

İREM DALOĞLU ÇETİNKAYA

Boğaziçi University
Hisar Campus, HKC – 206
Bebek 34342, Istanbul, Turkey

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<https://orcid.org/0000-0002-9456-4610>

EDUCATION

2013 University of Michigan, Ann Arbor, Michigan, USA

PhD in Resource Ecology and Management

Dissertation Title: An Integrated Social and Ecological Model: Impacts of Agricultural Conservation Practices on Water Quality

Advisors: Prof Donald Scavia & Prof Joan I. Nassauer

Committee members: Prof Maria Carmen Lemos, Dr. Rick Riolo

2008 Northeastern University, Boston, Massachusetts, USA

MS in Engineering Management

2005 Middle East Technical University, Ankara, Turkey

BS in Geological Engineering

PROFESSIONAL APPOINTMENTS

Feb 2018 – present	Assistant Professor	Boğaziçi University
June 2015 – Feb 2018	Instructor	Boğaziçi University
Sep 2014 – May 2015	Part-time Instructor	Boğaziçi University
Dec 2013 – Aug 2014	Research Fellow	University of Michigan, Ann Arbor
Sep 2008 – May 2013	Research Assistant	University of Michigan, Ann Arbor

RESEARCH INTERESTS

- Modeling social ecological systems
- Impacts of human activities on sustainability of natural resources
- Impacts of climate change on freshwater social ecological systems

PUBLICATIONS

Daloğlu, I., Cho, K.H., Scavia, D. 2012. Evaluating causes of trends in long-term dissolved reactive phosphorus to Lake Erie. *Environmental Science and Technology*. DOI: 10.1021/es302315d

A.M. Michalak, E. Anderson, D. Beletsky, S. Boland, N.S. Bosch, T.B. Bridgeman, J.D. Chaffin, K.H. Cho, R. Confesor, **I. Daloğlu**, J. DePinto, M.-A. Evans, G.L. Fahnenstiel, L. He, J.C. Ho, L. Jenkins, T. Johengen, K.C. Kuo, E. Laporte, X. Liu, M. McWilliams, M.R. Moore, D.J. Posselt, R.P. Richards, D. Scavia, A.L. Steiner, E. Verhamme, D.M. Wright, M.A. Zagorski. 2013. Record-setting algal bloom in Lake Erie caused by agricultural and meteorological trends consistent with expected future conditions. *Proceedings of the National Academy of Sciences*. www.pnas.org/cgi/doi/10.1073/pnas.1216006110

Scavia, D., J. D. Allan, K. K. Arend, S. Bartell, D. Beletsky, N. S. Bosch, S. B. Brandt, R. D. Briland, **I. Daloğlu**, J. V. DePinto, D. M. Dolan, M. A. Evans, T. M. Farmer, D. Goto, H. Han, T. O. Höök, R. Knight, S. A. Ludsin, D. Mason, A.

M. Michalak, R. P. Richards, J. J. Roberts, D. K. Rucinski, E. Rutherford, D. J. Schwab, T. Sesterhenn, H. Zhang, Y. Zhou. 2014. Assessing and addressing the re-eutrophication of Lake Erie: Central Basin Hypoxia. *Journal of Great Lakes Research*. <http://dx.doi.org/10.1016/j.jglr.2014.02.004>

Daloğlu, I., Nassauer, J.I., Riolo, R., Scavia, D. 2014. An integrated social and ecological modeling framework – Impacts of agricultural conservation practices on water quality. *Ecology and Society* 19(3): 12. <http://dx.doi.org/10.5751/ES-06597-190312>

Daloğlu, I., Nassauer, J.I., Riolo, R., Scavia, D. 2014. Development of a farmer typology of agricultural conservation behavior in the American Corn Belt. *Agricultural Systems* 129, 93-102. ,

Marangoz, D., **Daloğlu, I.** (2022). Development of a water security index incorporating future challenges. In W.L. Filho and E.Manolas (Ed). *World Sustainability Series: Climate Change in the Mediterranean and Middle East Region*. SpringerLink.

