

CURRICULUM VITAE

Mika Petri Tapani Raateoja

Born 1968, Finnish citizen, male, married, two children

Finnish Environment Institute (SYKE)

mika.raateoja@syke.fi

EDUCATION

Master of Science. Department of Limnology and Environmental Conservation, Faculty of Agriculture and Forestry, University of Helsinki, 25th Oct 1995.

Main subject: limnology, subsidiary subjects: hydrobiology, fisheries sciences. Pro Gradu thesis 'Hydrography and the distribution of phytoplankton in the Southern Ocean in January – February 1993'.

Doctor of Philosophy. Department of Biological and Environmental Sciences, Faculty of Biosciences, University of Helsinki, 18th Jan 2007.

Main subject: limnology, subsidiary subjects: hydrobiology, geophysics of hydrosphere. Ph.D. thesis 'Photobiological studies on Baltic Sea phytoplankton'.

Vocational degree for management. Institute of Marketing, Helsinki, 22nd Aug 2014.

Subjects: leadership, management. Thesis 'Recruiting process at the Finnish Environmental Institute'.

PROFESSIONAL EXPERIENCE

City of Hyvinkää, technical office, water supply and sewage department

Laboratory analyst, Hyvinkää municipal water laboratory and Kalteva sewage treatment plant, 7th May – 12th Aug 1990

Finnish Institute of Marine Research (FIMR), department of biological oceanography, department of chemical oceanography and 'State of the Baltic Sea and global change' unit

University trainee 1st Jun – 31st Aug 1991, Research assistant 8th – 30th Jun 1993, Research assistant 1st Oct – 31st Dec 1993, Scientist 1st Nov – 31st Dec 1994, Research assistant 1st – 30th Nov 1995, Assistant scientist 1st Oct 1996 – 31st Aug 1997, Scientist 1st Sep 1997 – 31st Dec 1999, Scientist, scholar, Maj ja Tor Nessling foundation 1st Jan 2000 – 31st Dec 2002, Scientist, scholar, Onni Talas foundation 1st Jan – 12th Oct 2003, Scientist 13th Oct 2003 – 30th Sep 2005, Research scientist 1st Oct 2005 – 30th Jun 2007, Senior research scientist 1st Jul 2007 – 31st Dec 2008

Finnish Environment Institute (SYKE), Marine Research Centre and 'Quality in data production' unit

Group manager 1st Jan 2009 – 31st Dec 2013, Senior scientist 1st Jan 2014 – 31st Dec 2017, Group manager 1st Jan 2018 – 30th Jul 2019, Development manager 1st Aug 2019 – 31st Dec 2022, Leading expert 1st Jan 2023 –

WORK CONTENTS

1991 – 1995

Alg@line project at FIMR. Work contents: maintenance of underway surface water monitoring systems onboard merchant ships operating in the Baltic Sea, and maintenance of project's website. Scientific objective: the effect of sampling interval on the representativeness of the monitoring.

1997 – 1999

EU MAST III program 'MITEC' project at FIMR. Work contents: testing the variable fluorescence approach for activity and productivity of the phytoplankton. Scientific objective: activity and productivity of phytoplankton measured using both bio-optical and radioactive-labelled methods.

2000 – 2003

Maj and Tor Nessling foundation and Onni Talas foundation project 'Bio-optics in phytoplankton research' at FIMR. Work content: application of variable fluorescence approach to monitoring of the Baltic Sea. Scientific objective: light utilization and productivity of phytoplankton in the Baltic Sea, as well as identification of growth-limiting factors.

2003 – 2005

Alg@line-project at FIMR. Work contents: head of project, managing operational ship-of-opportunity phytoplankton monitoring and information services concerning algal blooms. Scientific objective: introduction of variable fluorescence approach to Baltic Sea monitoring.

2006 – 2007

Department of chemical oceanography at FIMR. Work contents: development of FIMR's Baltic Sea monitoring. Scientific objective: Baltic Sea system study with emphasis on nutrient dynamics of the pelagic Baltic Sea.

2008

Monitoring group at FIMR. Work contents: head of the group, coordinating, developing, and planning the Baltic Sea monitoring. Scientific objective: Baltic Sea system study.

2009 – 2013

Analytical group at SYKE MRC. Work contents: head of the group, coordinating and developing analytical work. Scientific objective: Baltic Sea system study.

2014 – 2017

State of the Baltic Sea group at SYKE MRC. Work contents: monitoring coordination, managing the quality of the environmental data flow. The Gulf of Finland Year 2014 project: responsible for monitoring integration, dataflow, data reporting and information popularization. Scientific objective: Baltic Sea system study

2018 – 2019

Baltic Sea monitoring and assessment group at SYKE MRC. Work contents: head of the group, coordinating and developing monitoring work.

Project leader: Abandoned, lost, or otherwise discarded fishing gear in the Finnish coastal waters (KAPYYSI), Proficiency test for consultant laboratories within the WFD / MSFD monitoring (LABKOE), Marine field intercalibration for parameters indicating eutrophication (MARICAL).

