

US EPA ARCHIVE DOCUMENT

**EXPERT ELICITATION WHITE PAPER – ADDENDUM
SELECTED RECENT (2006-2008) CITATIONS**

The Expert Elicitation Task Force White Paper is the product of discussions and deliberations of the Task Force starting in April 2005 and resulted in a draft document in August 2006 which was approved by the Science Policy Council for external peer review. The content of the paper relies on published literature up to that point. The paper was submitted for inter-Agency review and has undergone editing to address comments received. The Task Force focused solely on editorial revisions to the paper during this period.

The Task Force recognizes that a period of time has lapsed since the preparation of the draft document and applications and advancements in expert elicitation have continued during that time. The White Paper, for the most part, does not reflect published literature since 2006. In the interest of time, the White Paper has not been revised to reflect more recent publications but rather a limited literature review has been conducted to identify relevant publications from 2006-2008. Below is a listing of select relevant publications in expert elicitation.

A quick review of these documents did not identify any significant new issues not already identified in earlier cited publications. In general, the literature seems to reflect continued applications and refinements rather than significant changes. Therefore, we do not anticipate that the content of the White Paper, or the findings and recommendations of the Task Force, would be notably impacted based on our provisional assessment of the more recent literature.

Citations

Ahson W, Gorman, ME., Swami, N, and Deshpande, S, 2008. Identification of Risks in the Life Cycle of Nanotechnology-Based Products, *Journal of Industrial Ecology*, 12(3): 435-448.

Al-Awadhi, SA, Garthwaite, PH, 2006. Quantifying expert opinion for modelling fauna habitat distributions, *Computational Statistics*, 21(1): 121-140.

Andrews WL, Helfrich M, and Harrold JR, 2008. The Use of Multi-Attribute Methods to Respond to Nuclear Crisis, *Journal of Homeland Security and Emergency Management*, Vol 5(1), Article 53. Available on internet at <http://www.bepress.com/jhsem/vol5/iss1/53>.

Arie H. Havelaar, Angela Vargas Galindo, Dorothea Kurowicka, Roger M. Cooke, 2008, *Foodborne Pathogens and Disease*, 5(5): 649-659. doi:10.1089/fpd.2008.0115.

Bojke, L, Claxton, K, Bravo Vergel, Y, 2006. Using Expert Elicitation to Resolve Issues of Structural Uncertainty in Decision Analytic Models, *28th Annual Meeting of the Society for Medical Decision Making*, October 17, 2006.

Collins, CD, 2008. A semi-quantitative approach to deriving a model structure for the uptake of organic chemicals by vegetation, *International Journal of Phytoremediation*, 10(5): 371-377.

Cooke, RM, Wilson, AM, Tuomisto, JT, Morales, O, Tainio, M, Evans, JS A, 2007. Probabilistic characterization of the relationship between fine particulate matter and mortality: Elicitation of European experts, *Environmental Science and Technology*, 41: 6598-6605.

Coppersmith KJ ; Perman RC ; Youngs RR, 2006. Lessons Learned- The Use of Formal Expert Elicitation in Probabilistic Seismic Hazard, Technical Report, Department of Energy, Yucca Mountain Project, Las Vegas, Nevada, OSTI ID: 893709. Available on internet: <http://www.osti.gov/bridge/servlets/purl/893709-yw1Tfr/893709.PDF>.

Hammit, J., 2008. Letter to EPA Administrator Stephen Johnson, Subject: Characterizing Uncertainty in Particulate Matter Benefits Using Expert Elicitation, EPA-Council-08-002, Office of the Science Advisory Board, U.S. EPA, Washington, D.C.

Havelaar, AH, Galindo, AV, Kurowicka, D, Cooke, RM, 2008. Attribution of Foodborne Pathogens Using Structured Expert Elicitation, *Foodborne Pathogens and Disease*, 5(5): 649-659.

Hoffmann, S, Fischbeck, P, Krupnick, A, McWilliams, M, 2007. Using expert elicitation to link foodborne illnesses in the United States to foods, *Journal of Food Protection*, 70(5): 1220-1229.

Hoffmann, S, Fischbeck, PS., Krupnick, A, McWilliams, M, 2006. Eliciting Information on Uncertainty from Heterogeneous Expert Panels: Attributing U.S. Foodborne Pathogen Illness to Food Consumption, Resources for the Future Discussion Papers, Discussion Paper 06-17-REV, <http://purl.umn.edu/10444>.

Kandlikar, M, Ramachandran, G, Maynard, A, Murdock, B, Toscano, WA, 2007. Health risk assessment for nanoparticles: A case for using expert judgment, *Journal of Nanoparticle Research*, 9(1): 137-156.

Kinney PL, Roman H, Walker K, Richmond H, Conner L, Hubbell B (2009 – submitted), On the use of expert judgment to characterize uncertainties in the health benefits of regulatory controls of particulate matter.

Kuzma J, Paradise J , Ramachandran G, Kim JA, Kokotovich A, Wolf SM. 2008. An Integrated Approach to Oversight Assessment for Emerging Technologies, *Risk Analysis*, 28(5): 1197-1220.

Kynn, M., 2008. The 'heuristics and biases' bias in expert elicitation. *Journal of the Royal Statistical Society Series A – Statistics in Society*, 171: 239-264.

Leal, J, Wordsworth, S, Legood, R, Blair, E, 2007. Eliciting expert opinion for economic models: An applied example, *Value in Health*, 10(3): 195-203.

Lenton TM., Held H, Kriegler E, Hall JW, Lucht W, Rahmstorf, and Schellnhuber HL, 2008. Tipping elements in the Earth's climate system, *Proceeding of the National Academy of Sciences*, 105(6): 1786-1793.

Lin, Shi-Woei and Bier, Vicki M., 2008. A Study of Expert Overconfidence, *Reliability Engineering & System Safety*, 93(5): 711-721.

MacDonald, JA, Small, MJ, Morgan, MG, 2008. Explosion probability of unexploded ordnance: Expert beliefs, *Risk Analysis*, 28(4): 825-841.

Morgan, MG, Adams, PJ, Keith, DW, 2006. Elicitation of expert judgments of aerosol forcing, *Climatic Change*, 75(1-2): 195-214.

Roman, HA, Walker, KD, Walsh, TL, Conner, L, Richmond, HM, Hubbell, BJ, Kinney, PL, 2008. Expert judgment assessment of the mortality impact of changes in ambient fine particulate matter in the US, *ES&T*, 42(7): 2268-2274.

Tuomisto, JT., Wilson, A Evans, JS. and Tainio, M, 2008. Uncertainty in mortality response to airborne fine particulate matter: Combining European air pollution experts, *Reliability Engineering & System Safety*, 93(5): 732-744.

Ye M, Pohlmann KF, Chapman JB, 2008. Expert elicitation of recharge model probabilities for the Death Valley regional flow system, *Journal of Hydrology*, 354: 102-115.

Zickfeld K · Levermann A , Morgan MG, Kuhlbrodt T, Rahmstorf S, Keith DW, 2007. Expert judgements on the response of the Atlantic meridional overturning circulation to climate change, *Climatic Change*, 82: 3-265.