

## FACT SHEET

### Tobacco Industry and the Environment

Tobacco companies, despite having significant control over product design and supply chains, have yet to pay for, among others:

**HARMS TO OCEAN LIFE:** Environmental toxins leaching out from cigarette butts throughout their decade-long decomposition<sup>12</sup>, including “biodegradable butts” which **harm marine life**.<sup>3</sup>

**DISRUPTION TO THE ECOSYSTEM:** Tobacco production accounts for 5% of global deforestation<sup>4</sup> and offers no replenishment to the soil or to other parts of the farm ecosystem.<sup>5</sup>

#### I. TOBACCO INDUSTRY’S PRODUCTION OF CIGARETTES DAMAGES THE ECOSYSTEM

**Tobacco is a major ecosystem disruptor. By continuing to produce and profit from tobacco and perpetuating the long-lasting harms on the environment<sup>6</sup>, the tobacco industry undermines efforts toward Ecosystem Restoration.<sup>7</sup>**

1. **Clearing lands**, with preference of virgin lands for tobacco production, is leading to **deforestation**, negatively impacting forest reserves.<sup>8</sup>
  - Current practices of tobacco farming are not sustainable. Shortened periods of replenishment of forests and soil are endangering the recovery of the woodlands, subsequently causing a topographical change from woodlands to bush, or worse, permanent deforestation.<sup>9</sup>
  - **Cutting and burning** of stalks and plant residue after harvest because they are of no food value to livestock and poultry, thus reducing essential animal resources such as manure.<sup>10</sup>
2. **Burning firewood** or fuel wood for days, secured from neighbouring forests, to “flue cure”<sup>11</sup> tobacco leaves, causing soil erosion and depletion of wood resources.
  - Cutting trees, including rubber trees and indigenous trees, lead to **deforestation as well as transition of local streams** from perennial to seasonal, thereby causing water scarcity.<sup>12</sup>
  - Trees are also destroyed in the production of matches that are produced/used to light up the cigarette.<sup>13</sup>
3. **Use of agrochemicals** is causing **poisoning<sup>14</sup> and water pollution**, as evidenced by agrochemical residues in waterways adjacent to tobacco farming communities. This is causing severe detrimental impacts on hydrological systems and sediment yield in wetlands, riparian zones and steep slopes.<sup>15</sup>
  - Tobacco is among 10 crops that require the most fertilizers.<sup>16</sup>
  - Chloropicrin, among many pesticides used, is a lung damaging agent toxic to fish and other organisms.<sup>17</sup>

4. **Using plastics and chemicals** in cigarette filters is adversely affecting **marine life and water sanitation, since cigarette butts are the most littered item on earth.**<sup>18</sup>
  - Arsenic, lead and ethyl phenol are leached from cigarette butts into waterways, affecting the aquatic life and drinking water.<sup>19</sup>
  - Cigarette lighters, mostly disposable, require plastic, metal, and butane.<sup>20</sup>
  - E-cigarettes and devices contain batteries and other hazardous<sup>21</sup> and non-biodegradable material.<sup>22</sup>
  
5. Designing products that do not self-extinguish leads to accidental fires,<sup>23</sup> and cigarettes are the most common cause of accidental fires, including forest fires. Around 8-10% of fires in the U.S. are caused by cigarettes.<sup>24</sup>

### Fast Facts **BOX**

#### TOBACCO: DEADLY TO THE ENVIRONMENT IN EVERY STAGE

Tobacco farming causes

- 5% of global deforestation (up to 30% of deforestation in tobacco growing countries)<sup>25</sup>
- 200,000 hectares of wood biomass loss annually<sup>26</sup>

Tobacco manufacturing causes

- 2 million tons of solid waste<sup>27</sup>
- 175M tons of non-biodegradable (filter) waste discarded annually<sup>28</sup>

Tobacco use leads to

- 4.5 trillion cigarette butts littered every year globally, 1.69 billion pounds of toxic trash each year.<sup>29</sup>
- Indoor particulate matter concentrations ten times higher than diesel car exhausts<sup>30</sup>
- 19-38% of the total debris collected in ocean clean up globally are cigarette butts<sup>31</sup>

Lighting up cigarettes would require

- 9 million trees to be destroyed every year for producing matches<sup>32</sup>

### **MAIN BODY**

#### **How does the tobacco industry undermine efforts to protect the environment and restore the ecosystem?**

Transnational tobacco companies have been named some of the worst polluters in the world<sup>33</sup> and yet, they manage to flaunt their pro-environment practices<sup>34</sup> and awards from the business community.<sup>35</sup> The tobacco industry employs a public relations strategy that diverts attention from the true impact of environmental harms, obscures genuine solutions, undermines diversification strategies, drowns voices of stakeholders, shifts the blame on consumers, and escapes culpability.

#### **1. Tobacco companies' so-called Corporate Social Responsibility (CSR) initiatives divert attention from tobacco's devastating impact on the environment**<sup>36 37</sup>

The so-called CSR programs of tobacco companies in the area of environment such as Keep America Beautiful (KAB), Unsmoke Canada Cleanups<sup>38</sup> etc., have been exposed as a means to divert attention from real issues- keeping tobacco prices low, denying bargaining powers to

workers, encouraging expansion into more fertile soil and use of toxic agrochemicals.<sup>39</sup> They obscure the extent of environmental harm and responsibility<sup>40</sup> and violate Article 5.3 of the WHO Framework Convention on Tobacco Control (FCTC). Recent tobacco audit regimes<sup>41</sup> are illusive, effectively perpetuating the problem.<sup>42</sup>

Tobacco companies admit that cigarette butts are the most widely littered product<sup>43</sup>, with 4-5 trillion of them discarded annually,<sup>44</sup> take up to 15 years to degrade. However, to date they avoid publicizing that the environmental toxins generated from this waste continue to be released into the environment during decomposition.<sup>45</sup> Further, even their 'biodegradable butts' harm aquatic life.<sup>46</sup>

Tobacco companies have largely shifted manufacturing, which accounts for 2 million tons of solid waste annually,<sup>47</sup> to low- and middle-income countries where the bulk of the tobacco is grown and produced,<sup>48</sup> to escape accountability and avoid strict environmental regulations<sup>49</sup>, while also falsely publicising the same as a socio-economic boon. In such cases, environmental harms are exacerbated due to poor waste management<sup>50</sup> and polluted water systems<sup>51</sup>, along with deforestation,<sup>52</sup> which accounts for 25-30% of greenhouse gas emissions.<sup>53</sup>

## **2. Tobacco industry's public relations (PR) strategies around the environment obscure internationally-agreed solutions to address environmental impact of tobacco production.**

The tobacco industry's so-called contribution to the environment such as promoting 'tree planting' drowns out the true solutions to protect the environment and restore the ecosystem, while publicizing its supposed 'sustainable practices'. These efforts fail to support any of the policy options that the international community has agreed on in order to address the environmental impact of tobacco production. It involves synergistically implementing Article 17 (provision of Support for Economically Viable Alternative Activities) and 18 (Protection of Environment and the health of persons) of the WHO FCTC, primarily calling for **farmer and worker-driven policies and programs towards diversification that are sustainably financed and protected from tobacco industry interference**.<sup>54</sup> These are intended to address, among others, deforestation, land degradation and child labor. In Tanzania, the Global Environment Facility and United Nations Development Programme (UNDP) helped farmers shift from tobacco farming to growing tomatoes.<sup>55</sup> In Kenya, International Bamboo and Rattan Organisation (INBAR) has helped farmers switch to bamboo plantations, which has created a positive impact on the land and livelihood of the farmers.<sup>56</sup> These transitions have promoted positive land use, reduced carbon emissions and increased profitability of the land, while also supporting biodiversity.<sup>57</sup>

In addition, experts also call for the improvement/ enforcement of environmental regulations that may apply to tobacco such as extended producer responsibility (EPR) schemes, engaging litigation and economic interventions to recover the costs of industry misconduct and environmental damages, and elimination of single use plastics/ filters.<sup>58</sup> The tobacco industry's CSR initiatives are not responsive to these solutions.

## **3. Tobacco companies shift the blame of environmental harm on consumers<sup>59</sup>**

The tobacco industry's CSR strategy on addressing environmental harm focuses on outwardly flaunting its "tree planting projects" and "clean manufacturing processes" while promoting awareness about the cigarette butt litter problem by providing ash trays and trash bins in public

places and contributing to ocean clean-ups. The message conveyed by the tobacco industry is clear- “we have a clean backyard” and “the problem is how smokers throw the trash, but we are helping with that.” This message obscures the fact that littering is due to the cigarette filter itself, which is designed by tobacco companies, and they have a responsibility to such a flawed design of a deadly and addictive product.

