

## 1. Personal details and date of CV

- Surname: Vihervaara
- First names: Sami Juha Petteri
- ORCID: 0000-0002-5889-8402, Personal web page: [https://www.syke.fi/en-US/Experts/Petteri\\_Vihervaara\(43106\)](https://www.syke.fi/en-US/Experts/Petteri_Vihervaara(43106))
- Date of CV: September 16<sup>th</sup> 2024

## 2. Degrees

- 2010, March, PhD (Biodiversity and Environmental Science), University of Turku
- 2004, December, MSc (Ecology), University of Turku
- Title of Docent: June 24<sup>th</sup> 2013, Geography: especially biodiversity and ecosystem services, University of Eastern Finland

## 3. Current employment

Finnish Environment Institute (Syke), Nature Solutions, Research Professor (*Biodiversity monitoring for sustainability*), since 1.11.2022. *Description: leading biodiversity and ecosystem research at SYKE, leading projects and participating in international collaboration, this includes e.g., European Biodiversity Partnership (Biodiversa+), Leader of WP2: Biodiversity Monitoring, preparatory phase 2021, operational phase 2022-2028, appointed by Ministry of the Environment of Finland. Description: leading the work to establish a transnational network of biodiversity monitoring schemes, aiming at improved monitoring of biodiversity (status & trends) across Europe, the co-funded budget of partnership's biodiversity monitoring activities is approximately 1/3 of the total 800 M€ budget of the partnership.*

## 4. Previous work experience (selected)

- Finnish Environment Institute (SYKE), Biodiversity Centre, Leading Scientist, 1.11.2017-31.10.2022, and Head of Unit (Ecosystem services) 1.1.2018.-31.12.2022
- Finnish Environment Institute (SYKE), Natural Environment Centre, Ecosystem Change Unit, and later Director's Office, Senior Research Scientist, 1.6.2010-31.10.2017, and Research Programme Manager (Ecosystem Services) 1.1.2014-31.12.2017
- European Commission, Joint Research Centre, Institute for Environment and Sustainability, Visiting Scientist (paid by SYKE), 27.1.-12.5.2012
- Biologist Office Vihervaara Ltd., Managing director, Owner, established 6 March 2006, changed to Ltd. 1 January 2008, sold 15 June 2010, Y-tunnus 2163535-5, leading over 50 projects

## 5. Research funding and grants

- 2024-2028, HEU, ~7.5M€ of which EC part 5.3 M€, OBSGESSION, coordinator
- 2021, MoE, 89.449 €, Drafting of the National Biodiversity Strategy and Action Plan (NBSAP), responsible leader
- 2021, MoE, 124.813 €, Roadmap for implementing eDNA and other molecular biological methods in Finland 2021-2025, responsible leader
- 2021-2023, ESA Biodiversity+ Precursors, 44.000 €, EO4DIVERSITY, PI
- 2020-2024, MoE, ~6.3M€, Finnish Ecosystem Observatory (FEO), director
- 2019, MoE, 60.000 €, FEO, Pilot/ Phase 1, PI
- 2019-2022, H2020, 110.000 €, E-SHAPE, PI
- 2018-2021, H2020, 210.000 €, MAIA, PI
- 2018-2023, SRC consortium grant, IBC-CARBON, co-lead of one WP with own budget of 220.000 €, (consortium leader Martin Forsius, total project budget ~3.8M€ for the 1st period)
- 2019, 2020, European Statistics Action Grants, total budgets 245.947 € and 225.252 €, respectively, consortium leader
- 2017-2018, Eurostat Grant, total budget 234.000 €, consortium leader
- 2016-2018, Central Baltic Interreg, budget of SYKE ~320.000 €, PI
- 2016-2017, Prime Minister's Office, budget of SYKE 80.000 €, PI
- 2016-2018, Nordic Council of Ministers & MoE, budget of SYKE ~75.000 €, The Nordic IPBES-like assessment, Lead author

- 2015-2019, MoE, ~75.000 €, MAES for Finland, responsible leader
- 2012-2015, MoE, 193.065 €, Finnish Ecosystem Service Indicators FESSI, responsible leader

## 6. Research output

I have published over 50 refereed articles in journals, 16 book chapters/ sections, 1 edited book, 6 conference proceedings, 12 articles in professional journals/ handbooks, and 25 reports; H-index 33, i10-index 55, Total citations 6000 (retrieved Google Scholar 23.9.2024). My most important long-term research lines include mapping and monitoring of biodiversity and ecosystem services, Earth observation applications in data integration and ecosystem assessment, sustainability science, and holistic management of the coupled human-environment systems. I have strong references in multidisciplinary science [highlighted e.g. in *Nature Climate Change* Vol. 1 (12), 478, and in *Science* 2021 Vol. 374 (6570), pp. 926-931]. In my research, I have strong tendency for comprehensive holistic understanding of systems and research challenges, resulting to reviews and assessments, as well as development of novel methodologies for environmental challenges, such as integration of remote sensing and in situ data for models.

