

Answers to questions about the impact of a proposed US menthol cigarette ban on reducing cigarette litter, Carla Delgado, Popular Science

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What is the impact of cigarette litter on the environment?

Cigarettes not only kill over 8 million people each year (about one in five deaths in the United States), they also harm the environment at every step of their life cycle—polluting land, water, and air during the growing and cultivation of tobacco, the production and use of cigarettes, and discarded packaging and littered butts.

The World Health Organization has called attention to the devastating impacts of cigarettes on the environment in their 2022 World No Tobacco Day campaign¹ and Tobacco: Poisoning Our Planet report². The facts presented in the report on the global environmental impact of cigarettes are alarming—(1) about **200 000 hectares** of land (500,000 acres) are cleared each year for tobacco crops, including countries most at risk for desertification (damage to land that makes agricultural or any kind of biological use impossible); (2) about **22 billion** tons of water (nearly 5 trillion gallons) are used in tobacco growing each year, equivalent to 15 million Olympic-sized swimming pools; (3) the production and use of cigarettes release over **80 million** tons of carbon dioxide each year, the equivalent of 3 million transatlantic flights; (4) about **4.5 trillion** cigarette butts are littered each year, releasing slow-degrading microplastics and other toxic chemicals from cigarette filters into soil and waterways, posing a threat to fish and aquatic ecosystems.

Here is a link to an infographic which explains the impacts of cigarettes on the environment bit.ly/3EJfjbz

What kind of environmental benefits would the FDA's proposed menthol ban offer?

If cigarettes cause such widespread and multifaceted devastation to the environment, then tobacco control policies that REDUCE smoking, would have a corresponding BENEFIT to the environment by reducing that devastation.

In our evaluation of the impact of Canada's menthol cigarette ban, we found that Canada's ban increased the percentage of menthol smokers who quit smoking altogether. Specifically, we found that after the Canadian menthol cigarette ban, the quit rate of menthol smokers was 7.3% higher than the quit rate of non-menthol smokers, the "control" group, since the menthol ban did not affect the non-menthol smokers.

Based on data on the impact of the menthol ban on quitting in Canada, we predicted that the FDA's proposed menthol cigarette ban would lead 1.3 million smokers to quit.

In the letter we just published in Tobacco Control, we examined the environmental benefits of that tobacco control policy. Specifically, we calculated the impact of the proposed US menthol cigarette ban on reducing one of the leading sources of plastic waste—the cigarette butt.

US studies have estimated that two-thirds of all manufactured cigarettes are littered annually. This translates into **3.8 billion fewer cigarette butts** littered each year and significant reductions in microplastics and other harmful chemicals to the environment. There would also be other environmental benefits associated with reductions in the manufacture, transport, consumption, and packaging of fewer cigarettes.

How did you estimate the impact of a US menthol ban on reducing cigarette litter?

We estimated the impact of a US menthol ban on reducing cigarette litter in the following way:

- In our previous study on the impact of Canada's menthol ban on quitting among Canadian smokers, we used the quit rate to estimate that a US menthol ban would lead 1.3 million US smokers to quit.³
- We multiplied this projection of 1.3 million US quitters by the average of 12 cigarettes smoked per day, from an earlier ITC study, and then multiplied by 365 to get the yearly reduction of cigarettes smoked of 5.8 billion.
- To estimate the annual reduction in littered cigarettes after a US menthol ban, we multiplied 5.8 billion total fewer cigarettes smoked per year after the ban by the published estimate that 65% of cigarettes are littered in the US⁴. This resulted in our estimate that the proposed US menthol cigarette ban would lead to 3.8 billion fewer cigarettes being littered per year.⁵

Attached are two infographics that illustrate the impact of the FDA-proposed US menthol cigarette ban on reducing littered cigarette butts. Your readers can click on this link, which is our ITC Project webpage that has links to the article and the two infographics: bit.ly/3rO4ahX

Why is this an important area of research?

Cigarette smoking is a leading cause of death in the United States, still killing about 480,000 people per year and tens of thousands of non-smokers from secondhand smoke.

We have found that the Canadian menthol cigarette ban led to significant increases in quitting among smokers. And we previously estimated the tremendous impact of the FDA's proposed menthol cigarette ban leading to an additional 1.3 million smokers who would quit.

This new study highlights an additional benefit that is rarely discussed: how tobacco control policies that increase quitting will also significantly benefit the environmental—by reducing littered butts. Moreover, the study calls attention to the problem of cigarette butts as a leading source of plastic pollution and the potential for menthol bans to reduce single-use plastics.

Aside from a menthol ban, how can policymakers effectively reduce cigarette litter even further?

The most effective way is through strong implementation of tobacco control policies of the World Health Organization Framework Convention on Tobacco Control, the global tobacco control treaty, which have been proven to reduce smoking rates.⁶

Any policy that reduces the number of smokers (about 30 million in the US) will lead to reductions in cigarette litter. It's killing two birds with one stone. Or said in a different way, it is a win-win situation: strong tobacco control policies reduce smoking and reduce environmental damage. The WHO and public health researchers are also calling for policy action to ban the sale of filtered cigarettes as a measure to significantly reduce single-use plastic pollution.

References

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