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River soundscapes: the human-altered acoustic world of migratory fish

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Curriculum Vitae

Kees te Velde was born in 1993 in Rotterdam, the Netherlands. He attended highschool at Thorbecke Lyceum Rotterdam and finished a VWO programme in 2012. He completed a Biology Bachelor in 2017 and Master in 2020 at Wageningen University. Between 2007 and 2018 he gained much fieldwork experience as a member and in several volunteer positions at the NJN (Dutch youth association for nature studies).

During his Bachelor, he did an internship with Mischa Streekstra and Dr. Ronald Osinga. Here he utilized historical data and observations in collaboration with Rijkswaterstaat and stichting ANEMOON to assess the habitat requirements of the green sea urchin from a complete life cycle perspective. During his Master he also carried out two research projects. For his first project he investigated the effects of elevated CO₂ on blue mussels with Dr. Yuzhu (Celia) Wei, Dr. Edwin Foekema and Prof. Dr. Tinka Murk. For his second project he assisted in setting up a water quality monitoring programme for Sustainable Aquaculture certification of Yalelo Limited (Zambia), the largest Tilapia farm in Sub-Saharan Africa, and carried out a sustainable aquaculture carrying capacity study for Lake Kariba, Zambia, with John Beijer, Dr. Marc Verdegem, and Dr. Edwin Peeters. Which he published in Aquaculture Environment Interactions as first author.

In 2021 he started his PhD-project on the effects of natural and anthropogenic sounds on migratory fish behaviour. During his PhD he conducted several scientific studies in the field, as well as in the lab. He developed and worked with various analytical tools in Python and R, applying machine learning for acoustic detections and video tracking, and GIS methods for spatial modelling. He worked with a variety of species, including fish, aquatic insects, crabs, mussels, corals and aquatic plants and worked in the Netherlands, Germany, Belgium and France. He also participated in teaching courses on behavioural biology and supervised internships of 14 Bsc and Msc students. He has presented his work at many conferences and was awarded with the Rodney Coates awards for best speed talk and poster in the Aquatic Noise conference in Berlin. And awarded the "Groene

Glazenmaker prijs” by the Werkgroep Ecologisch Waterbeheer for the best idea for improvement of water quality in the Netherlands. He was also active in outreach to the general public, with several public lectures, interviews on Dutch national radio, magazines and podcasts, and worked with artists in several sound art projects. Currently, he is starting a Postdoctoral position at Naturalis Biodiversity center.

List of Publications

te Velde, K., Mairo, A., Peeters, E. T., Winter, H. V., Tudorache, C., & Slabbekoorn, H. (2024). Natural soundscapes of lowland river habitats and the potential threat of urban noise pollution to migratory fish. *Environmental Pollution*, 359, 124517.

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Conference papers

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Weiss, L., Dörner, L., Kather, V., de Koning, M., **te Velde, K.**, Pauwels, I., Tudorache, C., Slabbekoorn, H., (2026) Optimizing Machine Learning for Detection of Splashing Sounds for Automatic Monitoring of Fish Spawning. In: *The Effects of Noise on*

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Under review

te Velde, K., van der Horst, R., Neger, R., Pistor, D., Uiterwijk, B., Tudorache, C., Slabbekoorn, H., (2026), Human-altered Soundscapes in Large European Rivers: Widespread potential for masking by boats, *Science of the Total Environment (STOTEN)*

Slabbekoorn, H., **te Velde, K.**, Jansen, E., Snelderwaard, P., Tudorache, C., & de Jong, C., (2025), The MIGRADROME: an artificial river for acoustic exposure studies on migratory fishes. *Journal of the Acoustical Society of America (JASA)*

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Greenhalgh, J. A., Akmentins, M. S., Boullhesen, M., Brejão, G. L., Bowman, J. C., Briers, R. A., ..., **te Velde, K.**, & Looby, A. (2025). The Freshwater Sounds Archive. *bioRxiv*, 2025-05.

Slabbekoorn, H., te Velde, K., (2025) Geluid als kwaliteitsnorm voor aquatische biodiversiteit: Uitdagingen en mogelijkheden in een akoestische wereld onder druk. *Stedelijke Ecologische Waterkwaliteit*