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UNITED NATIONS ENVIRONMENT PROGRAMME OPTIONS PAPER: THE IMPACT ON TOBACCO CONTROL

In April 2023, the United Nations Environment Programme (UNEP), based on a mandate given at the First Session of the Intergovernmental Negotiating Committee on Plastic Pollution (INC-1), released a document that summarizes a set of "Options" based on the positions and recommendations stated or submitted since the negotiations started in November 2022.[1] It lays out the objectives, substantive provisions, including core obligations, control measures, voluntary approaches, implementation measures, and means of implementation.[2] Due to the regulatory regime that covers tobacco products and the tobacco industry, some of the options for core obligations[3] will not fully address tobacco product plastic components and may even be detrimental to tobacco control. These need to be modified or clarified to ensure coherence or to conform to tobacco control measures provided under the World Health Organization Framework Convention on Tobacco Control (WHO FCTC). This brief offers recommendations for the core obligations so that they fully address tobacco's toxic plastics.

TREATY OBJECTIVES

To attain the objective of ending plastic pollution and protecting human health and the environment from the adverse effects of plastics,[4] the core obligations of the Treaty should focus on regulating/banning the production of harmful and unnecessary single-use plastics, and the measures must be mandatory, not voluntary. This is especially relevant for fiscal measures and trade-related measures such as licensing and import/export bans or restrictions. If health is part of the treaty's key objectives, then it must be mentioned specifically in the preambular section.

Tobacco product waste (i.e., packaging) should be reduced. Cigarette filters, of which 4.5 trillion are ending up in nature worldwide, must be banned, not just "reduced." This is a unique type of toxic plastic and there is no safe and environmentally sustainable substitute (biodegradable or recyclable) for cellulose acetate cigarette filters because the toxins released from discarded butts, no matter the type of cigarette filter, will remain an environmental hazard. Furthermore, any new design feature introduced could make the cigarette appear safer, thereby encouraging smoking. Filter-less cigarettes, on the other hand, could discourage smoking.

More importantly, the UN Treaty on Plastic Pollution must align with other UN health treaties, especially the WHO FCTC, which has 180 Parties and addresses tobacco use as the single most important preventable cause of death globally. As predicted, in 2023, tobacco use will take eight million lives; this is approximately 15% of total global mortality.[5]

RECOMMENDED OPTIONS PERTAINING TO "CORE OBLIGATIONS"

Ban cigarette filters

"Banning, phasing out and/or drastically reducing the use" of such products is the most appropriate policy option to address tobacco product plastics. However, it should emphasize "banning" and not "reducing the use", given the toxic nature of tobacco products as well as their impact on human health and the environment.

"Promoting the use of safe and sustainable substitutes" of problematic and avoidable plastic products would be detrimental to tobacco control. Biodegradable cigarette filters would still leach out toxic chemicals and heavy metals as tobacco product waste, and would not solve the 'litter' problem.

Align UN Treaty on Plastic Pollution with the WHO FCTC

If the objective of the plastics treaty is "to protect health as well as the environment," then it must effectively align itself with the most widely embraced public health treaty which addresses the single most preventable global cause of death, the WHO FCTC.

The concept of circularity or "redesigning products for a circular economy" should not be applied to tobacco product waste since butts cannot be transformed into toxic-free material and any form of redesign could help sustain smoking. (Art 9/10 FCTC)

"Extended Producer Responsibility (EPR)" should not apply to the tobacco industry because this industry is not a stakeholder in the effort to reduce the global disease burden of tobacco use. It needs to be a strictly regulated industry from which any interference with tobacco control policies must be protected (Art 5.3). The WHO FCTC binds more than 180 countries to develop domestic policies in concert with internationally agreed and science-based interventions against tobacco use. In addition, it calls on governments to eliminate and de-normalize activities that paint the tobacco industry as socially and environmentally responsible. (Art 5.3, 13 FCTC)

Make the tobacco industry pay (Polluter Pays Principle)

"Remediating existing pollution" is a potentially important element of the plastics treaty, but the tobacco industry should pay not only for the cost of existing tobacco waste pollution, but also for past, present, and future harms. (Art 19 FCTC)

ROLE OF THE PRIVATE SECTOR

Obligations on the involvement of the private sector and other stakeholders in the UN Treaty on Plastic Pollution negotiations should be qualified to ensure that policies are protected against conflicts of interest. Conflicts of interest need to be managed, especially when involving actors with commercial interests and their agents. This means raising awareness, public education,[7] exchange of information,[8] and stakeholder engagement.[9]

In the case of the tobacco industry, specific exclusionary rules should apply to this Treaty, such as those in place in United Nations (UN) agencies as well as in the Model Policy endorsed by the UN's Economic and Social Council (ECOSOC).

FINANCING IMPLEMENTATION

Financial assistance[10] provisions for multilateral funds or domestic resources should align with the 'polluter pays' principle (PPP). The options mentioned under innovative funding, such as taxes levied and fees charged to producers, distributors, and sellers, are appropriate, including an additional fund for legacy waste (or the unmitigated ecosystem service damages due to tobacco product waste) as well as awareness campaigns (not managed by the tobacco industry, of course!). It is conservatively estimated that aside from the trillions of healthcare costs of tobacco annually, tobacco plastics cost the world over 20B USD per year in waste management and marine ecosystem losses.[11] Since WHO FCTC Parties are bound to deal with tobacco industry liability, they should apply the PPP, and not extended producer responsibility (EPR), when making the tobacco industry pay for the past, present and future harms caused to both health and the environment.

The Cigarette Filter Problem Cannot be Solved by Biodegradable or Recyclable Filters

Environmental hazards caused by cigarette filters may have human health relevance given recent studies on the toxicity of cigarette butt leachates to a wide variety of animal and plant life and the bio-accumulation and bio-amplification of these chemicals in test organisms. Biodegradable filters would not solve the 'litter' problem, people might even be more likely to throw them away because of the 'green' image. Furthermore, any eco-friendly new design feature could encourage people who smoke to be less concerned about discarding their tobacco waste products into the environment.There is evidence that people who smoke filtered cigarettes would smoke fewer cigarettes and enjoy smoking less if commercial cigarettes had no attached filters. It may be assumed that 'leftovers' from non-filtered cigarettes will also end up in the environment, but it can be assumed that this represents only a fraction of the environmental impact of cigarette butts.[6]

Cigarette filters cannot be safely recycled given the chemical toxins in smoked cigarette butts. The logistics of cigarette butt collection, transportation, detoxification, regulation, and safe reuse of recycled cigarette filters are likely to be impossible. Such schemes would be used by the international tobacco industry to support their corporate social responsibility (CSR) efforts, while never being scalable to mitigate the waste produced by the six trillion commercial cigarettes sold globally each year. (International Coastal Cleanups average about one million butts per year, and existing private-sector recycling schemes serve mainly to greenwash offending industries).Thus, recyclability is not an acceptable design feature that would make a difference in the tobacco product waste burden or human health. (Art 9/10 FCTC)

Acknowledgements and Authorship

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ANNEX 1:

