FIFTH EDITION

Revised, Expanded, and Updated

THE TOBACCO ATLAS

American Cancer Society®

WORLD LUNG FOUNDATION

tobaccoatlas.org

Michael Eriksen
Judith Mackay
Neil Schluger
Farhad Islami Gomeshtapeh
Jeffrey Drope

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The fifth edition of *The Tobacco Atlas* can be found online at www.TobaccoAtlas.org. The online version of the *Atlas* provides additional resources and information unique to the online interactive version.

The tobacco control movement must grow its base of support to achieve ever-larger and more ambitious policy and public health successes.

In this edition of *The Tobacco Atlas*, we invite colleagues tackling closely-related challenges—including protecting the environment, promoting equality, engendering development and fighting non-communicable diseases (NCDs)—to explore common interests, ideas, and strategies to find far-reaching solutions. As this table of contents illustrates, every chapter touches meaningfully on one or more of these important areas.

ENVIRONMENT
The tobacco industry causes major ecological damage, and at least seven chapters offer solutions to protect the environment from this devastation.

EQUALITY
In nearly half the chapters, we highlight the tobacco industry's attempts to attract young women and children, while also offering tractable solutions that instead empower women and protect children.

DEVELOPMENT
While many chapters demonstrate that tobacco is inextricably linked to chronic underdevelopment, evidence emerges throughout the *Atlas* demonstrating that it is possible for tobacco growers and users to free themselves from its yoke.

NCDS
Tobacco use is an important risk factor for all major NCDs. More importantly, it is arguably the most preventable, and the *Atlas* offers appropriate prevention strategies that are proven effective in multiple settings.

Sources, methods and data for all chapters are available at tobaccoatlas.org.

DR. MARGARET CHAN

Director-General, World Health Organization

This fifth edition of *The Tobacco Atlas* celebrates a decade since the WHO Framework Convention on Tobacco Control (WHO FCTC) came into force in 2005. The treaty's usefulness is clear throughout these pages. Further, this edition of the *Atlas* covers the broad spectrum of non-communicable diseases and important issues that influence them, especially gender, development, and the environment.

The WHO FCTC is the first international treaty negotiated under the auspices of WHO. It is an evidence-based treaty that represents a milestone for the promotion of public health, and it provides new legal dimensions for international health cooperation. Since the treaty entered into force in 2005, it has become one of the most rapidly and widely embraced treaties in the history of the United Nations.

Some extraordinary advances in tobacco control have taken place since the publication of the previous *Atlas* in 2012. Highlights of these are:

- The adoption, in 2012, by the Conference of the Parties, of the first protocol to the Convention, **THE PROTOCOL TO ELIMINATE ILLICIT TRADE IN TOBACCO PRODUCTS**. This protocol is currently open for ratification, acceptance, approval, or accession by the Parties to the WHO FCTC.
- By October 2014, **179 PARTIES**, covering 90% of the world's population, had committed themselves to its full implementation. And, over the past decade, more than 130 Parties that have ratified the Convention had either strengthened their tobacco control legislation before they ratified the treaty, or have adopted new, treaty-compliant legislation (see Chapter 20: *WHO FCTC*).

All five editions of *The Tobacco Atlas* have used data from WHO sources, especially the WHO *Reports on the Global Tobacco Epidemic* and information from implementation reports of the Parties to the WHO FCTC. The *Atlases* also contain data from surveys conducted as part of the Global Tobacco Surveillance System, which comprises data from the Global Youth Tobacco Survey and the Global Adult Tobacco Survey. WHO and Member States are joined in these efforts by the US Centers for Disease Control and Prevention and the Bloomberg Initiative—examples of successful partnerships for monitoring the tobacco epidemic.

As implementation of the Framework Convention intensifies, the tobacco industry fights back, harder and through every possible channel. The industry continues to attempt to derail tobacco control measures by adopting tactics that range from corporate social responsibility programs to legal and trade challenges to government tobacco control legislation. We cannot permit the industry to shape in any way our public health efforts to end the tobacco epidemic.

This fifth edition of *The Tobacco Atlas* provides a good example of the interrelatedness of health issues, and how we need to work together, across diseases and conditions, to improve public health.

