Judith Mackay, FRCP

# THE GLOBAL TOBACCO EPIDEMIC THE NEXT 25 YEARS

THE TRANSNATIONAL COMMERCIAL TOBACCO COMPANIES are expanding their empires—denying the health evidence on the effects of smoking; advertising and promoting their products in every corner of the earth; obstructing government action; overpowering national monopolies; and selling more and more cigarettes. Their grip on the big markets in developing countries will become stronger as they move their agriculture and manufacturing processes out of the United States, and by 2025 there may be no tobacco grown in the United States.

### SYNOPSIS

THIS ARTICLE IS based on Dr. Mackay's Keynote Address at the closing ceremony of the 10th World Conference on Tobacco or Health, Beijing, China, August 24–28, 1997. Drawing on the latest research evidence, she outlines a set of projections for the status of the world smoking problem in the year 2025.





"The global tobacco
epidemic is worse today
than it was 30 years ago.
And it will be even worse
in another 30 years unless
an extraordinary effort is
made now."

This prediction, and others presented below, were set out in the keynote address I gave at the closing session of the recent 10th World Conference on Tobacco or Health—reworked here for publication. These predictions, though terrifying, will hold true if we keep to the patterns established today.

# BY THE YEAR 2025

The total number of smokers will go up. There are 1.1 billion smokers in the world today. By the year 2025, this number will increase to over 1.64 billion for three reasons: (a) the world's population will rise (from the current 6 billion to 8.5 billion); (b) people will live longer by not dying from other illnesses or injuries that might have taken them in this century; (c) more women will be smoking.

Three times as many people will die from tobaccorelated causes. From only two major causes—HIV and tobacco—are the numbers of premature deaths increasing substantially in the world today.<sup>2</sup> Annual HIV deaths will peak at 1.7 million in the year 2006.<sup>3</sup> Tobacco deaths will continue to rise from today's 3 million a year to 10

million a year by 2025. 4.5 These mortality figures can be predicted based on the number of people who smoke today and the time lag for disease to take its toll. By 2025, China will be the leading country for tobaccorelated deaths. 6-8 Tobacco's share of all death and disability worldwide will have increased from the current rate of 3% to 9%. 3 Passive smoking will continue to harm a significant number of nonsmokers in the future. 9

The good news is that tobacco deaths will continue to fall among males in countries with small populations. It is hoped that this trend will encourage developing countries to take firm action and follow suit.

**Developing countries will suffer the most.** By 2025, the transfer of the tobacco epidemic from rich to poor countries will be well advanced, with only 15% of the world's smokers living in the rich countries. Health care facilities and services in poor countries will be hopelessly inadequate to cope with this epidemic.

Smoking prevalence: bad news for women—better news for men. <sup>10,11</sup> When searching for predictions on smoking prevalence rates for 2025, I was surprised to find that none existed; nor were there any predictions for the number of smokers. In collaboration with Alan Lopez, MD, from the World Health Organization (WHO), I worked out the following as a reasonable scenario: In developing countries, the prevalence of smoking among women will rise from 8% to 20% by 2025. By then, women will be dying from tobacco in substantial and ever-increasing numbers. The good news is that the prevalence of smoking among men will fall to 25% in developed countries (possibly even as low as 15% in some) and will decrease from 60% to 45% in developing countries.

The huge increases in the number of women smokers will have enormous consequences on health, <sup>12</sup> income, the health of fetuses, and on family members who will suffer from passive smoking and economic consequences. <sup>13</sup> Unfortunately, women's organizations and women's magazines have singularly failed both to understand that smoking is a feminist issue and to take an appropriate role. <sup>14</sup>

# **Tobacco will cause severe economic effects.** Already the economic costs of tobacco are at least US\$ 200 billion greater than the economic gain, with one-third of this loss being incurred by developing countries. This toll can only get worse. Fet, the World Bank states that tobacco control efforts could contribute to economic development in low- and middle-income countries by bettering family health, increasing productivity, and improving national and personal income. Before 2025, governments will finally understand that tobacco control

is good for the economy<sup>17</sup> and that no tobacco farmers, retailers, or tobacco workers will be out of a job because of tobacco control measures.<sup>18</sup>

Treatment and care. The potential exists for spectacular advances in the diagnosis, investigation, and treatment of tobacco-related diseases, for example in genetics, surgery, nanotechnology, telemedicine, targeted pharmaceuticals, and radiotherapy. By 2025, people genetically prone to tobacco-related diseases could be identified at birth. Secondary cancers, currently untreatable, could be treated. But most of this technology will be expensive and, as a consequence, will have almost no impact on global mortality statistics. However, these advances will help individual smokers, especially in the rich countries.

