PAUL VAN DEN BRINK

"Extrapolation of effects across biological levels: challenges to implement scientific approaches in regulation"

Paul van den Brink

One of the biggest challenges in the ecological risk assessment of chemicals like pesticides, pharmaceuticals, industrial chemicals, personal and home care products and biocides is to extrapolate effects of chemicals across different levels of biological organisation. We measure, for example, the survival of water fleas in the laboratory but we want to protect aquatic invertebrate populations in the field. In most cases, extrapolation is assumed to be covered by the use of assessment factors applied to the results of single species toxicity tests, typically at the organism level. Nevertheless there is uncertainty on whether this extrapolation is protective enough or overprotective. During this SESSS we would like to start with the regulatory views of EFSA, EC and ECHA covering current practices and outlook and challenges for the implementation of new developments into the risk assessment schemes of the different chemical regulations. This would be followed by presentations of experts on novel experimental and modelling approaches as well as presenting some successful case studies on how these approaches could inform future risk assessments of chemicals in the regulatory context.