

**1. Name: Anna Uitto**



**2. Contact information**

Faculty of Educational Sciences  
PO Box 9, (Siltavuorenpenger 5A)  
00014 University of Helsinki, Finland  
Tel +358919129597, e-mail: anna.uitto@helsinki.fi

**3. Education and degrees awarded**

2000 Title of Docent, hydrobiology, University of Helsinki.  
1997 Doctor of Philosophy (Ph.D.), hydrobiology, University of Helsinki.  
1990 Licentiate of Philosophy, zoology, University of Helsinki.  
1986 Master of Science, zoology, University of Helsinki.

**4. Other education and training, qualifications and skills**

2001-2002 Subject teacher's pedagogical studies, minor subject (60 credits) in biology and geography education, and advanced level subject teacher's pedagogical studies in biology education (40 credits), University of Helsinki.  
1997 Special course for experts in environmental research; Special course in application and management of geographic information systems (GIS), University of Helsinki.

**5. Linguistic skills:** Finnish (mother tongue), English (excellent), Swedish: (good), German: (basic).

**6. Current position:** Professor in biology education, Faculty of Education, University of Helsinki, since April 1, 2014.

**7. Previous relevant work experience**

2006-2014 University lecturer in biology education, University of Helsinki, Department of Teacher Education.  
2001-2006 University lecturer in biology and geography education, University of Helsinki, Department of Teacher Education.  
2001 Biology and geography teacher, lower and upper secondary school, Helsinki.  
1999-2000 Postdoctoral researcher, Academy of Finland (University of Helsinki, Department of Ecology and Systematics).  
1998 University lecturer in hydrobiology, University of Helsinki, Department of Ecology and Systematics.  
1987-1989 Research scientist, Academy of Finland (University of Helsinki, Department of Ecology and Systematics and Tvärminne Zoological Station).  
1985-1986 Research scientist, Finnish Institute of Marine Research.

**8. Research funding as well as leadership and supervision**

*Academy of Finland:*

2009 – 2011 Sustainable Food Education for Self-Efficacy Development (SEED), subproject 2, Department of Education, Principal investigator (PI) in subproject 2.  
1999-2000 The dynamics of pelagic food web, University of Helsinki, Department of Ecology and Systematics (PI).  
1987-1989 Ecological plankton research of the Baltic Sea, member of the research group.

*Research grants awarded by different foundations:*

1990-2001 The Baltic Sea pelagic ecology, Walter and André de Nottbeck foundation, Maj and Tor Nessling foundation (PI).

*Funding for research, development and evaluation projects (2009-2019) (PI):*

Biology education, science education, sustainability education and digital outdoor education: LumA Science Education Centre, University of Helsinki and LUMA Centre Finland; Finnish National Board of Education; Keski-Suomi ELY-keskus; University of Helsinki.

*Supervision of academic degrees:*

*First supervisor of Ph.D. theses in the University of Helsinki*

- Saloranta, S.(2017). Koulun toimintakulttuurin merkitys kestävä kehityksen kasvatuksen toteuttamisessa perusopetuksen vuosiluokkien 1–6 kouluissa. Faculty of Educational Sciences.
- Kervinen A. (in progress), Faculty of Educational Sciences.
- Kesler, M. (in progress), Faculty of Educational Sciences.
- Mutanen, J. (in progress), Faculty of Biological and Environmental Sciences and Faculty of Educational Sciences.
- Nwoke, N. (in progress), Faculty of Educational Sciences.

*Ph.D. thesis in other universities, assistant supervisor*

- Sjöholm, P.(2012). Naturen och jag. En studie av gymnasie-studerandes förhållande till naturen ur ett miljöpedagogiskt perspektiv. Åbo Akademi.

*Licentiate theses*

- Laurila, S. (2006). En professor om växter och kloaker” näkökulmia Helsingin merialueen pilaantumisen hydrobiologisen tutkimuksen historiaan. Faculty of Biological and Environmental Sciences.
- Salo, K. (2016). Learning by gardening – nuorisjärjestön aktivoima koulun puutarhatoiminta. Tapaus Vihdin malli. Faculty of Agriculture and Forestry.

