



Project Goals

- Describe how the SDSU CTE connects to international environmental initiatives
- Show how local actions can fuel global progress on tobacco and the environment
- Identify future research needs that can accelerate this progress



Background

- Discarded cigarette butts, mainly the cellulose acetate filter, are globally the single most collected waste items in urban areas, parks, beaches, and roadways.
- Extensive laboratory research has established the toxicity of tobacco chemicals leached from discarded butts.
- There are increasing concerns regarding the breakdown of non-biodegradable filters into microplastic pollution.
- Clearly, tobacco product waste (TPW) is a global concern, and several international organizations now address TPW. These organizations are drawing upon research, publications, and technical assistance provided by the SDSU CTE.



Key Publications (Partial List)

- The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption. *Bull World Health Organ* 2015
- Tobacco industry responsibility for butts: A model Tobacco Waste Care Act. *Tob Control*. 2017
- The filter fraud: debunking the myth of "safer" as a key new strategy of tobacco control. *Tobacco Induced Diseases* 2018
- No More Butts-- Reducing plastic pollution means banning the sale of filtered cigarettes *BMJ* 2019
- Online Simulation Model to Estimate the Total Costs of Tobacco Product Waste in Large U.S. Cities. *Int. J. Environ. Res. Public Health* 2020
- Support for cigarette filter waste policies among US adults. *Tob Control*. 2023
- A Review of Environmental Pollution from the Use and Disposal of Cigarettes and Electronic Cigarettes: Contaminants, Sources, and Impacts. *Sustainability* 2021
- Modelling the global economic costs of tobacco product waste. *Bull World Health Org* 2022
- Cellulose acetate cigarette filter is hazardous to human health. *Tob Control* 2023
- Leached compounds from smoked cigarettes and their potential for bioaccumulation in Rainbow Trout (*Oncorhynchus mykiss*). *Chem Res Tox* 2023
- Nitrosamine and nicotine exposure after switching from filtered to unfiltered cigarette smoking: a cross-over clinical trial. *Tob Control* 2024
- Influence of tobacco product wastes in a protected coastal reserve adjacent to urbanization. *Mar Pollut Bull.* 2024
- Estimating the accumulation and re-accumulation of commercial tobacco, electronic cigarette, and cannabis waste based on a stratified random sample of census blocks. *PLOS One* 2025
- Worldwide News and Comment. USA: Could this be the world’s first cigarette filter ban? Lessons learned from Santa Cruz County, California. *Tob Control* 2025

Relevant Global Organizations

- CTE established with funding from University of California Tobacco Related Disease Research Program 2022.
- National/International Partners; Action on Smoking and Health, US CDC Office on Smoking and Health; Truth Initiative;; Stop Tobacco Pollution Alliance; London School of Hygiene & Tropical Medicine; University of Bath, England; Imperial College, England; University of California, San Francisco;; University of California Merced;; University of California, San Diego; Roswell Park Comprehensive Cancer Center, Buffalo.
- UNDO.Org (California Tobacco Prevention Program)
- WHO: World No-tobacco Day on tobacco and the environment 2022
- WHO Framework Convention on Tobacco Control: COP10 adopted historic decisions to protect the environment from the harms of tobacco (2023)



- UN Environment Program: Treaty on Plastic Pollution: Filters as single-use plastic trash, 2022-present



- The Union: World Conference on Tobacco Control: Satellite Session: *Tackling the Adverse Environmental Impacts of Tobacco Product Use and the Industry that Produces Them*

Conclusions

- Tobacco Product Waste (TPW) is an international policy challenge.
- CTE Lab and field research informs concerns for TPW environmental and human health harms.
- Major international organizations and partners are moving forward on TPW.
- Santa Cruz County’s filtered cigarette ban has inspired global action.
- Further research is needed on the human and environmental response to banning sales of filtered cigarettes.



References

- Tobacco Product Waste White Paper. California Tobacco Control Program, 2022: <https://cte.sdsu.edu/resources/>
- Tobacco: poisoning our planet, World Health Organization: 29 May 2022: <https://www.who.int/publications/i/item/9789240051287>
- San Diego State University Center for Tobacco and the Environment: <https://cte.sdsu.edu/resources/outdoor-environment/>
- Cigarette Surfboard photo: <https://www.thecigarettesurfboard.com/>