Wellcome ☺

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The book of Judea Pearl in 1988 & course in technical university (current Aalto University)

Kuikka, S. & Varis, O. 1997. Uncertainties of climatic change impacts in Finnish watersheds: a Bayesian network analysis of expert knowledge. Boreal Environment Research 2: 109–128.

Kuikka, S., Hildén, M., Gislason, H., Hansson, S., Sparholt, H. & Varis, O. 1999. Modelling Environmentally Driven Uncertainties in Baltic Cod Management by Bayesian Influence Diagrams. Canadian Journal of Fisheries and Aquatic Sciences 56: 629–641.

Michielsens, C.G.J, McAllister, M.K., Kuikka, S., Mäntyniemi, S., Romakkaniemi, A., Pakarinen, T., Karlsson, L. & Uusitalo, L. 2008. Combining multiple Bayesian data analyses in a sequential Bayesian framework for quantitative fisheries stock assessment. Canadian Journal of Fisheries and Aquatic Sciences 65: 962–974. doi:10.1139/F08-015

Barton, D.N., Saloranta, T., Moe, S. J., Eggestad, H.O. & Kuikka, S. 2008. Bayesian Belief Networks as a Meta-Modelling Tool in Integrated River Basin Management; Pros and Cons in Evaluating Nutrient Abatement Decisions under Uncertainty in a Norwegian River Basin. Ecological Economics 66:91-104. DOI: 10.1016/j.ecolecon.2008.02.012

Klemola, E., Kuronen, J., Kalli, J., Arola, T., Hänninen, M., Lehikoinen, A., Kuikka, S., Kujala, P. and Tapaninen, U. 2009. A cross-disciplinary approach to minimising the risks of maritime transport in the Gulf of Finland. World Review of Intermodal Transportation Research 2(4): 343–363. DOI: 10.1504/WRITR.2009.026212

Kokkonen, T., Ihaksi, T., Jolma, A. and Kuikka, S. 2010. Dynamic mapping of nature values to support prioritization of coastal oil combating. Environmental Modelling & Software, 25 (2010) 248–257. doi: 10.1016/j.envsoft.2009.07.017

Lecklin, T., Ryömä, R. and Kuikka, S. 2011. A Bayesian network for analyzing biological acute and long-term impacts of an oil spill in the Gulf of Finland. Marine Pollution Bulletin 62 (2011) 2822-2835. DOI: 10.1016/j.marpolbul.2011.08.045

Pulkkinen, H., Mäntyniemi, S., Kuikka, S., & Levontin, P. 2011. More knowledge with the same amount of data: advantage of accounting for parameter correlations in hierarchical meta-analyses. Marine Ecology Progress Series. 443:29-37. doi:10.3354/meps0968.

Mäntyniemi, S., Whitlock, R., Perälä, T., Blomstedt, P., Vanhatalo, J., Rincon, M. M., Kuparinen, A., Pulkkinen, H., and Kuikka, S. 2015. General State-space Population Dynamics Model for Bayesian Stock Assessment. ICES Journal of Marine Sciences 72 (8): 2209-2222.

Helle, I., Ahtiainen, H., Luoma, E., Hänninen, M. and Kuikka, S. 2015. A probabilistic approach for a cost-benefit analysis of oil spill management under uncertainty: A Bayesian network model for the Gulf of Finland. Journal of Environmental Management, 158:122-132.

Parviainen, T., Goerlandt, F., Helle, I., Haapasaari, P. and Kuikka, S. 2021. Implementing Bayesian Networks for ISO 31000:2018-based Maritime Oil Spill Risk Management: State- of-art, Implementation Benefits and Challenges, and Future Research Directions. Journal of Environmental Management.278. https:doi.org/10.1016/j.jenvman.2020.111520

Liu, J., Liua,R., Yanga, Z., Zhanga, L., Kuikka, S. 2021. Prioritizing risk mitigation measures for binary heavy metal contamination emergencies at the watershed scale using Bayesian decision networks. Journal of Environmental Management https://doi.org/10.1016/j.jenvman.2021.11364.

Other societal impacts

- International Council for the Exploration of the Sea (ICES): WGSHIP focuses on various types of environmental impacts of shipping

- FEM: 4 PhD thesis in oil spill risk analysis

- A lot of articles in Finnish newspapers

Thanks!