Environmental consequences of tobacco production and consumption

Vin Gupta and colleagues1 draw attention to the synergies between air pollution and tobacco exposure and suggest that it might be possible to leverage growing concern about the health effect of air quality to improve the global implementation of tobacco control measures.

This is a welcome suggestion, but governments and other agencies should be encouraged to think even more widely when considering the environmental effects of tobacco production and consumption, as outlined in two reports.2,3

Tobacco cultivation requires substantial inputs of labour (often by children), land, fertiliser, and water while producing substantial toxicity to land and water ecosystems. Both land clearance for cultivation and the burning of wood and charcoal for curing tobacco are major contributors to deforestation.

Nine of the ten largest tobacco cultivators are low-income or middleincome countries, and four are defined as low-income food-deficit countries.2 Food cultivation has less environmental effect, fulfils an essential human need, and is more profitable for farmers.3

With an annual greenhouse gas contribution of 84 megatonnes carbon dioxide equivalent (appendix), the tobacco industry contributes to climate change and reduces climate resilience, wasting resources and damaging ecosystems necessary for human society.

Although the environmental burden falls on countries least able to cope with it, the profits are made by transnational tobacco companies that are based in higher-income countries. Reducing tobacco consumption needs to be identified as a key lever for achieving all of the Sustainable Development Goals,4,5 not just those directly related to health.

We declare no competing interests.

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1. Gupta V, Mokdad A, Bollyky T, Glassman A, Daschle TA. Leveraging climate change to improve global tobacco control. Lancet 2019; 393: 2182–83.
2. Zafeiridou M, Hopkinson NS, Voulvoulis N. Cigarette smoking: an assessment of tobacco's global environmental footprint across its entire supply chain. Environ Sci Technol 2018; 52: 8087–94.
3. Zafeiridou M, Hopkinson NS, Voulvoulis N. Technical report for the FCTC: cigarette smoking, an assessment of tobacco's global environmental footprint across its entire supply chain and policy strategies to reduce it. 2018. http://www.who.int/fctc/publications/ WHO-FCTC-Enviroment-Cigarette-smoking. pdf?ua=1 (accessed June 7, 2019).
4. Sachs JD. From Millennium Development Goals to Sustainable Development Goals. Lancet 2012; 379: 2206–11.
5. UN Development Programme. The WHO framework convention on tobacco control: an accelerator for sustainable development. 2017. http://wwwundporg/content/undp/en/ home/librarypage/hiv-aids/-the-whoframework-convention-on-tobacco-controlan-accelerator-html (accessed June 7, 2019).