Core Obligations of Proposed 'Options' and their Implications on Tobacco Control

Core Obligations	Implications on Tobacco Control	WHO FCTC Provisions
Phasing out and/or reducing the supply of, demand for and use of primary plastic polymers. (e.g., global targets, trade restrictions, production moratorium, tracking, licensing)	**May be effective if substitutes are not allowed:** The tobacco transnationals are promoting their shift to "recyclable plastic packaging" by 2025,[13] but have not tackled "recycled plastic/cellulose acetate"[14] used for its filters. Hence, reducing the use of primary plastic polymers or "virgin plastics" would be **a positive step if the tobacco industry is not allowed to sidestep the ban** by redesigning its filters with "recycled plastic." Cigarettes with new features such as "recyclable filters" could be viewed as an attractive design feature that would sustain tobacco product consumption.; these are not acceptable in the context of protecting human health.	Article 9/10 prohibits attractive design features. Article 5.3 Guidelines prohibit incentives for the tobacco industry.
Banning, phasing out and/or reducing the use of problematic and avoidable plastic products[15] (e.g., ban/control, sale/ use restriction, trade restriction, criteria, production monitoring)	**Is ideal if plastic cigarette filters are recognized as problematic and avoidable and therefore banned.**[16] But it is unclear what criteria[17] will be established to define problematic and avoidable ("single-use", "short-lived" and "unnecessary") plastics. [18] Notably, in many countries that banned single-use plastics (SUPs), shopping bags and straws were included but cigarette filters were not.[19] Recently, the Dutch government's policy study concluded that a ban on filters is the most effective solution,[20]	Article 14 mandates promotion cessation of tobacco use, and Article 18[25] seeks to give due regard to the environment.

	and the Superior Health Council of Belgium supported a ban on filters at both the national and EU level.[21] As a SUP, cigarettes have a stronger rationale for inclusion due to the deceptive effect of filters in enticing smokers,[22] the toxic nature of the by-product,[23] and the propensity for the product to be littered in the environment.[24]	
Banning phasing out and/or reducing the production, consumption and use of chemicals and polymers of concern. [26] (e.g., ban/control, list/criteria, trade restrictions, transparency by producers, tracking and marking, substitutes, research)	**Does not directly affect plastics in cigarette filters.** Cellulose acetate is not a ranking polymer of concern;[27] nevertheless, cigarette butts contain about 7000 chemicals of which at least 250 are harmful and 69 cause cancer. [28] Many of these have been found to leach out into the environment and cause harm to ecosystems and living creatures. The cellulose acetate filter is essentially a defective product, as it does not protect the health of smokers, may be associated with increased risks for certain lung cancers, and is the most common waste item picked up on the beach and urban cleanups globally.	
Reducing microplastics[29] (e.g., ban/control use of intentionally added microplastics, ban/control the trade and use of microplastics and products with intentionally added microplastics,	**Is ideal if cigarette filters are included as a product that releases microplastics.** There is no evidence that microplastics in cigarettes are "intentionally added". However, cigarette filters should be classified as a source of microplastics because a single filter releases approximately 100 cellulose acetate fibers a day (mostly 0.2mm in size), and 0.3 million tons of cellulose acetate filters are disposed of annually. [30] Cigarette butts are found in storm drains and other	Article 19 seeks to deal with the liability of the tobacco industry.

minimize leakage of plastic pellets in certain products, address unintentional release including in wastewater, guidelines on reducing the release of plastics in some products)	waterways where they can release microplastics. While governments should invest in innovative wastewater treatment systems[31], the tobacco industry should be made to pay for the burden caused by their product wastes in these systems. Guidelines on technology and practices to reduce the release of plastics in cigarette butts should be considered in addition to "washing, textile, road markings and tires."[32]	
Strengthening waste management[33] (e.g., infrastructure and technology, guidance & tools, producer waste reduction targets, export restrictions of waste, EPR systems to incentivize recycling)	Will be beneficial for tobacco control if the tobacco industry is not endorsed through EPR schemes: Strengthening waste management to contain toxic tobacco plastics is crucial, and the tobacco industry can and must be made to pay for their product waste burdens. This should be mandatory and not subject to voluntary agreements.[34] However, EPR schemes [35],[36] could provide an avenue for the tobacco industry to promote itself as good corporate citizens. Strengthening demand for secondary plastics should not mean procuring or enticing the use of cigarettes with recyclable filters, plastic or otherwise.[37] Tobacco companies must never be incentivized to recycle or be given financial support or tax exemptions to develop recycling programs.[38] No incentives should be given to tobacco companies to support their business; recyclable additives to cigarettes will not alter the toxic nature of cigarettes or cigarette filters.	

Fostering design for circularity[39] (e.g., redesign, labelling, target recycled content, data registry)	**Is detrimental to tobacco control; may be beneficial if the tobacco industry is excluded.** Circularity requires producers to redesign products to conform to certain criteria[40] as well as to facilitate ease of use, collection, sorting, or reuse and recyclability of plastics and ensure that "plastic products and their additives do not hinder or disrupt the recyclability of other plastic products in the same waste streams."[41] In the context of tobacco, this would entail making cigarette filters recyclable or reusable, indicating the percent of recycled content, and placing labels to entice consumers.[42] From an environmental standpoint, a recyclable cigarette butt would remain toxic. From a health perspective, any novel substitute to the current filter design would be deemed an attractive design feature that would entice consumption. The tobacco industry would appear to be contributing to plastic reduction while encouraging tobacco use and downplaying the release of toxic chemicals and heavy metals from cigarette butts into the environment.	
Encouraging reduction, reuse and repair of plastic products and packaging[43] (e.g., fees, tariffs, tax incentives, EPR schemes, product take-back, etc.)	**Can be beneficial for tobacco control, if consistent with WHO FCTC and implemented in the form of taxes or fees to discourage use.** "Encouraging reduction and reuse of plastics" includes requiring producers to adopt design features[44] or imposing regulatory approaches, programs, or incentives.[45] Given the tobacco industry's long-running history of promoting a poorly designed	

	product, it cannot be trusted to undertake any redesign. Any form of attractive design feature added to the cigarette could entice users. Fees and tariffs to pay for environmental harm and discourage use will help reduce tobacco consumption. But any form of incentive would be contrary to WHO FCTC guidelines which proscribe incentives for the tobacco industry. Product take-back programs on cigarette butts (e.g., Terracycle) have not been proven safe, impactful, and/ or scalable,[46] but are already widely used as part of the tobacco company's publicity narratives.[47] Like EPR schemes, these could provide an avenue for the tobacco industry to promote itself as good corporate citizens, which is a means to entice tobacco use, especially among the youth.[48]	
Promoting the use of safe, sustainable alternatives and substitutes[49] (e.g., certification schemes, incentives and other economic instruments, a technical committee with a list of criteria)	**Is detrimental to tobacco control.** Because of the nature of cigarette filters, there is no "safe" or sustainable alternative or substitutes. The filter is designed to allow contact with toxic chemicals which are then retained, making cigarette butts a hazardous waste. Toxins retained in biodegradable butts would still leach into the environment.[50] Substitutes can also be viewed as a novel design feature that makes the cigarette more attractive. Such substitutes would retain toxic chemicals and remain harmful to the environment. Certification schemes[51] to standardize substitutes can be viewed as an	

	endorsement of the quality of cigarettes, which would undermine public health efforts. Economic instruments such as incentivizing substitutes for cigarette filters are proscribed by the WHO FCTC Guidelines.	
Eliminating the release and emission of plastics to water, soil and air[52] (e.g., reduce/eliminate release, technology to eliminate pollution from all stages of the life cycle, prohibit dangerous practices, prevent the production and release of toxic emissions from plastic waste management)	**Is ideal if cigarette butts are identified and have corresponding sectoral measures[53] and if the tobacco industry is not included in the development of such measures.** In one day, a single cigarette filter releases approximately 100 microfibers of less than 0.2mm.[54] These plastic emissions include chemicals and heavy toxins.[55] Because cigarette filters are intrinsically flawed[56] (the tobacco industry knows they release plastic fibers during inhalation), the industry cannot be trusted to develop any measure or system to address the plastic emissions of discarded cigarette filters. Although recycling efforts exist,[57] little is known about the release of plastics and toxins during the recycling process or the product waste management process.[58] In the absence of evidence, the precautionary principle may be applied to consider cigarette butt waste management a dangerous practice that requires special treatment.	
Addressing existing plastic pollution[59]	**Is important in the context of tobacco control.**[60] Cigarette butts are toxic	