JOHN R. SEFFRIN, PHD

Chief Executive Officer, American Cancer Society

PETER BALDINI

Chief Executive Officer, World Lung Foundation

In the three years since the publication of the previous edition of *The Tobacco Atlas*, much has shifted in the landscape of tobacco control. Some of these changes show great promise: one hundred and eighty parties have now ratified or acceded to the WHO Framework Convention on Tobacco Control, and more countries than ever are now adopting and implementing protective tobacco control policies. Encouragingly, these nations include those with enormous populations, and a number of low- and middle-income countries where the epidemic is hitting the hardest.

Notable achievements in the past three years include Australia's move to implement the world's first plain packaging policy for tobacco products, and Russia's and Vietnam's passage of comprehensive national laws, including strict prohibitions on smoking in all public places. As we go to press, China has just made historic progress: a law that will make all indoor public places in Beijing 100% smoke-free, paving the way for a national smoke-free law in China. Such a development in the world's most populous and highest tobacco-using nation would be a game-changing global health achievement.

We also continue to see an unwavering commitment to tobacco control from Bloomberg Philanthropies, which since 2007 has dedicated more than 600 million dollars to supporting anti-tobacco policies in more than 90 low- and middle-income countries. Significant support also comes from the Bill and Melinda Gates Foundation, which has focused on preventing the epidemic from taking hold in Africa and on supporting policy efforts in China and Southeast Asia. These two major donors drive momentum and buoy much of the world's tobacco control policy efforts. These efforts are complemented by organizations such as the American Cancer Society and the World Lung Foundation and their many partners and colleagues around the globe who continue to provide financial, material, technical, and programmatic support.

Tobacco control is also increasingly important in development conversations, occupying a central spot in noncommunicable disease (NCD) discussions in the United Nations and other fora. Tobacco use has rightly been recognized as one of the leading NCD risk factors that must be addressed systematically, and is critical to the Sustainable Development Goals that will be unveiled this year.

This is the good news. However, major challenges lie ahead.

Although we are seeing smoking rates drop in many high-income countries, the tobacco epidemic continues to ravage low- and middle-income nations, who are facing the brunt of the industry's tactics.

This focus on addicting hundreds of millions in "emerging markets" has led to alarming trends in tobacco use in some countries. Unless we redouble our efforts to fight the spread of tobacco, 100 million people will die from tobacco-related disease between now and 2030—and up to one billion could die this century. Notably, worrying developments are occurring in Africa, where current prevalence of tobacco use is still relatively low. As a recent American Cancer Society report stated, by 2100 "without action [against tobacco], Africa will grow from being the fly on the wall to the elephant in the room."

We continue to confront an industry that constantly changes and adapts its marketing strategies. The burgeoning of new products, likely new portals to tobacco use, is a salient example. Electronic Nicotine Delivery Systems such as e-cigarettes and "cigalikes" are challenging the tobacco control community. Researchers have only just started to measure their harm reduction potential for individual smokers, and their public health impact at the population level is still unclear. With the aggressive marketing of these products in yet-unregulated contexts in many countries, it is unsurprising and concerning to see rapid uptake among youth and emerging evidence of a "gateway" effect to smoking conventional cigarettes. Prompt regulation of these and other new products would protect decades of progress in public health.

The industry also increasingly seeks to use international economic agreements (e.g. the World Trade Organization) and its near-unlimited resources to deter countries from taking action to protect their citizens' health. With titanic legal battles being waged on pack warnings from Australia to Uruguay, and relentless tobacco industry interference around the world, with this *Atlas* we seek to involve new partners beyond our traditional public health allies—not only from the NCD community, but also experts on tax policy, development, and human rights—whose interests are dramatically affected by the tobacco epidemic and its human toll.

Just as we develop a new *Atlas* every three years to provide advocates, journalists, and policymakers with clear, simple, graphic, and up-to-date information, we seek also to arm these new allies, not just because tobacco causes more disease and death than any other agent, but also to shed light on the industry's malevolent actions against fair trade, economic growth, the global climate, and the overall health of the planet. No one is untouched by the ravages of tobacco.

We want this document to be used, parsed, quoted, defended, and debated, and ultimately to open minds, to persuade the unconvinced about tobacco's toll, to spur untraditional allies to action, and to help create opportunities to reverse the epidemic.