The fact that the product was disposed improperly by the smoker is irrelevant under the concept of extended producer responsibility (EPR) program, which places on to the tobacco manufacturers the responsibility of their product throughout its lifecycle, instead of placing the responsibility on consumers.<sup>60</sup> Among others, proponents recommend various measures to enable cost recovery schemes to fund enforcement of environment laws, suggesting that the tobacco companies pay for environmental harms through polluters pay schemes.<sup>61</sup> Other related measures recommended under this concept cover a range of principles embodied in Article 19 and Article 5.3 of the WHO FCTC, such as charging fees against the tobacco industry for clean-ups, litigating for damages, and enacting laws to make producers and sellers, and not consumers, ultimately responsible for harms.<sup>62 63</sup>

#### **4. Tobacco industry funded research is self-serving, intended to protect it from liability, not accountability.**

Tobacco industry reports severely underestimate the adverse impact of tobacco on the environment.<sup>64</sup> For instance, tobacco multinationals’ estimates of fuel wood consumption used in tobacco production is exceedingly low, estimating specific fuel consumption (SFC) index of 7.8 kg of wood/kg of tobacco compared with previous estimates of 100 kg to 230 kg of wood/kg of tobacco.<sup>65</sup> Further the annual global impact on deforestation estimated to be 5%, but could be as high as 30% in some countries, was revealed only in independent studies.<sup>66</sup>

Notably, the tobacco industry’s litter studies claiming that smuggling rate is high are used to aid tobacco companies in countering tax increases; and appears to be a self-preservation technique. Disowning the large amount of cigarette butts by claiming they are illicit also reduces the potential liability of tobacco companies for the damages relating to clean ups and environmental toxins released in the oceans.

#### **5. Tobacco industry’s practice of incentivizing tobacco production and undermining diversification strategies keeps farmers addicted to tobacco farming, which is detrimental to the environment.**

As part of its core business and supply chain, the tobacco companies provide a false impression that they are supportive of tobacco farming and its related communities, hence providing so-called CSR initiatives for technical and financial support for farming<sup>67</sup>. However, incentivizing tobacco farming goes against diversification, which is a key solution to addressing the health and environmental harms of tobacco.<sup>68</sup>

Financial arrangements contrived by the tobacco industry are purposed to keep farmers addicted to tobacco farming.<sup>69</sup> Some of the incentives provided by tobacco companies, such as loans, are meant to continually lure tobacco farmers and workers into tobacco production and keep them dependent to it,<sup>70</sup> and ultimately, constantly indebted.<sup>71</sup> Continuous production and curing of tobacco have caused irreversible loss of biodiversity, increased carbon dioxide and methane emissions, changes in rainfall patterns, and widespread deforestation. Growing tobacco is up to ten times more aggressive in causing deforestation than other crops.<sup>72</sup>

**6. Tobacco companies' front groups and so-called CSR drown the voices of farmers and workers impacted by environmental harms.**

Global consensus and treaty policy dictates that tobacco companies have no place in policy making related to agricultural diversification, and that such efforts must be driven by workers/farmers.<sup>73</sup> However, tobacco farmers and workers directly affected in tobacco production and involved in environmental harms, are poorly represented. This is exacerbated by the fact that transnational tobacco companies have set up and funded front groups like International Tobacco Growers' Association (ITGA)<sup>74</sup> to lobby on their behalf<sup>75</sup> in order to falsely represent farmers' socio-economic arguments<sup>76777879</sup> as basis to challenge tobacco control measures such as tax increases.<sup>80</sup>

Tobacco workers have accused the tobacco companies of drowning their voices with false promises during discussions around the value of the tobacco industry-funded Eliminating Child Labour in Tobacco (ECLT) Foundation.<sup>81</sup> Furthermore, the tobacco industry took up stakeholder space in discussions on diversification through the Philip Morris funded Foundation for Smoke-Free World's (FSFW) Agriculture Transformation Initiative (ATI),<sup>82</sup> despite the need to protect agricultural and environmental policies on tobacco from commercial and vested interests of the tobacco industry, in line with Article 5.3 of the WHO FCTC.

**7. Tobacco companies resist paying for environmental harms despite legal and rational basis for the same.**

Engaging in litigation and economic interventions to recover the costs of industry misconduct and environmental damages is a key solution that experts recommend to address tobacco's environmental harms.<sup>83</sup> This is consistent with Article 19 of the WHO FCTC to deal with tobacco industry liability including compensation. Yet, the tobacco industry has avoided responsibility for environmental harms by moving its operations into jurisdictions that have less stringent or lax regulations.<sup>84</sup> Although CSR and PR strategies may play a part in assessing the extent of environmental damage, no litigation holding the tobacco company accountable for harms has been filed.<sup>85</sup>

Article 6 of the WHO FCTC (price and tax measures to reduce demand for tobacco) takes into account the need to make tobacco pay for negative externalities through increased tobacco taxation. In line with this, a few countries already impose surcharges and fees consistent with the "polluters pay" principle.<sup>86 87</sup> Policies that make the tobacco industry pay for clean-up costs are under consideration in USA<sup>88</sup>, EU<sup>89</sup>, UK<sup>90</sup>, France<sup>91</sup> and Ireland,<sup>92</sup> despite resistance by the tobacco companies.<sup>93</sup>

## ANNEX: How the Tobacco Industry Hinders UN's Sustainable Development Goals (SDGs) Relating To The Environment

<b>6.</b> Clean water & sanitation	Promote water recycling, protect watersheds, and promote sustainable water management	<b>Pollute waterways and threaten aquatic life through cigarette filters and pesticides.</b> <ul style="list-style-type: none"><li>Cigarette butts, which are often dumped into oceans, lakes and other water sources, have toxic substances with implications for the quality of drinking water.</li></ul>
		
<b>12.</b> Responsible consumption & production	Reduce the environmental impact of their products, including recycling and litter-prevention programs	<b>Generate 1.69 billion pounds of toxic waste each year releasing thousands of chemicals into the air, water and soil.</b> <ul style="list-style-type: none"><li>Over 4.5 trillion cigarette butts are not disposed of properly, making them the most littered item on the planet.</li></ul>
		
<b>13.</b> Climate action	Mitigate risks of climate change through carbon neutral programs	<b>Shirk responsibility for compensating for the environmental harm caused by its business, including a deforestation rate of 200,000 hectares a year.</b> <ul style="list-style-type: none"><li>Tobacco companies routinely downplay their environmental harm.</li></ul>
		
<b>14.</b> Life below water	Reduce the environmental impact of products, including through litter prevention, and ensure effluents released are within government regulations	<b>Find ways to continue their business practices that harm aquatic systems.</b> <ul style="list-style-type: none"><li>Tobacco companies provide campaign donations that allow cigarette butts to go unregulated despite being the single most collected trash in beach clean-ups.</li><li>They also pollute waterways and threaten aquatic life through cigarette filters and pesticides.</li></ul>
		
<b>15.</b> Life on land	Protect biodiversity, particularly in affected forested areas	<b>Conduct so-called environmental activities to detract attention from liability for environmental harm.</b> <ul style="list-style-type: none"><li>Tobacco farming and cultivation causes the irreversible loss of trees and biodiversity.</li><li>Clearing land for tobacco growing and cigarette-related forest fires leads to deforestation.</li></ul>
		

SDG	Tobacco companies claim to...	In reality, tobacco companies...
<p><b>16.</b> Peace, justice &amp; strong institutions</p> 	<p>"Combat illicit trade in tobacco products,"<sup>7</sup> support the rule of law and transparency</p> <p>Be against the "illegitimate tobacco industry" that can "erode the rule of law and upset peaceful existence by financing the operations of criminal networks"<sup>8</sup></p>	<p><b>Lobby and bribe policymakers to favor commercial interests and weaken, delay or completely frustrate implementation of lifesaving measures through litigation against governments or outright circumvention of its provisions.</b></p> <ul style="list-style-type: none"> <li>The major tobacco transnationals have been found to be complicit in illicit trade; a vast majority of illicitly trafficked cigarettes are "illicit whites" or legitimately produced products that find their way into illicit markets.</li> </ul>
<p><b>17.</b> Partnerships for the goals</p> 	<p>Be a partner in health, despite conflicts of interest, in order to promote alternative products</p> <p>Partner with governments to fight illicit trade</p>	<p><b>Influence policymakers to water down life-saving measures (including raising taxes and banning advertising, promotions and sponsorship) in favor of commercial interests in dangerous, addictive products, effectively undermining efforts to achieve the SDGs.</b></p> <ul style="list-style-type: none"> <li>The tobacco industry's CSR activities related to SDGs are designed to enhance its public image and induce tax exemptions.</li> <li>Tobacco companies cause violation of treaty laws, which disapprove of partnerships with the tobacco industry in general, and especially on efforts to fight illicit trade.</li> </ul>

Source: Sy D, Castillo C, Trivino D. [How tobacco industry interference hinders the UN Sustainable Development Goals. Issue Brief.](#) STOP (September 2020).

### Acknowledgements and Authorship

This fact sheet was prepared by Deborah Sy and Ambika Narain for the Global Center for Good Governance in Tobacco Control (GGTC) in partnership with STOP, a tobacco industry watchdog.

<sup>1</sup> Although cigarette filters eventually decompose into smaller pieces, their toxic components and plastic pieces may never disappear from water and soil and can continue to leach chemicals for up to 10 years.