(e.g., remediation measures for legacy waste, and clean-up strategies)	components of legacy waste. Addressing existing pollution of the tobacco industry such as by targeted remediation activities (e.g., cleanups) is aligned with giving due regard to the environment. In line with dealing with the liability of the tobacco industry, the tobacco industry must be made to pay the costs of these activities. [61] However, cleanups are not a solution to the problem of plastic tobacco product waste, as this waste stream is enormous, continuous, and ubiquitous. Upstream solutions against production of the defective product should be pursued.	
Facilitating a just transition, including an inclusive transition of the informal waste sector.[62] (e.g., formalization, benefits, infrastructure, and skill building)	**Can be feasible if protected by governments from private sector interests and corporate practices.** In the efforts to "address decent work deficits in the tobacco sector",[63] tobacco workers have called out corporate practices as a major hindrance to the improvement of their livelihoods. The activities of the tobacco companies to "support" workers and growers are also viewed as efforts to drown out workers' voices.[64]	
Protecting human health from the adverse effects of plastic pollution[65] (e.g., Risk assessment, further research on health impact, exchange information, improve One Health approach)	**Can be beneficial if strengthened further** to, among others, recognise the need to highlight the participation of the health sector and recognise the impact on health and safety of any intervention. These include substitution, waste management, etc. and must take into account the need to coordinate and exchange information with the WHO FCTC Secretariat and expert groups at the global level.[66]	

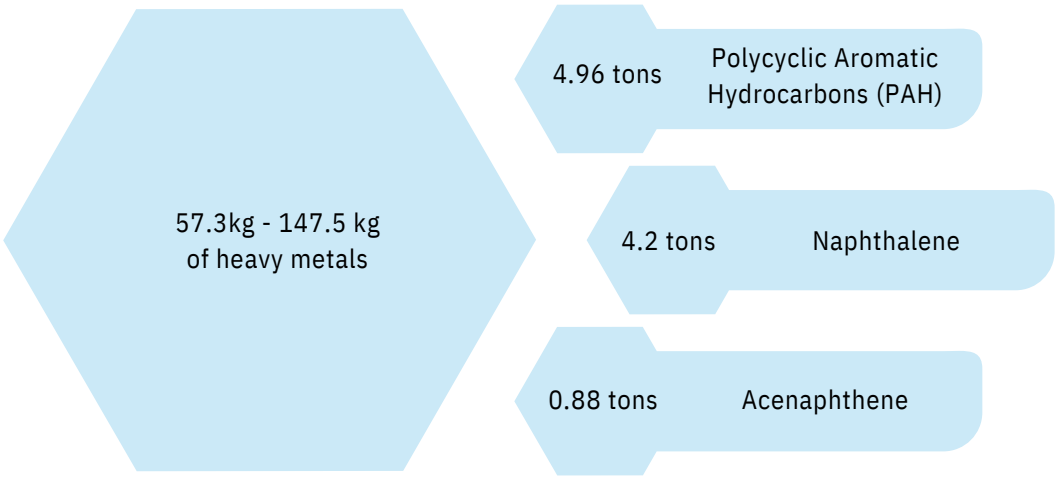
ANNEX 2:

Hazardous Plastics: Cigarette Butts

Cigarette Butts: Toxic/ Hazardous Plastics

Cigarette butts are highly toxic and leach out harmful substances when in contact with water, exposing aquatic life to over 200 potentially carcinogenic and mutagenic toxins, including nicotine and its derivatives, heavy metals, polycyclic aromatic hydrocarbons (PAH), and benzene, toluene, ethylbenzene, and xylene (BTEX). Nicotine is rapidly released in water and can persist for 60 days. Nickel, lead, titanium, and zinc are released on the first day of contact with the environment while PAH has a more gradual long-term release.[72]
Cigarette butts also absorb a variety of toxins in the marine environment with a 200-fold increase in heavy metal concentration after 85 days.[73] Consequently, heavily contaminated cigarette butts can be accidentally ingested by marine life and end up in the food chain.[74]

Annually, cigarette butts release into the environment [75]:



Circular Economy

A circular economy is a model for addressing plastic pollution and waste in a sustainable way where all plastic waste is used or biodegraded efficiently and/or returned to the economy for reusing or recycling.[67],[68] This requires designing products that eliminate waste and pollution, circulate materials back to the economy, and regenerates nature.[69] This is in contrast to the current linear economy,[70] an open-ended economy model developed with no built-in tendency to recycle, which is reflected by treating the environment as a waste reservoir.[71]

1.
Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

2.
"At its first session, the intergovernmental negotiating committee to develop an international legally binding instrument on plastic pollution, including in the marine environment, requested the secretariat to prepare, for consideration by the committee at its second session, a document with potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addressed the full life cycle of plastics as called for by Environment Assembly resolution 5/14, including identifying the objective; substantive provisions, including core obligations, control measures and voluntary approaches; implementation measures; and means of implementation."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

3.
"Core obligations, control measures and voluntary approaches (including annexes, if any)"
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

4.
"9. The committee may wish to consider using one, or a combination, of the following statements of objective of the instrument:
(a) End plastic pollution; protect human health and the environment from its adverse effects throughout the life cycle of plastic.
(b) Protect human health and the environment from the adverse effects of plastic pollution throughout the life cycle.
(c) Reduce the production, use and discharge of plastics across their life cycle, including through the promotion of a circular plastics economy with a view to ending plastic pollution by X year and protecting human health and the environment from its adverse effects."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

5.
Global Burden of Disease, The Lancet, available at: https://www.thelancet.com/GBD

6.
Superior Health Council. The impact of cigarette filters on public health and the Belgian environment. Brussels: SHC; 2023. Report 9726. Available at: https://www.health.belgium.be/sites/default/files/uploads/fields/fpshealth_theme_file/20230426_shc_9726_cigarette_filters_vweb.pdf

7.
"34. The committee may wish to consider including some or all of the following potential options related to awareness-raising and education:
(a) In relation to scope and focus, the instrument could promote:
(i) Behavior change;
(ii) Capacity development;
(iii) Sharing of information on environmental impact, sustainability, reduction of plastic use and demonstrated successes;
(iv) Increased awareness and understanding of the instrument's goals and objectives.
(b) In relation to the mechanism(s), the instrument could include provisions for:
(i) A communication and education plan for the instrument, involving all stakeholders;
(ii) Educational and awareness-raising programmes and citizencampaigns;
(iii) Public participation and public access to information;
(iv) Training at the national, regional and international levels, including exchange visits and specific dedicated training;
(v) The role of the Global Partnership on Plastic Pollution and Marine Litter and other multistakeholder entities;
(vi) Guidance on plastic pollution in school curriculums and enhance local environmental education related to the impact of plastic pollution;
(vii) Knowledge transfer strategies around the health risks of plastic pollution, and potential alternatives and the importance of behavioural change."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

8.

"35. (a) In relation to scope and focus:
(i)Exchange information on best practices, knowledge, research and technologies.
(ii)Exchange information on sustainable consumption and production, environmentally sound waste management, sources of plastic pollution, human and animal exposure to plastic pollution and the associated risks and reduction options, among policymakers, stakeholders and the public.
(iii)Exchange information, if any, on the wisdom of indigenous systems and practices.
(b) In relation to the mechanism(s):
(i)Include mandatory disclosure (of harmonized information on chemical/material composition of plastic products and its intended uses throughout the life cycle).
(ii)Establish a registry – the secretariat should establish a central data exchange where information reported by parties could be made available, initiated through the instrument and reflected in NAPs.
(iii)Include prior informed consent for transboundary movements through an information exchange mechanism.
(iv)Build on ongoing voluntary initiatives such as the and the New Plastics Economy Global Commitment from the Ellen MacArthur Foundation and the United Nations Environment Programme (UNEP).
(v)Use the multi-stakeholder action agenda to share knowledge and highlight successes, to replicate and scale sustainable solutions.
(vi)Use regional networks for information exchange, lessons learned and capacity-building.
(vii)Promote cooperation with other countries and international organizations.
(viii)Organize events on the sidelines of governing body sessions to exchange best practices.
Learn from other processes such as those under the Convention on Biological Diversity, SAICM and the United Nations Framework Convention on Climate Change."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

9.