With this fifth edition of *The Tobacco Atlas* we hope to reach many more people around the globe, reinforcing a movement that is making great strides but that cannot let down its guard for even a second. The fate of the earth, a world that should be free of tobacco industry exploitation, depends on it.

WE BELIEVE THAT BY ENGAGING A WIDE-RANGING ARRAY OF HEALTH, LEGAL, ECONOMIC, DEVELOPMENT AND ENVIRONMENTAL PROPONENTS AND DEMONSTRATING HOW TOBACCO USE AFFECTS THEIR ISSUES, WE CAN AMPLIFY OUR IMPACT.

GET INVOLVED AT TOBACCOATLAS.ORG

USD1,000,000,000,000
Annual industry revenue

1,000,000,000
Adult smokers worldwide

TRILLIONS
Cigarettes consumed annuallly

MILLIONS
Preventable deaths each year

In 2000, while at a meeting of the WHO Framework Convention on Tobacco Control's (WHO FCTC) Intergovernmental Negotiating Body, founding authors Michael Eriksen and Judith Mackay discussed the need for a global atlas on tobacco. Having recently authored two health atlases, Mackay thought it was an intriguing notion, but was concerned there might not be enough data for a true global atlas. After years of working in tobacco control at the US Centers for Disease Control and Prevention and the World Health Organization (WHO), Eriksen was confident that the data existed and that the real need was for the data to be assembled in one accessible place, presented in a colorful, graphic and readable format, and disseminated widely. In 2002, WHO published the first edition of *The Tobacco Atlas*.

In the subsequent 13 years, much has changed in global tobacco control, and yet much has remained the same. The WHO FCTC was unanimously approved by the World Health Assembly in 2003 and signed by 168 member states, covering 90% of the world's population. WHO also developed MPOWER, providing evidence-based best practices. Countries have continued to adopt often paradigm-shifting policies such as prohibiting "light" cigarettes, implementing complete public smoking bans, and introducing plain/standardized tobacco product packaging. Philanthropists Michael Bloomberg and Bill and Melinda Gates have committed hundreds of millions of dollars to support global tobacco control, which among many efforts helped implement the Global Adult Tobacco Survey (GATS) in 2007 to serve as a complement to the existing Global Youth Tobacco Survey (GYTS). In the United States in 2006, the tobacco industry was found guilty of fraud and racketeering in one of the largest civil cases in history. In Europe, member countries have twice revised the wide-reaching Tobacco Products Directive.

What has remained the same is that the tobacco industry continues to thrive with revenues approaching USD1,000,000,000,000 annually, with millions of deaths occurring each year among the one billion adult smokers who consume trillions of cigarettes annually. And today, after a century of harm, the tobacco industry is trying to re-invent itself by selling purportedly less harmful products, but in such a way as to maintain and expand nicotine addiction worldwide.

While progress is being made, the pace is too slow and too many lives continue to be lost. As we planned the fifth edition of *The Tobacco Atlas*, we were driven not only by our sense of urgency to continue to vigorously promote these proven tobacco control strategies, but also to broaden the base of tobacco control and expand the number of people who are willing to act.

We believe that by engaging a wide-ranging array of health, legal, economic, development, and environmental proponents and demonstrating how tobacco use affects their issues, we can amplify our impact. Documenting the impact of tobacco use and how it exacerbates mental health conditions, substance abuse, diabetes, tuberculosis, HIV, poverty, and environmental degradation can help enlist an increasing number of individuals and institutions, thereby expanding our collective spheres of influence.

Not only do we hope to enroll a larger and robust cadre of proponents concerned about tobacco control and urge them to action, we also hope to share best practices and lessons learned.

Tobacco control lessons include the importance of strategies that affect populations—not just individuals—such as the powerful role of policies and litigation in disrupting the status quo. There may be strategies that work in development, climate change, environmental protection, or poverty reduction that could be extremely promising for tobacco control. How can we share approaches and best work together to collectively advance the human condition?

