HSE Tobacco Free Ireland Programme
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Waste Action Plan Consultation
Waste Policy and Resource Efficiency
Department of Communications, Climate Action and Environment
Newtown Road
Wexford
Y35 AP90

20th February, 2020

Re: WASTE ACTION PLAN FOR A CIRCULAR ECONOMY

To whom it may concern,

Please find enclosed a submission on the Waste Action Plan for a Circular Economy.

Yours faithfully

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Submission on

Waste Action Plan for a Circular Economy

February 2020

From

Health Service Executive Tobacco Free Ireland Programme

HSE Tobacco Free Ireland Programme

The HSE Tobacco Free Ireland Policy Priority Programme (HSE TFIP) was established in 2016 under the "*Healthy Ireland in the Health Services Implementation Plan*"(1). Its role is to mobilise the health services to improve health and wellbeing and play its part in the achievement of government's goal to reduce smoking prevalence to less than 5% of the population by 2025. The HSE TFIP coordinates and leads tobacco control activity across the health services to ensure implementation of the HSE actions in the government policy, "*Tobacco Free Ireland*"(2). We welcome this opportunity to make a submission on the Waste Action Plan for a Circular Economy in relation to single use plastic, specifically cigarette filters.

Single-use plastics and smoking

In the past 5 years smoking (daily and occasional) prevalence among people aged 15 years and older in Ireland fell from 23% to 17%(3). Despite this significant progress, smoking remains the leading preventable cause of illness, disability and premature death and is responsible for more than 1000 hospital contacts and 100 deaths each week at a cost of €500 million to the health services(4). Single use plastics pose a serious threat to the environment, damaging marine ecosystems and making a significant contribution to climate change over the course of their life-cycle(5). Cigarette filters are one of the largest sources of single-use plastic and are the world's most littered item(6). An incredible 4.5 trillion cigarette butts are discarded into the environment every year(7) and cigarette butts account for more than half of all litter items collected annually in Ireland(8). The link between smoking and single-use plastics presents a unique opportunity for an intervention to tackle these twin harms to human health and to the environment.

Recommendations

1. Introduction of an environmental levy on cigarettes
2. Extension of the smoking ban to include more outdoor public spaces
3. A public awareness campaign to educate the public on the environmental impact of smoking

Potential Benefits

- Generation of up to €27 million per year for the Environment Fund (based on a 25 cent levy per pack of cigarettes)
- Significant cost savings to the state in relation to the economic costs of smoking (health service costs, loss of productivity, smoking-related fires)
- Significant cost savings to the state in relation to smoking-related litter (which alone cost €69 million in 2013)
- Mitigation of the damaging environmental impact of smoking at all stages of the cigarette life-cycle
- A reduction in the number of smokers by up to 3,500 per year
- A reduction in the initiation of smoking amongst young people
- Prevention of illness, disability and premature death

The need for action

Ireland has a history of being a world leader in terms of both tobacco control and the move towards the elimination of single-use plastics, having been the first country in the world to introduce a comprehensive national-level smoke-free policy and the first to introduce a levy on plastic bags. However, significant work remains to be done if the goals of a society free of tobacco and single-use plastics are to be realised. The introduction of an environmental levy on cigarettes represents a huge opportunity for an intervention that will move us closer to both of these goals and must not go to waste.

Introduction

Smoking remains the leading preventable cause of illness, disability and premature death in Ireland and tobacco control remains the single greatest opportunity to protect and improve the public's health(9). Single-use plastics pose a significant threat to our environment and plastic cigarette filters make a huge contribution to this, but the overall environmental impact of smoking is much broader(5,10,11). This link between smoking and the environment presents a major opportunity to take action that will help tackle both problems.

