

PERSPECTIVES ON MANAGING TOBACCO WASTE

REPORT ON A DISCUSSION AMONG CANADIAN TOBACCO CONTROL EXPERTS,
SUMMER 2022.

“We need to address these products and their impact on the environment – but let’s address their impact on human health at the same time” –

Tobacco enforcement officer, Western Canada.

OCTOBER 2022

PHYSICIANS *for a* SMOKE-FREE CANADA

134 Caroline Avenue ♦ Ottawa ♦ Ontario ♦ K1Y 0S9
www.smoke-free.ca ♦ psc@smoke-free.ca

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A. RAPPORTEUR'S SUMMARY

Prompted by the environmental theme of World No Tobacco Day 2022 and the development in Canada of regulatory controls on single use plastics, a virtual meeting was convened to launch a discussion within the Canadian tobacco control community about the issue of cigarette filter waste. The meeting was hosted by Physicians for a Smoke-Free Canada, Greenpeace Canada and the Ontario Tobacco Research Unit and was held on June 1, 2022. Following the meeting, invitations were sent to 23 randomly selected individuals, 12 of whom agreed to share their perspectives on the issue.

From the views expressed in the virtual meeting and the follow up interviews these Canadians generally share the view that:

- Tobacco waste is a significant environmental issue, and the approach to managing it should be designed to support health objectives.
- The best approach to managing cigarette waste would involve upstream measures, although mid-stream (e.g. levy on industry) and down-stream efforts (e.g. collection and disposal) will also be required.
- Of the upstream measures that have been proposed to date, the preferred option of most is a ban on the manufacture of cigarettes with filters.
 - The preference for this option is based on the likelihood that it would make the greatest contribution to reducing environmental damage and will also make the greatest contribution to the reduction of smoking (by reducing demand for cigarettes).
 - Biodegradable filters are seen as an inadequate half-measure from both environmental and health perspective, and carry the risk of increasing the demand for cigarettes by reducing concerns about environmental waste (greenwashing).
 - A key challenge to implementing such a ban was the long-standing misperception generated by industry marketing that cigarette filters provided a health benefit.
- Deposit-return systems are seen as unworkable for cigarette waste by most, but as a more promising system for waste from electronic nicotine devices and liquids provided that public health controls are placed on how this is managed.
- Increased public education (including messaging focused on the lack of health benefit to filters) was identified as a necessary activity to gain support for new controls on tobacco and vaping waste.
- Changing policies in favour of controls on cigarette waste will require political and organizational leadership and coordinated activities among and within governments and civil society (including Indigenous governments). Resources will be needed to support these activities.
- There was consensus too that the tobacco industry should not be allowed to influence controls on tobacco waste, but that the costs of these measures should be borne by the industry / internalized into the tobacco and nicotine market.

B. BACKGROUND TO THE ACTIVITY

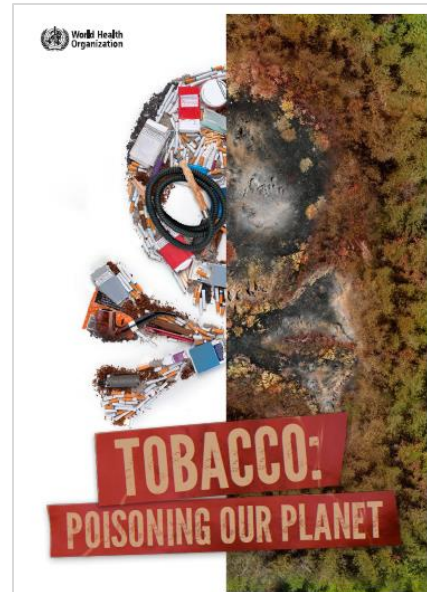
The theme set by the World Health Organization (WHO) for World No Tobacco Day on May 31, 2022 was “Tobacco: Poisoning our Planet.” The WHO invited governments and citizens to consider on that day how “throughout its life cycle, tobacco pollutes the planet and damages the health of all people.”¹

On this occasion, Physicians for a Smoke-Free Canada, Greenpeace Canada and the Ontario Tobacco Research Unit hosted a webinar and e-discussion on the topic of tobacco waste, a subject which has to date been little discussed within the Canadian public health community. Among those attending the webinar were Canadians who worked in tobacco control or on environmental issues as researchers, clinicians, or within governmental or non-governmental organizations. The webinar took place on June 1, 2022.

The purpose of this e-discussion was to present research on the topic and share reflections on this research from differing perspectives. This discussion was informed by recent developments in Canada regarding the treatment of cigarette filters as a single-use plastic.

The e-discussion was followed with interviews with individuals outside the federal government who had registered for the event and who accepted an invitation to share their perspectives on this topic.

Although environmental concerns about tobacco use are included in the *Framework Convention on Tobacco Control*,² they are not directly included in *Canada’s Tobacco Strategy*,³ nor in the federal *Tobacco and Vaping Products Act*.⁴ Plastic waste is managed in Canada under the powers of the *Canadian Environmental Protection Act*, for which the Minister of Health shares responsibility with the Minister of the Environment.⁵ *Canada’s Single-use Plastics Prohibition Regulations* were adopted on the joint recommendation of the Minister of Environment and Minister of Health.⁶ Cigarette filters were not included in the first round of *Canada’s plastic regulations*,⁷ although their inclusion had been recommended by a parliamentary committee⁸ and others.^{9 10 11}



1 World Health Organization. World No Tobacco Day 2022. <https://www.who.int/campaigns/world-no-tobacco-day/2022>

2 World Health Organization. Framework Convention on Tobacco Control, Article 18. “Protection of the environment and the health of persons. In carrying out their obligations under this Convention, the Parties agree to have due regard to the protection of the environment and the health of persons in relation to the environment in respect of tobacco cultivation and manufacture within their respective territories.”