In the first edition of *The Tobacco Atlas*, we wrote:

> "The publication of this *Atlas* marks a critical time in the epidemic. We stand at a crossroads, with the future in our hands.
> **WE CAN CHOOSE TO STAND ASIDE; OR TO TAKE WEAK AND INEFFECTIVE MEASURES; OR TO IMPLEMENT ROBUST AND ENDURING MEASURES TO PROTECT THE HEALTH AND WEALTH OF NATIONS."**

Four editions later—with the wonderful earlier contributions of Omar Shafey (2nd and 3rd editions) and Hana Ross (3rd and 4th editions)—these words are as true today as they were then. The founding authors, together with new authors Neil Schluger, Farhad Islami, and Jeffrey Drope, the American Cancer Society and the World Lung Foundation are proud to present the fifth triennial edition of *The Tobacco Atlas*, along with the interactive www.tobaccoatlas.org website. We hope this endeavor will accelerate global efforts to reduce the harm caused by tobacco use and will engage new partners that will collectively advance global health.

MICHAEL ERIKSEN, SC.D.

Michael Eriksen is Regents' Professor and founding Dean of the School of Public Health at Georgia State University. He is also director of Georgia State University's Tobacco Center of Regulatory Science (TCORS) and the Center of Excellence in Health Disparities Research (CoEx). Prior to his current positions, Dr. Eriksen served as a senior advisor to the World Health Organization in Geneva and was the longest-serving director of the Centers for Disease Control and Prevention's Office on Smoking and Health (1992–2000). Previously, Dr. Eriksen was director of behavioral research at the M.D. Anderson Cancer Center. He has recently served as an advisor to the Bill & Melinda Gates Foundation, the Robert Wood Johnson Foundation, the American Legacy Foundation, and the CDC Foundation. Dr. Eriksen has published extensively on tobacco prevention and has served as an expert witness on behalf of the US Department of Justice and the Federal Trade Commission in litigation against the tobacco industry. He is editor-in-chief of *Health Education Research* and has been designated as a Distinguished Cancer Scholar by the Georgia Cancer Coalition. He is a recipient of the WHO Commemorative Medal on Tobacco or Health, and a Presidential Citation for Meritorious Service, awarded by President Bill Clinton.
Dr. Eriksen is past president and Distinguished Fellow of the Society for Public Health Education, and has been a member of the American Public Health Association for over 40 years.

JUDITH MACKAY, MBChB, FRCP

Dr. Mackay is a medical doctor based in Hong Kong since 1967. She is senior adviser to World Lung Foundation as part of the Bloomberg Initiative, to the Bill and Melinda Gates Foundation, senior policy adviser to the World Health Organization, and director of the Asian Consultancy on Tobacco Control. She holds professorships at the Chinese Academy of Preventive Medicine, the University of Hong Kong and Chinese University. She is a Fellow of the Royal Colleges of Physicians of Edinburgh and of London. After an early career as a hospital physician, she moved to public health. She has authored or co-authored ten health atlases, published 200 papers, and addressed over 460 conferences on tobacco control. She has received many awards, including the WHO Commemorative Medal, Royal Awards from the UK and Thailand, the Fries Prize, the Luther Terry Award for Outstanding Individual Leadership, the US Surgeon General's Medallion, the Founding International Achievement Award from the Asia Pacific Association for the Control of Tobacco, and the Lifetime Achievement Award from the International Network of Women Against Tobacco. She was selected as one of *Time*'s 60 Asian Heroes (2006) and one of *Time*'s 100 World's Most Influential People (2007), the *British Medical Journal* Lifetime Achievement Award (2009), and a Special Award of Outstanding Contribution on Tobacco Control (2014). She has been identified by the tobacco industry as one of the three most dangerous people in the world.

NEIL W. SCHLUGER, MD

Dr. Schluger is Chief Scientific Officer of World Lung Foundation as well as Chief of the Division of Pulmonary, Allergy and Critical Care Medicine at the Columbia University Medical Center, and Professor of Medicine, Epidemiology and Environmental Health Science at the Columbia University College of Physicians and Surgeons and Columbia's Mailman School of Public Health. Dr. Schluger's career has focused on global aspects of lung disease. He has written over 150 articles, chapters and books, and his work has been published in *The New England Journal of Medicine*, *JAMA*, *The Lancet*, and the *American Journal of Respiratory and Critical Care Medicine*, among other journals. He serves on the editorial boards of *The American Journal of Respiratory and Critical Medicine*, the *Annals of the American Thoracic Society*, and *Chest*. He also currently serves as the Chairman of the Steering Committee of the Tuberculosis Trials Consortium (TBTC), an international research consortium funded by the United States Centers for Disease Control and Prevention (US CDC). He is also the founder and director of the East Africa Training Initiative, a World Lung Foundation-sponsored project to train pulmonary physicians in Ethiopia. Under this initiative, expert faculty are in residence in Addis Ababa to train Ethiopian physicians in order to develop a cadre of specialists to care for patients and develop public health approaches to lung health. This program is the first of its kind in East Africa.

