Popular science summary of the PhD thesis

PhD student	Anne Cathrine Linder
Title of the PhD thesis	Computational Human Ecology: Understanding the Role of Cultural Ecosystem Services in Trade-offs Between Human Well-Being and Nature Conservation
PhD school/Department	DTU Aqua

Science summary

Human well-being and the health of nature are deeply connected. Beyond providing food, water, and clean air, nature supports our mental and physical health through everyday experiences of beauty, recreation, and relaxation. These non-material benefits, known as *cultural ecosystem services* (CES), are central to quality of life but have been difficult to measure and therefore often overlooked in environmental and health policies. This PhD develops a *computational human ecology* approach to better understand how people interact with nature and how these interactions contribute to well-being. By combining large-scale digital data, from social media, smartphones, and wearable devices, with global environmental data, the research captures patterns of everyday human–nature interactions at an unprecedented scale. The work demonstrates how digital technologies can reveal new insights into the ways people value, use, and depend on ecosystems. It highlights that protecting and enabling access to nature is not only vital for biodiversity but also for public health and social equity. These findings support a more integrated approach to sustainability, one that recognizes nature as essential infrastructure for human well-being and guides future planning toward healthier, more resilient societies.