**Tobacco control action.**<sup>19-21</sup> Globally, by 2025, the WHO International Framework Convention on Tobacco Control should have been adopted, ratified, and implemented.<sup>22-24</sup> WHO may have a major department on Tobacco or Health at its headquarters, appropriately

# THE CONFERENCE RESPONSE TO THE PROPOSED U.S. TOBACCO SETTLEMENT

The proposed U.S. settlement agreement has greatly reinforced the sense among participants in the 10th World Conference on Tobacco or Health that all countries can and should draw on consensus principles so that every national effort contributes to the global campaign to control tobacco. Specifically, the consensus resolutions emerging from the conference included the following statement on the international implications of domestic tobacco control measures:

"The Conference recommends governments consider the international implications of tobacco control policies or settlements with the tobacco industry, and to ensure that:

- a. such measures do not contribute to an increase in the worldwide epidemic of tobacco-related death and disease;
- b. the legal rights of those not party to any agreement or policy are fully protected;
- c. such measures do not inhibit full public scrutiny of the past, present, and future activities of the tobacco industry; and
- d. that the tobacco industry pay the costs of damage caused by tobacco."

staffed and financed, with a staff member in each regional office. All other UN agencies may recognize their role as well. There will be the need for:

- global policies<sup>25</sup> and legislation<sup>26</sup> on supranational tobacco advertising via satellite and the Internet,<sup>27</sup> tar and nicotine yields, additives, taxes, and smuggling;
- greater regional coordination,<sup>28</sup> such as in the European Community and the Association of Southeast Asian Nations;
- restriction on trade pressures from one government to another;<sup>29</sup> and
- electronic networking, such as through Globalink.

The conference presentations showed that tobacco control is clearly a low priority for most governments, as illustrated by negligible funding, and that internationally only a few people are working on tobacco control. There are fewer than 10 full-time people in the Asia-Pacific region, for example, responsible for more than half the world's smokers.

In the future, a major distinction will evolve between nations that have or have not made the "transition" to committed and vigorous preventive health measures and practices.<sup>30</sup> By 2025, "post-transition" nations will have robust health education programs and extremely restrictive tobacco policies—along with active promotion of and increased support for physical activity and a low fat, high fiber, high fruit, and mainly vegetarian diet.31-33 "Pre-transition" nations will be grappling with deteriorating health status and an unabated epidemic of lung cancer, heart disease, and obesity. They will struggle with deeply entrenched tobacco interests that manipulate the government, the media, and public opinion.

Many countries will have made an extremely costly mistake by missing the opportunity to build significant barriers to

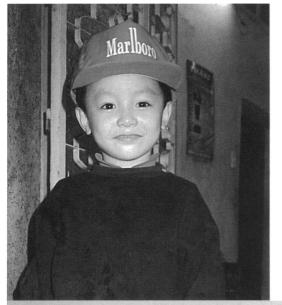
tobacco in the late 20th and early 21st centuries, and these countries will then find it very difficult to expel the powerful foreign tobacco companies and their domestic allies from their midsts. They will be doomed to repeat the painful and costly experience of the "post-transition" nations that will have labored for 30 to 50 years to achieve significant gains over tobacco peddlers.



"The economic costs of tobacco are at least US\$ 200 billion greater than the economic gain, with one-third of this loss being incurred by developing countries."

The following will be attained by 2025 in nations that take serious tobacco control action now:

- Establishment of a National Office to coordinate tobacco control efforts.
- Licensing of nicotine as an addictive drug with manufacture, promotion, and sale under regulatory control





by agencies such as the U.S. Food and Drug Administration.<sup>34</sup>

- Smoke-free areas in workplaces, 35,36 indoor public areas, and public transport. "Smoking rooms," popular 100 years ago, will make a comeback.
- Bans on all promotion of tobacco products. <sup>37–39</sup> Sports and arts bodies will look back with amazement at the time in history when their predecessors accepted tobacco money.