FARHAD ISLAMI GOMESHTAPEH, MD, PhD

Dr. Islami is the director of interventions in the Surveillance and Health Services Research group at the American Cancer Society. His work focuses on investigating the associations between tobacco or other modifiable risk factors and cancer and evaluating the effects of interventions for cancer prevention, including tobacco control, in reducing cancer morbidity and mortality.
Dr. Islami has published more than 90 articles in peer-reviewed journals, including studies of the association of tobacco use with cancer and other chronic diseases, including cardiovascular and gastrointestinal diseases. Several of these publications studied long-term health effects of tobacco products other than cigarettes, and studies conducted by Dr. Islami and colleagues in Iran and India have provided the strongest evidence so far for associations between waterpipe smoking and esophageal and gastric cancers. Dr. Islami was a member of the International Agency for Research on Cancer (IARC) secretariat in the IARC Monographs Volume 100: A Review of Human Carcinogens Part E, Lifestyle Factors, and the IARC Handbooks volume 14, The Effectiveness of Tax and Price Policies for Tobacco Control. He is also involved in studies of cancer disparities and distribution of risk factors of cancer, including tobacco use, in various socioeconomic groups.
Dr. Islami is the co-chief editor of *Frontiers in Cancer Epidemiology and Prevention*, a specialty section of *Frontiers in Oncology*. He earned his MD from Tehran University of Medical Sciences, Iran, and a PhD in Epidemiology from the King's College, University of London, UK.

JEFFREY DROPE, PhD

Dr. Drope is the Managing Director of the Economic and Health Policy Research program at the American Cancer Society. His research focuses on the nexus of public health (including tobacco control, harmful alcohol use, nutrition, and access to care) and economic policymaking, especially trade, investment and taxation. His work seeks to explain rigorously how countries can integrate the two different policy areas in proactive ways that engender both improved public health outcomes and economic prosperity. Recent projects have received support from major funding organizations, including the National Institutes of Health (National Institute for Drug Abuse, Fogarty International Center and the National Cancer Institute), the Johns Hopkins Bloomberg School of Public Health (with funds from the Bloomberg Initiative to Reduce Tobacco Use), the National Science Foundation, and the International Development Research Centre. In addition to extensively publishing in these substantive areas, he continues to participate actively in capacity-building efforts on these issues across the globe, working with major inter-governmental organizations, non-governmental organizations, national governments and many institutions of higher learning. Most recently, Dr. Drope is spearheading a multi-country initiative to illuminate the economics of tobacco farming in low- and middle-income countries in Africa and Asia. He is also an associate professor of political science at Marquette University, where he regularly teaches and mentors students on global health and international development.

ACKNOWLEDGMENTS

The Tobacco Atlas is the product of the combined effort of many dedicated people.

Four individuals played vital roles as contributing authors and editorial/data coordinators: **Ellie Faustino**, **Alex Liber**, **Michal Stoklosa**, and **Carrie Whitney**. **Christina Curell**, **Sun Young Jeong**, and **Xuanzi Qin** played key roles as primary research assistants. For additional content and editorial support, we thank **Samantha Bourque**, **Emily Cahill**, **Lauren Clark**, **Amanda Gailey**, and **Sarita Pathak**.

