

**Annual report for 2009: Strategic Research Program
Environmental Management and Corporate Social Responsibility
(EMCSR) in Global Value Chains
Department of Industrial Economics and Technology Management**

Continuing in the tradition begun in 2006, this report summarizes the accomplishments of this strategic research area within the Department of Industrial Economics and Technology Management in cooperation with the Supply Chain Management program. Much of the information found in this report can also be found on the department website (www.iot.ntnu.no/csr) or under the IGLO-MP2020 site (www.iglo-mp2020.no).

A. Research group 2009:

- Annik Magerholm Fet (Coordinating Professor for the EMCSR-activities at IØT)
- Uno Abrahamsen (Visiting researcher)
- Luitzen de Boer (Professor)
- Caroline Cheng (PhD candidate)
- Alexander Dahlsrud (PhD candidate)
- Øivind Hagen (PhD candidate, Indecol)
- Cecilia Haskins (post-doc researcher)
- John Hermansen (Associate Professor)
- Rolf Lunheim (Adjunct professor)
- Ottar Michelsen (post-doc researcher)
- Erwin M. Schau (PhD candidate, IØT and Berlin)
- Christofer Skaar (PhD candidate)
- Magnus Sparrevik (PhD candidate)
- Tore Ulstein (Associate Professor II)
- Natalie Vakar (PhD candidate)
- Fengrong Zhang (Visiting scholar from China)

B. Seminars/workshops 2009

- i. November 2009: “CSR for reputation-building,” during Top Leaders Forum 2009
- ii. August 13, 2009: Seminar on 'CSR - where ethics meets business practice in the global economy'
- iii. June 3, 2009: Workshop on CSR and innovation, Siemens Trondheim
- iv. CSR Forum at NTNU Research Seminar 25 May 2009: Communicating CSR: Enhancing or inhibiting socially responsible business practice?
- v. March 3-4, 2009: Workshop - System Thinking, Maritime Systems and Trends in Maritime and Shipbuilding Industries

C. International exchange

Dr. Fengrong Zhang, Visiting Scholar from China – Jan-2009 – Jan-2010, Funded by Norwegian Research Council

Dr. Prakash Sethi, University Distinguished Professor of Management at the Zicklin School of Business, Baruch College, The City University of New York, Visiting professor August 2009

Annik Magerholm Fet; visiting professor at University of Technology, Sydney, Center for Corporate Governance, 1.10.-31.12.2009

D. Research Projects 2009

- i. Innovation in Global Maritime Production 2020 (IGLO-MP2020) is a KMB-project financed by the Norwegian Research Council in collaboration with Ulstein International AS, Siemens AS, PonPower AS, see www.iglo-mp2020.no
- ii. Cleaner Technology and Environmental Management (CTEM), Environment Urban Sector Program Support, Ministry of Economic Affairs; Bhutan, implementation of cleaner production strategies in 7 industrial sectors, funded by Danida
- iii. Data assisted tool for sustainability product information (DATSUPI) is a cooperation between Helland AS, Ekrones ASA, Håg ASA, Jensen Møbler AS. This project was financed by the Norwegian Research Council, reported in September 2009.
- iv. C(S)R in Global Value Chains: a Conceptual and Operational Approach, in collaboration between NTNU and the Norwegian School of Business (BI), see www.csr-norway.no This project was financed by the Norwegian Research Council, reported in January 2009.
- v. Different projects in collaboration with EPD-Norway; CSR and Chemical information in EPDs, reported in December 2009, development of PCR for different sectors, three updated PCRs registered in 2009.