See: Thomas E. Novotny & Elli Slaughter. Tobacco Product Waste: An Environmental Approach to Reduce Tobacco Consumption. *Current Environment Health Report* (2014) 1:208–216 (6 May 2014). Available at: <https://link.springer.com/content/pdf/10.1007/s40572-014-0016-x.pdf>

<sup>2</sup> PMI conducted a [cigarette butt litter survey](#) in 2020. The survey revealed-

- 25 percent of adult smokers throw cigarette butts to the ground because they think it is normal to dispose a cigarette in this manner. Every one in eight individuals in the survey said they don't think its polluting.
- Smokers identified in the survey said they smoke 11 cigarettes per day, of which 60% are smoked outdoors, thereby creating ample chances of littering.
- Only 13% of individuals correctly identified plastic as the main component of cigarette filters.

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The main constituent of cigarette filters is 'cellulose acetate', a bio-plastic that takes anything from three months to 15 years to decompose. This was also acknowledged in the [PMI Integrated Report 2020](#).

<sup>3</sup> Slaughter, Elli et al. "Toxicity of cigarette butts, and their chemical components, to marine and freshwater fish." *Tobacco control* vol. 20 Suppl 1,Suppl\_1 (May 2011): i25-9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088407/#:~:text=Background,in%20cigarettes%20pre,pared%20for%20consumption>.

<sup>4</sup> "The average amount of natural vegetation removed per developing country is more than 2000 ha or about 5% of total national deforestation, while it rises, on average, to around a quarter of all deforestation in the group of seriously affected producers. As a major factor contributing to crop-specific deforestation, the global mean of flue-cured produce using wood is only about 12%, but increases to a mean 62% in the producer countries with minor-to-serious tobacco-related deforestation."

See: Geist HJ. Global assessment of deforestation related to tobacco farming. *Tobacco Control* (March 1999); 8:18-28. Available at: <https://tobaccocontrol.bmj.com/content/8/1/18>

<sup>5</sup> Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>6</sup> In Cambodia, tobacco farmers buy firewood for curing tobacco. They also cut and use fuel wood as well as rubber trees, a useful economic product, for tobacco curing.

In Kenya, soil erosion, widespread deforestation, cutting of indigenous trees for curing, water pollution as well as change in flow patterns of local streams have been documented, all due to tobacco plantations.

In Brazil, reduced forest land cover, soil depletion as well as abundant agrochemical residues in waterways located close to tobacco cultivating communities were found, severely impacting natural hydrological systems.

See: Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>7</sup> "Article 2 of the Convention on Biological Diversity defines an 'ecosystem' as a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit".

See: Convention on Biological Diversity (CBD) (1992). Article 2 Use of Terms. Available at: <https://www.cbd.int/kb/record/article/6872?RecordType=article>

"The term 'ecosystem' can refer to any functioning unit at any scale which is determined by the problem being addressed."

See: Convention on Biological Diversity (CBD). (no date). Description. Available at: <https://www.cbd.int/ecosystem/description.shtml>

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*“Ecosystem restoration is defined as a process of reversing the degradation of ecosystems, such as landscapes, lakes and oceans to regain their ecological functionality; in other words, to improve the productivity and capacity of ecosystems to meet the needs of society. This can be done by allowing the natural regeneration of overexploited ecosystems or by planting trees and other plants”.*

See: New UN Decade on Ecosystem Restoration offers unparalleled opportunity for job creation, food security and addressing climate change opportunity. UNEP (2019). Available at: <https://www.unep.org/news-and-stories/press-release/new-un-decade-ecosystem-restoration-offers-unparalleled-opportunity>

*“The objective of ecosystem restoration is to contribute to the conservation and sustainable use of biodiversity as well as create social, economic and environmental benefits, whereby healthy and connected ecosystems should contribute to improve food and water security, peoples’ livelihoods and to mitigate and adapt to climate change.”*

See: ‘Decision XIII/5. Ecosystem restoration: short-term action plan’, in, p. 10. CBD (2019). Available at: <https://www.cbd.int/doc/decisions/cop-13/cop-13-dec-05-en.pdf>

*“Ecosystem restoration substantially supports the objectives of international agreements and global objectives, including the Sustainable Development Goals (specifically Target 6, 14, and 15), the Strategic Plan for Biodiversity 2011-2020 (specifically Target 15), the Paris Agreement, the Land Degradation Neutrality goal, the Global Forest Goals, and the Ramsar Convention on Wetlands.”*

See: What is ecosystem restoration? International Union for Conservation of Nature (no date). Available at: [https://www.iucn.org/sites/dev/files/content/documents/what\\_is\\_ecosystem\\_restoration.pdf](https://www.iucn.org/sites/dev/files/content/documents/what_is_ecosystem_restoration.pdf)

<sup>8</sup> In low- and middle-income countries, land clearing for tobacco cultivation has depleted forest reserves. In Tanzania, expanding cultivations can only be done by clearing virgin forest lands for their increased yield and disease-free soil. According to Abdallah et al, 69% of tobacco cultivators in Urambo District clear new woodlands every season for tobacco farming and only 25% of them grow on the same area for two successive seasons, while only a mere 6% do so for more than two successive seasons. This type of ‘shifting cultivation’ accounts for 96% of deforestation in the area, making tobacco farming a massive threat to forest biomes.

See: Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>9</sup> Mangora, M.M. Ecological impact of tobacco farming in miombo woodlands of Urambo District, Tanzania. *African Journal of Ecology* (December 2005), 43: 385-391. Available at: [https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2028.2005.00603.x?casa\\_token=iyzW6vIn700AAAAA%3AvLghnpcJRYHivkklpq9Ds1LCPFabAQJBTBGRdzwN2Cxnoj-UjeISFzi-jM4omlNY1PbsHIBCRICSeZA](https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2028.2005.00603.x?casa_token=iyzW6vIn700AAAAA%3AvLghnpcJRYHivkklpq9Ds1LCPFabAQJBTBGRdzwN2Cxnoj-UjeISFzi-jM4omlNY1PbsHIBCRICSeZA)

<sup>10</sup> Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>11</sup> *“The production of Virginia tobacco (for which there is higher demand and therefore higher price) requires flue curing, which is performed in kilns by burning wood at constant heat temperatures for*

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*several days. Thus, for this type of crop, farmers in LMICs must acquire wood from the surrounding forests, their own land, or from public lands. These wood resources are less and less available as a result of shifting cultivation.”*

*“As a major factor contributing to crop-specific deforestation, the global mean of flue-cured produce using wood is only about 12%, but increases to a mean 62% in the producer countries with minor-to-serious tobacco-related deforestation.”*

See: Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>12</sup> Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>13</sup> *“Most cigarettes are lit using matches or gas-filled lighters. If, for example, one wooden match is used to light two cigarettes, the six trillion cigarettes smoked globally each year would require the destruction of about nine million trees to produce three trillion matches.”*

See: Novotny, Thomas E *et al.* “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” *Bulletin of the World Health Organization* vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>14</sup> Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/ftc/implementation/publications/who-ftc-undp-wntd-2017.pdf>

<sup>15</sup> Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>16</sup> *“Tobacco ranks among the 10 crops with the highest fertilization rates.”*

See: Fertilizer use by crop. Rome, Food and Agriculture Organization of the United Nations; 2006. Cited in: Economically sustainable alternatives to tobacco growing (in relation to Articles 17 and 18 of the WHO Framework Convention on Tobacco Control) Report by the working group. Conference of the Parties to the WHO Framework Convention on Tobacco Control (18 July 2014); FCTC/COP/6/12. Available at: [https://apps.who.int/gb/ftc/PDF/cop6/FCTC\\_COP6\\_12-en.pdf](https://apps.who.int/gb/ftc/PDF/cop6/FCTC_COP6_12-en.pdf)

<sup>17</sup> *“Among the pesticides used in tobacco growing is chloropicrin, a lung-damaging agent that was used as a tear gas in World War I and is toxic to fish and other organisms.”*

See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/ftc/implementation/publications/who-ftc-undp-wntd-2017.pdf>

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<sup>18</sup> Ocean Conservancy, International Coastal Cleanup Report 2015.; United Nations Development Programme. Available at: <https://oceanconservancy.org/wp-content/uploads/2017/04/2015-Ocean-Conservancy-ICC-Report.pdf>

<sup>19</sup> *“In Nueva Segovia department of Nicaragua, where most tobacco farms are close to important rivers, researchers found pesticide contamination in both the superficial aquifer and deep groundwater. Studies in Brazil have found excessive agrochemical residues in waterways near tobacco farming communities.”*

See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/fctc/implementation/publications/who-fctc-undp-wntd-2017.pdf>

<sup>20</sup> *“There are also environmental impacts of manufacturing and disposing of the plastic, metal and butane used in making cigarette lighters.”*

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>21</sup> The tobacco industry is very much aware of the scope and extent of environmental harms it causes. For example, Philip Morris International (PMI) acknowledged that selling of electronic smoking devices leads to worsening of the water and energy used (PMI, [2016](#)). The Lifecycle Analysis reports by PMI for the so-called reduced risk products (RRRs) clearly showed the impact of product development, manufacturing and distribution on their ecological footprint (PMI, [2017b](#)).

