

Integrative Ecological and Human Well-being Risk Assessment.

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Risk assessment for ecological endpoints and human health and well-being are often seen as separate entities. As Harris et al (2017) has demonstrated they are not. Although the terminology and the criteria are based on the different histories of development, there is still the fundamental of exposure-response and the fact that both have to deal with cumulative effects. In a number of recent papers, it has been demonstrated that Bayesian network relative risk models (BN-RRM) can be built to describe ecological effects of Hg and other stressor and can estimate the efficacy of mitigation tools such as bank stabilization and best management practices. It is also possible to build adaptive management tools that assist in the planning of long-term management.

The class will use several examples to demonstrate how ecological and human well-being risk assessment can be integrated. Students should bring their own case studies as well. The course will begin with a review of the basic principles and calculation methods. Then second half will be the exploration of other case studies, some of which will be provided but the use of other examples supplied by students will be welcomed.