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Factsheet Cigarette Butts

Waedenswil, Mai 2024

About false arguments in favour of cigarette filters

- Contrary to the claims of the Tobacco-industry, **filters do not make cigarette smoking less unhealthy, even to the contrary**[1]. The Tobacco industry knows this for decades but continued to use cigarette filters as a marketing tool, designed to keep and recruit smokers as consumers[2].

About throwing cigarette butts away

- According to the WHO, up to two-thirds of every smoked cigarette is discarded onto the ground[3]. As it is estimated that in 2012, some 967 million daily smokers consumed approximately 6.25 trillion cigarettes worldwide[4], that is about 4.17 trillion butts tossed on the ground.

About cigarette butts in the environment

Worldwide

- Cigarette butts are by far the largest single type of litter by count[5]. Since the 1980s cigarette butts have consistently comprised **30–40%** of all items picked up in annual international coastal and urban clean-ups[6,a].
- Considering the number of cigarette butts tossed away, and given that the weight of 20 cigarette filters is 3.4 g, the estimated discarded waste from global cigarette consumption in 2014 could be anywhere between **340–680 million kg**. This does not include the weight of remnant tobacco and other byproducts of the discarded waste[7].

Europe

- Also in Europe, various sources confirm the high litter prevalence of cigarette butts:
- According to the EU single-use plastic directive, they are the second most found single-use plastic item on beaches in the EU[8].
- Of the 2'448'011 litter items that have been collected under the Marine Litter Watch initiative between 2013-2021, reportedly **20.9% were cigarette butts**. Thus, according to these data, they are the most found item on European beaches[9].
- In 2023, a monitoring programme carried out by the Portuguese Environment Agency assessed the most found macro-litter items on the country's beaches. Based on 54 sampling campaigns on 14

[a] While many data are essentially based on what is picked-up during cleanups by citizens and therefore could present a somewhat distorted image (as people maybe tend to focus their collection efforts on visually striking and familiar items like cigarette butts), all available data nonetheless confirm the high prevalence of cigarette butts in the environment. In that sense, the different data (numbers, percentages) and rankings listed in this factsheet should not so much be understood as exact accounts of the (cigarette) litter problem, yet rather as indications of order of magnitude. As such they consistently point to the very high prevalence of cigarette butt liter in the environment.

beaches, among the most found items, **13.5% were cigarette butts**. Thus, according to these data, they are the second most found item on Portuguese beaches[10].

Switzerland

- Also in Switzerland cigarette butts are the most littered item[11].
- Research in Geneva has counted up to 476'000 cigarette butts covering the city's streets[12]. Extrapolated to the whole country based on its population, this adds up to more than 20 million cigarette butts lying around daily on Swiss streets and roads. From there, they leak away and accumulate into the further environment.
- As part of the stop2drop campaign, between 7 and 22 March 2021, school classes from Switzerland and Liechtenstein collected 958,181 cigarette butts in two weeks. This prevented the pollution of 38.3 million litres of water[13].

Oceans

- According to the *Ocean Conservancy*, cigarette butts are the number one item collected in shoreline clean-ups worldwide, with about **2.4 million** collected during the international coastal clean-up day in 2017[14]. Similar results come from the *European Environmental Agency*. Of the reported 2'448'011 items collected through the Marine litter watch initiative over the years 2013-2021, 20.9 % were cigarette butts[15]. According to the EU, on the other hand, they are the second most found single-use plastic items on beaches in the EU[16].
- According to the *WorldOceanReview*, cigarettes are together with plastic bags, food packaging and beverage bottles among the most common garbage in the ocean[17].
- Little data seems to exist about ingestion of cigarette butts by marine species. Plastic cigarette filters have been found in the stomachs of fish, birds, whales, turtles[18] and other marine creatures that mistake them as food, swallowing both the harmful plastic and associated toxic chemicals; yet, reporting about this seems to be anecdotal, and not based on systematic research[19]. Overall, it seems research on ingestion rates is lacking[20], and while *"[cigarette butts] and their associated toxic chemicals might be ingested by diverse aquatic organisms […] further studies are necessary to understand the exact toxicity of [cigarette butts] on different freshwater and marine organisms and also their fate in the aquatic media[21]"*.

