

Photo by Jane Ferguson of the sculpture The Thinker's Burden on Place des Nations in Geneva, Switzerland by ©Benjamin Von Wong.

Last Monday, the California Department of Toxic Substances Control (DTSC) closed its public comment period on a proposal to add microplastics to its Candidate Chemicals List. Adding microplastics to this list would allow the State's Safer Consumer Product Program to evaluate potential Priority Products that may contain or release microplastics. The Program works to make products safer for people and the environment by identifying and promoting products that use safer chemicals. The move, which received over 180 public comments, is a critical step in the state's effort to reduce the release of microplastics to the environment during all stages of the consumer product life cycle. A group of scientists, healthcare, and policy professionals associated with Stanford University and the University of California, Berkeley, myself included—who connected through the Plastics and Health Working Group—submitted a comment supporting the proposal.

This rulemaking in California, the world's fourth-largest economy, is a powerful demonstration of how local stakeholder engagement and regulatory leadership could have global ripple effects. As our comment highlights, adding microplastics to

the Candidate Chemical List here could drive innovation and safer product formulation in the future, across national and international supply chains.

The timing of California's initiative is particularly significant, as it coincides with the final round of negotiations for the UN Global Plastics Treaty (INC-5.2) happening now in Geneva, Switzerland. Over 1,400 delegates from countries around the world are working to finalize a legally binding instrument to tackle the pressing issue of plastic pollution. These talks are dealing with unresolved issues from previous discussions that started in 2022, like regulating chemicals of concern, reducing plastic waste, addressing the entire plastics lifecycle and more.

The comment submitted to the California Department of Toxic Substances Control underscore the urgent need for a comprehensive approach that addresses the full life cycle of plastics: from raw material extraction to disposal, including manufacturing, use and transportation. We emphasized the myriad health concerns, including the vulnerability of children to microplastic exposure, microplastic impact on respiratory health, the creation of drug resistant "superbugs", and their presence in our food, water and soil. A recent study found that 1 liter (2.2 pounds) of bottled water contains nearly a quarter million particles of micro and nanoplastics. Additionally, the group made the link between plastic production and oil and gas emissions, which contributes to climate change. Over 99% of plastic is made from chemicals sourced from fossil fuels, making the plastic industry and the fossil fuel industry interconnected. Furthermore, plastic production, use and waste management account for around 4% of greenhouse gas emissions worldwide and its pollution is a major drive of biodiversity loss. In our comments, we also highlighted the importance of a clear and precise definition of microplastics: emphasizing microbeads, polymer types, and their various sources resulting from degradation in addition to including the persistence of microplastics in the environment.

The ongoing talks in Geneva and California's rulemaking both represent a growing global consensus that plastic pollution is not just a waste management problem but a systemic crisis with profound implications for human, animal and environmental health. As the international community seeks a binding treaty, the rulemaking actions of states like California provide a vital example of how to translate scientific evidence into tangible subnational policy that can drive impactful change.