The tobacco industry has refused to implement practices that could reduce the waste generated from manufacture and disposal of their products. Cigarette filters have been proven to do more harm than good to both health and the environment. They were developed as a consequence of growing fears in consumers regarding health harms of cigarette use and are, in reality, unnecessary appendages to the cigarette (Song et al. [2017](#)). Yet, the industry has done nothing to reduce its ecological impact of cigarette production, use and disposal.

See: Hendlin, Y.H., Bialous, S.A. The environmental externalities of tobacco manufacturing: A review of tobacco industry reporting. *Ambio* 49, 17–34 (January 2020). Available at: <https://link.springer.com/article/10.1007/s13280-019-01148-3#citeas>

See also: *“Unlike petrochemical-derived plastic products such as straws and plastic cutlery, cigarette filters do biodegrade, but not quickly enough currently to avoid any short-term littering problems.”* -BAT, [Integrated Report 2020](#)

<sup>22</sup> *“Electronic cigarettes may contain batteries that require special disposal as well as chemicals, packaging and other non-biodegradable materials. The US Federal Emergency Management Agency (FEMA) has expressed concerns about the flammability and lack of product regulation of electronic cigarettes and their components.”*

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See: Novotny, Thomas E et al. The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption. Bulletin of the World Health Organization [online]. 2015, v. 93, n. 12 , pp. 877-880. Available from: <https://www.who.int/bulletin/volumes/93/12/15-152744/en/>

<sup>23</sup> *“Regulations requiring cigarettes to self-extinguish in Canada and the USA were associated with a 30% decline in fire-related deaths from 2003 to 2011.”*

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>24</sup> *“Cigarettes remain an important cause of accidental fires and resulting deaths. In the United States of America, cigarettes have been responsible for 8–10% of all fires over the past 10 years (on average 90 000 fires per year); they also remain the single most important cause of deaths related to fires (540 of 2855 total deaths in 2011).”*

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>25</sup> *“Tobacco cultivation is to blame for 2-4 percent of deforestation globally...In Bangladesh, 30 percent of deforestation is related to tobacco manufacturing.”*

See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. United Nations Development Programme (May 2017). Retrieved from <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/-the-who-framework-convention-on-tobacco-control-an-accelerator-.html>

<sup>26</sup> *“The average amount of natural vegetation removed per developing country is more than 2000 ha or about 5% of total national deforestation, while it rises, on average, to around a quarter of all deforestation in the group of seriously affected producers.”*

See: WHO. Tobacco control, a ‘major component’ of environmental protection efforts (11 September 2018). Available at: <https://www.who.int/fctc/mediacentre/news/2018/tobacco-control-a-major-component-of-environmental-protection/en/#:~:text=Estimates%20show%20that%20tobacco%20farming,da%20Costa%20e%20Silva%20noted.>

<sup>27</sup> Waste generated from cartons and cigarette packaging alone generates 2 million tonnes of solid waste annually. These figures are comparable with 1.83 million tonnes of plastic waste generated annually by plastic water bottles.

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

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<sup>28</sup> *“The non-biodegradable cellulose acetate filter attached to most manufactured cigarettes is the main component of cigarette butt waste and trillions of filter-tipped butts are discarded annually. Assuming that each filter weighs 170 milligrams, the weight of all tobacco-attributable non-biodegradable (filter) waste discarded annually is about 175 200 tonnes.”*

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>29</sup> See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. United Nations Development Programme (May 2017). Retrieved from <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/-the-who-framework-convention-on-tobacco-control-an-accelerator-.html>

See also: Wright, S., Rowe, D., Reid, M. et al. Bioaccumulation and biological effects of cigarette litter in marine worms. Sci Rep 5, 14119 (2015). Available at: <https://www.nature.com/articles/srep14119#:~:text=Approximately%204.5%20trillion%20smoked%20cigarette,to%20the%20environment%20annually4.>

<sup>30</sup> *“Indoor PM concentrations from smoking have been found to be up to 10-fold higher than PM concentrations from diesel car exhaust.”*

*“While exposure to ambient fine particulate matter (PM<sub>2.5</sub>) from air pollution increases everyone’s risk of dying from cardiovascular disease and lung cancer, the risk is higher for smokers because PM<sub>2.5</sub> combines synergistically with cigarette smoking for mortality (i.e. the elevated risk is greater than the mere sum of the individual exposures).”*

See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. United Nations Development Programme (May 2017). Retrieved from <https://www.undp.org/content/undp/en/home/librarypage/hiv-aids/-the-who-framework-convention-on-tobacco-control-an-accelerator-.html>

<sup>31</sup> Novotny, T.E., Slaughter, E. Tobacco Product Waste: An Environmental Approach to Reduce Tobacco Consumption. *Curr Envir Health Rpt* 1, 208–216 (May 2014). Available at: <https://link.springer.com/article/10.1007/s40572-014-0016-x>

<sup>32</sup> *“Most cigarettes are lit using matches or gas-filled lighters. If, for example, one wooden match is used to light two cigarettes, the six trillion cigarettes smoked globally each year would require the destruction of about nine million trees to produce three trillion matches.”*

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>33</sup> Rachel Koning Beals. Coca-Cola, PepsiCo and Nestlé top ‘10 worst plastic polluters’ of 2020. Market Watch (8 December 2020). Available at: <https://www.marketwatch.com/story/coca-cola-pepsico-and-nestle-top-10-worst-plastic-polluters-of-2020-11607465840>

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<sup>34</sup> For example:

*“PMI partners, supports, participates, and is a member of sustainability related initiatives and organizations such as the World Business Council for Sustainable Development (WBCSD), Business for Social Responsibility (BSR), CSR Europe, and the We Mean Business coalition, which harness the power of collaboration to implement solutions at scale.”* ([PMI Integrated Report 2020](#))

*“For decades, we have invested in developing and testing products with the aim of replacing cellulose acetate filters alongside our suppliers. We have commissioned more than 20 different projects exploring the potential development of such alternatives. There are strict requirements to be met before we can roll out any alternatives.”* ([BAT Integrated Report 2020](#))

*“[Key issues in 2020] Environment: (a) Supporting the TCFD (Task Force on Climate-related Financial Disclosures) and (b) the appropriate use and responsible disposal of materials, including plastics, used in our products and packaging.”* ([JTI Integrated Report 2020](#))

*“The tobacco sector has been one of the leaders in promoting sustainability and good agricultural practices (GAP). These subjects are central to the debates, discussions and decision-making processes between ITGA and sectoral bodies such as CORESTA, the international Scientific Research Committee on Tobacco.”* ([ITGA, Environmental Aspects](#))

<sup>35</sup> FTSE 100 – the 5 highest ESG rated companies.

See: Sophie Lund-Yates, Equity Analyst. Hargreaves Lansdown (3 March 2021). Available at: <https://www.hl.co.uk/news/articles/ftse-100-the-5-highest-esg-rated-companies>

See also: Philip Morris International Recognized Among World's Top Sustainable Businesses with "Triple A" Score from CDP. BusinessWire India (10 December 2020). Available at:

<https://www.businesswireindia.com/philip-morris-international-recognized-among-worlds-top-sustainable-businesses-with-triple-a-score-from-cdp-70732.html>

<sup>36</sup> Forthcoming paper ‘Towards Health with Justice 2’ by World Health Organisation Regional Office for the Eastern Mediterranean.

<sup>37</sup> Doubtful Campaign Against Stray Butts. The Plastic Soup Foundation (2015) [unofficial translation]. Available at: <https://www.plasticsoupfoundation.org/2015/05/dubieuze-campagne-tegen-zwerfpeuken/>

See also: Environmental program VARA gives the tobacco lobby a podium. Tabaknee Netherlands (23 March 2016) [unofficial translation]. Available at: <https://www.tabaknee.nl/nieuws/item/847-milieuprogramma-vara-geeft-tabakslobby-podium>

<sup>38</sup> Keep America Beautiful (KAB) is funded by Philip Morris USA, an Altria company as well as Reynolds American International and Santa Fe Natural Tobacco Company, companies under British American Tobacco; and runs programs such as ‘Cigarette Litter Prevention Programme’. KAB has been criticised for being a corporate greenwashing front group. Unsmoke Canada Cleanups is another initiative that organises litter clean-ups. It is funded by Rothmans, Benson & Hedges Inc., a Philip Morris International subsidiary.

See: Greenwashing. Tobacco Tactics (21 December 2020). Available at: <https://tobaccotactics.org/wiki/greenwashing/>

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*See also:*

KAB funds informational and educational tools on littering. Its Cigarette Litter Prevention Program includes enforcing litter laws, raising awareness, placing ash receptacles at public places and distributing pocket or portable ashtrays.

See: [Cigarette Litter Prevention Program](#) by Keep America Beautiful.

