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### Current Scenario and Future Prospects of Effluent Toxicity Assessment for Environmental Regulation in Latin America

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#### Abstract

For more than 60 years, ecotoxicity testing has been used to assess potential ecological impacts, and particularly used for effluent quality assessment. Several developed countries have included ecotoxicity testing in their regulatory framework to complement physical and chemical analysis. In Latin America, only Brazil included those tests in their regulations for effluent discharge and for water quality characterization. To update environmental regulations, it is essential to promote a dialogue among government, academia and industry. SETAC LA, organized a four-day Workshop on Effluent Ecotoxicity in November of 2022 in Buenos Aires, Argentina, entitled "Setting the basis for future regulation in Latin America". Its main objective was to share different perspectives from the academy, industry, and government representing Latin American countries regarding the processes of updating current environmental regulations. Brazil was invited to share the experience, success and failures during the implementation of ecotoxicity testing in its environmental regulation. The idea behind was to contribute to the process of strengthening the environmental regulations of other countries from the region. The Workshop embraced a wide governmental, academics and industrial visions regarding effluent quality, effluent treatment technologies, advances in regulations and analytical capacities. Objectives of quality and environmental protection levels, selection of the most suitable tests were other aspects discussed. A discussion session using the "World Coffee" method was organized and important key messages were summarized as, I) the current environmental regulatory framework in several Latin-American countries require urgent improvement to guarantee environmental protection, especially regarding the control of industrial and municipal discharges. II) A political support is far the most relevant premise and a science-based decision-making process need to be encouraged in governmental sector, for what a better dialogue between research scientists and governmental agents needs to be implemented. III) The need for proper training in the procedures and concepts were identify among all sectors. And IV) the role and compromise of industrial sector demonstrated to be crucial. As a conclusion, further actions are needed to advance into a more compromised environmental regulation in Latin America to ensure wildlife and human health protection