- Cigarette packets will be plain black and white and contain only brand name, tar and nicotine levels, and health warnings.
- Tar levels will be below 15 mg all over the world and below 10 mg in "post-transition" countries.
- Health education will be carried out by all nations, more effectively in some than in others. The failure of schools programs in the 20th century will force health educators to turn to social marketers for professional help.
- Prices will be higher in real terms in comparison with today. Outy-free tobacco will have long disappeared. Smuggling (currently 30% of all traded cigarettes) will continue to undermine price policy. Uth the expansion of the smuggling trade, tobacco will have become a predominantly illegal product in many markets. The tobacco industry will possibly have been hit by several spectacular legal cases proving its involvement with smuggling its own cigarettes.
- Core funding for tobacco control and health promotion will come from government and tobacco taxes, <sup>43–45</sup> although it will become fashionable in future for big business to contribute, in the same way it is beginning to contribute to environmental issues today.
- Partners in fighting the tobacco epidemic will include a wide range of women's groups, youth leaders, environmentalists, <sup>46–49</sup> religious leaders, <sup>50–52</sup> consumer pressure groups, <sup>53</sup> sports bodies, <sup>54</sup> and many others. However, by 2025, the backlash will be more intense, with smoking firmly entrenched among rebellious youth.

**Cessation.** Few countries today, especially developing countries, are sufficiently energetic about assisting cessation. <sup>55–57</sup> If efforts concentrate only on preventing children from smoking, there will be no reduction in the up to 200 million smoking-related deaths expected to occur before 2025 among those who already smoke. <sup>58</sup> By 2025, medical schools will have systematically incorporated tobacco issues into the curriculum, and health professionals will be competent and effective in advising patients on quitting smoking. <sup>59–63</sup>

# ANOTHER VISION OF THE FUTURE

Twenty-seven years from now, the 20th World Conference on Tobacco or Health may be discussing the domination of the world tobacco market by China—which will have become the largest exporter—and Japan, and the reversal of fortunes of the American and British tobacco companies. We can well wonder how the tobacco companies will behave in 2025, yet we can help shape the future—for who would have imagined 30 years ago that the tobacco industry would be engaged in settlement talks with governments today?<sup>64</sup>

# GLOBAL TOBACCO EPIDEMIC

An ex-tobacco industry executive has made the interesting prediction that tobacco production could be reduced in the next several decades by an expanding global demand for food, brought about by increasing population and a century of ecological abuse and mismanagement of the planet's food and water supply. He pointed out that because many of the tobacco companies are involved with the transnational food business, their corporate and personal pockets, previously lined with tobacco gold, could likewise be lined with gold from wheat, corn and rice.<sup>65</sup>

Once the litigation flurry<sup>66-68</sup> runs its course, much of the developed world will move to a managed tobacco industry, with liability automatically paid for tobacco-attributable health care costs and to individual smokers who have been harmed by tobacco.

The global tobacco epidemic is worse today than it was 30 years ago. And it will be even worse in another 30 years

unless an extraordinary effort is made now.<sup>69</sup> Several countries have already shown that smoking rates can be reduced. These successes can be reproduced by any responsible nation, but only through determined and sustained government and community action.<sup>70</sup> This will require encouragement and guidance from tobacco-control colleagues from around the world. We know it can be done.<sup>71</sup>

The published proceedings of the 10th World Conference on Tobacco or Health will be available later this year.

Dr. Mackay is the Director of the Asian Consultancy on Tobacco Control, Hong Kong, China.

Address correspondence to Dr. Mackay, Asian Consultancy on Tobacco Control, Riftswood, 9th Milestone, DD 229, Lot 147, Clearwater Bay Rd., Kowloon, Hong Kong; tel: +852 2719 1995; fax: +852 2719 5741; e-mail < jmackay@hk.super.net>.

# References -

- United Nations, Department of International Economic and Social Affairs. World population prospects 1990. Population Studies No 120. New York: United Nations; 1991.
- International Tobacco Initiative, 1994–1997 [appendix]. In: The Bellagio statement on tobacco and sustainable development. Ottawa: International Tobacco Initiative; 1997 Aug. p. 22–3.
- Murray CJL, Lopez AD. World Health Organization. World Bank. The global burden of disease. Boston (MA): Harvard School of Public Health; 1996.
- Peto R, Lopez AD, Liu B. Global tobacco mortality. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Zatonski W, Peto R, Lopez AD. Lung cancer trends and overall mortality from smoking in developed countries. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- Shiru N, Yang G, Wang G, He X, Chen ZM, Peto R. The Chinese national prospective study of mortality. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- Gao YT, Dent J, Xiang YB, Yuan ZX. Smoking, related cancers and other diseases: result of a 10-year follow-up of 210 thousand adults in Shanghai. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Lam TH, He Y. A review of case control studies on smoking and lung cancer in China. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Samet JM. Foetal and childhood exposure. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Yang G, Fan L, Huan ZJ, Li F, Aiping C, Zhang Y, Qi G. The 1996 national survey of smoking prevalence in China. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Mochizuki-Kobayashi Y. Impact of cigarette marketing on female smoking. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Sasco AJ. Health effects of tobacco use for women. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.

