased Water Abstraction and Climate Change Have Substantial Effect on Morphometry, Salinity, and Biotic Communities in Lakes: Examples from the Semi-Arid Burdur Basin (Turkey). *Water* 2022, *14*, 1241. <https://doi.org/10.3390/w14081241>

Candidate's Statement

I am involved in salt lake research just recently. My first experience with ISSLR was being the local organizer of the 15th ICSSLR which was held at Antalya, Türkiye in 2025. We are now a team of scientists who are actively focusing on freshwater salinization as a research topic. Members of ISSLR are very welcoming and inspiring to research together, they have invited me to be the part of the board.