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For their advice on specific chapters and/or providing data, there are a number of individuals that we wish to thank. For *Consumption*, **Marie Ng** and her IHME colleagues, **Michael Thun**, **Linda Andes**, **Krishna Palipudi**, and **Deliana Kostova**; for *Smokeless Tobacco*, **Stephen Stanfill** and **Pankaj Chaturvedi**; for *Water Pipes*, **Orna Baron-Epel**; for *Legal Challenges & Litigation*, **Patricia Lambert** and the International Legal Consortium (ILC) at the Campaign for Tobacco-Free Kids; for *WHO FCTC*, **Vera Luiza da Costa e Silva** and **Douglas Bettcher**; for *Warnings & Packaging*, **Rob Cunningham**; for *The Endgame*, **Mira Aghi**, **Simon Chapman**, **Greg Connolly**, **Yul Doretheo**, **Sheila Duffy**, **J.R. Pinky Few**, **Becky Freeman**, **Joe Gitchell**, **Prakash Gupta**, **Marita Hefler**, **Ei Skye Kimura-Paul**, **Jon Krueger**, **Eric LeGresley**, **Ruth Malone**, **Wasim Maziak** and **Martin Raw**; for *Health Consequences*, **Roberta Savli** and her colleagues at the European Federation of Allergy and Airways Diseases Patients' Associations; for *Nicotine Delivery Systems*, **Royal Kai Yee Law**; and for *Male Smoking* and *Female Smoking*, IHME. For mapping assistance, we thank **Liora Sahar** and the Statistics and Evaluation Center at ACS, and for access to the 2014 WHO FCTC reports, we thank **Tibor Szilagyi**.

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Last, and certainly not least, we thank our tireless and exacting managing editor, **John M. Daniel**.

Tobacco damages not only the whole person but also the whole planet.

HARM

The harm caused by tobacco use isn't limited to lung cancer, heart disease, and emphysema. Tobacco use exacerbates other non-communicable diseases, mental illnesses and substance abuse problems, as well as damages the environment and undermines human development.

BODY AND MIND

People living with mental illness are nearly twice as likely to smoke as other persons.

DEVELOPMENT

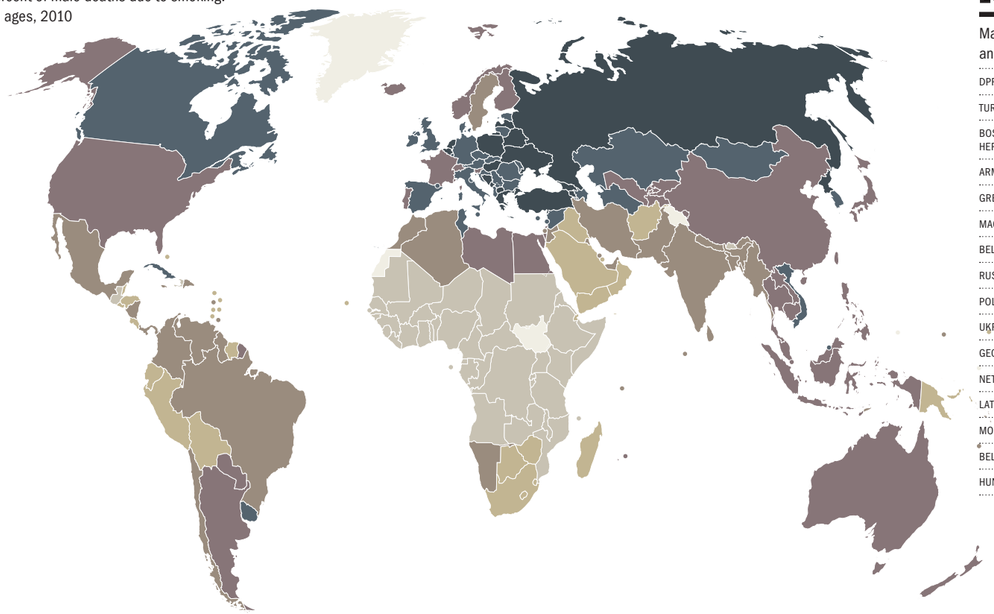
Nearly three-quarters of Brazilian smokers report spending money on cigarettes instead of household essentials.

ENVIRONMENT

Cigarette butts are the most commonly discarded piece of waste worldwide. It is estimated that 1.69 billion pounds of butts wind up as toxic trash, which is roughly equivalent to the weight of 177,895 endangered African elephants.