"40. (a) Promoting ambitious actions to address plastic pollution and promote cooperation with a wide variety of stakeholders, including by:
(i)Promoting high-level engagement;
(ii)Promoting ambitious action and cooperation at the local, regional and global levels;
(iii)Mobilizing financial and technical resources from stakeholders;
(iv)Sharing knowledge and highlighting successes to replicate and scale sustainable solutions.
(b) With respect to mechanisms of the multi-stakeholder action agenda, considering:
(i)Following a model similar to the climate Marrakesh partnership model, in close association with existing structures and coalitions;
(ii)A portal on stakeholder actions;
(iii)Periodic progress reporting to the instrument's governing body (e.g., self-reported progress on commitments, descriptions of new actions and responses, expert input on specific topics);
(iv)Multi-stakeholder forums, submissions, seminars and side events and participation in a potential technical expert group."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

10.

"Establish a dedicated plastics multilateral fund or funds through the new instrument, with Member States and other funding sources contributing funds to support the instruments' objectives. Modalities could include management of the fund or funds by the governing body.
(a) Expand an existing multilateral fund: A dedicated avenue for this legal agreement could be established within an existing multilateral fund to provide sustained funding for the implementation of the plastics treaty.
(b) Consider a hybrid approach that combines elements of the above options. For example, the establishment of the fund could be outlined in the legal agreement, but the governance structure and funding mechanisms could be modelled on, adapted to or hosted by an existing environmental fund such as the Global Environment Facility. This approach could help leverage existing resources and expertise while maintaining a unique identity and purpose for the multilateral fund.
(c) Establish an additional fund dedicated to tackling existing pollution in the environment and the remediation of legacy plastic waste to reduce and eliminate the release of plastics (and microplastics) to air, water and land, including in the marine environment, targeted specifically at supporting vulnerable countries and small island developing States that bear a heavy burden of legacy plastics on their shorelines. Modalities could include any of the above or other options.
(d) Explore innovative and other financing opportunities, nationally or globally, for tackling plastic pollution, where private-sector resources can play an enhanced role, including the following:
(i) Plastic fees, taxes or levies: Implement a fee, tax or levy on plastic production, use or disposal to generate revenue that would finance initiatives to reduce plastic waste. For example, the tax could be applied to manufacturers or importers of plastic polymers and products and the revenue could be used to fund the instrument's objectives, including recycling programmes, product redesign and public awareness campaigns.

(iI) EPR system: Set up an EPR system that requires plastic producers and importers to take responsibility for their products throughout their life cycle, from production to disposal, to incentivize collection and sorting, including by informal waste pickers, to initiate investment in recycling facilities, and tofund studies of advanced recycling and material recovery methodologies. The system would include fees paid by plastic producers, which would be used to fund initiatives aimed at reducing plastic waste, such as product design, material substitution and end-of-life management.
(iii) Public-private partnerships: Foster public-private partnerships to fund and implement initiatives aimed at reducing plastic waste. Companies could contribute funding, expertise and resources to support projects that align with their sustainability goals and the instrument's objectives.
(iv) Credit schemes: Use credit schemes to finance initiatives that reduce plastic waste. The credits would be generated by projects that reduce greenhouse gas emissions, such as recycling, and sold to companies and governments to offset their carbon footprint.
(v) Funding through private-sector entities involved in the life cycle of plastic: Introduce a packaging fee.
(vi) Product charges: Introduce charges on specific plastic products, such as single-use items, to encourage a reduction in their use or increased use of more sustainable alternatives. The revenue generated could be used to finance initiatives aimed at reducing plastic waste.
(vii) Other market-based approaches, such as pricing mechanisms and financial incentives, to encourage or discourage certain behaviours or practices.
(viii) Voluntary contributions: Encourage voluntary contributions from foundations, individuals and businesses to support initiatives aimed at tackling plastic pollution."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

11.
Sy, D., Tobacco's Toxic Plastics: A Global Outlook, The Global Center for Good Governance in Tobacco Control, June 2022, available at: https://ggtc.world/library/tobaccos-toxic-plastics-a-global-outlook

12.
"10. (a) Options for targets:
(i)Establish global targets to reduce production of primary plastic raw material.
(ii)Establish nationally determined commitments or targets.
(b) Options for regulating primary plastic polymers:
(i)Impose a moratorium on primary production of plastic polymers or ban, limit or reduce the manufacture, export and import of virgin plastic polymers.
(ii) Apply import and export requirements to parties and non-parties on a non-discriminatory basis.
(iii)Track types and volumes of plastic polymers, precursors, and feedstocks manufactured, imported, and exported as well as the quantities and type of chemicals applied in production through transparency and reporting requirements.
(iv)Establish licensing schemes for production, import and export of virgin and secondary plastic polymers.
(c)Option for economic tools: Set market-based measures such as price-based measures, production permits, licenses, removal of fiscal incentives and a mandatory fee, tariff or tax on virgin plastic production."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

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D. Moore, British American Tobacco to make "all plastic packaging recyclable", Circular, 2020, Available at: https://www.circularonline.co.uk/news/british-american-tobacco-to-make-all-plastic-packaging-recyclable/
See also: JT Group, Environment and our products, 2020, Available at: https://www.jt.com/sustainability/environment/products/index.html
See also: PMI, Zoom in, Post-consumer waste, Available at: https://www.pmi.com/sustainability/reduce-post-consumer-waste/zoom-in

14.
H. Liu et al., Frontiers, Reutilization of Recycled Cellulose Diacetate From Discarded Cigarette Filters in Production of Stone Mastic Asphalt Mixtures, 2021, Available at: https://www.frontiersin.org/articles/10.3389/fmats.2021.770150/full

15.
"11. (a) Inventory and monitor production of raw materials, including those used in plastic commodities, and establish a globalbaseline.
(b) Establish criteria to determine and prioritize problematic and avoidable plastic products, including unnecessary or short-livedproducts.
(c) Ban, phase out, reduce or control the production, sale, distribution, trade and use of specific problematic and avoidable plastic products by identified dates (the criteria under (b) above and the list and phase-out dates hereunder could be identified in an annex to the instrument);
(d) Apply import and export requirements for listed products to parties and non-parties on a non-discriminatory basis;
(e) Apply import and export requirements to parties and non-parties on a non-discriminatory basis."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

16.
See recommendations in GGTC's Tobacco's Toxic Plastics report and STPA Briefs, also available on the GGTC's Tobacco's Plastics webpage.