- Haglund M. Discussant presentation at the Plenary Session on women and tobacco. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Amos A. Involving women's organisations in tobacco control -what are the challenges? Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Jin S, Jiang Y. Estimation of smoking related direct costs in China. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Jha P, Feachem R, Klingen N. Economic development and tobacco use. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Warner KE. Economics of consumption. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- Stamps TJ. The growers' perspective. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Weng XZ. Tobacco control campaign in China. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Muna WFT. Challenges for tobacco control in Africa. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Robinson RG. Tobacco control networks in Latin America, Sub-Saharan Africa and communities of color in the United States. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Collishaw NE. An international framework convention for tobacco control. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Roemer R. International action for tobacco control. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Taylor AL. Towards a Framework Convention on Tobacco Control. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Gray N. Global tobacco policy. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- LeGresley E. International law and covenants. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.

- Pasnik S. The tobacco industry assault: billboards to cyberspace. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Saloojee Y. The African experience: present difficulties, future possibilities. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Chaloupka FJ. Do trade pressures lead to market expansion? Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Koplan J. Discussant presentation at the Plenary Session on developing countries. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Chng CY. The Singapore experience. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Tan D. Health promotion in tobacco control. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- Terborg J. Cost benefits of health promotion. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Borland R. Dedicated regulation of nicotine use: is it time? Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Chapman S. The impact of workplace smoking bans on declining cigarette consumption in Australia and the USA. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Burton R. Persuading employers to introduce smoke-free workplaces.
   Paper presented at the 10th World Conference on Tobacco or Health;
   1997 Aug 24–28; Beijing, China.
- Zain ZM, Assunta M. Circumvention of bans on direct advertising. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Pierce JP. Effects of targeted advertising. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- Pandey MR. Tobacco promotion: Nepal. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Townsend J. Price and consumption. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Joossens L. Europe: subsidies, trade and smuggling. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Godfrey AA. Investigation and prosecution of smuggling. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Sweanor D. Discussant presentation at the Plenary Session on financing tobacco control. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Galbally R. Financing tobacco control—the VicHealth experience. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Cook J, Bal DG, Todd R, Morra M, Lins N, Seffrin J. Money against tobacco vs money for tobacco: the U.S. experience. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Parkin S. Discussant presentation at the Plenary Session on developing countries. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Kweyuh P. Environmental damage of tobacco growing in Africa. Abstract, 10th World Conference on Tobacco or Health, 1997 Aug 24–28 Aug; Beijing, China.
- Loh C. Environmentalism and Health. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China
- 49. Du Melle F. Tobacco growing and the ozone layer. Paper presented at

- the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Dagli E. Islamic beliefs and practices in tobacco control. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Crosby M. Religious influences on tobacco investments. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Prado L. Milk or tobacco: the struggle for land in the south of Brazil.
   Paper presented at the 10th World Conference on Tobacco or Health;
   1997 Aug 24–28; Beijing, China.
- Wykle-Rosenberg L, Hastings G. Countermeasures against tobacco promotion. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Forbes R, Thompson P. Freeing sports from tobacco. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Slama K. Behavioural approaches to smoking cessation. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Jarvis M. Pharmacological approaches to smoking cessation. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Glynn TJ. Tobacco use cessation among children and youth. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Ramstrom L. Disease prevention before 2025. Discussion presentation at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Richmond R. Teaching on tobacco in medical schools. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Masironi R. Role of health professionals. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Akerberg O. World dentistry against tobacco. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Bass F, Lai L, Abrams D. Workshop on assisting cessation. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Gitchell J, Quesnelle G, Burton S, Kemper K. Workshop on pharmaceutical approaches to cessation. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- 64. Connolly G. The \$360 billion "global" settlement: will the women and children of Asia pay the bill? Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Daynard RA. Litigation against the tobacco industry by states. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- 66. Cornejo G. The tobacco industry assault: billboards to cyberspace. Workshop presentation scheduled for presentation at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Woodward S. Litigation as an intimidatory tactic. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Banzhaf JF III. Litigation against the tobacco industry by individuals. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Mahood G. Legislation: a key component of effective tobacco control plans. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Ritthiphakdee BO. Community approach. Paper presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.
- Bjartveit K. Discussant presentation at the Plenary Session on tobacco control programmes. Presented at the 10th World Conference on Tobacco or Health; 1997 Aug 24–28; Beijing, China.