

Wildlife ecotoxicology: from acute toxicity to low level, chronic exposure related effects

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Wildlife, birds, mammals and amphibians, are exposed to a wide range of compounds. Sometimes this is through direct exposure, often however related to food web accumulation. Exposure to environmental contaminants, already released in the environment, is generally at relatively low levels but chronic in time. In contrast, animals may be exposed to rather high levels of compounds that are currently purposely released in the environment, like plant protection products or rodenticides. Effects of low level, chronic exposure to compounds may be very elusive and difficult to separate from effects of other stressors. Generally, exposure does not result in direct mortality, but animals show lower fitness and may be more vulnerable to other stressors. In contrast, effects of acute toxicity may be relatively obvious, including mortality, although affected animals may be difficult to find in the field. For both regulatory purposes and risk assessment it is essential to obtain information on risks of both acute and chronic exposure scenario's, including mortality, affected functioning of organisms and vulnerability to additional stress. However, effect thresholds are generally based on acute toxicity experiments with relatively short term, high exposure. In the derivation of these toxicity thresholds, generally little information is available on risks of chronic exposure at low levels. In this session we would therefore like to solicit for presentations that provide insight in relationships between the exposure and effects for both types of exposure scenarios, acute and chronic. Experimental as well as field studies are envisaged to be presented. Presenters are encouraged to discuss their results in relation to known effect threshold levels, and thus provide information on their applicability in wildlife studies.

SESSION TYPE: Platform and Poster