17.
A proposed annex includes a list of problematic and avoidable plastic products; criteria for determining problematic and avoidable plastic products; and possible dates for banning, phase-out, reduction or control. See: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

18.
Comments form UNEP, INC SEC: "Submissions referred to a number of additional terms to describe problematic and avoidable plastic products that Member States may wish to consider, including "single-use", "short-lived" and "unnecessary". Research has shown that it would be possible and economically feasible to reduce the consumption of short-lived plastic products by 30 per cent by 2040 while respecting the needs of a growing population and economy, and many countries are already responding to this challenge through a range of measures.
Reducing or eliminating the use of problematic and avoidable products could also enhance the economics of recycling and thereby contribute to enabling a market for recycling."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

19.
Sy, D., Tobacco's Toxic Plastics: A Global Outlook, The Global Center for Good Governance in Tobacco Control, June 2022, available at: https://ggtc.world/library/tobaccos-toxic-plastics-a-global-outlook

20.
A ban on single-use cigarette filters. This policy option involves banning all single-use cigarette filters. This would include the current standard, plastic-free and biodegradable filters. The research shows that a ban is almost completely effective. It is the most effective measure and therefore the preferred option to reduce the number of cigarette filters in litter. A majority of both smokers and non-smokers are neutral to positive towards this policy option.
The question is whether the plastics in the filter can be replaced by a biodegradable material. Although theoretically possible, a biodegradable filter would only partly solve the problem of microplastics, and would not lead to less litter but only to different types of litter. In this way, the toxins left in the biodegradable cigarette filter after smoking would still leach into the environment.
See: Letter to parliament on policy options for reducing cigarette filters in litter, The National Government for the Netherlands, 19th April 2023, available at: https://www.rijksoverheid.nl/regering/bewindspersonen/vivianne-heijnen/documenten/kamerstukken/2023/04/19/beleidsopties-ter-reductie-van-sigarettenfilters-in-zwerfafval

21.
In this scientific advisory report, which offers guidance to public health policy-makers, the Superior Health Council of Belgium provides a brief overview of the current research and consensus on the effects of cigarette filters on public health and their presence as waste in the environment. A ban on cigarette filters is advocated.
"Filters in cigarettes do more harm than good: they fail to prevent the adverse effects of smoking and promote the enjoyment of smoking through a more pleasant mouthfeel. Moreover, the filters are very poorly biodegradable, which means that toxic cigarette butts pollute the environment for many years. It follows that they offer no benefit, be it from a public health perspective or an environmental one. The Superior Health Council therefore supports a general ban on cigarette filters, both at national and European level."
See: Superior Health Council. The impact of cigarette filters on public health and the Belgian environment. Brussels: SHC; 2023. Report 9726. Available at: https://www.health.belgium.be/sites/default/files/uploads/fields/fpshealth_theme_file/20230426_shc_9726_cigarette_filters_vweb.pdf

22.
Evans-Reeves K, Lauber K, Hiscock R. The 'filter fraud' persists: the tobacco industry is still using filters to suggest lower health risks while destroying the environment. Tobacco Control 2022;31:e80-e82. Available at: https://tobaccocontrol.bmj.com/content/31/e1/e80

23.
Novotny TE, Hamzai L. Cellulose acetate cigarette filter is hazardous to human health [published online ahead of print, 2023 Apr 18]. Tob Control. 2023;tc-2023-057925. doi:10.1136/tc-2023-057925. Available at: https://pubmed.ncbi.nlm.nih.gov/37072169/

24.
Novotny T.E. Environmental accountability for tobacco product waste. Tobacco Control. 2020;29:138-139. Available at: https://tobaccocontrol.bmj.com/content/29/2/138
25.
WHO FCTC Art 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.
See: Policy options and recommendations: Article 17 and 18, WHO Framework Convention on Tobacco Control, 1 January 2013. Available at: https://fctc.who.int/publications/m/item/policy-options-and-recommendations-on-economically-sustainable-alternatives-to-tobacco-growing
26.
"12. (a) Options for regulating chemicals and polymers of concern:
(i)Ban, phase out, reduce or control specific polymers and chemicals of concern, or groups of chemicals, based on criteria identified to determine polymers and chemicals of concern (list, phase-out date and criteria could be included in an annex to the instrument).
(ii)Apply import and export requirements for listed polymers and chemicals to parties and non-parties on a non-discriminatory basis.
(iii) Apply import and export requirements to parties and non-parties on a non-discriminatory basis.
(b)Options for increasing transparency:
(i)Track types and volumes of polymers and chemicals applied in production, including through disclosure requirements for plastics throughout the supply chain, and plastic production, use and additives, consistent with national laws.
(ii)Increase transparency through marking (digital watermarks, tracers) and harmonized product labelling, material safety data sheets, product passports and publicly available databases.
(c)Options for accelerating and supporting the transition:
(i)Establish measures to foster innovation and incentivize alternative and substitutes, including through sustainable or green chemistry and chemical simplification.
(ii)Incentivize research and development of sustainable additives and polymers."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y
27.
"PUR, PVC, PAN, ABS, PMMA, SAN, TPU, UP, PET, PS, and HDPE were found to be the most significant polymers with regards to the potential human health risk from food chain exposure routes influenced by marine waters."
Source: Yuan, Z. et. al., Ranking of potential hazards from microplastics polymers in the marine environment, Journal of Hazardous Materials, Volume 429, 2022, 128399, ISSN 0304-3894, available at: https://doi.org/10.1016/j.jhazmat.2022.128399
28.
HHS, Tobacco Reports and Publications, 2014, available at: https://www.hhs.gov/surgeongeneral/reports-and-publications/tobacco/index.html,
Of the more than 7,000 chemicals in tobacco smoke, at least 250 are known to be harmful, Among the 250 known harmful chemicals in tobacco smoke, at least 69 can cause cancer. U.S. Department of Health and Human Services. *The Health Consequences of Smoking—50 Years of Progress: A Report of the Surgeon General, 2014.* Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2014.
29.
"(a) Options for addressing intentional use:
(i)Ban, phase out, reduce or control the use of intentionally added microplastics to avoid the potential release of microplastics into the environment from certain sources (list could be identified in an annex to the instrument).
(ii)Ban, phase out, reduce or control the production, sale, distribution, trade and use of microplastics and products containing intentionally added microplastics.
(b)Options for addressing unintentional releases:
(i)Minimize the risk of leakage of plastic pellets from production, handling, transport and the use of certain products.
(ii)Support innovative wastewater treatment mechanisms to prevent the release of microplastics into waterways. Developing guidelines on best available technology and best environmental practices to reduce release of plastics, including for design, in the washing, textile, tyre, and road marking industries."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y.