3 Health Canada. Canada's Tobacco Strategy. <https://www.canada.ca/en/health-canada/services/publications/healthy-living/canada-tobacco-strategy.html>

4 Canada. Tobacco and Vaping Products Act (S.C. 1997, c. 13)

5 Canadian Environmental Protection Act, 1999 (S.C. 1999, c. 33), s. 3(2).

6 Single-use Plastics Prohibition Regulations (SOR/2022-138)

7 Single-use Plastics Prohibition Regulations (SOR/2022-138)

8 Report of the Standing Committee on Environment and Sustainable Development. The last straw: turning the tide on plastic pollution in Canada. June 2019.

9 University of Victoria. Environmental Law Centre. A National Strategy to Combat Marine Plastic Pollution. A blueprint for federal action. April 2018.

10 National Zero Waste Council. Regulatory Approaches for Priority Plastic Waste. December 2019. Also, Mr. Andrew Marr before the Standing Committee on Environment and Sustainable Development. Wednesday April 3, 2019.

11 King, S. A single-use plastic ban in Canada? Let’s hold the feds to it. Greenpeace. June 2019.

C. THE WEBINAR

The objective of the meeting was to exchange views on how Canadians might address the environmental consequences of tobacco use, particularly cigarettes. The meeting was not intended to result in any consensus or conclusions on the measures that could or should be implemented in Canada, but rather to inform subsequent discussions on the topic.

The meeting was in three parts.

In the first part, Dr. Tom Novotny presented the rationale for implementing measures to address cigarette waste. Dr. Novotny is Professor Emeritus of Epidemiology and Biostatistics at San Diego State University School of Public Health and has for many years championed the importance of addressing the environmental consequences of tobacco use. He founded the Cigarette Butt Solution Project which provides research, education and advocacy to reduce tobacco's impact on the environment. Notes from Dr Novotny's presentation can be found in Appendix 1.

In the second part of the meeting, perspectives were offered by three discussants:

- **Flory Doucas**, co-Director and spokesperson for the Quebec Coalition on Tobacco Control.
- **Megan Hamilton**, Head of the Regulatory Cooperation and Implementation Unit at Environment and Climate Change Canada.
- **Sarah King**, Head of Greenpeace Canada's Oceans & Plastics campaign

The final part of the meeting was a moderated discussion, touching on public readiness for new controls on tobacco waste, the powers and responsibilities of different levels of jurisdiction in Canada, the tobacco industry and potential actions to improve the situation.

The program for the webinar is attached as an Appendix.

D. THE INTERVIEWS

Following the meeting, invitations were sent to 23 individuals who had registered for the event. Of these, 12 agreed to the interviews, which were conducted between the end of July and the end of October.

These interviews were conducted using open-ended questions intended to elicit views in three topics: (a) the context of waste to tobacco control, (b) proposals on how to better manage waste, and (c) roles, responsibilities and desirable actions by different sectors.

Information on these participants and the interview guides is attached as an Appendix.

Because the participants in this exercise all chose to participate in an event focused on environmental issues, the opinions expressed during the meeting and subsequent interviews cannot be viewed as reflective of the broader Canadian tobacco control community.

E. THE OPINIONS EXPRESSED

Representative examples of opinions expressed during webinar and interviews

Views on waste as a tobacco control issue

This is an issue that can be used to mobilize public interest again because it involves the broad community. People recognize the importance of protecting the environment.

The issue of single-use plastic filters presents an opportunity to engage non smokers, but it also is an opportunity to communicate with smokers about the way that the harms of smoking are being increased. This may help persuade some to quit.

The World Health Organization has done a good job of identifying the damage to the globe from the life cycle of tobacco products, and how tobacco is a serious detriment to the planet. This is an issue that can't be ignored.

This is an opportunity to further denormalize the tobacco industry and its products.

Cigarette butts and e-waste is a major litter problem that impacts local environments with litter and also causes toxic run-off which harms local eco systems. Addressing this problem by banning filters will protect the environment but will also help reduce smoking. The plastic filter is there to make it easier to smoke and in the process causes more harm.

We're scratching our brains trying to find messaging that will appeal to smokers to encourage and sustain quit attempts. Environmental reasons might very well speak to some smokers in terms of the legacy they want to leave, the type of planet they want to leave behind for their grandchildren and children, and just in terms of just the environmental impact that these products have.

Tobacco control laws should also include environmental health protection. It is a problem that the federal Tobacco and Vaping Products Act does not allow regulations to address environmental impact.

Extending our focus to environmental issues is a natural progression. From our experience with other issues, like second hand smoke and advertising, we know it is important that any solutions that come out of plastic ban should not be half measures, like biodegradables or band-aids, but that we put in full solutions. These solutions should also support cessation, prevention and also get rid of waste.

It's a topic that has been neglected in the tobacco reduction world – an issue we don't address that very often. Nonetheless, it is an important piece for tobacco reduction and control.

Views on public readiness for new controls

We know from the response to federal government consultations that plastic waste and plastic pollution are really top of mind issues for Canadians, generating huge input from the general public. During these consultations measures to include cigarette filters in the proposed plastics ban have been called for by researchers, NGOs, local governments and the public advocating for cigarette filters to be included in the proposed ban on single use plastics.

Those who do realize that the plastic is an environmental hazard are more likely to support legislation or interventions, making public education an important element of an approach.

The readiness may be growing because environmental regulations are made easier when we are reducing tobacco use in general.

Cigarette smokers themselves might kind of have their own complex sentiments around cigarette waste. Some are not aware that cigarette butts are plastic waste, and others may feel a certain element of shame or defensiveness about it. Upstream policy solutions may be preferred by many smokers.

We have learned from smoke-free laws and advertising bans that the development of legislation and regulations can be a good springboard for communication. Even if there isn't a complete understanding of the issue at the outset of legislation and regulation and the communication around the process can serve to bring everybody forward.

One thing that will delay acceptance is the tobacco industry sending the fraudulent message that the filter protects smokers from some of the health consequences of smoking.