Daloğlu Cetinkaya, I., Yazar, M., Kılınc, S., Güven, B. (2022). Urban Climate Resilience and Water Insecurity in Cities: Evidence from Future Scenarios on Water Supply and Demand in Istanbul. *Urban Water Journal* [10.1080/1573062X.2022.2066548](https://doi.org/10.1080/1573062X.2022.2066548)

Daloğlu Cetinkaya, I., İlhan A. (2022). Sürdürülebilir Su Kaynakları Yönetimi. In A. Bilgin and B. Gökçır (Ed). *Çevre Diplomasisi*. İmge Yayınevi

PRESENTATIONS

Daloğlu Cetinkaya, I., Uygur, I., Saysel, A.K, Yoloğlu, O.C., Coptı, N.K. (2022) Groundwater use in a semi-arid area: Governance of an overexploited resource. SustainValencia – Achieving sustainable groundwater management: Promising solutions and unresolved challenges. Valencia, Spain. 6-8 October 2022.

Yoloğlu, O.C., Coptı, N. K., Tunca, M. C., **Daloğlu Cetinkaya, I.**, Saysel, A. K. (2022). Regional-Scale Modeling of Surface-Subsurface Flow: The Konya Closed Basin Case Study. 7th IAHR Europe Congress. Athens, Greece. 7-9 September 2022

Yoloğlu, O.C., Coptı, N. K., Uygur, İ, Tunca, M. C., Bal, E., Yetiştı, B., **Daloğlu Cetinkaya, I.**, Saysel, A. K. (2022). Coupled Surface-Subsurface Hydrological Model for the Estimation of Net Recharge of the Konya Closed Basin, Turkey. 14th International Conference on Geostatistics for Environmental Applications GeoEnv. Parma, 20-22 June

Jomaa,S., Ben-Salem, N., Chávez, R., Reinecke, R., Varouchakis, E., Silva, J.V., Ceseracciu, C., Nguyen, T.P.L., **Daloğlu Cetinkaya, I.**, Saysel, A.K.,Coptı, N.K., Rouhani, A., Oueslati, M., Mino, E., Karatzas, G.P., Roggero, P.P., Rode, M., and Gómez-Hernández, J.J.: Inclusive and resilient groundwater assessment towards sustainable development in the Mediterranean region. XIth Scientific Assembly of the International Association of Hydrological Sciences (IAHS 2022). 29 May- 3 June 2022. Montpellier, France.

Jomaa, S., Reinecke, R., Ben-Salem, N., Silva, R., Varouchakis, E., Silva, J.V., Ceseracciu, C., Nguyen, T.P.L., **Daloğlu Cetinkaya, I.**, Saysel, A.K., Coptı, N.K., Karatzas, G., Trichakis, Y., Pasqui, M., Heggy, E., Maurizi, S., Roggero, P.P., Rode M., and Gómez-Hernández, J.J.. Multidisciplinary joint-force efforts towards science-based management in the Mediterranean region: A particular focus on transboundary aquifers. ISARM 2021 – Transboundary Aquifers: Challenges and the way forward. 6-9 December 2021. Online

Erkol, I., **Daloğlu Cetinkaya, I.** Büyük Menderes Havzası'nda iklim değişikliğinin su bütçesi üzerinde etkileri: farklı iklim modelleri ve yanlılık düzeltme yöntemleri. 14. Ulusal ve 2. Uluslararası Çevre Mühendisliği Kongresi. 9-11 Aralık 2021.

Uygur, İ., **Daloğlu Cetinkaya, I.**, Saysel, A.K., Çumra-Karapınar bölgesinde yer altı suyu kaynaklarının tarımsal arazi kullanımına bağlı değişiminin sistem dinamiği yaklaşımıyla incelenmesi. 8. Uluslararası KOP Bölgesel Kalkınma Sempozyumu. 26-28 Eylül 2021. Çevrimiçi

Marangoz, D., **Daloğlu Cetinkaya, I.** Development of a water security index incorporating future challenges in the Aegean Coast. Water Security and Climate Change Conference. Hanoi, Vietnam. March 1-4, 2021

Kılınc, S., **Daloğlu Cetinkaya, I.**, Güven, B. Scenario-based analysis of climate change and urban dynamics' impact on water supply and demand. Water Security and Climate Change Conference. Hanoi, Vietnam. March 1-4, 2021

Copt, N. K., Gacal, F., Saysel, A. K., **Daloğlu, I.**, Yetisti, B., Aydın Sarikurt, D. Assessment of Improvements in Air Quality Related to an Increase in the Share of Renewable Energy in Turkey's Electricity Mix. Istanbul Policy Center – The Institute for Advanced Sustainability Studies COBENEFITS Conference, Istanbul, Turkey, November 13, 2019.