PhD projects:

- i. Hagen, Ø. (2009): *Do Socially Responsible Brands Lead to Socially Responsible Companies? Understanding Change in Expressive Organizations*. Trondheim: NTNU (doctoral dissertation 2009:51)
- ii. Dahlsrud, A. (2009). Corporate social responsibility as a business contribution to sustainable development - A study based on data from the Norwegian shipping industry. Trondheim: NTNU (doctoral dissertation 2009:142)
- iii. Erwin M. Schau; Environmental life cycle assessments of fish food products with emphasis of the fish catch process (submitted in April 2010, funded by Sintef)
- iv. Christofer Skaar; CSR in Global Value Chains (started September 2006)
- v. Natalie Vakar; Evaluation of Competitiveness of Product Engaged in CSR within Global Value Chains (Started December 2007, funded by Globalization Program)

- vi. Magnus Sparrevik; Methods for Sustainable Urban Coastal Area Management applied on Contaminant Sources (started January 2008)
- vii. Caroline Cheng; Evaluation of the Effectiveness of Hexagonal Balanced Scorecard approach for Managing Corporate Social Responsibility (CSR) in Global Production Systems (Started June 2009, funded by Globalization Program)

E. Applications for research funding

- i. A framework for regions to foster development through CSR enablement: Creating conditions that attract and retain sustainability-conscious businesses and people (CSR-IMPACTS); application to EUs 7. Framework Program (13th January 2009)
- ii. Fostering regional development through CSR enablement: Creating conditions that attract and retain sustainability conscious enterprises, application to The Norwegian Research Foundation, June 2009
- iii. Systemic Sustainable Innovation in Development (Application to Marie Curie under EU FP7, July 2007)
- iv. CSR-products, KMB-BIA proposal submitted in collaboration with J.E. Ekornes ASA, Sept 2009
- v. Nasjonalt kompetansesenter for CSR-dreven innovasjon, KMB-BIA-proposal submitted Oct. 2010
- vi. National Centre for CSR-driven Innovation, SFI-pre-project submitted 22.12.2009

F. Publications, conference presentations

Published articles and book chapters

- i. Dahlsrud, Alexander; Fet, Annik Magerholm; Lunheim, Rolf. Corporate social responsibility as a business contribution to sustainable development. A study based on data from the Norwegian shipping industry. Trondheim: Tapir Uttrykk 2009 (ISBN 9788247116722) 100 pages.
- ii. Fet AM, Michelsen O and Skaar C. 2009. Creating environmental product declarations (EPDs) – case study in the Norwegian furniture industry. In Fullana P, Betz M, Hirschier R and Puig R (eds.): *Life Cycle Assessment applications: Results from COST Action 530*, Aenor, Madrid pp: 238-244.
- iii. Fet AM, Skaar C and Michelsen O. 2009. Product Category Rules (PCR) and Environmental Product Declarations (EPDs). In Fullana P, Betz M, Hirschier R and Puig R (eds.): *Life Cycle Assessment applications: Results from COST Action 530*, Aenor, Madrid pp: 73-80.
- iv. Fet, A.M., Skaar, C. and Michelsen, O. 2009. Product category rules (PCR) and environmental product declarations (EPD) as tools to promote sustainable products; experiences from a case study of furniture production. *Clean Technologies and Environmental Policy* 11(2): 201-207.

- v. Schau, E.M.; Ellingsen, H.; Endal, A.; Aanondsen, S.Aa., 2009. Energy consumption in the Norwegian fisheries. *Journal of Cleaner Production* 17 (3): 325-334.
- vi. Michelsen, Ottar, Fet, Annik Magerholm, "Using eco-efficiency in sustainable supply chain management; a case study of furniture production", *Clean Technologies and Environmental Policy*, Published online June 2009
- vii. Fet, Annik Magerholm, NTNU, Staniškis, Jurgis K., APINI, Arbačiauskas, Valdas, APINI, "Indicators and Reporting As a Driving Tool for Environmental Activities in the Region", *Journal of Environmental Research, Engineering and Management*, 2009. No. 1(47), P. 69-75
- viii. Fet, Annik Magerholm; Skaar, Christoffer "Bedriftenes produktansvar – en case study fra norsk møbelindustri", Kapittel 12 i norsk oversettelse av boken "Corporate Social Responsibility (CSR) – reconciling Aspiration with Application", Tapir Forlag, 2010.
- ix. Michelsen O and de Boer L. 2009. Green procurement in Norway; a survey of practices at the municipal and county level. *Journal of Environmental Management* 91: 160-167.