Views on jurisdictional responsibilities

All levels of government play a role in environmental protection and these can work together. The federal government regulates under the Canadian Environmental Protection Act; provinces and territories oversee many aspects of waste management (including extended producer responsibility); municipalities often have bylaws against littering or play a role in litter cleanup.

Federal and provincial governments work together through the Canadian Council of Ministers and Environment. This Council has a zero plastic waste strategy which identifies cigarette waste as a single use plastic of concern.

An integrated approach is key and it is important to have all levels of government engaged. However, the federal government needs to be leading on the health and environment component as it is both a national issue and a global issue. That's really where I think the leadership needs to be coming from.

The Canadian Environmental Protection Acts (CEPA) seems like a logical tool for this because it ticks the health and environment boxes. Including cigarette filters in this law seems like the logical next step at this point - instead of looking at a patchwork approach which relies on several other levels of government.

Making it a priority will only come about if it is also on a provincial and national public health leader's agenda.

We need an intersection of environmental and health management— these pieces need to come together – especially at the federal level.

We need to look at it from a comprehensive lens – there need to be a comprehensive set of components and they need to be working together.

Views on the role of the tobacco industry

The industry should not be involved in the development of policies to manage waste.

I struggle with having the industry having their hand in any aspect of the situation It is smoke and mirrors. I am too jaded to think they can change or that there is any actual intent to lessen the impact on the environment.

We must not treat tobacco companies as stakeholders when dealing with this problem. In this particular case, the industry is the culprit in such a way that they cannot be thought of as part of the solution.

The industry should be charged for the costs of managing or regulating waste

The federal government is currently looking to establish a cost-recovery fee related to the tobacco control strategy. It makes sense to include the environmental impacts as part of the costs that will be recovered by government from the industry.

It is harder to cut the industry out completely if they are funding measures to address environmental damage. They need to be taken out of the decisions of where money is spent. They should pay a cost recovery fee— but let the environmental groups put the money where it is required.

Imposing a tax for waste recovery could free up money to be used for tobacco or vaping reduction efforts.

Environmental fee on manufacturers is a great idea. Big tobacco has to step up and do its work. They have not been accountable for the waste that has taken place in small towns and rural communities. I would love to see more about how they could support the cost of clean up.

A charge on manufacturers would be helpful for small northern communities, where not a lot of money is available for environmental clean ups. This is particularly the case with indigenous communities: currently when we do a clean up the band office is required to support and help, even though they are already very stretched. A lot of our communities don't even have potable water, so imposing additional work on them is quite unfair compared with the companies who are creating the waste in the first place.

Putting an environmental fee on cigarettes and e-cigarettes would be useful in terms of generating cost recovery for municipalities and others dealing with these problems. This will be needed until we reduce usage to the level where we do not have the quantity of waste that causes damages.

One benefit of an environmental fee would be the impact on prices -- price and tax increases are powerful ways to reduce smoking.

We need to start looking at integrating the external costs of the industry into the product. Why should society be responsible for cleaning up the waste?

The biggest thing I would like to see is the reporting standardized to get a true impact of what that is involved and charging the industry for environmental impact (beyond waste, but also deforestation). Cost recovery for entire environmental impact – money is the only thing that deters them.

The industry should be required to meet environmental standards across all aspects of manufacture.

Governments are talking about manufacturing standards in relation to environment – and we need to establish these for the tobacco industry.

The industry should not be allowed to greenwash its activities or products.

We know that Canada has committed to that Article 5.3 of you Framework Convention on Tobacco Control which requires the government to protect our public health policies from commercial invested interests of the tobacco industry. Yet they are still getting some social credit from the cleanup efforts they are running. This is something we need to consider.

The industry is giving the appearance that they are part of the solution to environmental problems. Although they should be funding such activities, this shouldn't give them the opportunity to grandstand about how they are cleaning up the oceans.

We should use the industry 'scream test' to gauge the effectiveness of measures to address waste.

We need to look very critically at what they are promoting: if they like something, we should head in the opposite direction, and if they hate it, we're on the right track.

Views on the most effective way to reduce cigarette waste?

General thoughts

We need to look at real upstream solutions and not the downstream solutions that the industry is promoting – recruiting volunteer groups, cleanup campaigns, waste bins, handheld ashtrays, etc. We should approach these downstream approaches as the wrong solution.

It is hard to point to one solution or group of solutions because we don't have many successes to base these decisions on.

I think it is important to have a combination of tactics.

We have a responsibility to protect our environment and the public from the harms of tobacco products. Banning single use plastics is one way that we can achieve that, but we need a comprehensive approach and funding to operationalize that. That shouldn't come from tax payers

a) Deposit-return

Deposit return for cigarette filters is not favoured by many

I don't think we will see the same success with deposit-return for cigarette filters that we saw for bottle return. A major challenge is setting up the infrastructure: Where are these things going to be collected? Are they going to be collected at the retailer level? Will a new agency be set up to collect them? How are they going to be disposed of? What are the management costs?

There are risks to this approach because of the toxic nature fo the product. People will be picking up cigarette butts without gloves on to bring them into the tobacco store where they get exposed to advertising.

This doesn't deal with the health aspect and doesn't deal adequately with the environment concerns. The cigarette filter scam would still remain even if smokers ended up collecting them. And while the collected butts might be put more safely in a landfill, they are still in a landfill. For 2022, that's kind of not a solution that should be at the top of the list.

Setting up infrastructure to dispose of something that shouldn't be there in the first place seems like a massively expensive solution to a relatively easily-solved problem.

Deposit return has been offered as a potential solution for municipal governments in our province. This may not be one of the stronger suggestions, however. And for municipalities it might be too hard for them to implement.

Deposit return has worked well in a lot of industries in the south, but in rural remote communities there isn't an infrastructure available to make this work – and even more so in first nations reserves. Because smoking itself is so widespread it would be hard to get a buy-in from these small communities. There is a huge downside to trying to do that on reserve.

I don't see butt recycling program as being effective at all. People won't do it, first of all. But even if they did, the infrastructure that would be needed to sustain that program would be vast and unnecessary. Why should we fund a program like that instead of reducing the amount of waste the industry can generate?

