



## **P9. RISK ASSESSMENT FROM THE ECOTOXICOLOGIC POINT OF VIEW**

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People can be exposed to chemicals in the environment in numerous ways, including inhalation, ingestion and dermal. Toxic chemicals in the environment contributes to the development of acute and chronic diseases and play a key role in burden of chronic diseases.

“Risk” can be defined as the probability of an adverse effect of a specific magnitude. Environmental Risk Assessment (ERA), as a scientific process, targets to identify the quantity of a chemical in the environment, the inherent toxicity of the chemical and the quantity which the chemical expose to a person or ecologic receptor with the contaminated environmental medium. Exposure assessment for human health risk requires two criteria: the degree of contamination in the environment and human . From this concept, the components of risk analysis and management should include the following criteria; hazard identification (source), characterization of exposure (type and form of hazard), assessment of exposure (extent of exposure), characterization of risk (the causal relation between exposure and response), risk management strategies and sharing of knowledge to those who have been affected.

In many studies, it has been demonstrated that exposure with mixture of chemicals are more frequent than single exposure. On the other hand, according to eco-epidemiological evidence and scientific studies, exposure against mixtures cause combined health effects. During risk assessment, ignoring the presence of multi-exposure may cause under-estimation of adverse biological outcome.

As a result, risk assessment is an integrative discipline that aims to protect human health and prevent diseases. It also plays an important role policy decision-making and regulatory rules.