Articles pending publication

- i. Fet, A. M., Schau, E.M., Haskins, C. 2009. A Framework for Environmental Analyses of Fish Food Production Systems based on Systems Engineering Principles. *Systems Engineering*, early online view June 2009.
- ii. Sopha, B.M., Fet, A.M., Keitsch, M.M., Haskins, C. 2009. Using systems engineering to create a framework for evaluating industrial symbiosis options. *Systems Engineering*, early online view June 2009.
- iii. Amy Marie Patrin Oen, Magnus Sparrevik¹, David N. Barton, Udaya Sekhar Nagothu, Gerald Jan Ellen, Gijds D. Breedveld, Jens Skei and Adriaan Slob. Sediment and society: an approach for assessing management of contaminated sediments and stakeholder involvement in Norway. *Journal of Soils and Sediments* Issue Volume 10, Number 2 / March, 2010
- iv. Sparrevik, M. From Ecological Risk Assessments to Risk Governance. Evaluation of the Norwegian Management System for Contaminated Sediments. *Integrated Environmental Assessment and Management* 2010

Articles under evaluation

- i. Haskins, Cecilia. A scorecard for communicating progress toward sustainable development in small and medium enterprises. Submitted to *Journal Cleaner Production*, October 2009.
- ii. Haskins, Cecilia. Applying the Discipline of Systems Engineering to Socio-Technical Global Challenges. Submitted to *Systems Engineering*, August 2009.

Conferences

- i. Sparrevik, M. 2009. From ecological risk assessment to risk governance in sediment management: What is the status in Norway? Uncertainty09; 16-17th November 2009.
- ii. Zhang, Fengrong; Fet, Annik Magerholm. Fuzzy RBF Assessment on Productive Efficiency of Environmental Impacted Enterprise. IEEE International Conference on Mechatronics and Automation (ICMA 2009); 2009.08.09-12.
- iii. Fet, Annik Magerholm. 2009. Using Systems Engineering to Implement Corporate Social Responsibility to Meet the Challenges of a Globalized World. Presented and printed in the proceedings of the 3rd Asia-Pacific Conference on Systems Engineering, Singapore, 20-23 July, 2009
- iv. Haskins, Cecilia. 2009. A scorecard for communicating progress toward sustainable development in small and medium enterprises. 15th AISDRC: Taking up the Global Challenge, Utrecht, NL, 4-8th July 2009.
- v. Zhang, Fengrong; Fet, Annik Magerholm. An Application of the Evaluation Model of Corporation Competitiveness and CSR costs in China. 5th Euro-Asia Conference on Environment and Corporate Social Responsibility: Management Science and Engineering; 2009.07.03 -04.
- vi. Fet, Annik Magerholm. Systems Engineering and Corporate Social Responsibility. Kongsberg Systems Engineering Event 2009; 4.-5.Juni 2009
- vii. Haskins, Cecilia. 2009. Using the concept of sustainable development to encourage corporate responsibility in small enterprises. Presented at Sustainable Development: A challenge for European Research, Brussels, 26-28 May 2009.
- viii. Brett, Per Olaf, and Ulstein, Tore. 2009. "Seeing what's next in design solutions: Developing the capability to build a disruptive commercial growth engine." Keynote presented at the 10th International Marine Design Conference, 25-29.mai 2009, Trondheim. Printed in conference proceedings, Volume 1.
- ix. Fet, Annik Magerholm, Moen, Øystein, Ulstein, Tore, Rensvik, Egil. 2009. "Innovation based modular ship design in a Global Value Chain perspective". Paper presented at the 10th International Marine Design Conference, 25-29.mai 2009, Trondheim. Printed in conference proceedings, Volume 1, pages 880-890
- x. Fet, Annik Magerholm. Corporate Social Responsibility – an introduction. ESTIEM Vision Conference; 2009.02.18
- xi. Sparrevik, M. 2009. New models for stakeholder involvement. 5th International conference on management of contaminated sediments; Jacksonville Florida; 2-5th January 2009.

