

# Annik Magerholm Fet - Curriculum vitae with track record

## PERSONAL INFORMATION

Family name, First name:	Fet, Annik Magerholm
Nationality:	Norwegian
URL for personal website:	<a href="https://www.ntnu.edu/employees/Annik.fet">https://www.ntnu.edu/employees/Annik.fet</a>

## EDUCATION

	Department of Energy and Process Engineering Norwegian University of Science and Technology (NTNU) Norway
1997	Ph.D. Systems Engineering and Environmental Life Cycle Performance in the Ship Industry
1978	Master/Cand Real Physics, Nuclear Physics, Department of Physics, University of Trondheim, AVH, Norway

## POSITIONS - Current Position

2017-pres.	Vice Rector Norwegian University of Science and Technology, NTNU in Ålesund
1999-pres.	Professor Environmental Management and Life Cycle Assessment, Faculty of Economics, Department of International Business, NTNU, Norway

## Previous positions held

	Job title/name of employer/country
2014-2016	Director of NTNU strategic research area Sustainable Societal Development
1990- 1998	Associate professor and head of department at Ålesund University College/NTNU
1979-1990	Vice principal at Møre and Romsdal Technical College of Engineering
1986-1988	Geophysicist at Statoil's exploration offices in Stavanger and Kristiansund

## FELLOWSHIPS, AWARDS AND PRIZES

	Name of institution/country
2012	The Environmental Award, Ålesund Municipality, first time given to a single person
2003	IMarEST Silver medal for the paper "Environmental Reporting in marine transport", published in the Journal of Marine Design and Operations, No B1 2002, ISSN 1476-1556.
1997	Norwegian national award for excellent promotion of Environmental Management and Cleaner Production in Norwegian companies, Norske Sivilingeniørers forening
2006-present	Fellow of the Institute of Marine Engineering, Science and Technology, FIMarEST, Chartered Marine Scientist, CMarSci, Chartered Marine Engineer, CMarEng, Chartered Engineer, CEng

## MOBILITY - Research stays abroad lasting more than three months

	Name of faculty/department/centre, name of university/institution/country
2009	• University of Technology, Sydney, Australia. (2009), Centre for Corporate Governance;
2004	• Univ. of California Santa Barbara (UCSB), Donald Bren School of Env. Science and Man.
1997	• Instituto Superior Technico, Lisbon University, Portugal (1997);
1996	• Massachusetts Institute of Technology, MIT, Boston, USA (1996);
1996	• Wuppertal Institute, Germany, Institute for Climate and Environmental Research (1996);
1995	• Technical Univ. Delft, Mechanical, Maritime and Materials Engineering, the Netherlands

## PROJECT MANAGEMENT EXPERIENCE

	Project and role, funding from
2005-2019	<b>Projects funded by Research Council of Norway, private or public organisations:</b> Leader of more than 25 projects under different funding (Research Council of Norway, Norwegian Ministry of Foreign Affairs, The Norwegian Agency for Development Cooperation (NORAD). Examples of most recent projects:

	<ul style="list-style-type: none"> <li>• Leader of “Sustainable Transportation in heritage areas (Geiranger) - (SUSTRANS)”, Norwegian Research Council, 2017-20, 1 mill EUR</li> <li>• Leader of “Sustainable Innovation and Shared Value Creation in Norwegian Industry”, (SISVI), Norwegian Research Council, / BIA, 2014-2018, budget 2.5 mill EUR, KPN</li> <li>• Leader of Network for Green Growth, NRC/BIA, 2016-2019</li> <li>• Leader of Smart Circular City, Ålesund (2018-2019), M&amp;R County, Ålesund Municipality, ÅRIM and Tafjord Energy.</li> <li>• Partner in “Sustainable Ship Production” (SUSPRO), funded by NRC, (MAROFF), 2013-2018, KPN.</li> <li>• Leader of KPN-project “Innovation in Global Maritime Production 2020”, (IGLO-MP2020) funded by the NRC (MAROFF) (2008-2012, budget 2,5 million EUR), innovation in sustainable business models.</li> <li>• Leader of project “Data Assisted Tool for Sustainable Product Innovation – DATSUPI”, funded by the NRC from 2006-2009 (and pre-projects 1999-2006), software for development of EPDs.</li> <li>• Leader of “Harmonization of PCR and EPD”, a collaboration between NTNU, Sintef Byggforsk and Østfold research, and the project “Climate-calculator” Statsbygg</li> <li>• Leader of Norwegian project “CSR competence network for innovation and value creation” funded by NRC and industrial member-partners, 2011-2013.</li> <li>• WP-leader “CSR as a Strategic Tool for Sustainability Focused Innovation in Small and Medium Sized Enterprises” with BI, Oslo and Stavanger, (2011-2015), funded by NRC</li> <li>• Leader of “The Climate Calculator for buildings, hereunder LCA for building materials (2011-2013), which continues into a Nordic project on LCA-databases for construction materials.</li> <li>• EP-leader “Development of Carbon footprint of fish food products”, (2010-2011), continuing into a series of new projects on standardization of Product Categories Rules (PCR) by Standards Norway and by FAO and the British Standards Institution.</li> <li>• Project leader of a series of projects where sustainability in maritime sector came in focus; “Cleaner Production in Norwegian Shipyards”, “Environmental performance of transportation - a comparative study”, “Life Cycle Evaluation of Ship Transportation – Development of Methodology and Testing”, from the Norwegian MARMIL-program), LCA for ship equipment, (Rolls Royce), “Ship Soft”, a pre-project (since 2010) for software solutions for the maritime sector (RCN)</li> <li>• Project leader “Sustainable consumption, production and communication”, “Integrated product development tool for the furniture industry”, “Productivity 2005 Industrial Ecology (P2005-IndEcol), “Eco-efficiency and value chains in the common goods market”, “Environmental product declaration, development of database for product design”, “Eco-efficiency reporting in the common goods market”, “Eco-effective value chains”)</li> </ul> <p><b>Projects funded by EU Interregg, EU Erasmus +, and other international research programmes:</b></p> <ul style="list-style-type: none"> <li>• Leader of CapSEM, “Capacity building in Sustainability and Environmental Management” an Erasmus+-project funded by the European Comission, 2017-2019 with partner countries India, Nepal, Uganda, Portugal, the Netherlands and Norway.</li> <li>• Leader of Cleaner Prodcuton projects funded by DANIDA in collaboration with Ministry of Economic Affairs in Bhutan (DANIDA), Cleaner Production Tanzania (NORAD), Cleanser Production in Lithuania (UD)</li> <li>• Norwegian delegate to the FAO - expert group for greenhouse gas emission of seafood (2011)</li> <li>• Norwegian delegate in the NATO/CCMS Pilot Study on Clean Products and Processes (1999-2008)</li> <li>• Norwegian delegate in the Cost Action 530, a European network on Material Techn. (2001-2006)</li> </ul>
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## SUPERVISION OF GRADUATE STUDENTS AND RESEARCH FELLOWS

	No. of	Master's students/ Ph.D./Postdocs	Name of faculty/department/centre, name of university/institution/country
200-2019	18  50	PhD  Master Students	Department of Industrial Economics and Technology Management, NTNU, Norway, In the same period: Supervision of Research Fellows: About 15 through my leadership of Research projects

## TEACHING ACTIVITIES

	Teaching position – topic, name of university/institution/country
1999-2019	Professor, Master Courses in Environmental Management, Industrial Ecology, Corporate Social Responsibility (CSR), Sustainable Business Models, NTNU (full courses up to 2015, giving lectures in specific topics in classes Ålesund and Tondheim) <i>PhD-course: Theory and methods in systems approaches to sustainability (every 2.year, last time 2019)</i>
1990-1999	Assistant professor, Møre og Romsdal Ingeniørhøgskole, Ålesund Teaching in mathematics and physics, and the course Business, society and Environment
1979-1989	Lecturer in Mathematics and Physics, Møre og Romsdal Teknisk Fagskole, Ålesund

## ORGANISATION OF MEETINGS

	Role and name of event/number of participants/country
2003-2017	Responsible for the national CSR-conferences in 2003 and in 2012, in Trondheim. Responsible for the international conference NTNU Sustainability Science Conference, Transitions to Sustainable Systems, Oct 2017, Trondheim As part of the leadership of a large number of research projects, I have organized a variety of Scientific meetings. In addition, I have built up research groups duringh 30 years.