30.
"Cellulose acetate cigarette filter is hazardous to human health Thomas E Novotny , Laila Hamzai A cigarette filter has 12 000–15 000 cellulose acetate strands, and if discarded into aquatic or terrestrial environments, these fibres can disperse into ecosystems. Belzagui et al. modelled this process in a laboratory setting and estimated that a typical filter releases approximately 100 microfibres per day, most of which are less than 0.2 mm in size. They estimated that roughly 0.3 million tons of cellulose acetate filters are disposed of annually worldwide. The released microfibres may harm small aquatic organisms. In fact, microplastics have been found in fish and shellfish that may become part of the human food chain."
Source: Novotny TE, Hamzai L, Cellulose acetate cigarette filter is hazardous to human health, Tobacco Contro, Published Online First: 18 April 2023. doi: 10.1136/tc-2023-057925
31.
"Support innovative wastewater treatment mechanisms to prevent the release of microplastics into waterways"
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y
32.
"Developing guidelines on best available technology and best environmental practices to reduce release of plastics, including for design, in the washing, textile, tyre, and road marking industries."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y
33.
"(a) Options for enhancing waste management capacity and promoting innovation:
(i) Deploy and foster the development of technologies for the collection, recycling and disposal of plastic waste.
(ii) Set a target for reducing the generation of plastic waste that needs final disposal operations such as landfilling and incineration.
(iii) Develop guidance for areas such as:
a.Encouragement of investment in waste management infrastructure;
b. Sampling, analysis, monitoring, reporting and verification of plastic waste in the environment, to support policymakers in measuring the impact of implemented targets and policies;
a.Specifications for containers, equipment and storage sites containing plastic waste.
(i) Promote research for innovation.
(b) Options for regulating plastic waste:
(i) Regulate the movement, and end of life management of plastic waste to reduce leakage from mismanaged waste.
(ii) Prohibit the following dangerous practices: open burning, incineration, co-firing in coal-fired power plants and other waste-to-energy processes, co-processing in cement kilns, and chemical recycling.
(iii) Establish guidance and tools for decision-making on waste recycling practices (to avoid lock-ins to solutions that harm human and environmental health).
(iv) Set indicators and obligations for plastic waste collection, sorting and recycling, especially at the national level.
(v) Require producers to prepare an action plan that includes individual waste reduction targets.
(c) Options related to illegal dumping and disposal of plastic waste:
(i) Implement measures to ensure the collection, sorting, management, and disposal of plastic waste in an environmentally sound and safe manner.
(ii) Rely on the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal where appropriate.
(iii) Establish surveillance systems and quotas for exports of plastic waste.
(iv) Prohibit or control transboundary movement of plastic waste, except where this ensures circularity;
(v) Develop a streamlined permit process for transboundary movement of plastic waste to countries where recycling facilities exist with sufficient capacity;
(vi) Apply a timetable for control measures on transboundary movements of plastic waste, in particular those from developed countries to developing countries.
(d) Options for promoting EPR and enabling a market forrecycling:
(i) Adopt measures to strengthen the demand for secondary plastics and facilitate environmentally sound plastic scrap recycling, including by using public procurement to drive demand for plastic products containing higher recycled content, where feasible.
(ii) Set indicators for the plastic waste recycling rate, especially at the domestic level.
(iii) Establish EPR systems to incentivize recycling, taking into account national circumstances. Options for such systems include:
a. Action plan programmes in which fees are charged to plastic manufacturers and plastic product producers;
b. A set of guidelines for EPR systems.
(iv) Provide financial support and tax exemptions for recycling projects.
(v) Establish best available technologies for recycling to ensure alignment with the Paris Agreement (or with principles of sustainable banking and investment).
(vi) Establish a requirement that polymer producers invest in the volume of recycling facilities needed to recycle all the plastic they produce that could become plastic waste."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

34.

"Require producers to prepare an action plan that includes individual waste reduction targets."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

35.

"EPR schemes can make producers responsible for the environmental impact of their products throughout the life cycle, accelerating the market for waste recycling, incentivizing producers to create products with circularity in mind and reducing leakage of plastic waste into the environment."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

36.

"Require producers to prepare an action plan that includes individual waste reduction targets.
(a)Options for promoting EPR and enabling a market for recycling:
(i) Adopt measures to strengthen the demand for secondary plastics and facilitate environmentally sound plastic scrap recycling, including by using public procurement to drive demand for plastic products containing higher recycled content, where feasible.
(ii) Set indicators for the plastic waste recycling rate, especially at the domestic level.
(iii) Establish EPR systems to incentivize recycling, taking into account national circumstances. Options for such systems include:
a. Action plan programmes in which fees are charged to plastic manufacturers and plastic product producers;
b.A set of guidelines for EPR systems.
(iv) Provide financial support and tax exemptions for recycling projects."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

37.

"Adopt measures to strengthen the demand for secondary plastics and facilitate environmentally sound plastic scrap recycling, including by using public procurement to drive demand for plastic products containing higher recycled content, where feasible."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

38.

"Establish EPR systems to incentivize recycling, taking into account national circumstances. Options for such systems include:
Action plan programmes in which fees are charged to plastic manufacturers and plastic product producers;
A set of guidelines for EPR systems.
Provide financial support and tax exemptions for recycling projects."

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

39.

"Establish circularity criteria and guidance for design and production of plastic products and packaging to encourage, enhance and enable value recovery processes and systems; high volume and problematic product categories could be prioritized, using a "start and strengthen" approach (criteria and guidance could be included in an annex to the instrument).
(a) Introduce a requirement for plastic products and packaging put on the market to conform to circularity design criteria.
(b) Establish national requirements for design criteria based on a global harmonized system and methodologies to promote circularity of plastics.
(c) Establish labelling measures for plastic products and packaging in the light of the criteria and guidance to allow informed choices by consumers.

(c) Set a target for the required minimum recycled content of plastic products on the market.
(d) Establish a central data exchange registry where the secretariat can make related information available."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

40.

"(a) Establish circularity criteria and guidance for design and production of plastic products and packaging to encourage, enhance and enable value recovery processes and systems; high volume and problematic product categories could be prioritized, using a "start and strengthen" approach (criteria and guidance could be included in an annex to the instrument).
(b) Introduce a requirement for plastic products and packaging put on the market to conform to circularity design criteria.
(c) Establish national requirements for design criteria based on a global harmonized system and methodologies to promote circularity of plastics."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

41.

"Improving the design of plastic products and packaging for recycling could expand the share of recyclable plastic by improving its profitability. Designing to facilitate maintenance, collection, sorting, reuse, repair and repurposing and ensuring that plastic products and their additives do not hinder or disrupt the recyclability of other plastic products in the same waste streams could play an important role in promoting sustainable production and consumption of plastics"
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

42.

"(d) Establish labelling measures for plastic products and packaging in the light of the criteria and guidance to allow informed choices by consumers.
(e) Set a target for the required minimum recycled content of plastic products on the market.
(f) Establish a central data exchange registry where the secretariat can make related information available."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

43.

"(a) Option for targets: Set targets for the reduction, reuse and repair of plastic products.
(b) Options for regulating and encouraging reduction and reuse of plastics:
(i) Request the governing body to develop and adopt general and sectoral guidelines for reduction and reuse.
(ii) Encourage reduction and reuse of plastic products, such as containers and bottles, including through service delivery systems.
(iii) Recommend that parties promote reuse through collection of used plastics by production sector.
(iv) Apply harmonized product design standards, certifications and requirements, including for certain plastic products and packaging.
(v) Encourage reduction and reuse of plastic products, including fees, tariffs or tax incentives, EPR schemes, deposit refund schemes and product take-back, right-to-repair requirements and remove trade barriers."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

44.

"The reduction, reuse and repair of products and packaging can be facilitated through the product design stage. Reuse schemes can contribute to resource efficiency. They have the potential to decrease life cycle greenhouse gas emissions by 60 to 80 per cent compared to emissions of single-use plastic products. It is also estimated that new reuse schemes and delivery models could create 1.4 million jobs globally by 2040"
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

45.
"Encourage reduction and reuse of plastic products, including fees, tariffs or tax incentives, EPR schemes, deposit refund schemes and product take-back, right-to-repair requirements and remove tradebarriers."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

46.
The Global Center for Good Governance in Tobacco Control, Tobacco Plastics [website], available at: https://tobaccoplastics.ggtc.world/

47.
J Robin Hicks, When will tobacco companies be held responsible for cigarette butt pollution? Eco-Business, October 22, 2019, available at: https://www.eco-business.com/news/when-will-tobacco-companies-be-held-responsible-for-cigarette-butt-pollution/#:~:text=terracycle%20receives%20funding%20from%20tobacco%20companies%20to%20make%20the%20system%20work