2019 – 2022

SYKE MRC. Work contents: administrative development manager, coordinating and developing administrative processes at MRC. Head of MRC laboratory. Coordinator of SYKE's Baltic Sea monitoring.

2023 –

SYKE Quality in data production. Work contents: Monitoring coordinator, coordinating the implementation of the national environment monitoring strategy. Coordinator of SYKE's Baltic Sea monitoring.

NOTABLE POSITIONS OF TRUST

Marine Science and Technology Society of Finland, treasurer, and member of the board 1999 – 2008

Finnish Limnological Society, secretary, and member of the board 2000 – 2005, librarian and member of the board 2006 – 2015

International Association of Theoretical and Applied Limnology (SIL), secretary of Finland 2000 – 2005

TRUSTED TASKS

SIL2004 Conference, member of the organizing Committee 2003 – 2004

Scripps Institution of Oceanography, University of San Diego, expert member of the recruitment board 2008

SYKE, personnel member of payroll system evaluation group 2009

SYKE, laboratory coordination group, secretary, and a member of the group 2011 – 2013

SYKE, quality system group, secretary, and a member of the group 2011 – 2017

SYKE, certification body, expert for water sampling 2016 – 2019, and expert for biological sampling in the water 2017 – 2019

SYKE MRC, communications team, head of the group 2017 – 2019

SYKE, Proftest proficiency testing service, member of the steering group 2019 – 2022

SYKE, laboratory coordination group, representative of Marine Research Centre 2020 – 2022

Environmental administration's working group for the service for the monitoring of the state of the waters 2022 – current
Scientific reviewer for *Bor Env Res*, *Deep-Sea Res*, *Eur J Phycol*, *J Plank Res*, *Mar Ecol Prog Ser* and *J Mar Syst*

OTHER TASKS

Finnish Institute of Marine Research, industrial safety delegate 2007 – 2008

Finnish Environment Institute, Marine Research Centre, quality system delegate 2010 – 2017

PUBLICATIONS (AS THE FIRST AUTHOR)

Peer-reviewed articles

Raateoja M, Seppälä J (2001) Light utilization and photosynthetic efficiency of *Nannochloris* sp. (Chlorophyceae) approached by spectral absorption characteristics and Fast Repetition Rate Fluorometry (FRRF). *Bor Env Res* 6: 205 – 221.

— (2004) Fast repetition rate fluorometry (FRRF) measuring phytoplankton productivity: A case study at the entrance to the Gulf of Finland, Baltic Sea. *Bor Env Res* 9: 263 – 276.

—, Seppälä J, Kuosa H (2004) Bio-optical modelling of primary production in SW Finnish coastal zone, Baltic Sea: fast repetition rate fluorometry in case 2 waters. *Mar Ecol Prog Ser* 267: 9 – 26.

—, Seppälä J, Ylöstalo P (2004) The fast repetition rate fluorometry is not applicable to studies on filamentous cyanobacteria from the Baltic Sea. *Limnol Oceanogr* 49: 1006 – 1012.

—, Seppälä J, Kuosa H, Myrberg K (2005) Recent changes in trophic state of the Baltic Sea along SW coast of Finland. *Ambio* 34: 188 – 191.

—, Mitchell BG, Wang H, Olivo E (2009) Effect of water-column light gradient on phytoplankton fluorescence transients. *Mar Ecol Prog Ser* 376: 85 – 101.

—, Kuosa H, Flinkman J, Pääkkönen J-P, Perttilä M (2010) Late summer metalimnetic oxygen minimum zone in the northern Baltic Sea. *J Mar Syst* 80: 1 – 7.

—, Kuosa H, Hällfors S (2011) Fate of excess phosphorus in the Baltic Sea: a real driving force for cyanobacterial blooms? *J Sea Res* 65: 315 – 321.

— (2013) Deep water oxygen conditions in the Bothnian Sea. *Bor Env Res* 18: 235 – 249.

—, Hällfors H, Kaitala S (2018) Vernal phytoplankton bloom in the Baltic Sea: intensity and relation to nutrient regime. *J Sea Res* 138C: 24 – 33.

—, Kauppila P (2019) Interaction between the land and the sea: nutrient load sources to the scattered coastal zone in the Baltic Sea. *Env Mon Ass* 191: 24. DOI: 10.1007/s10661-018-7143-z.

Thesis

Raateoja M (2006) Photobiological studies of Baltic Sea phytoplankton. *Finn Inst Mar Res – contributions* 12 / 2006.

Reports

Raateoja M, Leppänen, J-M, Siren O (1992) Kasviplanktonin ajallinen ja paikallinen vaihtelu keskisen Pohjanlahden alueella 1992: esitutkimus automaattisen pintavedenmittausaseman käytöstä velvoitetarkkailussa. Vesi- ja ympäristöhallituksen monistesarja 598. Vesi- ja ympäristöhallitus, Kokkolan vesi- ja ympäristöpiiri. In Finnish.