The environmental impact of cigarettes

The detrimental environmental impact of smoking extends right throughout the lifecycle of a cigarette. Tobacco cultivation is a direct cause of deforestation as forests are cleared for the tobacco plantations. The curing process requires an estimated 11.4 million metric tonnes of wood to be burned annually. In addition, further wood is required to produce paper to roll cigarettes and packaging for the final product. It is estimated that 1.5 billion hectares of forest have been destroyed globally over the last half-century, contributing to up to one fifth of annual greenhouse gas increases, and the tobacco industry has been a significant contributor to this. Cultivation also leads to soil erosion and desertification and intensive pesticide use leads to soil and water pollution. (10,11)

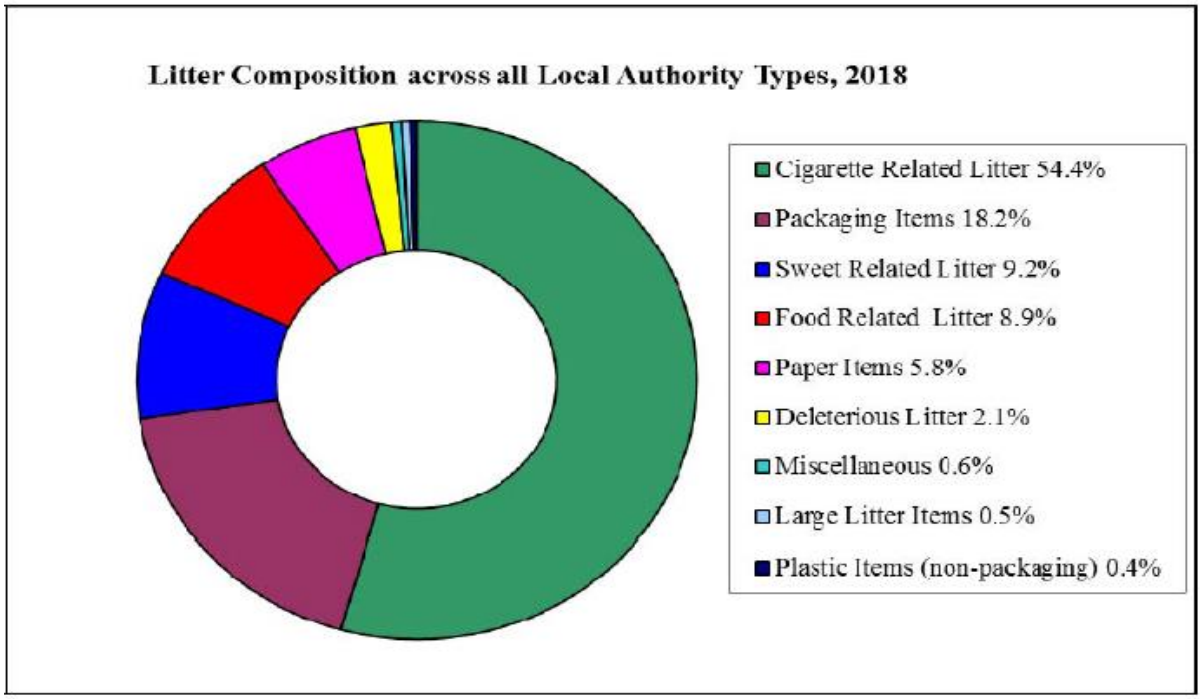
The tobacco industry has admitted that its greatest impact on the environment is as a result of manufacturing and distributing tobacco products. The types of environmental costs generated by these activities include, but are not limited to; energy consumption (required for manufacturing tobacco products and cellulose acetate filters and for manufacturing and fuelling transport vehicles to transport tobacco products from manufacturers to retailers), chemical (thousands of which are used as additives to tobacco products) and metal (used in the manufacture of machinery for cigarette production) use, water consumption, emission of CO_2 and other greenhouse gases, the use of plastics as packaging materials and effluent production as a bi-product of the manufacturing process. With available data in this area mainly being limited to self-reported data from tobacco companies it is difficult to quantify the scale of these costs, but with 560 manufacturing facilities in the world producing more than 6 trillion cigarettes annually it is likely to be quite significant.(10) A report produced by Imperial College London in 2014 estimated that in that year global cigarette production consumed 22,200 megatons of water, 5.3 million hectares of land, 62.2 petajoules of energy and 27.2 megatons of material resources(12).