<sup>39</sup> The tobacco industry's response to such environmental harms was to work with agricultural front groups and partnering with renowned organisations in order to lobby against tobacco control measures. Through these front groups such as ITGA, tobacco companies worked with sympathetic businessmen and politicians. The tobacco companies also encouraged excessive use of hazardous agrochemicals as well as shifting cultivation to virgin fertile lands. Their deceptive CSR programs shift attention away from real issues, such as keeping tobacco prices very low, socio-economic inequalities, child labour, health hazards, undermining the voices of farmers, instead of addressing them.

See: Lecours N, Almeida GEG, Abdallah JM, *et al.* Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>40</sup> Instead of exhibiting authentic CSR, the tobacco companies use such programs, especially in the production sector, to ward-off tobacco control regulations.

See: The environmental externalities of tobacco manufacturing: A review of tobacco industry reporting. Hendlin, Y.H., Bialous, S.A. *Ambio* 49, 17–34 (2020). Available at: <https://link.springer.com/article/10.1007/s13280-019-01148-3>

<sup>41</sup> “Based on our 2020 purchased volumes, 61 percent of our board- and paper-based packaging materials were sourced at no risk of deforestation of primary and high conservation value forests.” ([PMI Integrated Report 2020](#))

“We have a proud history of advancing sustainable agriculture. We help our contracted farmers to deploy techniques that help reduce agrochemical use and promote crop diversity.” ([BAT Integrated Report 2020](#))

“Our sustainable business practices allow us to conserve resources, reduce waste, manage costs, and meet the growing consumer demand for eco-friendly products.” ([JTI Integrated Report 2020](#))

<sup>42</sup> As highlighted in the report by Genevieve et al., auditing as a mechanism of transnational governance is exclusionary and failing. Audit regimes designed to work for corporations have begun to gain acceptance, despite a failure to detect underlying issues that, if addressed, can lead to far more beneficial changes to environmental as well as labour standards. Regulatory authority by governments and NGOs call for ethical audit mechanisms as an effective means of governing global change. However, auditing is helping retailers legitimize and expand their businesses as well as increase their supply chain, while also advancing their social license to operate while maintaining a ‘responsible’ image. It is also helping retailers monitor over their decentralized system of global production, thus perpetuating the cycle of inequality, corporate power, environmental harms and more; and creates only an illusion of the

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global supply chain rather than portray its dark reality. While the pressure for an accountable and transparent approach to corporate functioning has been increasing, these audit regimes are being used to preserve the retail business models which focus on cheap labour, cheap goods, low prices and short-term purchase contracts.

See: Genevieve LeBaron, Jane Lister & Peter Dauvergne (2017) Governing Global Supply Chain Sustainability through the Ethical Audit Regime, *Globalizations*, 14:6, 958-975. Available at: <https://www.tandfonline.com/doi/full/10.1080/14747731.2017.1304008>

<sup>43</sup> Ocean Conservancy, International Coastal Cleanup Report 2015.; United Nations Development Programme. Available at: <https://oceanconservancy.org/wp-content/uploads/2017/04/2015-Ocean-Conservancy-ICC-Report.pdf>

*Cited in:* Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/fctc/implementation/publications/who-fctc-undp-wntd-2017.pdf>

<sup>44</sup> Slaughter, Elli et al. “Toxicity of cigarette butts, and their chemical components, to marine and freshwater fish.” *Tobacco control* vol. 20 Suppl 1, Suppl\_1 (2011): i25-9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088407/#:~:text=Background,in%20cigarettes%20prepared%20for%20consumption.>

<sup>45</sup> Although cigarette filters eventually decompose into smaller pieces, their toxic components and plastic pieces may never disappear from water and soil and can continue to leach chemicals for up to 10 years.

See: Novotny, T.E., Slaughter, E. Tobacco Product Waste: An Environmental Approach to Reduce Tobacco Consumption. *Curr Envir Health Rpt* 1, 208–216 (May 2014). Available at: <https://link.springer.com/article/10.1007/s40572-014-0016-x>

See also: PMI conducted a [cigarette butt litter survey](#) in 2020. The survey revealed-

- i. 25 percent of adult smokers throw cigarette butts to the ground because they think it is normal to dispose a cigarette in this manner. Every one in eight individuals in the survey said they don't think its polluting.
- ii. Smokers identified in the survey said they smoke 11 cigarettes per day, of which 60% are smoked outdoors, thereby creating ample chances of littering.
- iii. Only 13% of individuals correctly identified plastic as the main component of cigarette filters.

The main constituent of cigarette filters is 'cellulose acetate', a bio-plastic that takes anything from three months to 15 years to decompose. This was also acknowledged on the [PMI Integrated Report 2020](#).

<sup>46</sup> *“Effects of leachate from cellulose acetate vs cellulose cigarette butts were tested.”*

*“Cigarette butt leachate (5 butts L<sup>-1</sup>) was acutely toxic to freshwater invertebrates.”*

*“After 120 h leachate from 1 butt L<sup>-1</sup> killed 60% of juvenile B. tentaculate”.*

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*“There was a decrease in activity in invertebrates exposed to 1 butt L<sup>-1</sup> leachate.”*

*“Leachate from biodegradable butts caused the same impact as conventional butts.”*

See: Dannielle Senga Green, Louise Kregting and Bas Boots. Smoked cigarette butt leachate impacts survival and behaviour of freshwater invertebrates. *Environmental Pollution*, Volume 266, Part 3, 2020, 115286, ISSN 0269-7491 (November 2020). Available at:

<https://www.sciencedirect.com/science/article/abs/pii/S0269749120359741>

See also: P. Dilip Venugopal, Shannon K. Hanna, Gregory G. Gagliano and Hoshing W. Chang. No Butts on the Beach: Aquatic Toxicity of Cigarette Butt Leachate Chemicals. *Tobacco Regulatory Science* (Jan 2021); 7(1): 17–30. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7849351/>

<sup>47</sup> Waste generated from cartons and cigarette packaging alone generates 2 million tonnes of solid waste annually. These figures are comparable with 1.83 million tonnes of plastic waste generated annually by plastic water bottles.

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” *Bulletin of the World Health Organization* vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>48</sup> *“With almost 90% of tobacco leaf production and the majority of cigarette consumption now concentrated in the less developed regions, the environmental burden and the many risks associated with tobacco are largely borne by lower-income countries. Thus, for example, while Malawi and Tanzania are among the top 10 tobacco growing countries, they consume less than 5% of the tobacco they produce. At the same time, in the UK, Canada, Portugal, and Austria, with no or very little domestic tobacco leaf or cigarette production, smoking cigarettes, literally means burning other countries’ resources.”*

See: Maria Zafeiridou, Nicholas S Hopkinson and Nikolaos Voulvoulis. Cigarette Smoking: An Assessment of Tobacco’s Global Environmental Footprint Across Its Entire Supply Chain. *Environ. Sci. Technol.* 2018, 52, 15, 8087–8094 (3 July 2018). Available at: <https://pubs.acs.org/doi/10.1021/acs.est.8b01533>

<sup>49</sup> The tobacco companies are known for routinely uprooting their businesses and moving to countries where there are fewer restrictions on production and civil society has less political influence (and therefore cannot petition for better business practices), in order to avoid responsibility for the burdens it causes, including environmental harms. For example, in 2013, local leaders in Uganda complained of fouled air near the BAT Ugandan plant, and the Parliament called for stricter regulations of production and sale of tobacco in the country. Soon after, BAT moved its facilities from Uganda to Kenya. To preempt government regulation and cost-effective measures, the tobacco industry cloaks its actions in the garb of selflessness and environmental concerns, whereas they are the results of public pressure

See: Hendlin, Y.H., Bialous, S.A. The environmental externalities of tobacco manufacturing: A review of tobacco industry reporting. *Ambio*; 49, 17–34 (2020). Available at:

<https://link.springer.com/article/10.1007/s13280-019-01148-3>

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<sup>50</sup> Low- and Middle-income countries tend to have higher smoking rates as a result of targeting by the tobacco industry, and suffer from systemic inequities, making it harder for them to access healthcare, educational tools and cessation resources. In addition, they have inequitable waste management, which can worsen from cigarette butt pollution.

See: Tiny but Deadly: Cigarette Butts Are The Most Commonly Polluted Plastic. The Great Global Cleanup. Earth Day (28 August 2020). Available at: <https://www.earthday.org/tiny-but-deadly-cigarette-butts-are-the-most-commonly-polluted-plastic/>

<sup>51</sup> Tobacco growing takes up a lot of water and disperses toxins to waterways.

See: Slaughter, Elli et al. "Toxicity of cigarette butts, and their chemical components, to marine and freshwater fish." *Tobacco control* vol. 20 Suppl 1, Suppl\_1 (2011): i25-9. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3088407/#:~:text=Background,in%20cigarettes%20pre,pared%20for%20consumption.>

<sup>52</sup> Studies have confirmed the serious threat of deforestation and soil erosion as a result of tobacco cultivation.