## **9. Merits in teaching and pedagogical competence**

*Trial lectures:*

For university lecturer in biology education, (2006) and for the title of docent in hydrobiology (2000), University of Helsinki.

*Supervision of master theses:*

Master theses (2002- ); About 35 master theses in the Faculty of Educational Sciences and Faculty of Biological and Environmental Sciences; supervision of several ongoing theses.

*Development of university teaching in biology education and science education:*

Pedagogical courses in class teacher and subject teacher education in the Department of Education, University of Helsinki (2002- ); teaching material for biology education (text books, material for web-based learning, text books for primary schools).

*Part-time university teaching in the Baltic Sea ecology (1993-2002):*

Development of teaching methods for field and laboratory courses, bachelor and master level university courses (together 15 courses) in the Department of Ecology and Systematics and Tvärminne Zoological station, University of Helsinki: the Baltic Sea plankton ecology; the Baltic sea open sea field courses; experimental plankton ecology; littoral and benthic ecology; environmental ecology; lectures on hydrobiology; in-service

training for secondary school biology teachers; web-based course in the Baltic Sea ecology.

## **11. Other academic merits**

### *Academic evaluations:*

Member of Ph.D. thesis advisory committee, Guinart, A.B. Faculty of Biological and Environmental Sciences, J. Mutanen, Faculty of Biological and Environmental Sciences; evaluation of application for the title of docent, A. Salonen, University of Eastern Finland (2017); member of doctoral thesis evaluation committee, E.-L. Nieminen (2016); member of the evaluation committee, assistant/associate professor tenure track positions, (2015, 2017); pre-examiner of doctoral thesis, I. Södervik, University of Turku (2016); opponent of doctoral dissertation, E. Anyolo, University of Eastern Finland (2015); opponent of licentiate dissertation, D. Olsson, Karlstad University, Sweden (2014); evaluation of application for the title of docent, Åbo Akademi (2012); member of the trial lecture evaluation committee, K. Juuti (2006), M. Hannula (2006), M. Reiss (2004).

### *Membership at the faculty committee, Department of Teacher Education, University of Helsinki:*

Member of the development working group of the subject teacher education (2014- ); member of the equality working group (2010-2015); deputy member in the council (2004- 2006); vice head, compulsory minor subject in class teacher education programme (studies in subject didactics in class teacher education) (2002-2006).

### *Membership at the other university or academic committee:*

Member of the Helsinki Institute of Sustainability Science (HELSUS, 2017- ); member of the research coordination group of the SIRENE network (2017- ); member of the steering group of the Science Education Centre (LumA) in the University of Helsinki (2014- ); director of the LumO resource centre/science education centre in the Faculty of Education which is part of the Science Education Centre (LumA) in the University of Helsinki (2014- ); member, the European Science Education Research Association (ESERA) (2012- ); member, the Virtual Studies in Biology, Geography, Environmental Education and Health Education in Finnish Universities (KasVi project), together with University of Oulu, University of Jyväskylä and University of Turku (2005-2008).

### *Membership at editorial team and referee in international scientific journals:*

*International:* Editorial team of the LUMAT International Journal of Math, Science and Technology Education and referee in several scientific journals: Boreal Environment Research; Education Sciences; Environmental Education Research; International Journal of Science Education; International Journal of Science and Mathematics Education; Journal of Biological Education; Journal of the Marine Biological Association of the United Kingdom; Learning and Instruction; Marine Ecology Progress Series; Nordidactica: Journal of Humanities and Social Science Education; Nordina (Nordic Studies in Science Education); Scandinavian Journal of Educational Research; Sustainability.

*National:* ÅA Pedagogiska fakulteten Rapport; Suomen ympäristö, Helsinki: Edita; Kasvatus; LUMAT: International Journal of Math, Science and Technology Education.