Some see incentives as an important component of recovery.

We should make the industry collect their own butts and allow them to give consumers a reward for keeping them and sending them back. The cigarette package could be redesigned to work as a butt receptacle.

b) Ban on cigarette filters

Most saw a filter ban as the most effective measure

In some ways, banning filters is the easiest thing to do because then you can completely address the problem. But we need to recognize that getting there is a lot of work: it will require advocating for policy change and also getting the general public on board.

A ban on filters would address a lot of issues and make it more manageable for public health and others to reduce the impact of this waste in the environment.

Banning sale of cigarettes with filters—that is a really strong intervention. Anything we do that denormalizes the product AND bring awareness to harmfulness of smoking AND remove things that make people think the products are safer AND makes cigarettes less palatable will have an impact on smoking rates as well as reduce the impact of waste.

Banning filters should be a slam dunk.

Banning filters is a priority – but we need other methods as we will still be left with toxic waste from unfiltered butts.

Filter bans are seen as a way to address both health and environmental harms.

Banning filters is the most significant reform. It reduces the harm to the user and also reduces the plastic. You can get two for one. Although it would be a federal policy, generating support for the measure could be done at all levels.

A ban on filters will make cigarettes less appealing. From everything I have read it would be a good idea. The majority of studies say there is no health benefit to filters.

It is important to address filters also as part of the Canadian strategy to reduce tobacco use, especially given

the role that the industry has given filters in trying to reassure smokers. Given the role filters have played in increasing consumption and causing higher rates of cancers, getting rid of them for health reasons should be a no-brainer.

One respondent was opposed to a ban on filters.

I am not a huge fan of banning filters. It will punish users and will push contraband. They are not going to stop using them so will lead to contraband.

While a ban on filters is seen as a federal responsibility, many jurisdictions would be involved.

A ban on filters would make sense – a ban at the manufacturer level would have to be done by the federal government.

It would have to be done in consultation with indigenous communities because of the sacred purpose tobacco is given. However, many elders separate think that those who are smoking cigarettes in the usual way are destroying the sacred purpose that tobacco was gifted to them for. It could be complicated to get their agreement to a ban on filters, but it should be possible to accomplish the goal.

The most upstream and the least effort for municipalities would be a filter ban. Municipalities could encourage the federal government to ban filters.

Addressing this problem should it be federal initiative – right now is dealt with at the municipal level.

Public education was seen as a necessary component of a ban on filters.

The public will think we are crazy to remove filters. We would be going up against the beliefs that many in the general public have – public education efforts would be needed to bring them onside

Need a lot of public education to inform people that filters are not a benefit.

c) Biodegradable filters

Most participants saw a downside to requiring biodegradable filters

Requiring biodegradable filters would result in MORE waste, not less. Because smokers will think the filters will decompose, they will be more willing to discard them.

Biodegradable filters will be used by tobacco companies as a way to greenwash their products.

Not all environments are conducive to biodegrading.

Even though I initially loved the concept, I am now not sure how it would play out. It doesn't deal with the health aspects - as a result I am rather wishy washy.

Biodegradable filters is only a partial response to the problem. You will still have the chemicals that are leaching out.

Biodegradable filters is an accommodation to the tobacco industry – a way to get change happening without really addressing the problem or making the industry responsible for environmental damage.

Biodegradable filters is a semi-solution. It doesn't deal with the fact that we can otherwise change the product to make it less attractive and by doing so reduce smoking.

The chemicals in biodegradable filters will also harm fish, affect wildlife. Focusing on biodegradable filters instead of a filter ban assumes that we can't change behaviours.

Cessation rates won't change with biodegradable filters. Instead, they will make it more environmentally friendly for people to continue to smoke – that won't be doing any one any good.

Biodegradable filters were a preferred option for two participants, and seen as a second-best option by one other.

In term of mandatory biodegradability. I love this idea, personally. There are not a lot of companies working on this but biodegradability is a great idea. It does not deal with the public health issues, but in terms of dealing with the waste it would cut down or make it easier for people to manage that waste.

Biodegradability? I am 100% behind that idea. Government could mandate that and it puts onus back on industry to solve the problem.

If you feel you need to give consumer a choice, making filters biodegradable could be an option.

d) More waste receptacles.

Public ashtrays are seen as a solution with its own problems

We need to address the issue of butt bins head on. There are lots of strong advocates for butt bins – especially among smokers, but they are not a good solution. They are not properly used, and there is not a great incentive for

smokers to use them. To be effective, they would have to be placed every few feet. They are a risk for theft and vandalism (people smoke butts). Although it seems like a good solution, the better solution is to reduce number of filters used.

e) Stronger littering laws.

I am less sure of this from an infrastructure and enforcement perspective. I wonder whether there is the capacity to do it – I would want to hear from public health units about the reality of enforcing such measures.

I think this approach works elsewhere. In Australia you can be fined if you drop your cigarette out the window. This makes a difference. It is a self-policing situation, and needs an education piece, but it is powerful because the majority of people do want to follow rules.

Another way to get on stronger regulations on littering could be on expansion of smoke-free spaces -for example, campuses and other remaining spaces.

We will have less luck changing individual behaviours around littering than with other controls. The incentives of rewards for proper disposal will get us further than negative consequences for littering.

f) Public education .

My number one action would be a public education campaign to talk about what cigarette waste is doing to the environment. I would target schools, Indigenous communities as well as the most vulnerable people in society.

Public education needs to be an ongoing piece. Environmental impact needs to be added to the school curriculum.

Public education is a good idea. When we do talks to schools we don't really talk about the environmental aspects. I think there would be a public health benefit if we did.

A lot of people know a lot about tobacco, but they don't know about the environmental impact that cigarette waste is having. There is currently no kind of coordinated effort to talk about what this waste is doing.

We need a media and social media campaign – we know that there is little knowledge about environmental consequences like deforestation or non biodegradability of filters.