Tobacco smoke contains more than 7000 chemical compounds, at least 69 of which are known to cause cancer(13). In addition it contains three major greenhouse gases, carbon dioxide, methane and nitrous oxides(10). Tobacco consumption is directly responsible for the emission of 2,600,000 tonnes of carbon dioxide and approximately 5,200,000 tonnes of methane into the atmosphere(14). Third-hand smoke is the residue of tobacco smoke that remains as 'dust' on objects and surfaces after tobacco has been smoked. The compounds that it contains change and become more toxic over time. This can have a negative impact on indoor air quality and expose occupants to secondary pollutants. Infants and young children are particularly vulnerable to these effects. When building materials or furnishings that have been exposed to third-hand smoke are disposed of, it becomes an environmental pollution risk. The compounds it contains have the potential to contaminate water

supplies and may persist even after waste water has been treated leading to potential contamination of water intended for human consumption.(10) Tobacco smoke has also been shown to affect ambient air quality(15).

Cigarette butts, the vast majority of which contain non-biodegradable plastic filters made of cellulose acetate, are the most collected item of litter across the globe(6). Approximately 6 trillion cigarettes are consumed globally each year and it is estimated that two-thirds of these, amounting to a gargantuan 4.5 trillion cigarette butts, are discarded into the environment annually(7). According to the National Litter Pollution Monitoring System Results Report for 2018 which analysed litter data provided by all 31 local authorities in Ireland, cigarette-related litter accounted for 54.4% of all litter pollution in Ireland in 2018 (see Figure 1). The vast majority of this consisted of cigarette butts which accounted for an incredible 51.1% of all litter items. Passing pedestrians were responsible for 42% of litter pollution making them the commonest source.(8) Improper disposal of cigarette butts in public places is a normative part of smoking and remains socially acceptable in an era when other forms of littering are not. Factors associated with this phenomenon include a lack of adequate regulation and penalties, and a lack of enforcement of these where they do exist, along with poor public awareness of the environmental impact of this type of waste.(7,11)

Figure 1 Composition of Litter in 2018 Broken Down into Main Categories(16)



The assertion that these filters reduce the harmful effects of smoking has been proven to be false and it is well recognised that they are simply a marketing tool used to create the perception of a safer smoking experience(6). There is evidence that filters alter the combustion of tobacco leading to an increase in the level of toxicants in tobacco smoke and that they lead to an altered smoking pattern whereby smokers inhale more smoke to maintain their nicotine intake. There is also some evidence to suggest that they may have contributed to an increase in lung adenocarcinomas in smokers. (17) It has also been shown that they make cigarettes more attractive to teenagers.(6)

In addition to the plastic, these filters contain all of the toxic chemicals found in tobacco products(7). These have the potential to leech into the environment, contaminating the soil and being washed into rivers and waterways by rainfall(11). The impact of these chemicals on aquatic life is not yet fully understood, but emerging evidence suggests that they may cause significant harm(18). Filters also pose a physical threat to marine life. One study reported on the presence of cigarette filters in the digestive tracts of sea turtles off the coast of Brazil. (11)

Smoking is a significant risk factor for chronic disease. The Irish Longitudinal Study on Ageing (TILDA) found that, in Ireland, 34% of current smokers and 37% of former smokers suffer from a smoking-related chronic disease.(9) Healthcare has a significant environmental impact(19) and significant healthcare resources are required in the management of chronic disease(20). The use of metred-dose inhalers, which is standard in the treatment of chronic respiratory conditions, is just one example of how the management of chronic disease adversely impacts the environment. These devices not only contribute to plastic waste when they are disposed of, but contain hydrofluorocarbon propellants which are potent greenhouse gases. These inhalers produce 500g CO_2 equivalent per dose and contribute an estimated 3.9% of the carbon emissions of the National Health Service in the United Kingdom. To put this in context, travelling a mile in a typical car produces 290g CO_2 equivalents. (21,22)

Proposed solutions

While the proposed establishment of an extended producer responsibility scheme whereby the tobacco industry will be responsible for covering the cost of collecting and disposing of post-consumption tobacco waste is a welcome development and is likely to have a positive impact on the environmental footprint of cigarette filters, it will do nothing to address the other negative environmental impacts of smoking described above.

