

Curriculum vitae – Line Sverdrup

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Academic record:

Dr. scient, Biology (Ecotoxicology), University of Oslo, 2001

Cand. scient, Biology (Toxicology), University of Oslo, 1997

Employment record:

2008 - Assistant professor at the University of Oslo (20 %)
2006 - Senior consultant with DNV Energy, Risk Management Solutions.
2005 – 2006: Project work at the University of Oslo, sponsored by DNV
2003 – 2005: Post doc position at the University of Oslo
2002 - 2003: Consultant, Norwegian Centre for Soil and Environmental research.
1998 - 2001: Part time (60 %) PhD position, University of Oslo.
1997 - 2001: Consultant, Aquateam. Part-time (40 %) from 1998.

Detailed Professional Experience:

Experienced in hazard and risk assessment of chemicals, risk assessment of industrial effluents and wastes, contaminated land, and contaminated sediments. Hands-on experience with a broad range of procedures for ecotoxicological testing and environmental monitoring (i.e., toxicity testing with soil invertebrates and terrestrial plants, functional and diversity measures for soil microorganisms, biodegradation testing of chemicals in aquatic samples, toxicity testing with aquatic organisms including freshwater and marine invertebrates and algae, chemical extraction procedures and chemical analysis (e.g., GC-FID, ICP-AES) of various matrices including plants, invertebrates, soil, and water samples.

Main focus for research activities have been on the fate and effects of heavy metals and organic contaminants in the terrestrial environment, with special emphasis on substance bioavailability.

In my present position at DNV I work mainly with environmental risk assessment and contingency planning for accidental oil spills from offshore petroleum activities. Here, the information on both the non-renewable local resources (birds, fish, marine mammals, and coastal habitats) and the oil spills (e.g., possible blowout scenarios and their associated yearly risk) are expressed in a probabilistic manner on a geographic scale. The environmental risk can be expressed as combination of probability and consequence; highlighting areas, target species and time periods of special concern.

Relevant advisory activities (regulatory (eco)toxicology)

Member of the Norwegian Scientific Committee for Food Safety (2005-). Presently I chair the panel for plant protection products, and contribute to the work in other panels (e.g., risk assessment of sludge and genetically modified organisms).

Various projects for SFT and Nordisk Ministerråd on hazard and risk assessment of chemicals performed as a consultant at Aquateam and Jordforsk (1997-2003).

Member of ISO TC190 (soil quality) in 2002-2003, developing standards for ecotoxicity testing and evaluation of test results.

Scientific reviews

Papers: Editorial Board member for the journal "Environmental Toxicology and Chemistry". I regularly act as a referee for a number of other journals in my field (most frequently Environmental Science and Technology and Chemosphere).

Research proposals: Expert panel member - The Swedish Research Council for Environment, Agricultural Sciences and Spatial Planning (FORMAS) (97 proposals evaluated in 2008), occasional reviews for other funding bodies abroad.

International experience & cooperation

18 months as a visiting scientist at Danish National Environmental Research Institute (Terrestrial Ecology) in Silkeborg (1999 – 2001). 12 months as a visiting scientist at Vrije Universiteit (Terrestrial Ecology) in Amsterdam, The Netherlands (2004-2005). I still have ongoing work with several people at these and other institutions abroad.

Professional societies:

Board member, The Norwegian Society of Pharmacology and Toxicology (NSFT)
Member, Society for Environmental Toxicology and Chemistry (SETAC)
Member, International Union of Toxicology (IUTOX)
Member, Eurotox

Publications in international, peer reviewed journals

Sverdrup, L.E.; Kelley, A.E.; Weideborg, M.; Ødegård, K.; Vik, E.A. 2000. Leakage of chemicals from two grouting agents used in tunnel construction in Norway: monitoring results from the tunnel Romeriksporten. **Environmental Science and Technology**, **34**: 1914-1918.

Vik, E.A.; Sverdrup, L.E.; Kelley, A.E.; Storhaug, R.; Beitnes, A.; Boge, K.; Grepstad, G.K.; Tveiten, V. 2000. Experiences from environmental risk management of chemical grouting agents used during the Romeriksporten tunnel construction. **Tunnelling and Underground Space Technology**, **15**: 369-378.

Sverdrup, L.E.; Kelley, A.E.; Krogh, P.H.; Nielsen, T.; Jensen, J.; Scott-Fordsmand, J.J.; Stenersen, J. 2001. Effects of eight polycyclic aromatic compounds on the survival and reproduction of the springtail *Folsomia fimetaria* (Collembola, Isotomidae). **Environmental Toxicology and Chemistry**, **20**: 1332-1338.

Weideborg, M.; Källqvist, T.; Ødegård, K.E.; Sverdrup, L.E.; and Vik, E.A. 2001. Environmental risk assessment of acrylamide and methyllolacrylamide from a grouting agent used in the tunnel construction of Romeriksporten, Norway. **Water Research**, **35**: 2645-2652.

Sverdrup, L.E.; Källqvist, T.; Kelley, A.E.; Fürst, C.S.; Hagen S.B. 2001. Comparative toxicity of acrylic acid to marine and freshwater microalgae and the significance for environmental effects assessments. **Chemosphere**, **45**: 653-658.