Public education is important, but it shouldn't focus on consumer responsibility, but should also include how the industry pollutes.

g) Extended producer responsibility

I like the idea of having extended producer responsibility in addition to other measures. My concerns relate to how to implement that in terms of effectiveness, and also how to avoid giving and opportunity to the tobacco industry to have a voice and use greenwashing techniques or initiate campaigns that continue to put the responsibility on the end consumer.

When we talk about extended producer responsibility we should look at what is happening and not happening right now with respect to cartridges and fully disposable vapes. Even though companies like Vuse have programs that will send packages to have used product returns, they do not advertise that. It is important that at point of sale and in packaging people receive the information about returning waste. We also need to be realistic about the number of people who will use these programs.

h) Reducing smoking .

Reducing smoking is always a core policy objective.

I think one of the important things is more funding to reduce cigarette smoking. If we have fewer people smoking, we will have less waste.

Views on the most effective way to address e-cigarette waste

Addressing e-waste is a priority concern for most respondents.

E-waste is the next issue. Schools are struggling with confiscated products and how to dispose of them properly. At the same time you have the industry releasing disposable products as opposed to trying to solve the solution.

We definitely need a system to reduce e-waste – whether that is a regulation on how to design the products with the plastics that are involved, or perhaps a deposit return.

One of the major problems of youth vaping, is that young people face pressures to not be responsible with their waste. Kids are vaping against the law, school policies, or their parents' permission or approval – so they hide the product. This makes it harder to dispose of their waste responsibly, they want to get rid of the evidence – so they just dump it.

If we do collect e-waste, we need to be thoughtful about how to manage this at schools, where a lot of the product is being used. Schools need information on how to handle the waste that is left or confiscated – there is an obligation to give them this information and an opportunity to ensure that waste collection is not done in a way that normalizes or promotes use.

Need to address disposable vapes. The plastics in vapes have disruptive chemicals – and it is young people using them and handling them frequently. We should have manufacturing standards so that companies cannot use harmful components in them.

We are trying to reduce greenhouse gas emissions by using lithium batteries – it is crazy to see them just pitched out through disposable vaping devices.

Our special waste treatment facilities are already overwhelmed. We should be removing products from the market that need special treatment, not adding more.

Deposit-return for e-cigarette waste is seen as more effective than for cigarette filters

For vapes it is easier to have a deposit return type of system. With cigarettes there are other challenges that would make it difficult to operationalize.

This system could work in B.C., where we have return centers. Today even milk has deposits. These centres are walking distance from most peoples' homes. Those centers could take e-waste on, as they are already managing batteries and other hazardous waste.

E-cigarette deposit return systems could work if it were done somewhere where it wasn't run by the industry – I certainly wouldn't want return centers at convenience stores.

For e-waste deposit return would be a good solution . It could be done at provincial liquor stores – doubling up on an existing system where people already go for a deposit return.

Deposit return would apply very well for e-cigarettes, but the challenge would be to not let this normalize the product. This is the only environmental proposal that raises concerns about normalization.

We should consider regulations to require vaping shops to have biohazard boxes so that if people buy new products they have a place to put the old ones. We can make these boxes mandatory – and use the surface of the box as a vehicle to provide health information, and links to additional information, in the vape shop.

We could also place return receptacles in pharmacies to encourage conversations about quitting.

Changing the retail distribution of e-cigarettes could support better waste management.

In my view, e-cigarettes should not be sold as consumer products but as a cessation product intended only as a last-ditch effort. Instead of being available in convenience stores and vape shops, they should only be available at pharmacies. Making this happen would make it easier to keep tabs on use of these products and also implement waste recovery systems.

The problem wouldn't be so bad if we still had the old tank systems that were not thrown out as often. Disposable e-cigarettes and the almost-disposable pod devices should not be allowed on the market on environmental grounds.

Views on the actions that could be taken by the Canadian tobacco control community

Actions to establish the capacity to act

Ultimately we need more bodies. We are already stretched thin.

There needs to be dedicated funding for this issue – otherwise the work won't get done.

We need to look to other countries and other products for experience on what works and what doesn't.

This is ripe for action – but coming back after COVID there is still a lack of capacity at a local level.

Staff in public health and environmental organizations also need training to be informed about cigarette (and e-cigarette) waste and what can be done to reduce it.

We would benefit from an opportunity to network to discuss and support action, such as through an online community of practice.

Actions to counter the tobacco industry

We need to out the grass roots clean-up efforts that are funded by industry. There is a risk that these groups will be pushed by the industry into opposing meaningful initiatives.

We need an exposé on Terracycle. It is a massive greenwashing exercise.

Actions to strengthen the evidence base

The industry is getting off smelling like roses with their 'plant a tree for every forest we destroy' approach. We need to counter their narrative, and to assemble the research to do this. .

We need to standardize the reporting of environmental impact – there is currently no standardized way of reporting what the environmental impacts are.

We need to get an actual cost associated with tobacco waste. How much are taxpayers paying to clean up the industry's waste?

Actions to encourage governments to act

There is currently not an appetite to stir things up with new tobacco control initiatives, so we need to work on getting more political leadership. We need to expose how the stated intentions of governments to protect health and their actions are not aligned.

This issue has been around for a long time. It's just a question of having the political will to do something about it. Whether it is banning filters, biodegradable filters, manufacturer fees – all of those are useful and you need multiple levels of government to work on it.

Following municipal elections there are a series of briefings given to new councils. Perhaps there is a way to brief up on how municipalities could use cost recovery fees to offset the costs of cleaning up tobacco waste.

The World Health Organization report talks about the need for a 'whole of government approach' to the impact of tobacco. We need to start doing this in Canada.

Actions to bring the public inside.

We need public polling data to find out how the public sees this issue.

I am not sure that it is well understood that a filter makes smoking more harmful overall. It certainly doesn't seem to be talked about much. For that reason, a key action is to raise awareness.