Kılınc, S., **Daloğlu, I.**, Güven, B., Çöllü, K., Kurnaz, M.L. How vulnerable is Istanbul's water supply under the changes in climate and urban dynamics. 1st International Conference on Water Security, Toronto, Canada. June 17-20 2018.

Akdoğan, Z., **Daloğlu, I.**, Güven, B. Multi-criteria decision analysis application in watershed management: A review. 1st International Conference on Water Security, Toronto, Canada. June 17-20 2018.

Michalak, A.M., Scavia, D., Steiner, A., Moore, M., LaPorte, E., Anderson, E., Beletsky, D., Bosch, N., Bridgeman, T.C., Cho, K., **Daloğlu, I.**, Depinto, J.V., Evans, M.A., Fahnenstiel, G., Ho, J., Johengen, T., McWilliams, M., Posselt, D., Richards, P., Ruberg, S.A., Schwab, D.J., and Wright, D. *The 2011 Algal Bloom in Lake Erie: A Conceptual Model of an Extreme Event*. 55TH Annual conference of the International Association for the Great Lakes Research, Cornwall, Ontario, Canada. May 13-17, 2012.

Daloğlu, I. and Nassauer, J.I. *An Integrated Social and Ecological Modeling Approach to the Impacts of Agricultural Conservation Practices on Water Quality*. Invited participant to OECD Trade and Agriculture Directorate Cooperative Research Programme funded workshop 'Pathways towards policy integration for sustainable agricultural landscape systems', Copenhagen, Denmark. September 2-3, 2011.

Daloğlu, I., Nassauer, J.I., Scavia, D. *An Integrated Social and Ecological Modeling Approach to the Impacts of Agricultural Conservation Practices on Water Quality*. Annual Meeting of the American Association for the Advancement of Science, Washington, D.C. February 17-21, 2011.

Daloğlu, I. Nassauer, J.I., Riolo, R. *Agent-based modeling approach to spatial diffusion of adoption in an agricultural context*. Global Land Project Open Science Meeting 2010: Land Systems, Global Change, and Sustainability, Phoenix, Arizona. October 17-19, 2010.

Benli, B., Uras, A., **Daloğlu, I.** *Integrated Water Resources Management as a Practical Approach to Climate Change Adaptation*. Proceedings of World Water Week, Responding to Global Changes: Accessing Water for the Common Good, Stockholm, Sweden. August 16-22, 2009.

EDITED COLLECTIONS, REPORTS and OTHER PUBLICATIONS

Daloğlu Cetinkaya, I. 2020. İklim krizi neslimizin belirleyici sorunudur. İstanbul Kadın Müzesi, Kız Çocukları ve İklim Krizi – Bana Bırakacağınız Gelecek.

Coptý, N.K., Gacal, F., Saysel, A.K., **Dalođlu, I.**, Yetiřti, B., Aydın Sarıkurt, D., Çađlayan, Ç. 2020. Improving people’s health and unburdening the health system through renewable energy in Turkey. Assessing the co-benefits of decarbonising the power sector. COBENEFITS Report. Potsdam/Istanbul. www.cobenefits.info

Dalođlu Cetinkaya, I. 2018. CO₂ – Suyu ısınan dünya. BÜMED Bođaziçi Üniversitesi Mezunlar Derneđi Yayını. Mayıs -Haziran 2018, Sayı 236.

Dalođlu, I.; Rajkovich, N.B., Clancy, T., Cheng, S., Vickers, B., Kornberg, D. and Morrell, E. editors. 2013. Michigan Journal of Sustainability, Volume 1. ([doi:10.3998/mjs.12333712.0001.002](https://doi.org/10.3998/mjs.12333712.0001.002))

RESEARCH PROJECTS

“Local climate narratives in Turkey toward effective local climate actions”, The Centre for Applied Turkey Studies (CATS) Network Funding (February 2022 - December 2022, 32,500 EUR)

“Innovative and Sustainable Groundwater Management in the Mediterranean: InTheMED”, Partnership for Research and Innovation in the Mediterranean Region (PRIMA), 1,589,000 Euro [Award ID: 1923; April 2020 – April 2023].