Sjursen, H.; Sverdrup, L.E.; Krogh, P.H. 2001. Effects of polycyclic aromatic compounds on the drought tolerance of *Folsomia fimetaria* (Collembola, Isotomidae). **Environmental Toxicology and Chemistry**, **20**: 2899-2902.

Sverdrup, L.E.; Jensen, J.; Krogh, P.H.; Kelley, A.E.; Stenersen, J. 2002. Effects of eight polycyclic aromatic compounds on the survival and reproduction of the enchytraeid *Enchytraeus crypticus* (Oligochaeta, Clitellata). **Environmental Toxicology and Chemistry**, **21**: 109-114.

Sverdrup, L.E.; Fürst, C.S.; Weideborg, M.; Vik E.A.; Stenersen, J. 2002. Relative sensitivity of one freshwater and two marine acute toxicity tests as determined by testing 30 offshore E&P chemicals. **Chemosphere**, **46**: 311-318.

Sverdrup, L.E.; Jensen, J.; Krogh, P.H.; Stenersen, J. 2002. Studies on the effect of soil aging on the toxicity of pyrene and phenanthrene to a soil dwelling springtail. **Environmental Toxicology and Chemistry**, **21**: 489-492.

Sverdrup, L.E.; Nielsen, T.; Krogh, P.H. 2002. Soil ecotoxicity of polycyclic aromatic hydrocarbons (PAHs) in relation to soil sorption, lipophilicity and water solubility. **Environmental Science and Technology**, **36**: 2429-2435.

Jensen, J.; Sverdrup, L.E. 2002. Joint toxicity of linear alkylbenzene sulphonates (LAS) and pyrene on *Folsomia fimetaria*. **Ecotoxicology and Environmental Safety**, **52**: 75-81.

Sverdrup, L.E.; Ekelund, F.; Krogh, P.H.; Nielsen, T.; Johnsen, K. 2002. Soil microbial toxicity of eight polycyclic aromatic compounds: effects on nitrification, the genetic diversity of bacteria and the total number of protozoans. **Environmental Toxicology and Chemistry**, **21**: 1644-1650.

Sverdrup, L.E.; Krogh, P.H.; Nielsen, T.; Stenersen, J. 2002. Relative sensitivity of three terrestrial invertebrate tests to polycyclic aromatic compounds. **Environmental Toxicology and Chemistry**, **21**: 1927-1933.

Jensen, J.; Krogh, P.H.; Sverdrup, L.E. 2003. Effects of the antibiotics tiamulin, olanquinodox and metronidazole and the anthelmintic ivermectin on the soil invertebrate species *Folsomia fimetaria* (Collembola) and *Enchytraeus crypticus* (Oligochaeta). **Chemosphere**, **50**: 437-443.

Jensen, J.; Sverdrup, L.E. 2003. Polycyclic Aromatic Hydrocarbon (PAHs) Ecotoxicity Data for Developing Soil Quality Standards. **Reviews of Environmental Contamination and Toxicology**, **179**: 71-95.

Sverdrup, L.E.; Krogh, P.H.; Nielsen, T.; Kjær, C.; Stenersen, J. 2003. Toxicity of eight polycyclic aromatic compounds to the red clover (*Trifolium pratense*), ryegrass (*Lolium perenne*) and mustard (*Sinapsis alba*). **Chemosphere**, **53**: 993-1003.

Sverdrup, L.E.; Hartnik, T.; Mariussen, E.; Jensen, J. 2006. Toxicity of three halogenated flame retardants to nitrifying bacteria, red clover (*Trifolium pratense*), and a soil invertebrate (*Enchytraeus crypticus*). **Chemosphere**, **64**: 96-103.

Sverdrup, L.E.; De Vauffleury, A.; Hartnik, T.; Loibner, A.P.; Jensen, J. 2006. Effect and uptake of polycyclic aromatic compounds in snails (*Helix aspersa*). **Environmental Toxicology and Chemistry**, **25**: 1941-1945.

Sverdrup, L.E.; Linjordet, R.; Strømman, G.; Hagen, S.B.; van Gestel, C.A.M.; Frostegård, Å.; Sørheim, R. 2006. Functional and community-level soil microbial responses to zinc addition may depend on test system biocomplexity. **Chemosphere**, **65**: 1747-1754.

Sverdrup, L.E.; Hagen, S.B.; Krogh, P.H.; van Gestel, C.A.M. 2007. Benzo(a)pyrene shows low toxicity to three species of terrestrial plants, two soil invertebrates and soil nitrifying bacteria. **Ecotoxicology and Environmental Safety**, **66**: 362-368.

Aamodt, S.; Sjursen, H.; Sverdrup, L.E.; Gudbrandsen, M.; Reinecke S.A.; Reinecke A.J.; Stenersen, J. 2007. Recovery of cholinesterase activity in the earthworm *Eisenia fetida* Savigny following exposure to chlorpyrifos. **Environmental Toxicology and Chemistry**, **26**: 1963-1967.

Gudbrandsen, M.; Sverdrup, L.E.; Aamodt, S.; Stenersen, J. 2007. Short-term pre-exposure increases earthworm tolerance to mercury. **European Journal of Soil Biology**, 43:261-267.

Hartnik, T.; Sverdrup, L.E.; Jensen, J. 2008. Toxicity of alpha-cypermethrin to four terrestrial non-target invertebrates and implications on risk assessment. **Environmental Toxicology and Chemistry** 27, (6), 1408-1415.