## INSTITUTIONAL RESPONSIBILITIES - Member of a committee/graduate student advisor etc.

	Name of university/institution/country
1997-2019	<ul style="list-style-type: none"> <li>Member of ca 20 evaluation committees of professorships, studyprograms, mainly in Europe, but also in Africa and Asia.</li> <li>Member of 23 PhD-committees; Newcastle University, Chalmers University, Lund University, Norwegian School of Business, University Nordland, NTNU, TU-Luleå, Ålborg Univ, KTH</li> <li>Member on elect in UNEP International Resource Panel, UNIRP, 2016-2017</li> <li>Board member of Møre Research, (since 2017), of Global Center of Expertise Blue Maritime, (since 2017), NCE Blue Legasea (2017-2018).</li> <li><a href="#">Member of the Advisory Board for the Swedish Competition Authority (2014-2017)</a></li> <li>Member of evaluation panel, FORMAS, Swedish Research Council (2013-2015)</li> <li>Leader of the strategic research area Green Value Creation at IØT, NTNU (2012-2014)</li> <li>Board member of Polaris Media Nordvestlandet (Media House) (since 2009)</li> <li>Board member for the Program for User-driven Research-based Innovation (BIA) within the Norwegian Research Council, (2010-2018)</li> <li>Deputy board member of Standards Norway (SN), the national memb. ISO and CEN. (2010-2016)</li> <li>Member of the committee on Ethics and Corporate Social Responsibility, the Norwegian Federation of Business Association (2009-2014)</li> <li>Board member (2001-2006 / 2015-2018) and leader of technical committee in EPD-Norway, innovation in product LCA-development and development of the EPD-organization in Norway</li> <li>Member of the two strategy-groups established by Rector at NTNU; OTIS –Ocean Space Research and Sustainable Social development, NTNU (2011-2013)</li> </ul>

	<ul style="list-style-type: none"> <li>• Board member of SINTEF Reward Fund for excellent research (since 2008),</li> <li>• Board member of UNIFOR the Manag. Found. for funds and legacies, Trondheim (since 2006)</li> <li>• Leader of the Academic Advisory Board; SFI-NORMAN, 2011-2015</li> <li>• Member of the Strategy Committee at the Department of Industrial Economics and Technology Management, NTNU (2010-2012)</li> <li>• Member of the Advisory Board for the Industrial Ecology program at NTNU (2001-2009),</li> <li>• Board member in Norwegian Council for Systems Engineering (NORSEC) (since 2001)</li> <li>• Board member of the Environmental Management Advisory Group, NTNU (2006-2009)</li> <li>• Member of the International Society of Industrial Ecology, ISIE (2000-2008)</li> <li>• Board member of SIVATECH AS, daughter company of SIVA (2009-2010)</li> <li>• Member of the Norwegian Petroleum Association (1987-2016)</li> <li>• Board Member of the Globalization program at NTNU (2005-2009)</li> <li>• Board member of the Program for Developing Countries, PRODEC, NTNU (2005-2008)</li> <li>• Board Member of the department of industrial economics and techn. management (1999-2005)</li> <li>• Board member of Aalesund University College (1997-1999)</li> </ul>
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#### **COMMISSIONS OF TRUST IN ACADEMIC, PUBLIC OR PRIVATE ORGANISATIONS** (if applicable)

**Scientific advisory board/review board/review panel member/editorial board/scientific advisory board/reviewer/scientific evaluation/etc.**

	Name of university/institution/country – and role
2008-2019	<ul style="list-style-type: none"> <li>• Expert in the evaluation panel for Joint Master's Programme in Maritime Operations (M.Sc.) at the University of Applied Sciences Emden/Leer (Germany) and Western Norway University of Applied Science, 2017-2018.</li> <li>• Evaluation panel for Lund University in 2008, and for The International Institute of Industrial Environmental Economics – IIIEE, Lund, in 2008.</li> <li>• Evaluation for promotion to professorships for 10 candidates (University of Newcastle, the University of Strathclyde, University of Mauritius, University College in Ålesund, Chalmers University, NTNU)</li> </ul>

