Conflicts of Interest Affect Conservation Science

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(PhysOrg.com) -- In a perfect world, scientific research is supposed to be completely objective and free of conflicts of interest. But University of South Florida researchers say that politics can overtake facts, with potentially detrimental effects for the integrity of science and the health of ecosystems.

In a paper published in the journal *Conservation Letters*, biologists Jason Rohr and Krista McCoy document the impacts of conflicts of interest on science, humanity, biodiversity and ecosystem services, educate the readers on how to identify the many guises of conflicts of interest, and offer recommendations to reduce conflicts of interest for enhanced environmental and human health.

Rohr and McCoy define conflicts of interest as circumstances where it can be reasonably perceived that financial or other considerations have compromised or biased professional judgment and objectivity for personal or organizational benefit.

However, it is Rohr and McCoy's case study focusing on a 2008 review of the effects of the herbicide atrazine on freshwater fish and amphibians that has the potential to have imminent policy implications. Atrazine is the subject of a congressional investigation, and its risk to aquatic systems and human health is being re-evaluated by the U. S. Environmental Protection Agency. Last month, a Minnesota congressman introduced federal legislation that would ban atrazine.

Rohr and McCoy examined whether this review, funded by the company that produces atrazine, represented the primary literature accurately. They report that this review misrepresented more than 50 studies and included 122 inaccurate and 22 misleading statements. Of these inaccurate and misleading statements, 96.5 percent seem to benefit the makers of atrazine in that they support the safety of the chemical.

Further, this review cast criticisms at 94 percent of the studies where atrazine had adverse effects, but only weakly criticized 2.8 percent of the studies where there were no effects of atrazine. These errors and biases are documented in a 39-page, point-by-point analysis in the supplementary materials of Rohr and McCoy's paper.

In contrast to the industry-funded review, Rohr and McCoy's 2010 paper in the journal Environmental Health Perspectives documented consistent effects of atrazine on the behavior, infections, growth, and immune, endocrine, and reproductive systems of freshwater fish and amphibians.

"Our concern is that policymakers may base their decisions on misinterpreted, misrepresented, or biased science," Rohr cautions. "However, we do not suggest any intent by the authors of this industry-funded review."

"Our case study on atrazine was designed as a contemporary example of conflict of interest rather than a direct examination of the controversial chemical," Rohr said. "The goal of the paper was to educate scientists, natural resource managers, policymakers and judicial officials on the potential impacts of conflicts of interests, and how to identify and reduce them."

"It is important to remember that environmental groups, governments, scientists, and other professionals can also have conflicts of interest that can delay or prevent advances that could benefit the public good."

Atrazine was banned in Europe in 2004, but is still widely used in the United States and 80 other nations, making it one of the most commonly used herbicides in the world. It is also used in the Southeastern United States, including Florida, where it is often used on lawns, golf courses, and in sugarcane agriculture.

Rohr and McCoy encourage the scientific and governmental review processes to prevent biased and inaccurate studies from being publicly released.

“Editors and reviewers play an important role in controlling the quality of science that is published,” McCoy said.

Rohr and McCoy offer several additional recommendations, such as a call for greater education on conflicts of interest; for governmental agencies and judicial systems to have the authority to mandate disclosure of who funded research, and for an end to allowing companies to pay for safety research for their own products and to instead put that testing in the hands of a neutral regulatory agency.

More information: www3.interscience.wiley.com/cg … t/123334620/PDFSTART

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