Conference posters:

- i. Michelsen O and de Boer L. 2009. Green procurement practice in Norwegian municipalities; still a long way to go. The International Society for Industrial Ecology Conference, Lisbon, Portugal 21-24 June 2009

- ii. Michelsen O. 2009. Using eco-efficiency assessments to evaluate the environmental effect of potential public regulations. SETAC Europe 19th Annual Meeting. Gothenburg, Sweden 31 May – 4 June 2009

Guest Presentations and Popular science publications

- i. Annik Magerholm Fet. 2009. CSR initiativ at NTNU - På tide med en tyngre og mer systematisk satsing?. The Arena Innovation at NTNU, 15.05.2009
- ii. Hagen Ø. Oljeselskap og myten om den oljefrie verden. Printed in Adresseavisen on 13 August 2009 [in Norwegian]
- iii. Andersen, Mads; Fet, Annik Magerholm. Miljøproblematikken og relevansen - både hjemme og her i Australia. SBS Radio, Sydney Australia [Radio] 2009-12-04
- iv. Berentz, Johan; Berentz, Johan; Fet, Annik Magerholm; Moen, Øystein; Strandhagen, Jan Ola. Legger hodene i bløt - professorer skal utvikle maritim industri. Sunnmørsposten [Avis] 2009-08-27
- v. Eriksen, Christian; Bach, David; Aursland, Karoline; Fet, Annik Magerholm. From Finland with love - Enorm fabrikk, enormt forbruk. Finske trær er en ressurs universitetet og dets studenter ødsler bort.. Under Dusken [Avis] 2009-12-17
- vi. Fet, Annik Magerholm. CSR-management tools and strategies. Corporate Governance and Sustainability - course; 2009-10-15, University of Technology, Sydney
- vii. Fet, Annik Magerholm. Hovedprinsipper i miljøstyring - krav og forventninger. Internt informasjonsmøte Reinersten; 2009-08-14 - 2009-08-14
- viii. Fet, Annik Magerholm. Hvordan finne balansen i et miljøfokuset samfunn?. Bedriftsseminar; 2009-09-17 - 2009-09-17
- ix. Fet, Annik Magerholm. Introduction to Cleaner Production (CP). Environment Urban Sector Programme Support; 2009-11-18, Thimpu, Bhutan
- x. Fet, Annik Magerholm. Jakter miljøkonsekvenser. Lindbak kontorglede 2009 ;Volum 1.(1) s. 6-7
- xi. Fet, Annik Magerholm. Norwegian shipping –integration of CSR in company strategies. CSR and Innovation; 2009-06-03

Internal project reports

- i. Hagen, Ø. 2009. *Teoretiske tilnærminger til CSR. Et forsøk på å kartlegge et uoversiktlig terreng*. Trondheim: NTNUs Globaliseringsprogram Rapportserie.
- ii. Hagen, Ø. and Fet, A.M. 2009. *CSR – A Reader*. Trondheim, IGLO-MP2020 Working Papers, WP-5/2009.

Masters' theses

Cheng, Caroline. 2009. Managing Corporate Social Responsibility in Global Production Systems: Applicability of the Hexagonal Balanced Scorecard approach - Enlightened with a case study of the Ulstein Group (Ulstein Mekaniske Verksted Holding ASA). Master thesis IØT, NTNU; advisor Annik Magerholm Fet

Trondheim March, 2010

Cecilia Haskins

Annik Magerholm Fet