Along side new regulations there would have to be an education campaign, so Canadians are aware of the environmental issues. I think people would be shocked if they knew I was shocked to learn of the depth of the problem, and I work in health promotion.

This issue seems ripe for creative use of events to engage the public. Youth should be all over this! But over the past 5 years we have moved away from engaging young people, and the infrastructure that was doing this has long since dissolved in many places. Nonetheless, for a reasonable government investment, we could make progress towards reducing youth vaping and smoking by engaging youth on the environmental aspects.

Need a public outcry. How many people realize that this a single use plastic that was exempted.

Important that legislators have more awareness of this problem. We don't have the highest smoking rate in BC, so I think it is not uncommon for people to think of smoking as a problem that is diminishing. A lot of focus has focused on vaping products. If we have ways to influence legislators.

Actions to raise the profile among influencers

From an indigenous perspective, there is more of a holistic approach to issues. The idea of this misuse of tobacco and the need for environmental protection is a bigger issue in Indigenous communities. We should increase our dialogue with Indigenous communities about the effect of commercial tobacco waste on the environment.

There are allies that could be brought into this – groups that work on environment and health issues. We should reach out to them.

Many prominent groups that work on tobacco ignore the environmental aspects. We need to encourage them to take this issue on board.

I would want to empower other health professionals to be knowledgeable about this issue, who would then help educate people in their usual roles. Health professionals need to take a role in any campaign on tobacco waste.

We need a coming together of the voices – boards of health and environment across the country and environmental and health organizations - to come together to make a recommendation.

We need to make more intersections between our communities to ensure that the tobacco industry is not exempt from the single use plastic regulations.

We need high-level leadership to communicate concern on this. Environmental organizations need to recognize that the tobacco industry sucks too.

APPENDIX 1

Notes from Dr. Novotny's presentation

Tobacco delivers a full service insult to the environment just as it has caused a full-service insult to the human body.

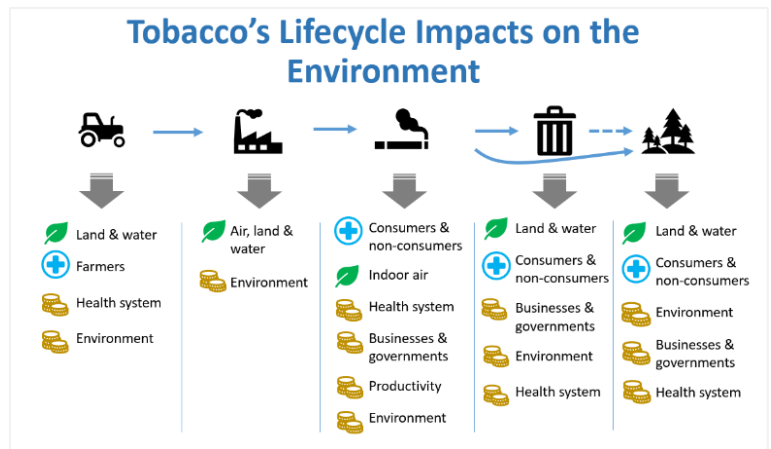
The environmental damage extends from agriculture and land use, chemical toxicity from farming, degradation of forests, impact of manufacturing in places where there are few regulatory controls, second hand and third hand smoke residuals in the inside of buildings and cars.

Important to today's discussion is the land and water contamination that results from the disposal and discarding of tobacco and electronic cigarette waste, including from the product or packaging. Cigarette butts in particular are the single most picked up item found on beaches and waterways worldwide – not surprising given that globally almost 6 trillion cigarettes are sold each year, most of which are made with cellulose filters.

The estimated annual butt waste from Canadian cigarette sales (22 billion) is about 3.75 million kg. This is on top of the waste from packages, lighters, matches, and other tobacco products (cigars, e-cigs, and smokeless tobacco pouches). Canadian cities report that tobacco product waste makes up about 10% to 20% of small urban litter. Even those cigarette butts that are not thrown as litter, and are properly disposed of in waste bins end up in landfills, and leach out chemicals. No matter where they are discarded, there will be eco-toxicity.

It is not enough to just clean up cigarette butts: something much more upstream needs to be done about this waste problem.

An increasing number of laboratory studies have assessed the impact of the chemicals which leach out of cigarette butts. They are toxic to gram-negative marine bacteria, to invertebrates like the water flea, to tide pool snails, to everything from tide pool snails to fish such as rainbow trout and top smelt and saltwater fish. We know that there are metals that are leached from cigarette butt waste and that these metals can be toxic as well, affecting the growth of plants and the reproduction of plant species.



Filters persist for years and meet the standard for toxic hazardous waste.

This has been shown in laboratory tests and in beach environments. Our study on the leachate on marine fish and freshwater fish found that sufficient fish were killed to meet the U.S. Environmental Protection Agency standard for toxic hazardous waste. This should be enough to alert regulatory authorities to consider measures to prevent this harm.

Field studies using soil and water samples reveal the presence of tobacco specific carcinogens in urban environments along riverbanks, roadsides and beaches. Nicotine itself is a toxic hazardous waste product. It has been detected in river samples downstream from wastewater treatment plants and even in drinking water supplies.

Tobacco product waste may be a human health risk.

From laboratory studies, we find sub-lethal effects of exposure to tobacco product waste chemicals. These include estrogenicity, tumor genesis, terrainogenesis and bioaccumulation in the food chain. Creatures at the lower end of the food chain can absorb the chemicals and then be consumed by those higher up and become part of the human food chain.

There are potential pathways for human health risks due to the environmental contamination of tobacco product waste, everything from exposure on beaches or urban environments into water systems, into the storm drains, into the drinking water systems. This includes the possibility of human exposure through indirect sources, including the food chain.

