Dilsad Dagtekin

PhD I Quantitative Ecologist I Data Scientist

Ayşegül Dilşad Dağtekin
Eawag – Swiss Federal Institute of Aquatic Science and Technology
Dübendorf, Switzerland
Email: dilsaddt@gmail.com | Phone: +41 (0) 78 942 19 49
Date of birth: 12/08/1993 | Place of birth: Konak, Turkiye
Civil status: Single | Driver's License: B
GitHub: github.com/dilsaddt | LinkedIn: linkedin.com/in/adilsaddagtekin/
Language: Turkish (native), English (fluent), German (conversational)

Professional Summary

Data scientist and quantitative ecologist with 6+ years of experience applying data-driven approaches to ecological and sustainability challenges, including environmental impact modeling and data infrastructure for decision-making. Experienced in computational and inferential statistics, skilled in time series modeling, regression analysis, and forecast using diverse statistical tools. Adept at managing large datasets, conducting field-based studies, and translating scientific results into practical insights for consultancy, policy, and applied research.

Keywords: Statistics; data analysis; data management; forecasting; time-series models; forecast analysis; projections; hierarchical models; Bayesian; quantitative ecology; population ecology; spatial ecology; conservation biology; wildlife ecology; ecological modelling; climate change; sustainability; biodiversity

Professional experience

Postdoctoral Researcher, Jan 2024 - Dec 2025
Eawag - Swiss Federal Institute of Aquatic Science and Technology
Department Systems Analysis, Integrated Assessment and Modelling

- Leading a Swiss National Science Foundation project on quantitative modeling for assessing impact of landscape degradation and restoration on metapopulation biodiversity through time-delayed responses (extinction debt & colonization lag) to improve possible conservation and management decisions.
- Analysis and visualization of complex ecological data and biodiversity metrics for cross-disciplinary communication to support policy and decision making.

Scientific Advisor (Part-time), 2024 - present
Versant

- Consulted on data-driven habitat restoration and conservation biology strategies.
- Complemented to ecological modeling and statistical analysis for global restoration scenarios for ecological compensation.

Research Assistant, 2018 - 2024
University of Zurich
Department of Evolutionary Biology and Environmental Studies

- Designed and implemented statistical models to identify and predict wildlife seasonality patterns, providing evidence-based support for environmental decision making.
- Analyzed multiple large datasets on various geographical locations and species using R and Bayesian frameworks.
- Teaching assistance in lectures: Data Analysis in Biology, Population Ecology
- Supervision of MSc students.
- Coordinated field campaigns and collaboration with international institutions.

Communications and Operations Assistant, 2013 - 2014
World Resources Institute Türkiye

- Assisted in office operations, communication, and event organizing

Technical Skills

Data Analysis & Programming: R (advanced), BUGS/JAGS/NIMBLE (advanced), Python (pandas, numpy, scikit-learn; experienced), bash (basic), Git (basic), cluster computing
Machine Learning: Time series modeling, regression analysis, Bayesian inference, forecasting and projections
Data Infrastructure: Data wrangling, structured and semi-structured data handling, big data, database management
GIS & Remote Sensing: QGIS, ArcGIS

Education

PhD in Ecology, University of Zurich, Zurich, Switzerland, 2018 - 2024
Thesis: "Seasonality effects on wildlife populations across different data resolutions"

MSc in Earth System Sciences, Istanbul Technical University, Istanbul, Türkiye, 2017 - 2018
Thesis: "Modeling Spatial Distribution of Oriental Beech (Fagus orientalis): Past, Present and Future"
BSc in Molecular Biology and Genetics, Istanbul Technical University, Istanbul, Türkiye, 2011 - 2017
Thesis: "Modeling Quaternary Vegetation Around Lake Iznik: Preliminary Results for Present, Mid-Holocene and Last Glacial Maximum"

Erasmus exchange during BSc, Biology, Heidelberg Ruprecht-Karls University, Germany, 2015