See: Sauer, Johannes, and Jumanne M. Abdallah. "Forest diversity, tobacco production and resource management in Tanzania." *Forest Policy and Economics* 9.5 (January 2007): 421-439. Available at: <https://www.sciencedirect.com/science/article/abs/pii/S1389934105001255?via%3Dihub>

See also: Mangora, M.M. Ecological impact of tobacco farming in miombo woodlands of Urambo District, Tanzania. *African Journal of Ecology* (December 2005), 43: 385-391. Available at: [https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2028.2005.00603.x?casa\\_token=iyzW6vIn700AAAAA%3AvLghnpcJRYHivkklpq9Ds1LCPFabAQJBTBGRdzwN2Cxnoj-UjeISFZi-jM4omINy1PbsHIBCRICSeZA](https://onlinelibrary.wiley.com/doi/full/10.1111/j.1365-2028.2005.00603.x?casa_token=iyzW6vIn700AAAAA%3AvLghnpcJRYHivkklpq9Ds1LCPFabAQJBTBGRdzwN2Cxnoj-UjeISFZi-jM4omINy1PbsHIBCRICSeZA)

See also: Abdallah, J. M., et al. "Impact of flue-cured Virginia on Miombo woodland: a case of small-scale flue-cured Virginia production in Iringa region, Tanzania." *Discov Innov* 19 (2007): 92-106. Available at: [https://www.researchgate.net/profile/Jumanne-Abdallah/publication/289110125\\_Impact\\_of\\_flue-cured\\_Virginia\\_on\\_Miombo\\_woodland\\_A\\_case\\_of\\_small-scale\\_flue-cured\\_Virginia\\_production\\_in\\_Iringa\\_region\\_Tanzania/links/5fa41c3592851cc28696255d/Impact-of-flue-cured-Virginia-on-Miombo-woodland-A-case-of-small-scale-flue-cured-Virginia-production-in-Iringa-region-Tanzania.pdf](https://www.researchgate.net/profile/Jumanne-Abdallah/publication/289110125_Impact_of_flue-cured_Virginia_on_Miombo_woodland_A_case_of_small-scale_flue-cured_Virginia_production_in_Iringa_region_Tanzania/links/5fa41c3592851cc28696255d/Impact-of-flue-cured-Virginia-on-Miombo-woodland-A-case-of-small-scale-flue-cured-Virginia-production-in-Iringa-region-Tanzania.pdf)

See also: Chapman, S.. "Tobacco and deforestation in the developing world." *Tobacco Control* vol. 3,3 (September 1994): 191–193. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1759351/pdf/v003p00191.pdf>

See also: Geist HJ. Global assessment of deforestation related to tobacco farming. *Tobacco Control* (March 1999); 8:18-28. Available at: <https://tobaccocontrol.bmj.com/content/8/1/18>

<sup>53</sup> "In 2006, 200 climate change experts warned that, each year, deforestation accounts for 25-30 percent of greenhouse gas emissions globally. More recent estimates which show reductions in the percentage of GHG contributions from deforestation can be misleading, in part because total emissions from all sources including fossil fuels (i.e. the denominator) have risen"

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See: Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/fctc/implementation/publications/who-fctc-undp-wntd-2017.pdf>

<sup>54</sup> Policy options and recommendations on economically sustainable alternatives to tobacco growing (in relation to Articles 17 and 18). Conference of the Parties, sixth session and WHO Framework Convention on Tobacco Control decision; FCTC/COP6(11) (2014). Available at: [https://www.who.int/fctc/treaty\\_instruments/Recommendations\\_Articles\\_17\\_18\\_English.pdf?ua=1%22](https://www.who.int/fctc/treaty_instruments/Recommendations_Articles_17_18_English.pdf?ua=1%22)

<sup>55</sup> T. Lee. Country practices in the implementation of Article 17 (Economically sustainable alternatives to tobacco growing) of the WHO Framework Convention on Tobacco Control. WHO FCTC (December 2019). Available at: <https://www.who.int/fctc/implementation/publications/country-practices-implementation-article-17-WHO-FCTC.PDF>

<sup>56</sup> Bamboo as an Alternative to Tobacco. Inbar News (June 2017). Available at: <https://www.inbar.int/bambootobaccoalternative/>

<sup>57</sup> Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/fctc/implementation/publications/who-fctc-undp-wntd-2017.pdf>

<sup>58</sup> Novotny and Thomas et al. propose seven policy recommendations and suitable alternatives to tobacco production which are more environmentally-oriented. First, identify and monitor health effects associated with tobacco production. Second, support farmers and their children in freeing themselves from the unsafe and unfair agricultural practices. Third, tighten tobacco production regulations to prevent further deforestation and land degradation. Fourth, implement extended producer responsibility (EPR) on the tobacco industry to reduce and prevent waste. Fifth, extend tobacco sale regulations to eliminate use of single-use filters, including biodegradable ones, to reduce waste. Sixth, recover the cost of industry misconduct and environmental damages through litigation and economic interventions. Seventh, improve and enforce environmental regulations and agreements that can be applied to tobacco manufacturing, transport and management of post-consumption waste.

See: Novotny, Thomas E et al. "The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption." Bulletin of the World Health Organization vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>59</sup> *"British American Tobacco, whose brands include Lucky Strike and Rothmans, said in a statement it would work with the government to educate smokers, and distribute pocket ashtrays. But it rejected new taxes. It is not up to companies, smokers or citizens to pay, via additional taxes, for the cost linked to the clean-up of cigarette butts," BAT public affairs director Eric Sensi-Minautier said. Imperial Brands, which sells the French Gauloises and Gitanes brands, said it encouraged smokers to dispose of butts responsibly. It said it had no plans to alter its filters to make them less polluting."*

See: France orders tobacco industry: stub out cigarette butt pollution. Geert De Clercq. Reuters (14 June 2018) Available at: <https://www.reuters.com/article/instant-article/idINKBN1JA257>

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Also available at: <https://www.egypttoday.com/Article/1/52148/France-orders-tobacco-industry-stub-out-cigarette-butt-pollution>

See also: Saabira Chaudhuri. The World's Most Littered Item Comes Under Fire. The Wall Street Journal (31 July 2019). Available at: <https://www.wsj.com/articles/the-worlds-most-littered-item-comes-under-fire-11564580324>

See also: [PMI Launches "Our World Is Not an Ashtray" Initiative](#) and Aims to Halve Plastic Litter from Products by 2025. (16 July 2020).

See also: [PMI: We can reduce littering](#): Three inspiring campaigns that prove change is possible (14 Jul 2020)

<sup>60</sup> Tobacco Product waste can be prevented and reduced by banning smoking in outdoor and indoor areas and workplaces, applying additional fees for litter caused by tobacco products, asking tobacco companies and sellers to pay for clean-ups, and enforcing fines for littering. Other possible interventions include banning of disposable or single-use filters, litigation for damages, and classifying tobacco product waste (TPW) as hazardous waste and labelling products accordingly.

See: Clifton Curtis, Thomas E Novotny, Kelley Lee, Mike Freiberg and Ian McLaughlin. Tobacco industry responsibility for butts: A Model Tobacco Waste Act. *Tobacco Control* 2017; **26**:113-117 (14 December 2016). Available at: <https://tobaccocontrol.bmj.com/content/26/1/113>

See also: Tobacco product waste: an environmental approach to reduce tobacco consumption. Novotny TE, Slaughter E. *Curr Envir Health Rep* 2014;1:208–16. Available at: <https://link.springer.com/article/10.1007%2Fs40572-014-0016-x>

<sup>61</sup> *"Environmental principles underlying the Model Tobacco Waste Act: EPR is a policy principle that promotes environmental protection by extending the responsibilities of the producer across the product's entire life cycle. As set out by Lindhqvist, EPR addresses three core tenets:*

- 1. Internalise the environmental cost of products into their retail price.*
- 2. Shift the economic burden of managing toxicity and other environmental harm associated with postconsumer waste from local governments and taxpayers, to producers.*

*Provide incentives to producers to incorporate environmental considerations into the design of their products."*

See: Clifton Curtis, Thomas E Novotny, Kelley Lee, Mike Freiberg and Ian McLaughlin. Tobacco industry responsibility for butts: A Model Tobacco Waste Act. *Tobacco Control* (2017); **26**:113-117. Available at: <https://tobaccocontrol.bmj.com/content/26/1/113>

<sup>62</sup> Tobacco Product waste can be prevented and reduced by banning smoking in outdoor and indoor areas and workplaces, applying additional fees for litter caused by tobacco products, asking tobacco companies and sellers to pay for clean-ups, and enforcing fines for littering. Other possible interventions include banning of disposable or single-use filters, litigation for damages, and classifying tobacco product waste (TPW) as hazardous waste and labelling products accordingly.

