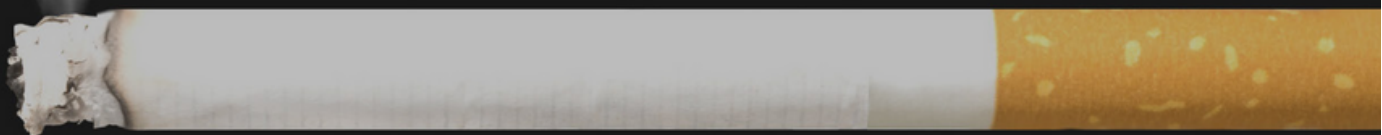


Executive Summary

GENERAL REPORT ON CIGARETTE BUTTS

IMPACT, REGULATIONS AND MANAGEMENT



Eco House Global | ecohouse.org.ar
#OjoConLaColilla | colillasdecigarillos.org

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Opening words

To see a world in a grain of sand

William Blake

One afternoon, in August 2009, we went downtown Buenos Aires to collect cigarette butts with five classmates. What started as an innocent university project soon became something bigger (and alarming). We collected 2,000 cigarette butts in one hour! “400 each? How is that even possible?”, we asked ourselves while we counted them. “If we collected that many in a few minutes, then how many cigarette butts are there in the city, the ocean or the planet? And what is their social and environmental impact? Is anyone even looking into this?” Our heads were spinning with doubts, concerns and ideas; we were both amazed and dismayed. Ever since, we’ve been, are and will be trying to lend a hand.

A decade has passed, and we still can’t understand how come we allow the mass-marketing and wide distribution of a product that pollutes the water, the soil and the air, that damages biodiversity and human beings, and whose waste is consciously and unconsciously discarded in public places around FOUR TRILLION times a year. I wonder what our first-grade teacher would say about this.

In our latest conversation with local Argentinean legislators, we went straight to the point: “We can take a simple cigarette butt to speak of our world and the profound social and environmental crisis we are in. A cigarette butt is not just another waste, it is a HAZARDOUS WASTE with which we coexist every day. We’ve reached a point where small actions, responsible consumption and good habits are simply not enough. It is essential to appoint people from the public and private sectors to tackle this issue comprehensively. The tobacco industry must be held accountable. Not only are they selling illnesses, but also hazardous waste that affects us daily.”

It’s our duty, as society-at-large, to take action. We need to educate about cigarette butts; prevent their negative impact, dispose of them correctly, collect as many of them as we can to stop the pollution; invest in research, innovation, social entrepreneurship and ways of recycling. We could use this initiative as a simple and practical example of the cultural transformation we are seeking.

You are about to read the first Comprehensive Report on Cigarette Butts produced by the Latin American civil society. This report is intended to raise awareness about the cigarette butts issue, to influence the decision-making process, and to move us closer to creating the sustainability paradigms we so direly need.

Thank you for your attention.
We hope you find this research valuable.

Máximo Mazzocco
Eco House Global Founder
UN Youth Ambassador
April 2021



Introduction

Eco House Global is an Action for Sustainability nonprofit organization. To put it simply, we are more than 700 volunteers trying to do something positive for the planet. In 2017, we launched the #OjoConLaColilla campaign (Mind the cigarette butts) aiming to solve the social and environmental issue caused by cigarette butts throughout their life cycle.

Cigarette butts (CBs) are the most abundant waste found in the streets around the world and they severely pollute both the environment and society. It's high time we started working seriously to solve this problem. Both in Argentina and at an international level, it is urgent and necessary to analyze in detail the social and environmental impact generated by CBs. We need to act, following the precautionary principle on the Environment General Act (Law No. 25 675), which states: *"where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."*

We decided to draft this report to draw attention to the CBs issue as a whole, to raise awareness and to provide individual and collective tools to reduce the negative impact of their mismanagement.

Acknowledgments

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Thanks so much! Let's keep working together!



Executive Summary

The information in this report stems from different sources available and accessible as of May 2021. It includes a wide selection of scientific papers, regulations, specialized journal publications, web pages, interviews and official sources from government agencies. Although comprehensive in nature, this report intends to foster further research into the issues caused by cigarette butts.

Cigarette butts (CBs) are the most abundant waste found on streets around the world: it is estimated that smokers discard between 4.5 and 5.6 trillion CBs per year, which is equivalent to roughly 18 billion CBs per day. Their mismanagement negatively and severely impacts both the environment and society. So, it's important that we know what they are made of, and their harmful effects on ecosystems and people. We need to understand the nuances of the tobacco industry, the currently applicable legislation, and the different disposal alternatives.