#### **Other commissions of trust - in business, organisations or public life**

	Name of board/body/country – and role
1997-2019	<ul style="list-style-type: none"> <li>• Member on elect in UNEP International Resource Panel IRP, 2016-2017</li> <li>• <a href="#">Member of the advisory board for the Swedish Competition Authority (2014-2017)</a></li> <li>• Member of evaluation panel, FORMAS, Swedish Research Council (2013-2015)</li> <li>• Leader of the strategic research area Green Value Creation at IØT, NTNU (2012-2014)</li> <li>• Board member of Polaris Media Nordvestlandet (Media House) (since 2009)</li> <li>• Board member for the Program for User-driven Research-based Innovation (BIA) within the Norwegian Research Council, (2010-2018)</li> <li>• Deputy board member of Standards Norway (SN), the national member ISO and CEN. (2010- 2016)</li> <li>• Member of the committee on Ethics and Corporate Social Responsibility, the Norwegian Federation of Business Association (2009-2014)</li> <li>• Board member (2001-2006 / 2015-2018) and leader of technical committee in EPD-Norway, innovation in product LCA-development and development of the EPD-organization in Norway</li> <li>• Member of the two strategy-groups established by Rector at NTNU; OTIS –Ocean Space Research and Sustainable Social development, NTNU (2011-2013)</li> <li>• Board member of SINTEF Reward Fund for excellent research (since 2008),</li> <li>• Board member of UNIFOR the Manag. Found. for funds and legacies, Trondheim (since 2006)</li> <li>• Leader of the Academic Advisory Board; NORMAN, 2011-2015</li> </ul>

	<ul style="list-style-type: none"> <li>• Member of the Strategy Committee at the Department of Industrial Economics and Technology Management, NTNU (2010-2012)</li> <li>• Member of the Advisory Board for the Industrial Ecology program at NTNU (2001-2009),</li> <li>• Board member in Norwegian Council for Systems Engineering (NORSEC) (since 2001)</li> <li>• Board member of the Environmental Management Advisory Group, NTNU (2006-2009)</li> <li>• Member of the International Society of Industrial Ecology, ISIE (2000-2008)</li> <li>• Board member of SIVATECH AS, daughter company of SIVA (2009-2010)</li> <li>• Member of the Norwegian Petroleum Association (1987-2016)</li> <li>• Board Member of the Globalization program at NTNU (2005-2009)</li> <li>• Board member of the Program for Developing Countries, PRODEC, NTNU (2005-2008)</li> <li>• Board Member of the department of industrial economics and techn. management (1999-2005)</li> <li>• Board member of Aalesund University College (1997-1999)</li> </ul>
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## MEMBERSHIPS OF ACADEMIES / SCIENTIFIC SOCIETIES / NETWORKS

	Name of academies, scientific societies, networks
2003-2019	Member in NTVA Norges Teknisk-Naturvitenskapelige Akademi, since 2007. Member of ISDRS- International Sustainable Development Research Society Conference Member of SDSN-NE; Sustainable Development Solution Networks – North Europe (UN initiated network)

## MAJOR COLLABORATIONS

Name of university/ institution/ faculty/ department/ centre, company/ governmental or non-governmental organisation	Topic
A long list of collaborations, they are addressed in some of the work listed above. TU Delft, the Netherlands, and University of Lisbon, Portugal	Sustainability Assessment methods, Environmental Management, Systems Engineering, CSR, Business Models for Sustainability

## Track record - Publications (10 most recent):

In total ca 90 papers in the period 2002-2018, of which 40 in scientific journals and proceedings with referee, book chapters, and co-author of books, invited ca 30 times as key-note speaker:

Deshpande, Paritosh; Brattebø, Helge; Fet, Annik Magerholm. (2019) A method to extract fishers' knowledge (FK) to generate evidence for sustainable management of fishing gears.. *MethodsX* 2019 ;Volum 6. s. 1044-1053, NTNU

Sørheim, Kristin; Barstad, Johan; Bergslid, Ildri Kristine; Fet, Annik Magerholm; Flø, Bjørn Egil; Lande, Unni Støbet; Solemdal, Liv; Steinshamn, Håvard; Velle, Liv Guri (2019). Berekraftig verdiskaping i verdens-arvomme. (ISBN 978-82-8202-089-3) ;Volum 4.52 s. NORSØK RAPPORT(8), NIBIO NORSØK NTNU HLB MF Aspen, Dina Margrethe; Haskins, Cecilia; Fet, Annik Magerholm. (2018) Application of systems engineering to structuring acquisition decisions for marine emission reduction technologies. *Systems Engineering*. vol. 21 (4).