MALE DEATHS

Percent of male deaths due to smoking: all ages, 2010



25%+

Male deaths 25% and greater: 2010

DPR KOREA	34%
TURKEY	31%
BOSNIA AND HERZEGOVINA	30%
ARMENIA	30%
GREECE	30%
MACEDONIA	29%
BELARUS	28%
RUSSIA	28%
POLAND	28%
UKRAINE	27%
GEORGIA	27%
NETHERLANDS	26%
LATVIA	26%
MONTENEGRO	26%
BELGIUM	25%
HUNGARY	25%

15%+

Female deaths 15% and greater: 2010

DPR KOREA	22%
BRUNEI	21%
DENMARK	20%
ALBANIA	19%
LEBANON	18%
BOSNIA AND HERZEGOVINA	17%
CUBA	17%
UNITED KINGDOM	16%
USA	16%
SERBIA	16%
IRELAND	15%
FYR MACEDONIA	15%
ICELAND	15%

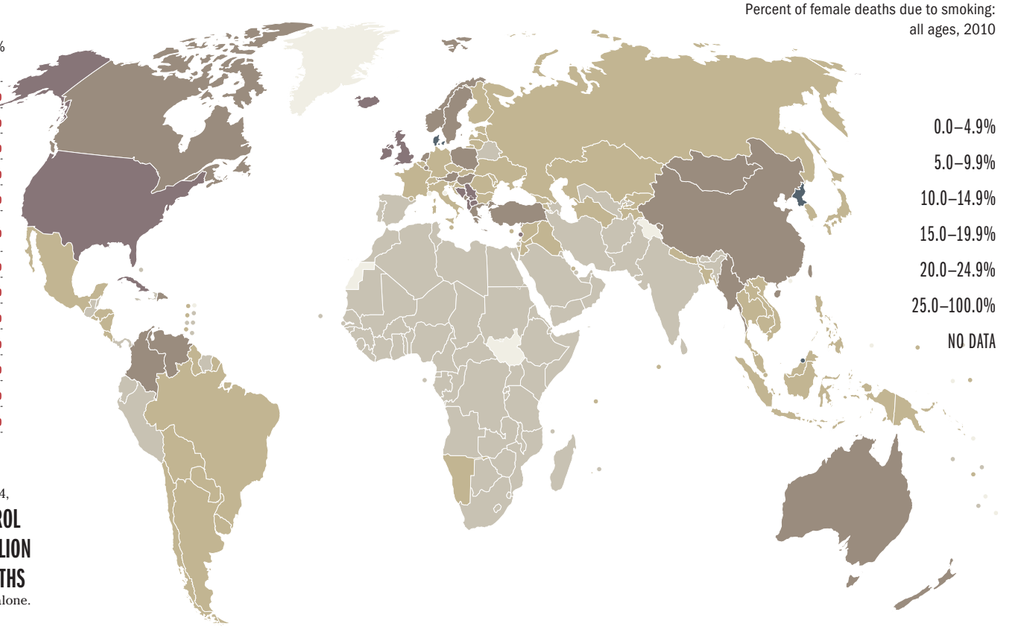
From 1964 to 2014,

TOBACCO CONTROL PREVENTED 8 MILLION PREMATURE DEATHS

in the United States alone.

FEMALE DEATHS

Percent of female deaths due to smoking: all ages, 2010

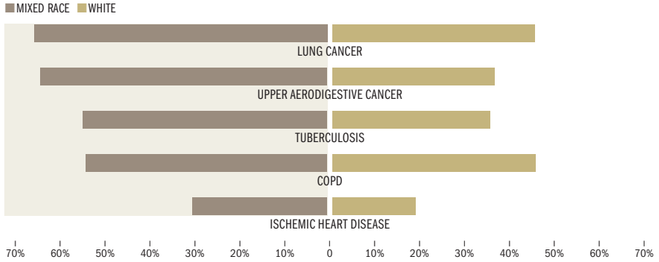


CALL TO ACTION

As tobacco use is the most common preventable cause of death, governments must implement effective policies to prevent tobacco use (reducing initiation and promoting cessation) and involuntary exposure to tobacco smoke in order to save lives. Death registries should collect data on tobacco use status to help assess and monitor national tobacco-related death rates.