The three basic components of cigarettes are tobacco, paper and filter. The tobacco plant has naturally-occurring chemical substances, like nicotine. Other substances are added throughout the production process, some of which are classified as potentially harmful to the environment or to human beings. Paper, used for wrapping, is treated with different chemicals to control and regulate color and combustion. Filters are used to screen out harmful chemicals from cigarettes. Although there are different types of filters, the majority is made of cellulose acetate, an artificial polymer that is hardly-biodegradable under natural conditions.

Once the cigarette is finished, the filter becomes a butt. Each component of a CB—ash, unburned tobacco, filter and paper—may contain different chemical substances that might be released into the environment over time, which turns it into a hazardous waste. It is very difficult to accurately estimate the pollution potential of a CB as it depends directly on the chemicals present in the tobacco, the filter type, how the cigarette was smoked, the combustion characteristics and the environment in which the butt degrades.

However, tobacco smoke is believed to contain around 7,000 chemicals, almost 70 of which are carcinogenic substances, like arsenic, benzene, beryllium, 1,3-butadiene, cadmium, chromium, ethylene oxide, nickel and vinyl chloride. Tobacco can also absorb and accumulate radioactive compounds, such as lead-210 and polonium 210, in amounts that pose a risk to health. These compounds may be present in already-polluted soils and in the fertilizers used. This is due to tobacco leaves being particularly efficient at absorbing these compounds. All these substances are absorbed by the filter and are present in CBs. It has also been demonstrated that CBs may retain part of the insecticides applied to tobacco plants before harvest.

As regards degradation intervals, although studies present different results, it is known that CBs made of cellulose acetate remain in the environment for at least 14 years. As they degrade, they might pollute the environment as they maintain their toxic load.

Between 2017 and 2020, in the City of Buenos Aires (Argentina), Eco House Global surveyed over 10,000 smokers under the #OjoConLaColilla campaign. More than 70 % of smokers said they discard CBs onto the street without much thought. This is common to see both in public urban places—streets, sidewalks and squares—and natural surroundings. Many of these CBs end up in streams, rivers and oceans after being dragged by wind or rain into drains.



Undoubtedly, the creation of this hazardous waste, which contains chemicals and heavy metals, represents a threat to people, animals and plants. When CBs degrade in soil, they can diminish its fertility and affect local flora and fauna. A single CB that degrades in liquid may pollute up to 1,000 liters of water, affecting every organism that lives off it. At the same time, CBs release volatile substances, such as nicotine, pyridine and benzene into the air. Discarding CBs on the streets pollutes public and recreational spaces, exposing both animals and humans—especially children—to the risk of ingestion. The hazardous substances in CBs may also enter the body indirectly via the food chain and cause adverse effects on health. CBs are toxic solid waste. So even if they are correctly discarded, they need to be segregated from other kinds of waste.

The global tobacco market represents around \$378 billion dollars. Most of the global market is controlled by only five transnational companies: (1) Philip Morris International (PMI), (2) Imperial Tobacco, (3) Japan Tobacco International Iberia, (4) China National Tobacco Corporation and (5) British American Tobacco (BAT). BAT supplies the Argentinian market along with Phillip Morris International, which operates locally as Massalin Particulares.

In Argentina, tobacco farming is an important economic and social activity on the Northwest (NOA) and Northeast (NEA) regions, with Jujuy, Misiones, Salta, Tucumán, Catamarca, Corrientes and Chaco being the main producing provinces. Virginia and Burley are the most widely grown and exported varieties, while the *Criollo* variety is produced at a lower scale and sold domestically. Tobacco production creates around 35,000 jobs, including large and medium-sized producers with paid staff and small family farmers. Cigarettes are mainly manufactured within the metropolitan area of Buenos Aires, and the activity creates around 6,000 jobs.

There seems to be a direct relationship between smoking and consumers' access to information, which is largely determined by their socioeconomic level. Those with fewer resources appear more vulnerable to this situation. Even while tobacco consumption is one of the main risk factors for premature death, 22 % of adults in Argentina are active smokers. During 2015, cigarette smoking accounted for 44,851 deaths in the country and the cost for treating smoking-related conditions represented 7.5 % of total health expenditure, surpassing tobacco tax revenues. Prevention and education policies applied since then proved to be effective in reducing or stagnating consumption.

At an international level, several countries have already regulated the management of CBs or of the tobacco industry as a whole. Along these lines, the WHO Framework Convention on Tobacco Control (WHO FCTC) was created in 2003. By May 2021 it had been signed and ratified by 177 countries. Argentina signed the treaty in 2005, but has not yet ratified it.