Emblemsvåg, Jan; Kvadsheim, Nina Pereira; Koesling, Matthias; Halfdanarson, Jon; Rebours, Celine; Fet, Annik Magerholm (2018). Establishing a Large-scale Seaweed Industry in Norway: Strategic, Environmental and Economic Considerations. *PROMAC Newsletter* 2018 (6) s. 3-4

Philis, Gaspard; Gracey, Erik Olav; Gansel, Lars Christian; Fet, Annik Magerholm; Rebours, Celine. (2018) Comparing the primary energy and phosphorus consumption of soybean and seaweed-based aquafeed proteins - A material and substance flow analysis. *Journal of Cleaner Production*. vol. 200., P 1142-1153.

Sparrevik, Magnus; Wangen, Helene FvTjrsund; Fet, Annik Magerholm; De Boer, Luitzen. (2018) Green public procurement - A case study of an innovative building project in Norway. *Journal of Cleaner Production*. vol. 188.

Fet, Annik Magerholm; Knudson, Haley. Environmental Management From a Systems Perspective. I: *Encyclopedia of Sustainable Technologies*. Elsevier 2017 ISBN 9780128046777. s. 165-173

Fet, Annik Magerholm; Knudson, Haley. Implementing Corporate Social Responsibility. I: Encyclopedia of Sustainable Technologies. Elsevier 2017 ISBN 9780128046777. s. 125-130

Vildasen, Sigurd; Keitsch, Martina; Fet, Annik Magerholm. (2017) Clarifying the Epistemology of Corporate Sustainability. Ecological Economics. vol. 138.

Ali, Faheem; Sriram, Pavan; Alfnes, Erlend; Brett, Per Olaf; Fet, Annik Magerholm. (2015) Remanufacturing as a Sustainable Strategy in Shipbuilding Industry. IFIP Advances in Information and Communication Technology. vol. 460 (1).

Aspen, Dina Margrethe; Sparrevik, Magnus; Fet, Annik Magerholm. (2015) Review of methods for sustainability appraisals in ship acquisition. Environment Systems and Decisions. vol. 35 (3).

Sparrevik, Lars Magnus; Lindhjem, Henrik; Andria, Verania; Fet, Annik; Cornelissen, Gerard. (2014) Environmental and socioeconomic impacts of utilizing waste for biochar in rural areas in Indonesia - a systems perspective. Environmental Science and Technology. vol. 48 (9).

Fet, Annik Magerholm; Aspen, Dina Margrethe; Ellingsen, Harald. (2013) Systems engineering as a holistic approach to life cycle designs. Ocean Engineering. vol. 62.

Igarashi, Mieko; De Boer, Luitzen; Fet, Annik Magerholm. (2013) What is required for greener supplier selection? A literature review and conceptual model development. Journal of Purchasing and Supply Management. vol. 19 (4).

Skaar, Christofer; Fet, Annik Magerholm. (2012) Accountability in the Value Chain: From Environmental Product Declaration (EPD) to CSR Product Declaration. Corporate Social Responsibility and Environmental Management. vol. 19 (4).

#### **Research monographs, chapters in collective volumes and any translations**

Winter, A. and Fet, A.M. Sustainability Strategies in the oil and gas industry, ISBN: 978-82-315-0049-0, Published by Norwegian Petroleum Academy AS, 2016, Norway

Fet, Annik Magerholm; "CSR & Sustainability - A Life Cycle Perspective", in *CSR and Beyond, A Nordic Perspective* . Cappelen Damm. Oslo 2013

Atle Midttun, Fred Wenstøp, Atle Blomgren and Annik Magerholm Fet: "CSR, Innovation and Value Creation: Business Models in Norwegian SMEs" I Atle Midttun (red) *CSR and Beyond, A Nordic Perspective* . Cappelen Damm. Oslo 2013

Fet, A. M.; Skaar, C.; Bedrifters produktansvar. Kapittel 12: Bedriftenes samfunnsansvar – en casestudie fra norsk møbelindustri. Norwegian translation of the book "Corporate Social Responsibility (CSR) – reconciling Aspiration with Application", Tapir Forlag, 2010