Laboratory Studies Ecotoxicological Assessments

- Toxic to *Vibrio fischeri* (gram-negative marine bacterium)
- Aquatic invertebrates: "biohazard to the water flea (*Daphnia magna*), at 0.125 CB/L"
 - nicotine and ethyl phenol likely toxins
- 5 CB/L resulted in 100% mortality rate in tide pool snails after 8 days of exposure
- Metals leached from butts: aluminum, barium, cadmium, chromium, copper, iron, lead, manganese, nickel, strontium, titanium, and zinc
- Affects growth and reproduction of plant species
- Filters persist for years under different scenarios
 - Degrade into micro- and nano-plastic particles

Field Studies

- Tobacco-specific polycyclic aromatic hydrocarbons (PAHs) found in urban environments, river banks, roadsides, beaches
- Nicotine: 1 CB may contaminate 1000 L surface water above predicted 'no effect' concentration
- Nicotine detected in river samples downstream from waste water treatment plants
- UC Santa Barbara project to assess impacts on Natural Reserve Areas
 - Analysis of waters, sediment, soil show signs of tobacco and cannabis chemical contamination (mostly near urban areas)

Potential Pathways of TPW to Human Health Risk



Image courtesy of Eunha Hoh, 2011

E-cigarette waste is an increasing concern.

Because it is considered by the US EPA as a toxic hazardous waste product, it is subject to specific regulations regarding handling. Schools, for instance, which confiscate e cigarettes from students or which pick them up from the school grounds find themselves responsible for managing this toxic hazardous waste with respect to transport, storage, disposal, training, et cetera.

Tobacco product waste imposes costs on waste management system.

The City of San Francisco used an estimate of the costs of managing waste to impose a litter abatement fee, levied on each package of cigarettes. To date this is the only U.S. city to use a fee to recover the costs. The fee is administered through the environmental department, not the health department.

The costs of tobacco product waste include direct costs, including the costs of prevention, enforcement, public information campaigns, surface abatement. In addition, there are unabated or secondary costs, which are impacts on ecosystems, on potentially on health care costs, potentially on businesses or tourism, etc. These are much more difficult to measure.

Most efforts to mitigate the damage from tobacco waste are not effective.

A variety of efforts are in place to mitigate the damage from tobacco waste. These include PR campaigns advising people not to dump their butts, bans on smoking in beaches, parks and other outdoor venues, fines for littering. There are also proposals for recycling, or biodegradable filters.

There are problems with all of these options. Litter laws and smoking bans help to denormalize tobacco use in general, but it's very limited in terms of its scope. Moreover, these laws are poorly enforced. Take-back and recycling (deposit-return) is not viable because you can't possibly pick up enough cigarette butts to make a difference and there is a huge infrastructure for a recycling system that can manage this toxic hazardous waste. or take-back efforts are . Biodegradable filters are not viable, mainly because if smokers think they are biodegradable they will be more likely to discard their butts inappropriately.



- Our goal is to assess the costs of TPW in each of these stages;
- However, if we can identify the costs of *general litter* at each of these stages, we can impute TPW costs by adjusting by the general litter costs by the proportion of all those that is TPW.

What is the problem with these interventions?

- Litter laws not enforced;
- Outdoor smoking bans poorly enforced;
- Most smokers (or nonsmokers) do not know filters are made of plastic;
- Two-thirds of smokers admit to discarding butts inappropriately;
- Many smokers still believe filters protect them from smoking.



Most smokers don't know that filters are made of plastic.

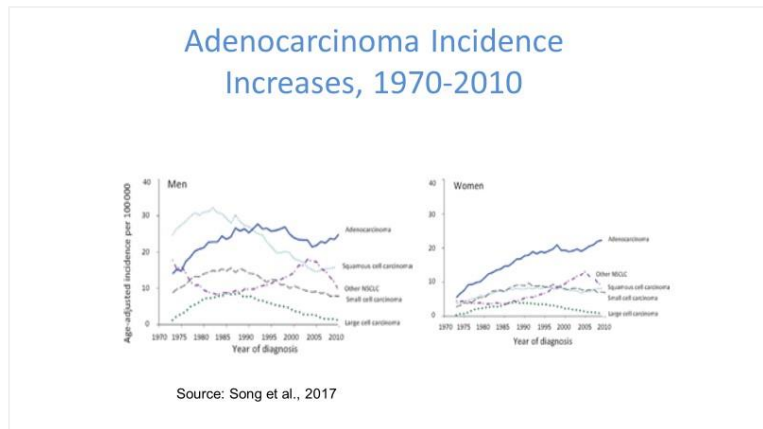
Even smokers who want to be protective of the environment are likely to discard their butts inappropriately because they don't know that the filter is plastic. Many believe that filters somehow protect them from some harms from smoking.

As Robert Proctor described in the Golden Holocaust, there are 3 reasons tobacco companies use filters: One is it lowers the cost of manufacturing because cellulose is cheaper than tobacco; secondly, it keeps tobacco out of the mouth; thirdly, filters make it easier to smoke and lead people to think that filtered brands are somehow 'safer' than unfiltered brands. The word filter itself is a misnomer.

Cigarette filters may make smoking more dangerous.

Aside from the fact that they make it easier to smoke and discourage people from quitting, cigarette filters may add to the risks of smoking.

Adenocarcinoma is a more aggressive type of lung cancer. The rates of this type of cancer have grown over the decades since filters became common from 1970 onwards. The overall relative risks of cancer for both men and women due to cigarette smoking has increased over these years too. If filters had done any good, this relative risk estimate would have declined.



Tobacco companies are getting other people to clean up their mess.

When tobacco companies sponsor clean-ups, they are essentially getting other people to clean up their mess. Their recruitment of volunteer groups has a long history – including environmental organizations like Keep America Beautiful and Keep Britain Tidy. Terracycle is another group funded by the industry. It is currently involved in the recycling of butts that are imported from Canada and then recycled into pallets and other products that may not be that useful.

Recommendations for Dealing with Tobacco Industry

- Policies should address the industry as the source of tobacco product waste, NOT as a stakeholder;
- Question environmental commitments of the tobacco industry: agriculture, production, product stewardship;
- Resist any partnerships with industry or affiliates;
- Point out lack of evidence for industry-sponsored environmental efforts.