## 7. Research supervision and leadership experience

I used to work as a head of unit leading a research team of 20 persons, and before that I worked as a research programme manager at SYKE developing research collaboration across the different research centers. In addition, I am a director of Finnish Ecosystem Observatory (FEO), and a leader of WP2 (Biodiversity monitoring) for the European Biodiversity Partnership (Biodiversa+), 2021-2028, appointed by Ministry of the Environment of Finland. I am also a co-lead of GEO BON working group on BON Development. I have been a lead author of the Nordic IPBES assessment for coastal ecosystems (Chp 1), and the Global Environment Outlook GEO-6: Assessment for the pan-European region (Chp 2 and 4). I was a task leader in H2020 ESMERALDA project 2014-2018, and in TEEB Finland 2013-2017. I have been supervisor/evaluator five MSc thesis, main supervisor for two PhD students, and in a supervisory group for three PhD students.

## 8. Other academic merits

- Pre-examinator of one PhD, opponent of one PhD, and evaluator of one docentship, recruitment of researchers to SYKE
- Evaluation tasks: Formas' call Perspectives on the Sustainable Development Goals 2018; ERANet-LAC Multi-Thematic Joint Call 2017/2018 involving Research Infrastructures: Theme Biodiversity / Climate Change; Evaluation of a research proposal for Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) 2016; and three proposals for BiodivERsA 2016; Member of the Societal Impact evaluation panel 2014 for BiodivERsA ERANET and FACCE-JPI call.
- Chair of Finnish Nature Information coordination group ([Lukki](#), 2024-2026); Lead author, IPBES monitoring assessment 2024-2025; European Biodiversity Partnership, Executive Board, Lead of WP2: Biodiversity Monitoring, 2021 onwards; Group on Earth Observations (GEO), Principal Programme Board Representative (Finland) 2019-2021, alternate 2022-2024; Member of GEO BON 2016-, Interim Lead Coordinator of Biodiversity Observation Network (BON) Development Working Group 2017-2019; Member of Management Board of ALTER-Net III 2014- 2017 and IV 2017-2020; National representative at European Commission's Working Group MAES, 2012-2020; Finnish delegate on CBD SBSTTA-23 & -24.
- Editor in *One Ecosystem* journal (Pensoft); Guest editor in a Special Feature, *Methods in Ecology and Evolution* by British Ecological Society, Guest editor of *Futura* 3/2019 Biodiversity special issue
- Referee for 12 scientific journals and publication series, and referee for two books: Cavender-Bares, J., Gamon, J. & Townsend, P. (Eds.) *Remote Sensing of Biodiversity*, Springer (2017); Jongman, R., Paganini, M. & Mora, B. (Eds.) *Sourcebook for Biodiversity Monitoring in Tropical Forests with Remote Sensing* (2017).
- Organizing international symposiums and conferences: ESA's Biospace25, Scientific and Program Committees, Frascati, Italy, 2025; GEO BON Global conference, Montreal, Canada, 2023;

Improving conservation targets for forest biodiversity: towards operational solutions from remote sensing technology at XXV IUFRO World Congress, Curitiba, Brazil, Oct 2019; Novel Earth Observation techniques for Biodiversity Monitoring and Research, 24 May 2018 at SYKE, Helsinki, Finland; Integrated water landscape planning and management at IALE European Congress 2017, Ghent, Belgium 12-15 September; Linking remote sensing data to biodiversity at different landscape scales at IUFRO Landscape Ecology Conference, Tartu, Estonia 23-30 August 2015; Systems ecological perspectives on sustainability followed by intensive course "Introduction to systems ecology" by Sven Erik Jørgensen at SYKE, Helsinki, Finland 24- 30 September 2014; Integrated biogeochemical cycles and their role for ecosystem services in SYKE, Helsinki, Finland 27.11.2013; Remote sensing in the mapping of biodiversity, habitats and ecosystem services, in SYKE, Helsinki (Finland) 6.-7.9.2012; The First Baltic Bat Researchers meeting, in Seili (Finland) 2003