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See: Clifton Curtis, Thomas E Novotny, Kelley Lee, Mike Freiberg and Ian McLaughlin. Tobacco industry responsibility for butts: A Model Tobacco Waste Act. *Tobacco Control* (2017); **26**:113-117. Available at: <https://tobaccocontrol.bmj.com/content/26/1/113>

See also: Novotny, T.E., Slaughter, E. Tobacco Product Waste: An Environmental Approach to Reduce Tobacco Consumption. *Curr Envir Health Rpt* 1, 208–216 (May 2014). Available at: <https://link.springer.com/article/10.1007/s40572-014-0016-x>

<sup>63</sup> Novotny and Thomas et al. propose seven policy recommendations and suitable alternatives to tobacco production which are more environmentally-oriented. First, identify and monitor health effects associated with tobacco production. Second, support farmers and their children in freeing themselves from the unsafe and unfair agricultural practices. Third, tighten tobacco production regulations to prevent further deforestation and land degradation. Fourth, implement extended producer responsibility (EPR) on the tobacco industry to reduce and prevent waste. Fifth, extend tobacco sale regulations to eliminate use of single-use filters, including biodegradable ones, to reduce waste. Sixth, recover the cost of industry misconduct and environmental damages through litigation and economic interventions. Seventh, improve and enforce environmental regulations and agreements that can be applied to tobacco manufacturing, transport and management of post-consumption waste.

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” *Bulletin of the World Health Organization* vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>64</sup> Lecours N, Almeida GEG, Abdallah JM, et al. Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* (February 2012);21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>65</sup> *“In response to rising international criticism, the multinational tobacco industry commissioned a report to evaluate its impact on global deforestation. Known as the International Forest Sciences Consultancy report, it was commissioned by the International Tobacco Information Centre (INFOTAB) and published in 1986 by Al Fraser. The report described fuel wood consumption for tobacco agriculture in Argentina, Brazil, Kenya, Malawi, Zimbabwe, India and Thailand, then extrapolated the data to 69 other tobacco-growing developing countries. Unsurprisingly, the study showed a remarkably low average specific fuel consumption (SFC) index of 7.8 kg of wood/kg of tobacco, much lower than the reported, but also criticised, estimates of 100 kg to 230 kg of wood/kg of tobacco.”*

See: Lecours N, Almeida GEG, Abdallah JM, et al. Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* 2012;21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>66</sup> Lecours N, Almeida GEG, Abdallah JM, et al. Environmental health impacts of tobacco farming: a review of the literature. *Tobacco Control* 2012;21:191-196. Available at: <https://tobaccocontrol.bmj.com/content/21/2/191>

<sup>67</sup> *“In Thailand, Philip Morris International funds environmental projects to achieve their own ends by supporting villagers in tobacco growing regions. For example, funding the Phrae Provincial*

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*Administrative Organization (PPAO) to create dams in their region to provide water for agricultural production and fire prevention.”*

See: The Tobacco Industry And Corporate Social Responsibility (CSR): An Overview From South East Asia. South East Asia Tobacco Industry Surveillance and Monitoring Program (SIS), SEATCA (June 2011). Available at: <https://seatca.org/dmdocuments/CSR%20fact%20sheet.pdf>

<sup>68</sup> Policy options and recommendations on economically sustainable alternatives to tobacco growing (in relation to Articles 17 and 18). Conference of the Parties, sixth session and WHO Framework Convention on Tobacco Control decision; FCTC/COP6(11) (2014). Available at: [https://www.who.int/fctc/treaty\\_instruments/Recommendations\\_Articles\\_17\\_18\\_English.pdf?ua=1%22](https://www.who.int/fctc/treaty_instruments/Recommendations_Articles_17_18_English.pdf?ua=1%22)

<sup>69</sup> Raw M, Regan S, Rigotti NA, McNeill A. A survey of tobacco dependence treatment guidelines in 31 countries. *Addiction*. 2009;104(7):1243-1250. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2736395/>

<sup>70</sup> A survey of tobacco dependence treatment guidelines in 31 countries. Raw M, Regan S, Rigotti NA, McNeill A. *Addiction*. 2009;104(7):1243-1250 (July 2009). Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2736395/>

<sup>71</sup> T. Lee. Country practices in the implementation of Article 17 (Economically sustainable alternatives to tobacco growing) of the WHO Framework Convention on Tobacco Control. WHO FCTC (December 2019). Available at: <https://www.who.int/fctc/implementation/publications/country-practices-implementation-article-17-WHO-FCTC.PDF>

See also: Policy options and recommendations on economically sustainable alternatives to tobacco growing (in relation to Articles 17 and 18). Conference of the Parties, sixth session and WHO Framework Convention on Tobacco Control decision; FCTC/COP6(11) (2014). Available at: [https://www.who.int/fctc/treaty\\_instruments/Recommendations\\_Articles\\_17\\_18\\_English.pdf?ua=1%22](https://www.who.int/fctc/treaty_instruments/Recommendations_Articles_17_18_English.pdf?ua=1%22)

<sup>72</sup> Discussion Paper: The WHO Framework Convention on Tobacco Control: An Accelerator for Sustainable Development. WHO Framework Convention on Tobacco Control and United Nations Development Program (26 May 2017). Available at: <https://www.who.int/fctc/implementation/publications/who-fctc-undp-wntd-2017.pdf>

<sup>73</sup> WHO Framework Convention on Tobacco Control. World Health Organization (2005). Available at: [https://www.who.int/fctc/text\\_download/en/](https://www.who.int/fctc/text_download/en/)

See also: Policy options and recommendations on economically sustainable alternatives to tobacco growing (in relation to Articles 17 and 18). Conference of the Parties, sixth session and WHO Framework Convention on Tobacco Control decision; FCTC/COP6(11) (2014). Available at: [https://www.who.int/fctc/treaty\\_instruments/Recommendations\\_Articles\\_17\\_18\\_English.pdf?ua=1%22](https://www.who.int/fctc/treaty_instruments/Recommendations_Articles_17_18_English.pdf?ua=1%22)

See also: WHO Statement on Philip Morris funded Foundation for a Smoke-Free World. WHO (28 September 2017). Available at: <https://www.who.int/news/item/28-09-2017-who-statement-on-philip-morris-funded-foundation-for-a-smoke-free-world>

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<sup>74</sup> Tobacco Industry Front Groups and Activities. South East Asia Tobacco Industry Surveillance and Monitoring Program (SIS), SEATCA (October 2010). Available at:

<https://seatca.org/dmdocuments/TI%20front%20groups%20fact%20sheet.pdf>

*See also:* Tobacco Industry Front Group: The International Tobacco Growers' Association. Campaign for Tobacco-Free Kids (November 2011). Available at:

[https://www.tobaccofreekids.org/assets/global/pdfs/en/IW\\_interference\\_ITGA\\_fact\\_sheet.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/IW_interference_ITGA_fact_sheet.pdf)

<sup>75</sup> ITGA claims "The aim of the association is to share non-competitive information and monitor market conditions, build mutual understanding and protect members and their dependents. Its policies and activities are developed by the growers to further their own interests."

However, tobacco industry documents reveal that the true intention behind ITGA is to advance tobacco industry lobbying, especially in developing countries. In the early nineties, one of ITGA's specific aim was to dilute WHO's tobacco control efforts. They expanded UN's work on tobacco beyond the WHO. They stressed that a successful 'Tobacco and Health Program' will cause a negative socio-economic impact on countries that produce tobacco.

*See:* Emma Must. ITGA uncovered: Unravelling the spin – the truth behind the claims. PATH Canada Guide (June 2001). Available at: <https://healthbridge.ca/images/uploads/library/itgabr.pdf>

<sup>76</sup> Tobacco Institute of India v. Union of India. Tobacco Control Laws. Available at:

<https://www.tobaccocontrollaws.org/litigation/decisions/in-20160114-tobacco-institute-of-india-v.->

<sup>77</sup> Judicial Review of Law No. 36 of 2009, Ruling in Case No. 24. Tobacco Control Laws. Available at:

<https://www.tobaccocontrollaws.org/litigation/decisions/id-00000000-judicial-review-of-law-no.-36->

<sup>78</sup> Judicial Review of Law No. 36 of 2009, Ruling in Case No. 66. Tobacco Control Laws. Available at:

<https://www.tobaccocontrollaws.org/litigation/decisions/id-00000000-judicial-review-of-law-no.-36--1-2>

<sup>79</sup> Judicial Review of Article 113 of Law No. 36 of 2009, Ruling in Case No. 19. Tobacco Control Laws.

Available at: <https://www.tobaccocontrollaws.org/litigation/decisions/id-20111101-judicial-review-of-article-114>

<sup>80</sup> Warner, Kenneth. (2000). The Economics of Tobacco: Myths and Realities. Tobacco control. 9. 78-89.

10.1136/tc.9.1.78. Available at: <https://tobaccocontrol.bmj.com/content/tobaccocontrol/9/1/78.full.pdf>

*See also:* Sy, D. Tobacco Industry Interference and Tobacco Taxation. B2B#12. July 2020, University of Cape Town. REEP Back to Basics Policy Brief (July 2020). Available at:

[https://untobaccocontrol.org/kh/taxation/wp-content/uploads/sites/3/2020/09/KH\\_1pager-12\\_Tobacco-Industry-Interference-Taxation.pdf](https://untobaccocontrol.org/kh/taxation/wp-content/uploads/sites/3/2020/09/KH_1pager-12_Tobacco-Industry-Interference-Taxation.pdf)

*See also:* Tobacco industry tactics: tax policies. World Health Organisation WHO-EM/TFI/200/E (2019).