The industry should not be seen as a stakeholder but as a source of tobacco product waste. It needs to be regulated, and not brought in as a co-conspirator trying to greenwash itself. We need to question the environmental commitments and publicizing of their PR efforts to green up their production processes. At every level of the life cycle, their agriculture, production and product stewardship is an environmental

hazard. We need to resist any partnerships with them and then we need to point out the lack of evidence for their industry sponsored environmental efforts such as those with a TerraCycle.

We need clear messaging.

The plastics issue has mobilized many environmental groups to realize that cigarette waste is a very critical component of global tobacco product waste. I'm going to point out this link here to a white paper that we did here in California that addresses tobacco product waste and especially the filter issue, so that you've been able to access this for additional resources. And thank you very much for this opportunity to provide this information. I'm happy to jump off now and see if there are any questions.

APPENDIX 2. BACKGROUND ON INTERVIEWEES

Twelve interviews were conducted:

Interviewees based in:

- Nova Scotia x 1
- Ontario x 6
- Quebec x 1
- British Columbia x 2
- Alberta x 2

Interviewees working in:

- Non-governmental organization x 2
- Provincial Health Ministry x 3
- First nations health authority x 1
- Municipal health department x 5
- Practicing physician x 1

Questionnaire guide used in interviews

1. Background (5 min)

- Is the environmental impact of tobacco waste an issue that you follow? That you consider important? That is new to you? That is part of your work? That you would like to work on/avoid?

2. Response to specific proposals. (10 min)

- How do you respond to the various proposals that have been made to address tobacco and e-cigarette waste? Do you have a favourite/least favourite? Do you find some more or less effective or accomplishable?
 - a. Banning the sale of cigarettes with filters
 - b. Deposit-return
 - c. A mandatory standard for biodegradability of cigarette filters
 - d. An environmental fee on consumers or manufacturers
 - e. Public education to discourage littering
 - f. Stronger regulations on cigarette littering
 - g. Greater effort to reduce cigarette smoking
 - h. Other?

3. Recommendations for future actions (10 min)

- What actions do you think that the following stakeholders should take over the next 3 to 5 years:
 - a. Regulators (federal, provincial, municipal)
 - b. Government programs (public education, administrative policy, funding, etc)
 - c. Civil Society
- What role should be assigned to the tobacco industry on this issue?

4. Summary (3 minutes)

- What is your key message to the tobacco control community on this topic?

APPENDIX 3. INVITATION TO WEBINAR



Ontario Tobacco
Research Unit

GREENPEACE

Reducing toxic plastic pollution from cigarette waste in Canada

A World No Tobacco Day E-discussion

Wednesday, June 1, 2022

10:00 – 11:00 (Pacific) ● 11:00 – 12:00 (Mountain) ● 12:00 – 13:00 (Central)
13:00 – 14:00 (Eastern) ● 14:00 – 15:00 (Atlantic) ● 14:30 – 15:30 (Newfoundland & Labrador)

This year the World Health Organization (WHO) encourages governments and their communities to mark World No Tobacco Day (May 31 2022) by focusing on **“Tobacco: Threat to our environment”**.

The WHO is calling on *“governments and policy makers to step up legislation, including implementing and strengthening existing schemes to make producers responsible for the environmental and economic costs of tobacco product waste.”*¹² Demonstrating the importance of environmental and health authorities working together on this issue, the WHO’s FCTC Secretariat is collaborating with the UN Environment Program (UNEP) to raise awareness about the damage caused by microplastics in cigarette butts – *“the most discarded waste item worldwide.”*¹³

Canadians concerned about health and the environment are invited to join a virtual meeting to discuss ways to address the environmental and health damage caused by plastic cigarette filters.

This conversation will be led with a presentation by **Dr. Tom Novotny**, founder of the Cigarette Butt Pollution Project (www.cigwaste.org). This will be followed by a discussion among panelists invited from the environmental, health and government communities. The panel will respond to questions and comments from the virtual audience.

To register for this event, [click here](#).¹⁴

Contact: Cynthia Callard 613 600 5794 / ccallard@smoke-free.ca

12 World Health Organization. Protect the environment, World No Tobacco Day 2022 will give you one more reason to quit. December 31, 2021.

13 UN Environment Program. Inside the Clean Seas campaign against microplastics. February 17, 2022.

14 <https://us02web.zoom.us/meeting/register/tZUlduGvqzkjGtUjN456DrYkednMbxLytYSJ>

SELECTED RESOURCES:

Novotny, Tom et al. *Tobacco Product Waste White Paper*. MERG (Measurement and Evaluation Research Group) at San Diego State University. 2022.

<https://merg.sdsu.edu/tpwwwp/>

Comité national contre le tabagisme. Tobacco industry tactics around Single Use Plastics (SUP) policies and civil society efforts to countering these. Presentation delivered by CNCT during the side event at the meetings of the COP to the Basel, Rotterdam and Stockholm conventions. 2022

[https://fctc.who.int/publications/m/item/tobacco-industry-tactics-around-single-use-plastics\(sup\)-policies-and-civil-society-efforts-to-countering-these](https://fctc.who.int/publications/m/item/tobacco-industry-tactics-around-single-use-plastics(sup)-policies-and-civil-society-efforts-to-countering-these)

World Health Organization. Tobacco: Poisoning our planet. 2022

<https://apps.who.int/iris/rest/bitstreams/1425871/retrieve>

World Wildlife Federation Australia. Backgrounder. No plastics in Nature. Ending Cigarette Butt Pollution. October 2021.

<https://www.wwf.org.au/ArticleDocuments/353/pub-WWF-Australia-Ending-cigarette-butt-pollution-3Dec21.pdf.aspx>

Lam, Juleen et al. Modelling the global economic costs of tobacco product waste. Bulletin of the World Health Organization. 2022

https://cdn.who.int/media/docs/default-source/bulletin/online-first/blt.22.288344.pdf?sfvrsn=3f626a2_1

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