### *Referee in scientific conference proceedings:*

NFSUN Conference proceedings (2014, 2017); ERIDOB Conference proceedings (2012, 2014, 2016); ESERA Conference proceedings (2011, 2013, 2015); Proceedings of the XXI

annual symposium of the Finnish Association of Mathematics and Science Education Research; Symposium of subject didactics [Ainedidaktiikan symposium] (2006- ); Research Report; PELAG Symposium Proceedings (1996).

*Editor in book or conference proceedings:*

Cognitive and Affective Aspects in Science Education Research (2017); Electronic Proceedings of the ESERA 2015 Conference. Science education research: Engaging learners for a sustainable future (2016); Symposium of subject didactics [Ainedidaktiikan symposium], 2011 (two books); Final report of SEED project (2011).

*Chairperson in scientific conferences including:*

NARST, San Antonio Texas, USA (2017); NFSUN, Helsinki Finland, (2014); NFSUN Trondheim Norway (2017); ESERA, Nicosia Cyprus (2013) and ESERA Helsinki Finland (2015); ERIDOB, Karlstad Sweden (2016); IOSTE, Tartu, Estonia (2006); Annual Symposium of the FMSERA, Helsinki, Finland (2003).

*Oral presentations and posters in the international and national scientific conferences:*

Numerous oral presentations on Baltic Sea ecology (1986-2000), biology education and the education of sustainable development (2001- ).

## **12. Scientific impact of research and three most cited articles in biology education**

About 90 publications, most published in scientific journals.

H-index: 18 (Google Scholar, December 2017).

I have worked in different scientific fields, studying marine ecology, biology education and education for sustainable development. I am interested in exploring learning in out-of-school learning environments, inquiry approach in biology education, conceptual learning, gene education and socio-scientific issues in biology education, as well as the school factors that influence students' sustainability behaviours.

### **Articles on biology education:**

Uitto, A. et al. (2006). Students' interest in biology and their out-of-school experiences. *Journal of Biological Education*, 40(3), 124-129.

Uitto, A. et al. (2011). Secondary school students' interests, attitudes and values concerning school science related environmental issues in Finland. *Environmental education research*, 17(2), 167-186.

Uitto, A. (2014). Interest, attitudes and self-efficacy beliefs explaining upper-secondary school students' orientation towards biology-related careers. *International Journal of Science and Mathematics Education*, 12(6), 1425-1444.

### **Articles on education for sustainable development (ESD):**

Uitto, A., Juuti, K., Lavonen, J. & Meisalo, V. (2004). Who is responsible for sustainable development? Attitudes to environmental challenges: A survey of Finnish 9th grade comprehensive school students. In: A. Laine, J. Lavonen & V. Meisalo (Eds.), *Current research on mathematics and science education: Proceedings of XXI annual symposium of The Finnish Association of Mathematics and Science Education Research. (Research Report 253, pp. 80 -102)*. Helsinki: University of Helsinki.

Uitto, A. et al. (2015). Participatory school experiences as facilitators for adolescents' ecological behaviour. *Journal of Environmental Psychology*, 43, 55-65.

Uitto, A. et al. (2017). Subject Teachers as Educators for Sustainability: A Survey Study. *Subject Teachers as Educators for Sustainability: A Survey Study, Education Sciences*, 7, 8, 1-19.

***Articles on marine ecology:***

Uitto, A. et al. (1997). Summer dynamics of the coastal planktonic food web in the northern Baltic Sea. *Marine Ecology Progress Series*, 151 (1), 27-41.

**13. Positions of trust in society and other societal merits**

*Membership at national and international committee:*

Member, the renewal of the national curriculum of basic education, lower secondary school biology, Finnish National Board of Education (FNBE) (2012-2014); member, commenting the renewal of the national curriculum of upper secondary school, biology, FNBE (2014-2015); member, the follow-up assessment of cross-curricular themes, FNBE (2009-2011); RCE Espoo, Regional Centre of Expertise on ESD (2014- ); member, the Scandinavian network of the researcher in environmental education (2005-2012).