Available at: <https://applications.emro.who.int/docs/FS-TFI-200-2019-EN.pdf?ua=1>

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See also: Assunta M. Tobacco industry's ITGA fights FCTC implementation in the Uruguay negotiations. *Tobacco Control* (May 2012);21:563-568. Available at: <https://tobaccocontrol.bmj.com/content/21/6/563.long>

<sup>81</sup> *“Our voices are being drowned out by false promises of economic prosperity from cigarette makers and leaf buying companies. Smallholder and tenant farmers in Malawi do not share the same views as the tobacco industry when it comes to our future. In the short term, tobacco companies are interested in profit and the addiction to smoking by our people is in direct opposition to the long-term goal of ensuring safe, resilient livelihoods for smallholder and tenant farmers, as well as the vast majority of the people of Malawi.”*

See: [Tobacco Tenants and Allied Workers Union Of Malawi \(TOAWUM\)'s letter to the President of the Republic of Malawi](#) (10 October 2014).

<sup>82</sup> [Agricultural Transformation Initiative \(ATI\)](#), Foundation for a Smoke-Free World.

<sup>83</sup> Novotny and Thomas et al. propose seven policy recommendations and suitable alternatives to tobacco production which are more environmentally-oriented. First, identify and monitor health effects associated with tobacco production. Second, support farmers and their children in freeing themselves from the unsafe and unfair agricultural practices. Third, tighten tobacco production regulations to prevent further deforestation and land degradation. Fourth, implement extended producer responsibility (EPR) on the tobacco industry to reduce and prevent waste. Fifth, extend tobacco sale regulations to eliminate use of single-use filters, including biodegradable ones, to reduce waste. Sixth, recover the cost of industry misconduct and environmental damages through litigation and economic interventions. Seventh, improve and enforce environmental regulations and agreements that can be applied to tobacco manufacturing, transport and management of post-consumption waste.

See: Novotny, Thomas E et al. “The environmental and health impacts of tobacco agriculture, cigarette manufacture and consumption.” *Bulletin of the World Health Organization* vol. 93,12 (December 2015): 877-80. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4669730/>

<sup>84</sup> The tobacco companies are known for routinely uprooting their businesses and moving to countries where there are fewer restrictions on production and civil society has less political influence (and therefore cannot petition for better business practices), in order to avoid responsibility for the burdens it causes, including environmental harms. For example, in 2013, local leaders in Uganda complained of fouled air near the BAT Ugandan plant, and the Parliament called for stricter regulations of production and sale of tobacco in the country. Soon after, BAT moved its facilities from Uganda to Kenya. To preempt government regulation and cost-effective measures, the tobacco industry cloaks its actions in the garb of selflessness and environmental concerns, whereas they are the results of public pressure

See: Hendlin, Y.H., Bialous, S.A. The environmental externalities of tobacco manufacturing: A review of tobacco industry reporting. *Ambio*; 49, 17–34 (2020). Available at: <https://link.springer.com/article/10.1007/s13280-019-01148-3>

<sup>85</sup> Litigation against tobacco companies, especially in USA, have mostly been focused on recovering smoking related government-funded healthcare costs. In case of environmental harms, EPR could be invoked to hold tobacco companies responsible for clean-up costs and other related damages. Under

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EPR, manufacturers are held responsible for environmental damages through class action lawsuits, which are based on two notions- negligence (failure to prevent environmental damages) and nuisance (disruption of 'right to quiet enjoyment'). Litigation by governments or local entities can be considered as an effective means to recover costs of environmental clean-up.

See: Thomas E. Novotny & Elli Slaughter. Tobacco Product Waste: An Environmental Approach to Reduce Tobacco Consumption. *Curr Envir Health Rpt* (2014) 1:208–216. Available at: <https://link.springer.com/content/pdf/10.1007/s40572-014-0016-x.pdf>

<sup>86</sup> D. Sy. Tobacco Industry Accountability and Liability in the Time of COVID-19. *STOP* (28 July 2020). Available at: [https://exposetobacco.org/wp-content/uploads/TI\\_Accountability\\_Policy\\_Brief.pdf](https://exposetobacco.org/wp-content/uploads/TI_Accountability_Policy_Brief.pdf)

<sup>87</sup> See: Gail Hurley, Dudley Tarlton. Helping Zambia's farmers ditch tobacco. *UN Development Programme* (30 May 2019). Available at: <https://undp.medium.com/helping-zambias-farmers-ditch-tobacco-19384a54323c>

See also: Gail Hurley, Dudley Tarlton. How incentivizing small tobacco farmers can change livelihoods. *Devex Opinion* (8 May 2018). Available at: <https://www.devex.com/news/opinion-how-incentivizing-small-tobacco-farmers-can-change-livelihoods-92669>

See also: Tax Reform Case Study: Philippines. *Campaign for Tobacco Free Kids* (June 2017). Available at: [https://www.tobaccofreekids.org/assets/global/pdfs/en/Philippines\\_Tax\\_Reform\\_Case\\_Study.pdf](https://www.tobaccofreekids.org/assets/global/pdfs/en/Philippines_Tax_Reform_Case_Study.pdf)

See also: The Master Settlement Agreement: An Overview. *Public Health Law Center* (November 2018). Available at: <https://publichealthlawcenter.org/sites/default/files/resources/MSA-Overview-2018.pdf>

<sup>88</sup> Heidi Sanborn. Commentary: Big Tobacco and e-cigarette companies should help clean up their mess. *Call Matters* (13 May 2019). Available at: <https://calmatters.org/commentary/2019/05/toxic-tobacco/>

See also: Arlene Karidis. Who's Doing What to Tackle Cigarette Litter. *Waste 360* (4 November 2020). Available at: <https://www.waste360.com/waste-reduction/whos-doing-what-tackle-cigarette-litter>.

*Please note:* Waste 360 article promotes 2 tobacco industry linked clean-up efforts. Keep America Beautiful and Keep Britain Tidy (the latter has cut ties with TI in 2013). There have been massive cleanup efforts around the globe, but mostly done locally by volunteers, and or at a cumulative expense of billions of dollars to cities and counties. Some regions have pushed for policy around cigarette litter; just this year, three U.S. states tried to move legislation to address the problem. And the European Union is working to pass the costly clean-up tab onto tobacco manufacturers.

<sup>89</sup> *"Member states would have to ensure that tobacco companies cover the costs of waste collection for those products, including transport, treatment and litter collection."*

See: Plastic Oceans: MEPs back EU ban on throwaway plastics by 2021. *European Parliament News/ Press Release* (24 October 2018). Available at: <https://www.europarl.europa.eu/news/en/press-room/20181018IPR16524/plastic-oceans-meps-back-eu-ban-on-throwaway-plastics-by-2021>

<sup>90</sup> *"Britain is considering a plan to force big tobacco companies to pay the 40 million pound (\$55 million) annual cost of cleaning up discarded cigarette butts."*

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See: Guy Faulconbridge. UK warns big tobacco firms: You should pay for cleaning up cigarette butts. Reuters (30 March 2021). Available at: <https://www.reuters.com/article/us-britain-tobacco-idUSKBN2BM1BZ>

*See also:* Correspondence: Smoking related litter roundtable meeting, 2 September 2020. Department for Environment Food & Rural Affairs (28 September 2020). Available at: <https://www.gov.uk/government/publications/defra-engagement-with-the-tobacco-industry-on-litter/smoking-related-litter-roundtable-meeting-2-sep-2020>

*See also:*

On December 2013, in order to comply with WHO FCTC, Department for Environment, Food and Rural Affairs (DEFRA) cut all links with Keep Britain Tidy, an environmental campaign group co-founded by Imperial Tobacco.

See: CSR: Imperial and Love Where You Live. Tobacco Tactics (27 April 2020). Available at: <https://tobaccotactics.org/wiki/csr-imperial-and-love-where-you-live/>

<sup>91</sup> Geert De Clercq. France orders tobacco industry: stub out cigarette butt pollution. Reuters (14 June 2018) Available at: <https://www.reuters.com/article/instant-article/idINKBN1JA257>

<sup>92</sup> *“One key aspect of the plan will be to place the costs associated with cleaning up cigarette butt litter on the tobacco industry.”*

See: Adam Higgins. No Ifs or Butts- Government considers placing cost of cigarette butt cleanup on tobacco industry. The Sun (30 December 2019). Available at: <https://www.thesun.ie/news/4935971/government-cost-cigarette-butt-cleanup-tobacco-industry/>

<sup>93</sup> Synopsis Report Stakeholder Consultation: Proposal for Directive of the European Parliament and of the Council on the reduction of the impact of certain plastic products on the environment. European Commission (28 May 2018); pg4. Available at: <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2018:0257:FIN:EN:PDF>