At a local level, Argentina regulates tobacco, CBs, health and the environment through the National Constitution, the acts on minimum budgets for environmental protection and the national laws. The main regulation is the National Tobacco Act No. 19 800, which defines taxes on production and sale of tobacco products. This Act is complemented by Act No. 26 687, which regulates advertising, promotion and consumption of products that use tobacco, known as Act against Tobacco. After the national Act was passed, the signing provinces had to adapt to this new regulation and pass their own. The City of Buenos Aires passed Act No. 6403, which bans the tossing of CBs, cigars or filters in public spaces. Eco House Global, through its #OjoConLaColilla campaign, had an active part in promoting it and working towards the passing of the law. Other examples include the province of Tierra del Fuego, which banned the advertising and promotion of and sponsoring by tobacco products and their display on points of sale; and the province of Neuquén that prohibited tossing CBs on streets and common public spaces. Some communities also started to strengthen their regulations on tobacco: Pinamar created the "Smoke-free beaches" program and passed Ordinance 5576/19, which bans smoking on its beaches. The City of Corrientes passed Ordinance 6966, approving, among others, the installation of cigarette receptacles, the creation of designated areas for smoking on the beach and of disciplinary sanctions for noncompliance.



The domestic tobacco industry is heavily taxed. There are three specific taxes on tobacco: the Special Tobacco Fund (FET), the Emergency Additional Tax of the Argentine Social Assistance Fund (FAS) and excise tax. These, together with other general taxes, such as VAT, turnover tax and the tax on bank credits and debits, add up to 77 % of the sale price of a cigarette pack. According to the WHO Framework Convention on Tobacco Control (WHO FCTC), the implementation of these types of tax public policies is an effective way to reduce tobacco consumption.

Having been proved that CBs include hazardous components —some listed in the Argentinean National Hazardous Waste Act— and taking into account the huge amount of CBs being disposed of every year worldwide, there is no denying that we need strategies to mitigate their socio-environmental impact.

There are different CBs management alternatives, from treatment in sanitary landfills, to waste sorting for recycling, reuse, bioremediation and thermal destruction. Some international companies collect CBs to recycle their cellulose acetate and produce new products, such as plastic pellets, ashtrays and others. There are projects that use discarded CBs to create works of art or products, such as surf boards, to raise awareness on this issue. Certain bioremediation processes were successful at degrading this waste through biological means—with fungus, bacteria or plants—, lowering its toxicity and even remediating polluted environments. Thermal destruction processes were implemented in some cities, such as Ushuaia, to treat CBs. Waste gas stays within the parameters established by law. The information available on the different CBs treatment alternatives in Argentina does not establish their socio-environmental impact and provides no guarantee on the sustainability of their processes. In all cases, there is a need to further examine the resources involved and the impacts associated to each management system. Every place looking to implement a management system should assess the related socioeconomic impacts before making the selection.

As of today, the tobacco industry does not have a specific role in managing this waste. Corporate Social Responsibility (CSR) initiatives are as far as they go. This kind of initiatives have been classified mainly as marketing and greenwashing strategies, as it is contradictory to seek actions in favor of social good within an industry that goes against it. For this reason, it is important to work on the implementation of standards related to **Extended Producer Responsibility (EPR)** to make the tobacco industry responsible for managing the impact their products have throughout their lifecycle. This would put the environment and society at the forefront, requiring every player in the production and commercial chain to perform a detailed analysis of the impact generated by their activities and to think about mitigation and management initiatives.

Thanks to the impact of the #OjoConLaColilla campaign—which had several positive outcomes like getting the media to talk about the issue, the passing of the law that bans the tossing of CBs onto streets in the City of Buenos Aires, the passing of related laws in Argentine provinces and Latin American countries, and inspiring different private and public initiatives to reduce, recycle and treat CBs, among others—we are close to introducing an ERP law to require tobacco companies and producers to treat this waste in a differentiated way.

And what can we do as individuals? Each one of us can take a proactive approach and become an agent of change, sharing our knowledge and experience with others. To that end, the first and most important step is to learn about the CBs and the issues they bring about. We can also take part in activism campaigns, carry out surveys and questionnaires, train others through talks or share information on social media, organize cleanups and collection of CBs to dispose of them correctly, create cigarette receptacles or special bins for CBs, research about management or recycling alternatives, start a triple impact venture, among many other initiatives. Finally, joining the #OjoConLaColilla campaign is a way of learning about the impact associated to the incorrect management of CBs, of informing other people, of becoming politically active and of getting involved to tackle this problem.



Read the full report at
colillasdecigarillo.org