Reducing cigarette consumption is the key to mitigating the detrimental environmental effects of smoking at all stages of the tobacco life-cycle. This is in keeping with article 4 of the EU directive on the reduction of the impact of certain plastic products on the environment(23). In recent years, estimates of price elasticity of demand for cigarettes in Ireland have shown it to be high compared to international averages. A 2011 study suggested an average of -1.6(8) while a study carried out on behalf of the Office of the Revenue Commissioners in 2018 gave an estimated average of -1.8(24). This would mean that a 10% increase in the price should lead to an 18% decrease in demand on average. In other words, tobacco demand is price elastic, so there is scope to reduce consumption through the introduction of an environmental levy. International estimates for price elasticity of demand in high-income countries tend to fall in the -0.2 to -0.6 range with most estimates clustering around -0.4(25). Based on this estimate one would expect to see a 4% decrease in demand in response to a 10% increase in price. This discrepancy may be explained to some degree by tax evasion and tax avoidance through the purchase of cigarettes from outside the state or untaxed cigarettes and in the past, the evidence did point to this as being a significant driver of the elasticity in Ireland(24). However recent falls in smoking prevalence rates indicate that it may now be driven to a large extent by smokers quitting.(24) Such levies have been shown to be particularly effective in preventing initiation of smoking and the transition to regular smoking in young people(25).

14% of the Irish adult population or just over 490,000 people are classed as daily smokers(3). With a median cigarette consumption for this group of 12.5 cigarettes per day(9), this equates to over 6 million cigarettes or 300,000 packs consumed per day. The introduction of a 25 cent single-use plastics levy on a pack of 20 cigarettes (akin to the levy proposed for disposable cups) has the potential to generate €75,000 euro per day or over €27 million per year for the Environment Fund.

The average price of a packet of cigarettes in Ireland is currently €13.50. 25 cents represents 1.85% of the price. Based on the more conservative international estimate of price elasticity of demand of -0.4, one would expect a price increase of 25 cents to lead to a 0.74% fall in demand. This would mean that over 2,200 fewer packs of cigarettes would be purchased in Ireland every day. This equates to over 800,000 fewer packs purchased per year. Based on the figure of 12.5 cigarettes per smoker per day, this is the equivalent of more than 3,500 people giving up smoking in Ireland every year. This potential fall in demand would have a minimal effect on the potential revenue from the levy. When one considers smoking-related health service costs, the cost of lost productivity due to smoking (due to smoking breaks and absenteeism), the cost related to fires started by smoking materials and the cost of smoking-related litter, which alone amounted to €69 million in 2013, (see Table 1) it is clear that any initiative aimed at reducing consumption has the potential to generate significant savings (4). This measure has the potential to significantly reduce the detrimental effects of cigarettes on the environment at all stages of the cigarette life-cycle while generating considerable revenue for the Environment Fund and significant savings for the state, and saving lives.

Table 1 Costs of smoking in Ireland by type of cost, 2013(26)

Type of cost	Number	Cost (€m)
Deaths attributable to smoking and exposure to second-hand smoke	5,950	-
Hospital inpatient admissions	31,500	171
Hospital day case appointments	19,300	13
Hospital outpatient appointments	116,300	15
Hospital emergency department attendances	38,000	10
Primary care	-	256
Hospital transportation	12,700	1
Domiciliary care	-	40
Loss of productivity – smoking breaks	-	136
Loss of productivity – smokers' absence	-	224
Lost productivity – premature death	-	711
Fires	380	4
Fatalities from fires	1	2
Litter	-	69
Total costs	-	**1,653**

Other measures which are worth considering include extending the smoking ban to cover more or all outdoor public places, a measure which has been shown to be associated with higher levels of quitting in addition to protecting non-smokers from the harms of second-hand smoke(3) and

increasing public awareness of the environmental impact of smoking as studies have shown that it is poor(27).

Conclusion

The introduction of an environmental levy on smoking has the potential mitigate the negative effects of smoking on the environment while preserving and improving the health of the population in a way that is financially beneficial to the state. It is vital that this opportunity is not missed.

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