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IN A NUTSHELL SCIENCE NEWSFLASH:
ECETOC workshop addresses aquatic toxicity using species sensitivity distribution

Brussels, December 2014

Predicting the toxicity of chemicals to aquatic communities is an integral element in environmental risk assessment. It is therefore a major component in environmental protection strategies and in the process of managing the safe use and disposal of chemicals. Hazard (toxicity) is most frequently predicted using concentration–effect data from single species toxicity tests which measure effects on individuals. However, the protection goals are generally wider i.e. populations, communities and ecosystems. Species sensitivity distributions, SSDs, describe the statistical distribution of species sensitivity to a toxicant and so can predict hazardous concentrations (HCps) affecting a certain percentage (p) of all the species in a community. Estimated HCps for environmental protection are usually the 5th percentile of the distribution and are used to derive a protective threshold concentration for an ecosystem.

ECETOC and the Environment Agency for England organised a three day workshop to discuss and review current statistical SSD models, when and how they should be used in regulatory applications and their ecological significance. A number of recommendations were made on how SSD methods could be further developed to improve the quality of decisions needed from both the prospective risk and retrospective impact assessment of chemicals.

The document is published as ECETOC Workshop Report No.28: *Estimating toxicity thresholds for aquatic ecological communities from sensitivity distributions. 11-13 February 2014.* The report can be freely downloaded via http://bit.ly/ecetoc-wr28

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ECETOC is Europe's leading industry association for developing and promoting top-quality science in human and environmental risk assessment of chemicals.

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