About the environmental and health impact of cigarette butts

- It is not just the volume of the waste that is a problem. Tobacco product waste also contains **over 7000 toxic chemicals**, including known human carcinogens[22].
- **A cigarette butt is not biodegradable**. The cigarette filter, i.e., the main part of what is thrown away is made of a type of plasticized cellulose acetate[23], and furthermore contains numerous harmful chemicals[24]. **How long do cigarette butts take to degrade? Difficult to say**. Various sources have stated that cigarette filters take 18 months to 10 years to degrade. Since environments differ – some places are wetter, dryer, sunnier, colder, hotter, windy, etc. – so too will the degrading time differ[25]. And, in any case, the degrading cigarette leaches its toxic substances into the environment independent of the time it takes to decompose.
- Littered, **cigarette butts accumulate in the environment** where they have devastating effects on both marine and fresh water environments[26], as well as soils[27] and flora[28].

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- Research from 2014 on levels of nicotine in urban water showed that **one cigarette butt is enough to contaminate 1'000 litres of water** with concentrations having toxic effects on water organisms[29, 30]. This research was done with rain water (not ocean water) in the laboratory, and 'toxic effect' means that the water is polluted to concentrations above the predicted no effect concentration (PNEC) meaning that there is a measurable effect[31].
- One study from 2011 found that **1 cigarette butt per litre water in fresh and salt water killed half of the fish in the basin after 96 hours**[32].
- According to a podcast from Newstalk from 2019, **one cigarette butt can contaminate 200 litres of ground water**[33].
- **Also along rivers, cigarette butts seem to be one of the most found litter-items**. A German study from 2019, based on a citizen science approach where schoolchildren examined litter at riversides and identified possible sources at over 250 sampling spots along large and small rivers in Germany, during autumn 2016 and spring 2017, found that the principal litter types found were plastics and cigarette butts (31% and 20%, respectively)[34].

About legislation on cigarette butts

EU

- In the EU, cigarette butts are covered by *Directive 2019/904 on the reduction of the impact of certain plastic products on the environment* (so called SUP directive) which calls for alternatives to filters containing plastic (§ 16), and tasks Member States to ensure that extended producer responsibility schemes are established for them (art. 8)[35].

Switzerland

- A parliamentary motion from 20.12.2019[36] asks to adapt federal law in such a way as to prohibit single-use cigarette filters.

  In its answer, the Federal Council (FC) recognises that cigarette filters are a source of MP-pollution and acknowledges that according to Art. 30a(a) EPA, it may ban products intended for single and short-term use if their benefit does not justify the environmental pollution they cause. Based on this provision, it would in principle be possible to issue a ban on such single-use filters. However, to justify such a ban, it would have to be clearly proven that cigarette filters are harmful to the environment, in particular the direct effects of the microplastics released and the organic pollutants on the health of organisms. However, **according to the FC these concrete effects have not been sufficiently proven**. For the FC, a ban would also mean a **disproportionate interference in the freedom of trade and commerce** compared to the environmental benefits.
- A parliamentary interpellation from 17.03.2023[37] about pollution by littered single-use E-cigarettes, asks the Federal Council if it could consider prohibiting such E-cigarettes.

  In reference to its previous answer to motion 19.4629 (see above), for the time being, however, the FC does not intend to ban their marketing on the basis of Article 30a(a) EPA, as it maintains that such a ban would be disproportionate in view of **the encroachment on freedom of trade and commerce** it would represent.
- A parliamentary interpellation from 08.12.2022[38] asks the Federal Council to examine if it would be feasible and appropriate to introduce a deposit on cigarette butts.

However, in the FC's view, the introduction of a deposit on cigarette butts is not a target-oriented measure for reducing littering. The financial and human resources required to set up the infrastructure and operate the deposit system in order to take back cigarette butts and refund the deposit would be very high.

About what could be done against cigarette butts

- **Reducing the number of smokers.** After all, non-smokers do not throw away cigarette butts. Considering that one in four Swiss of 15 years or older smokes[39], succeeding in bringing this number down would present a win-win on multiple fronts.

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