

# Dr. Katherine Irving

Scientist

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## Education

Doctorate (Natural Sciences), Leibniz Institute of Freshwater Ecology and Inland Fisheries  
Department of Ecosystem Research, Berlin, Germany & Freie Universitaet, Department of Biology  
Chemistry and Pharmacy, Berlin, Germany, 2019.

M.Sc., freshwater and marine ecology with distinction, 2015.

B.Sc., (Hons) marine biology, 2008.

## Professional Experience

PhD Candidate, Leibniz Institute of Freshwater Ecology and Inland Fisheries (IGB), Berlin,  
2015-2019.

Science Divemaster, Operation Wallacea, Tela, Honduras, 2014.

Microplastic Research Intern, Archipelagos Institute of Marine Conservation, Samos, Greece,  
2013.

Assistant Ecologist, Hesketh Ecology, Cumbria, UK, 2013.

## Selected Presentations and Conference Proceedings

Symposium for European Freshwater Sciences (SEFS11) 2019, "Disentangling the influence of  
climatic and hydrologic predictor variables on benthic macroinvertebrate distribution", Zagreb,  
Croatia, July 2019

Symposium for Freshwater Sciences (SFS), 2018, Identifying and applying an optimum set of  
environmental variables in species distribution models , Detroit, USA, May 2018

Symposium for European Freshwater Sciences (SEFS10), Daily stream flow and hydrological metrics for Germany, Olomouc, CZ, July 2017

## Publications

Comte, L., Carvajal-Quintero, J, Tedesco, PA, et al. RivFishTIME: A global database of fish time-series to study global change ecology in riverine systems. *Global Ecol Biogeography*. 2020; 00: 1- 13. <https://doi.org/10.1111/geb.13210>

Erős, T., Comte, L., Filipe, A.F., Ruhi, A., Tedesco, P.A., Brose, U., Fortin, M.-J., Giam, X., Irving, K., Jacquet, C., Larsen, S., Sharma, S. and Olden, J.D. (2020), Effects of nonnative species on the stability of riverine fish communities. *Ecography*, 43: 1156-1166. <https://doi.org/10.1111/ecog.04985>

Irving, K, Jähnig, SC, & Kuemmerlen, M (2020) Identifying and applying an optimum set of environmental variables in species distribution models, *Inland Waters*, 10:1, 11-28, DOI: [10.1080/20442041.2019.1653111](https://doi.org/10.1080/20442041.2019.1653111)

Irving, K., Kuemmerlen, M., Kiesel, J. et al. A high-resolution streamflow and hydrological metrics dataset for ecological modeling using a regression model. *Sci Data* 5, 180224 (2018). <https://doi.org/10.1038/sdata.2018.224>

Kakouei, K, Kiesel, J, Domisch, S, Irving, KS, Jähnig, SC, Kail, J. Projected effects of climate change-induced flow alterations on stream macroinvertebrate abundances. *Ecol Evol*. 2018; 8: 3393- 3409. <https://doi.org/10.1002/ece3.3907>

Irving K., Miliou A., Vasic M., Sainz N., Anderson L & Weatherhead W. 2014. Preliminary assessment of microplastic fibre content in Aegean Sea epipelagic fish. *Proceedings of the 5th environmental conference of Macedonia*. March 2014, Thessaloniki (p. 61).

## Journal Articles

Abdi, R., J.B. Rogers, A. Rust, J.M. Wolfand, D. Philippus, K.T. Taniguchi-Quan, K. Irving, E.D. Stein, T.S. Hogue. 2021. Simulating the thermal impact of substrate temperature on ecological restoration in shallow urban rivers. *Journal of Environmental Management*  
DOI:10.1016/j.jenvman.2021.112560.

Stein, E.D., E.M. Gee, J.B. Adams, K. Irving, L.V. Niekerk. 2021. Advancing the Science of Environmental Flow Management for Protection of Temporarily Closed Estuaries and Coastal

Lagoons. *Water* DOI:10.3390/w13050595.

Irving, K.S., Kuemmerlen, M., Kiesel, J., Kakouei, K., Domisch, S., Jaehnig, S.C. Daily stream flow and hydrological metrics for Germany, as predicted by a simple regression model. *Sci. Data* (in press)

Kakouei, K., Kiesel, J., Domisch, S., Irving K.S., Jähnig, S.C., Kail, J. Projected effects of climate change-induced flow alterations on stream macroinvertebrate abundances. *Ecol Evol.* 2018;8:3393-3409. <https://doi.org/10.1002/ece3.3907>

Irving K., Miliou A., Vasic M., Sainz N., Anderson L & Weatherhead W. 2014. Preliminary assessment of microplastic fibre content in Aegean Sea epipelagic fish. Proceedings of the 5th environmental conference of Macedonia. March 2014, Thessaloniki (p. 61).

## Technical Reports

Stein, E.D., K.T. Taniguchi-Quan, J. Wolfand, E. Gallo, K. Irving, D. Philippus, R. Abdi, V. Hennon, A. Tinoco, P. Mohammadi, A. Rust, T.S. Hogue. 2021. [Process and Decision Support Tools for Evaluating Flow Management Targets to Support Aquatic Life and Recreational Beneficial Uses of the Los Angeles River: Los Angeles River Environmental Flows Project](#). Technical Report 1196. Southern California Coastal Water Research Project. Costa Mesa, CA.

Stein, E.D., J. Wolfand, R. Abdi, K. Irving, V. Hennon, K.T. Taniguchi-Quan, D. Philippus, A. Tinoco, A. Rust, E. Gallo, C. Bell, T.S. Hogue. 2021. [Assessment of Aquatic Life Use Needs for the Los Angeles River](#). Technical Report 1154. Southern California Coastal Water Research Project. Costa Mesa, CA.