48.
Fooks GJ, Gilmore AB, Smith KE, Collin J, Holden C, et al. (2011) Corporate Social Responsibility and Access to Policy Élites: An Analysis of Tobacco Industry Documents. PLOS Medicine 8(8): e1001076. https://doi.org/10.1371/journal.pmed.1001076
See also: Tobacco Industry: Manipulating the Youth into a Lifelong Addiction, The Global Center for Good Governance in Tobacco Control, August 2022. Available at: https://ggtc.world/knowledge/sustainability-and-human-rights/tobacco-industry-manipulating-the-youth-into-a-lifelong-addiction-1; citing: Jirathanapiwat, W. et al. (August 2017). Hijacking 'Sustainability' from the SDGs: Review of Tobacco Related CSR activities in the ASEAN Region. Southeast Asia Tobacco Control Alliance (SEATCA), retrieved from https://seatca.org/dmdocuments/TI%20CSR%20Report%20FINAL.pdf (25 May 2020); Yeon Soo Kim & Youjin Choi (2012) College Students' Perception of Philip Morris's Tobacco-Related Smoking Prevention and Tobacco-Unrelated Social Responsibility, Journal of Public Relations Research, 24:2, 184-199, DOI: 10.1080/1062726X.2012.626138; The Public Health Rationale for Recommended Restrictions on New Tobacco Product Labeling, Advertising, Marketing, and Promotion. U.S. Food and Drug Administration; April 29, 2019. Available at: https://www.fda.gov/media/124174/download

49.
"(a) Options for enhancing research and development:
(i) Provide platforms for sharing information on the development of safe, sustainable alternatives and substitutes.
(ii) Establish market tools (or fiscal policy incentives) for enhancing research and development of alternative products and technologies.
(b) Options for reviewing and enabling the use of safe, sustainable alternatives and substitutes:
(i) Establish a certification scheme for plastic products.
(ii) Task a technical review committee (comparable to the Technology and Economic Assessment Panel under the Montreal Protocol on Substances that Deplete the Ozone Layer) with assessing criteria for the sustainable production and use of plastics and the availability of safe alternatives and substitutes, set out the criteria in annexes to the instrument, and recommend possible adjustments to such annexes or amendments to the instrument (including new annexes).
(iii) Develop clear mechanisms for funding, technical support and transfer of technology for the development of natural alternatives to plastics, in particular in small island developing States.
(iv) Use economic instruments, such as fees, tariffs, taxes, subsidies, and tradable permit systems, to incentivize a reduction of plastic use and the adoption of sustainable alternatives."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

50.
Slaughter, E., Gersberg, R. M., Watanabe, K., Rudolph, J., Stransky, C., & Novotny, T. E. (2011). Toxicity of cigarette butts, and their chemical components, to marine and freshwater fish. Tobacco control, 20 Suppl 1(Suppl_1), i25–i29. Available at: https://doi.org/10.1136/tc.2010.040170
See also: Letter to parliament on policy options for reducing cigarette filters in litter, The National Government for the Netherlands, 19th April 2023, available at: https://www.rijksoverheid.nl/regering/bewindspersonen/vivianne-heijnen/documenten/kamerstukken/2023/04/19/beleidsopties-ter-reductie-van-sigarettenfilters-in-zwerfafval

51.
"Establish a certification scheme for plastic products. Task a technical review committee (comparable to the Technology and Economic Assessment Panel under the Montreal Protocol on Substances that Deplete the Ozone Layer) with assessing criteria for the sustainable production and use of plastics and the availability of safe alternatives and substitutes, set out the criteria in annexes to the instrument, and recommend possible adjustments to such annexes or amendments to the instrument (including new annexes).

Develop clear mechanisms for funding, technical support and transfer of technology for the development of natural alternatives to plastics, in particular in small island developing States. Use economic instruments, such as fees, tariffs, taxes, subsidies, and tradable permit systems, to incentivize a reduction of plastic use and the adoption of sustainable alternatives."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

52.
"Reduce and, where feasible, eliminate releases of plastics to water, soil and air (general and sectoral measures could be listed in an annex to the instrument, including wastewater, industrial facilities, aquaculture, agriculture and the fishing industry, and transport).
(a) Develop and use the best available technology and best environmental practices, including environmental and emission/effluent standards, to minimize and eliminate pollution from all stages of the plastic life cycle.
(b) Prohibit dangerous practices to prevent the production and releases of toxic emissions from plastic waste management.
(c) Take effective measures to prevent and reduce loss of fishing gear containing plastic and leverage existing efforts, including those of the Food and Agriculture Organization of the United Nations, and the International Maritime Organization."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

53.
Proposed Annex includes categories of policy measures to reduce and, where feasible, eliminate releases of plastics to water, land and air.
See: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

54.
"A cigarette filter has 12 000–15 000 cellulose acetate strands, and if discarded into aquatic or terrestrial environments, these fibres can disperse into ecosystems. Belzagui et al29 modelled this process in a laboratory setting and estimated that a typical filter releases approximately 100 microfibres per day, most of which are less than 0.2 mm in size. They estimated that roughly 0.3 million tons of cellulose acetate filters are disposed of annually worldwide.The released microfibres may harm small aquatic organisms. In fact, microplastics have been found in fish and shellfish that may become part of the human food chain."
Source: T.E Novotny, L.Hamzai, NCBI Literature Resources, Cellulose acetate cigarette filter is hazardous to human health, 2023. Available at: https://pubmed.ncbi.nlm.nih.gov/37072169/

55.
Sy, D., Tobacco's Toxic Plastics: A Global Outlook, The Global Center for Good Governance in Tobacco Control, June 2022, available at: https://ggtc.world/library/tobaccos-toxic-plastics-a-global-outlook

56.
Evans-Reeves K, Lauber K, Hiscock RThe 'filter fraud' persists: the tobacco industry is still using filters to suggest lower health risks while destroying the environment. Tobacco Control, 2022;31:e80-e82, available at: https://tobaccocontrol.bmj.com/content/31/e1/e80

57.
The Global Center for Good Governance in Tobacco Control, Tobacco Plastics [website], available at: https://tobaccoplastics.ggtc.world/

58.
"Prohibit dangerous practices to prevent the production and releases of toxic emissions from plastic waste management."
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

59.
"(a) Options for addressing existing plastic pollution:
(i) Take measures to remediate plastic pollution in the environment, including in the marine environment and areas beyond national jurisdiction, taking into account the draft agreement under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction.
(ii) Cooperate to develop strategies to identify, prioritize and address areas of legacy waste.

(b) Options for sector/context-specific measures:
(i) Eliminate ghost gear pollution in the environment, particularly the marine environment, in collaboration with the Food and Agriculture Organization of the United Nations and the International Maritime Organization.
(ii) Conduct remediation activities in specific contexts such as accumulation sites on coasts, rivers and estuaries, urban mining and unregulated landfills, as feasible and justified from a socioeconomic perspective. Priority could be given to plastic pollution hotspots and measures that could have a positive local or regional impact on human health or the environment and to minimizing negative effects to ecosystems.
(iii) Develop criteria and guidelines on best available techniques and best environmental practices, including to ensure that clean-up activities respect biodiversity. Options include:
a. Identifying indicators for hot spots where quantities and types of litter endanger marine or other species or habitats;
b. Encouraging the adoption of targeted removal measures in national action plans (NAPs) on a voluntary basis (e.g., clean-up activities and awareness-raising initiatives).”
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

60.
“Cooperate to develop strategies to identify, prioritize and address areas of legacy waste.”
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

61.
“Conduct remediation activities in specific contexts such as accumulationsites on coasts, rivers and estuaries, urban mining and unregulated landfills, as feasible and justified from a socioeconomic perspective”
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

62.
“(a) Establish a mechanism to ensure a fair, equitable and inclusive transition for the industry and affected workers, informal waste workers and affected communities, particularly in developing countries;
(b) Establish a requirement for private waste management companies to collect plastic waste from informal waste picker cooperatives or associations, where relevant, and establish gradual schemes for their formalization. As these cooperatives or associations formalise, the requirement for companies to collect from waste picker cooperatives or associations should be geared toward the formal ones.
(c) Improve working conditions for workers, including waste pickers, including by providing legal recognition and support for informal waste pickers, such as access to health care, education and social security benefits.
(d) Integrate the informal waste sector into the plastics value chain and promote a circular economy through a “just transition programme”.
(e) Establish a requirement to use fees derived from EPR schemes to fund an upgrade of infrastructure and technical and management skills for informal waste pickers to function as waste collection and sorting companies.”
Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