Fieldwork experience

- **Mouse lemur research, Sep - Oct 2019**
  German Primate Institute Kirindy Research Station, Kirindy Forest, Madagascar
- **Large mammal camera-trapping research, May 2019**
  Kastamonu University, Turkey
- **Ecological forecasting research, Jun - Jul 2017**
  Boston University Research Stations, northeastern USA

Workshops and further training

- **Camera Trapping Study Design and Data Analysis** - Smithsonian Conservation Biology Institute - 2019 - Virginia, USA
- **Bayesian Population Analysis** - Vogelwarte - 2020 - Sempach, Switzerland
- Foster. Lead. Promote. (Fix the Leaky Pipeline) **Coaching and Mentoring for Women Researchers** - ETH - 2024, Zurich, Switzerland
- **Science-Policy Interface for Scientists: An (Inter)national Perspective** - Swiss Young Academy - 2025 - Bern, Switzerland
- **Stock Market Analytics Zoomcamp** – PythonInvest, 2025 (time series forecasting, regression, and machine learning techniques)

Extracurricular activities

- Co-applicant for Foster. Lead. Promote. (Fix the Leaky Pipeline) Peer Mentoring group for Transition from Academia to Industry - 2025
- Invited expert for a one-day consultation for "Swisstainability" project in Switzerland Tourism - 2024
- Board Member of Ecology and Evolutionary Biology Society of Turkey - 2019—2021
- Board Member of Mountaineering Club in Istanbul Technical University - 2017—2018
- Volunteer for AFS Intercultural Exchange Programs - since 2010, most active - 2012—2017, including hosting/sending exchange students, organizing workshops, orienteering camps, and selection interviews for the program
- Scientific Outreach:
  - Organizing scientific webinar series for the Turkish Society of Ecology and Evolutionary Biology
  - Co-organizer of Zurich Interaction Seminars between ETH/UZH - 2020—2021
  - Camera-trapping research was featured in an exhibition of University of Zurich Graduate Campus "Triggered by Motion" - February 2022 - Link
  - Invited guest to Daily Tech News Show podcast for "Scientists in Tech" to talk about camera-trapping and Bayesian analysis - Link

Prizes, awards, and fellowships

- PhD Scholarship from ESKAS - Swiss Government Excellence Scholarship, 2018, € 70'800
- Travel Grant from University of Zurich, Graduate Campus (GRC) to attend "Camera Trapping Study Design and Data Analysis for Occupancy and Density Estimation" workshop at Smithsonian Conservation Biology Institute, 2019, € 1'950
- Erasmus Student Scholarship from Turkish National Agency Erasmus Program, 2015, € 3'000
- Exchange Student Scholarship from AFS Intercultural Exchange Programs, 2012, € 7'000
- Foster. Lead. Promote. (Fix the Leaky Pipeline) Peer Mentoring group for Transition from Academia to Industry, 2025, 5000 CHF (for the whole group)

List of publications

Dagtekin D., Moor H., Schmidt B. R. (2025) Building pondscapes for amphibian metapopulations: forecasting the effects of different conservation strategies. *submitted - Biological Conservation*

Dagtekin D., Moor H., Sutherland C. (2025) Extinction debts and colonisation lags in the response of spatially structured population to degradation and restoration. *under review - Journal of Animal Ecology*

Dagtekin D., Behr D. M., Fichtel C., Kappeler P. M., Ozgul A. (2024) Seasonal survival of a short-lived primate under changing climate and population density. *under revision - Journal of Animal Ecology*

Dagtekin D., Ertürk A., Sommer S., Ozgul A., Soyumert A. (2023). Seasonal habitat-use patterns of large mammals in a human-dominated landscape. *Journal of Mammalogy*, doi: 10.1093/jmammal/gyad107

Dagtekin, D., Şahan, E. A., Denk, T., Köse, N., & Dalfes, H. N. (2020). Past, present and future distributions of Oriental beech (*Fagus orientalis*) under climate change projections. *PLoS ONE,* doi: 10.1371/journal.pone.0242280