“COBENEFITS: Assessment of improvements in air quality related to an increase in the share of renewable energy in Turkey’s electricity mix”, Institute of Advanced Sustainability Studies, Potsdam, Germany, 26,900 Euro [Award ID: 18-96; October 2018 – April 2019].

“Vulnerability of Istanbul’s water supplies due to changes in climate and urban dynamics”, Bođaziçi University Research Fund, 42,000 TL [Award ID: 17Y00P2; April 2017 – April 2018].

“An Integrated Social and Ecological Model: Impacts of Agricultural Conservation Practices on Water Quality”, Graham Environmental Sustainability Institute, \$50,000 (September 2011-2013)

INVITED TALKS

Deđişen iklim kořullarında tarımda su yönetimi. İstanbul Policy Center, Sabancı University. January 2020

İklim deđişikliği ve su bađlantısı. Su Akademisi, BUYEM and SDSN Turkey. May 2021

TEACHING EXPERIENCE

Assistant Professor, Bođaziçi University

ESC 58G Ecosystem Modeling (*Graduate*)

ESC 530 Research Methodology (*Graduate*)

ESC 594 Agricultural Policy (*Graduate*)

ESC 549 Climate Change Policy (*Graduate*)

ESC 59D Environmental Governance (*Graduate*)

ESC 351 Sustainable Development (Climate Change module) (*Undergraduate*)

ESC 305 Global Climate Change (*Undergraduate*)

RESEARCH ADVISING

Yazar, Mahir (2018). The policy mobility of energy efficient and green gentrification in the urban renewal of Istanbul. M.Sc. Thesis

Kılınç, Sultan (2019). Vulnerability of Istanbul's water supplies due to changes in climate and urban dynamics. M.Sc. Thesis

Marangoz, Deniz (2019). Water security index for 4 neighbor cities in the Aegean region incorporating future challenges. M.Sc. Thesis

Erkol, Ibrahim (2020). Modeling the impacts of climate change on water supply and demand balance of Büyük Menderes Basin. M.Sc. Thesis

Varty, Frances (on-going) Inter-basin water transfers and their role on Istanbul's water security. M.Sc. Thesis

Pala, Özge Naz (on-going) Flood vulnerability mapping of Istanbul. M.Sc. Thesis

Deniz, Bükre (on-going) Water quality modeling using SWAT in Gediz Watershed. M.Sc. Thesis

FELLOWSHIPS, HONORS, and AWARDS

2017 Boğaziçi University Outstanding Achievement in Teaching Award

2015 International Association for Great Lakes Research (IAGLR) Chandler-Misener Award for the most notable peer reviewed paper, "Assessing and addressing the re-eutrophication of Lake Erie: Central Basin Hypoxia".

2011 Graham Environmental Sustainability Institute Doctoral Fellowship, University of Michigan, Ann Arbor (2011–2013)

2011 CHANS-Net Fellow, Telecoupling of Human and Natural Systems, supported by the U.S. National Science Foundation at the Annual Meeting of The American Association for the Advancement of Science, Washington, D.C.

2008 Fellow, School of Natural Resources and Environment, University of Michigan, Ann Arbor (2008–2013)

2006 Fulbright Scholarship (2006-2008)

SERVICE and OUTREACH

Executive Committee Member in Boğaziçi University, Institute of Environmental Sciences (2021 – Present)

Steering Committee Member in Boğaziçi University Center for Climate Change and Policy Studies (2019–present)

Founding **Editor**, *Michigan Journal of Sustainability* (2012-present)

Reviewer for Journal of Great Lakes Research, Estuaries and Coasts, Water Resources Research, Environmental Science & Technology, Journal of American Environmental Studies, Land Use Policy, Journal of Environmental Management, Canadian Water Resources, Land Degradation and Development, Water, International Journal of Agriculture, Landscape and Urban Planning.

MEMBERSHIP

Soil and Water Conservation Society, Global Land Programme

SOFTWARE PROFICIENCIES

AUTOCAD, SWAT, ArcGIS, MODFLOW, WEAP, LEAP, Java, RePast, NetLogo