63.
An integrated strategy to address decent work deficits in the tobacco sector, Fifth Item on the Agenda, Governing Body, International Labour Office, GB.334/POL/5, October 11, 2018, available at: https://www.ilo.org/wcmsp5/groups/public/---ed_norm/---relconf/documents/meetingdocument/wcms_646755.pdf

64.
The Tobacco Industry: A Hindrance to the Elimination of Child Labor, STOP, June 15, 2021, available at: https://files.ggtc.world/uploads/2021-06-11/17-45-16-623415/CHILD%20LABOUR%20FS.pdf

65.
“(a) Options for assessing and evaluating risks:
(i)Evaluate risks caused by plastic and plastic pollution for human health.
(ii)Conduct further research on the adverse effects of plastic and plastic pollution on human health
(b)Options for cooperation:
(i)Promote cooperation, collaboration and exchange of information with the World Health Organization, the International Labour Organization and other intergovernmental organizations
(ii)Improve the One Health approach.”

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

66.

"The links between plastic, with its associated chemicals, and plastic pollution, with its detrimental effects on human health and the environment, are increasingly clear. Environment Assembly resolution 5/14 affirmed the importance of cooperation, coordination and complementarity among relevant regional and international conventions and instruments, with due respect for their respective mandates, to prevent plastic pollution and its related risks to human health and adverse effects on human well-being and the environment. Mindful of the precautionary approach as set forth in the Rio Declaration, further research can contribute to better understanding of the health effects of plastic pollution, including microfibres and other plastic microparticles, on humans, to understand the potential transfer of microplastics and hazardous chemicals to crops and animals and to inform decision-making"

Source: Potential options for elements towards an international legally binding instrument, based on a comprehensive approach that addresses the full life cycle of plastics as called for by United Nations Environment Assembly resolution 5/14, United Nations Environment Programme, April 13, 2023, https://wedocs.unep.org/bitstream/handle/20.500.11822/42190/UNEP-PP-INC.2-4%20English.pdf?sequence=13&isAllowed=y

67.

What is circular economy? [website], Ellen Macarthur Foundation, Available at: https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview

68.

McKinsey, a key partner of Ellen Macarthur Foundation on Circularity studies, is a known consultant for tobacco companies, including the PMI funded Foundation for Smoke Free World (2017).
See: McKinsey, Tobacco Tactics, updated 27 August 2020, accessed 11 May 2023. Available at: https://tobaccotactics.org/article/mckinsey/

69.

Widmer,S., Design and the circular economy, Ellen MacArthur Foundation, 2021. Available at: https://ellenmacarthurfoundation.org/articles/design-and-the-circular-economy

70.

"It is breaking with the model of the linear economy, based on a take-make-consume-throw away pattern, by proposing to transform waste into recycled raw material for product design or other uses."

Circular economy: solutions for a sustainable future, Solar Impulse Foundation, Available at: https://solarimpulse.com/circular-economy-solutions#:~:text=it%20is%20breaking%20with%20the%20model%20of%20the%20linear%20economy%2C%20based%20on%20a%20take-make-consume-throw%20away%20pattern%2C%20by%20proposing%20to%20transform%20waste%20into%20recycled%20raw%20material%20for%20product%20design%20or%20other%20uses

71.

U. Andrea et al., *Towards a new taxonomy of circular economy business models*, Journal of Cleaner Production, Volume 168, 2017, Pages 487-498, ISSN 0959-6526, https://doi.org/10.1016/j.jclepro.2017.09.047

72.

C. Mercedes et al., Toward a sustainable circular economy for cigarette butts, the most common waste worldwide on the coast, Science of The Total Environment, Volume 847, 2022, 157634, ISSN 0048-9697,Available at: https://doi.org/10.1016/j.scitotenv.2022.157634

73.

"the concentrations of these heavy metals, except Cr, could increase up to 200 times their original concentrations after 85 days of permanence."

Source: C. Mercedes et al., Toward a sustainable circular economy for cigarette butts, the most common waste worldwide on the coast, Science of The Total Environment, Volume 847, 2022, 157634, ISSN 0048-9697, Available at:https://doi.org/10.1016/j.scitotenv.2022.157634

74.

"There is currently no doubt that CBs become toxic-enriched after being weathered in different marine environments (see, e.g., Acosta-Coley et al., 2019; Santos-Echeandía et al., 2020). Dobaradaran et al. (2017) stated that metal levels nearly doubled their original concentration after 10 days in the sea. If, in addition, this marine environment were contaminated, such as a port, the concentrations of these heavy metals, except Cr, could increase up to 200 times their original concentrations after 85 days of permanence (Santos-Echeandía et al., 2021). The absorption kinetics is slower than the desorption kinetics and is correlated with the state of degradation of the CB; the more degraded it is, the greater the absorption (Santos-Echeandía et al., 2021). Indeed, as cellulose acetate degrades, the specific surface area and porosity increase, which in turn are related to an increase in polarity and in the potential functional groups to which heavy metals can bind (Nguyen et al., 2017; Wang et al., 2014). Therefore, an important aspect is to know the state of degradation of CBs when they enter seawater, an aspect that has been widely forgotten in the studies carried out so far to estimate the toxicity of CB. Furthermore, the longer the CBs are exposed to the medium, the greater the amount of fouling (Ashton et al., 2010; Holmes et al., 2012) or surface organic matter (Artham et al., 2009), which also increases the potential binding sites with heavy metals that are in seawater.

These CBs contaminated with this diversity of pollutants can be accidentally consumed by different marine animals and transferred through the food chain (Green et al., 2022).”
Source: C. Mercedes et al., Toward a sustainable circular economy for cigarette butts, the most common waste worldwide on the coast, Science of The Total Environment, Volume 847, 2022, 157634, ISSN 0048-9697Avaiable at:, https://doi.org/10.1016/j.scitotenv.2022.157634

75.

C. Mercedes et al., Toward a sustainable circular economy for cigarette butts, the most common waste worldwide on the coast, Science of The Total Environment, Volume 847, 2022, 157634, ISSN 0048-9697, Available at:https://doi.org/10.1016/j.scitotenv.2022.157634; citing: Razegheh Akhbarizadeh, Sina Dobaradaran, Gohar Parhizgar, Torsten C. Schmidt, Reza Mallaki, Potentially toxic elements leachates from cigarette butts into different types of water: A threat for aquatic environments and ecosystems?, Environmental Research, Volume 202, 2021, 111706, ISSN 0013-9351, Avaiable at:https://doi.org/10.1016/j.envres.2021.111706; Sina Dobaradaran, Torsten C. Schmidt, Nerea Lorenzo-Parodi, Maik A. Jochmann, Iraj Nabipour, Alireza Raeisi, Nenad Stojanović, Marzieh Mahmoodi, Cigarette butts: An overlooked source of PAHs in the environment?, Environmental Pollution, Volume 249, 2019, Pages 932-939, ISSN 0269-7491, Available at: https://doi.org/10.1016/j.envpol.2019.03.097; Mahdi Farzadkia, Mina Salehi Sedeh, Afsaneh Ghasemi, Navid Alinejad, Malihe Samadi Kazemi, Naghmeh Jafarzadeh, Javad Torkashvand, Estimation of the heavy metals released from cigarette butts to beaches and urban environments, Journal of Hazardous Materials, Volume 425, 2022, 127969, ISSN 0304-3894,Availble at: https://doi.org/10.1016/j.jhazmat.2021.127969.