— (Ed) (2008) Itämeri 2008 — Merentutkimuslaitoksen Itämeriseurannan vuosiraportti. MERI – Rep Ser Finn Inst Mar Res 64, 51 p. In Finnish.

— (Ed) (2014) GOF2014 Intercalibration exercise. Report of the physical-chemical-biological field intercalibration on sampling and analytical procedures in the frames of the Gulf of Finland year 2014. 44 p.

— (2015) Water quality in the Gulf of Finland 2014. Trilateral environmental monitoring: annual report. 14 p.

—, Setälä O (Eds) (2016) The Gulf of Finland assessment. Rep Finn Environ Inst 27 / 2016. 363 p.

—, Håkansson J, Lastumäki I, Hänninen P (2016) Monitoring collaboration between SYKE and SMHI: Field intercalibration on water chemistry. 6 p.

—, Håkansson J, Lastumäki I, Hänninen P (2017) Monitoring collaboration between SYKE and SMHI: 2nd field intercalibration on water chemistry. 7 p.

—, Kauppila P, Leivuori M (2018) Ympäristölaboratorioiden vertailukoe (LABKOE) – loppuraportti. 30 pp. In Finnish.

- , Jaanus A, Lips U, Håkansson J, Purokoski T, Pitkänen H (2020) MARICAL field inter-calibration exercise. Report of the field inter-calibration on sampling and analytical procedures for Estonian, Finnish and Swedish institutes carrying out HELCOM monitoring. TemaNord 2020:503. Nordic Council of Ministers. DOI: 10.6027/TemaNord2020-503.
- , Kotilainen P, Dahlbo, Saiha M, Jordas K (2020) Kapyysi - Kadonneet pyydykset Suomen merialueilla. Hankkeen loppuraportti. 54 p.

Professional articles

- Raateoja M (2003) Blue-green algal blooms in the Baltic in 2003. HELCOM newsletter 2/2003. Baltic Marine Environment Protection Commission, pp. 5.
- , Pitkänen H (2004) Why is eutrophication so difficult to tackle in the Baltic Sea region. In: 30 years of protecting the Baltic Sea: HELCOM 1974-2004. Baltic Marine Environment Protection Commission, pp. 15 – 18.
- , Ylöstalo P, Seppälä J, Kaitala S & Maunula P (2006) Operational monitoring system of cyanobacterial pigment signals. In: Dahlin H, Flemming NC, Marchand P & Petersson SE (eds) European operational oceanography: present and future. European Communities. pp. 418 – 425.
- , Kauppila P, Pitkänen H, Knuuttila S, Lehtoranta J (2015) Meren rehevöityminen rakentuu ravinteille. In: Rantajärvi E, Karjala L (eds) Meren Pärskäys 2015 - Sukellus Itämeren hoitoon ja tilaan. Suomen Ympäristökeskuksen Raportteja 21/2015. In Finnish.
- , Myrberg K, Pitkänen H, Lehtoranta J (2015) The Gulf of Finland is gradually recovering. SYKE Policy Brief, December 2015.
- (2016) Baltic Sea: Clearer waters in the east. Nordic Investment Bank newsletter 28 Sep 2016.
- , Pitkänen H, Eremina T, Lips U, Zagrebina T, Kauppila P, Knuuttila S, Ershova A, Lange E, Jaanus A, Lainela S (2016) Nutrients in the water. In: Raateoja M, Setälä O (eds) The Gulf of Finland assessment. Rep Finn Environ Inst 27 / 2016.
- , Myrberg K, Vesikko L (2017) Suomenlahden pikkujättiläinen. Suomen ympäristökeskus. In Finnish.
- , Piepponen H, Kankaanpää P (2018) Suomen meritieto yksiin kansiin. Vesitalous 4/2018, pp. 18 – 19. In Finnish.
- (2019) Ratkaisu haamuverkkoihin? Erä 3/2019, p. 10. In Finnish.

Books

- Raateoja M, Myrberg K, Flinkman J, Vainio J (2008) Kotimeri – Itämeri ympärillämme. Edita publications, 135 p. In Finnish.

Guidelines

- Raateoja M, Seppälä J (2017) Guidelines for monitoring of chlorophyll a. HELCOM monitoring guideline. Baltic Marine Environment Protection Commission. Online: www.helcom.fi/action-areas/monitoring-and-assessment/manuals-and-guidelines/chlorophyll-a-guidelines/.
- , Fleming-Lehtinen V (2017) Guidelines for monitoring of water transparency. HELCOM monitoring guideline. Baltic Marine Environment Protection Commission. Online: www.helcom.fi/action-areas/monitoring-and-assessment/manuals-and-guidelines/secchi-depth-guidelines/.
- , Seppälä J (2017) Guidelines for monitoring of turbidity. HELCOM monitoring guideline. Baltic Marine Environment Protection Commission. Online: www.helcom.fi/action-areas/monitoring-and-assessment/manuals-and-guidelines/turbidity-guidelines/.