

Cobitis choii species 생태모델링과 혼합독성모델기반 독성반응분석

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The *Cobitis choii* species population is being decreased due to the pollution in watersheds. The concentration addition (CA), independent action (IA), and concentration addition-independent action (CAIA) models were used to predict and compare a chemical mixture toxicity on the Geum watershed of South Korea, where the species is found. The chemicals dataset consisted of Dichlorobenzene, Benzoimide, Nonylphenol, Pyrene, Acetophenone, among other ten organic compounds measured in the effluents of the watershed in 2011. Weather conditions, and abundance of the species were considered for the population response level due to the toxicity of compounds. The CA model prediction of growth rate resulted less accurate than the CAIA. This study helps to broaden the information about the toxicity of mixtures for developing a plan of environmental management of the watersheds for the conservation of endangered species. Keywords: Toxicity models; *Cobitis choii*; Population level response; Concentration addition; Independent action Acknowledgements: This work was supported by the National Research Foundation of Korea (NRF) grant funded by the Korea government (MSIT). (No.NRF-2017R1E1A1A03070713).