DISPARITY IN TOBACCO DEATHS

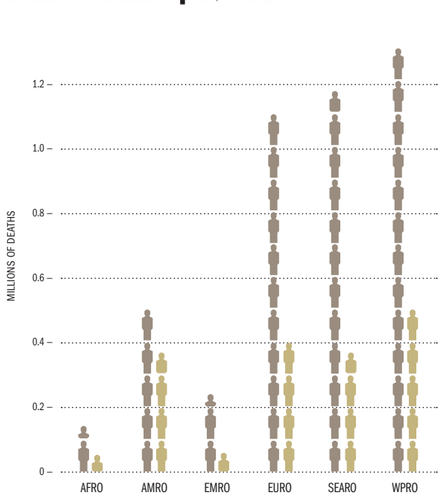
Percentage of smoking-related deaths in mixed-race and white men in South Africa: by cause of death, ages 35–74 years, 1999–2007



Tobacco-related deaths are more common in people with lower socioeconomic status. In South Africa, mixed-race men tend to be of lower socioeconomic status than white men.

DEATHS BY REGION

Number of smoking-related deaths in the World Health Organization regions: all ages, 2010



Globally, tobacco use killed 100 million people in the 20th century, much more than all deaths in World Wars I and II combined. Tobacco-related deaths will number around 1 billion in the 21st century if current smoking patterns continue. Among middle-aged persons, tobacco use is estimated to be the most important risk factor for premature death in men and the second most important risk factor in women (following high blood pressure) in 2010–2025. To understand better how to address this issue, tobacco deaths need to be monitored closely, and this can be done best if death registries systematically collect data on tobacco use status. Currently, data on tobacco deaths mostly come from individual epidemiological studies.

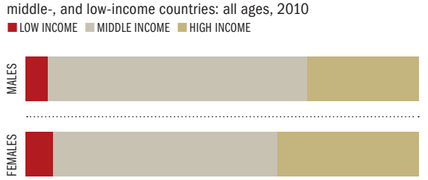
Tobacco use increases the risk of death from many diseases; cancer, ischemic heart disease, chronic obstructive pulmonary disease (COPD), and stroke are the most common ones. Lung cancer is the leading cause of cancer death worldwide, killing approximately 1.4 million people globally in 2008. At least 80% of lung cancer deaths are attributable to smoking. Even in Africa, where smoking prevalence has increased only recently, lung cancer is now the most common cause of cancer death in men.

Not only does tobacco use cause disease, but patients with coronary heart disease, cancer, or several other diseases who continue smoking are also at significantly higher risk of death compared to patients with the same disease who never smoked or who quit smoking after being diagnosed with the disease.

Even for those who smoke 10 or fewer cigarettes per day, life expectancy is on average 5 years shorter and lung cancer risk is up to 20 times higher than in never-smokers. Those who smoke fewer than 4 cigarettes per day are at up to 5 times higher risk of lung cancer. As there is neither a safe tobacco product, nor a safe level of tobacco use, the best way to prevent tobacco-related deaths is to avoid using it. Current smokers greatly benefit from quitting smoking (see Chapter 24: *Quitting*).

DEATHS BY COUNTRY INCOME

Proportion of global smoking-related deaths in high-, middle-, and low-income countries: all ages, 2010



More than two thirds of tobacco deaths occur in low- and middle-income countries.

"Smoking is a cause of real and serious diseases, cancer, particularly cancer of the lung, stroke, heart attack, and respiratory disease such as bronchitis and emphysema. For a lifetime smoker, about

HALF CAN EXPECT TO DIE PREMATURELY

as a result of their cigarette smoking."

– DAVID O'REILLY, Scientific Director, British American Tobacco, 2014

"Estimates from patients at our oral cancer ward indicate that

80–90% OF PREVENTABLE CANCERS OF THE NECK, HEAD, AND THROAT ARE TOBACCO-RELATED.

More than one million Indians die prematurely from tobacco-related disease each year."

– PANKAJ CHATURVEDI, cancer specialist at Mumbai's Tata Memorial Hospital, India, 2014

CALL TO ACTION

Providers must routinely integrate smoking cessation services into TB, HIV, alcohol and mental health care.

SMOKING AND HIV

Life years lost due to smoking: Danish cohort, ages 35–80, 1995–2000

Smokers lost more than twice as many years of life than did non-smokers.

Although the high smoking rates among HIV-infected patients worsen mortality outcomes,

THE TOBACCO INDUSTRY BOASTS ABOUT ITS HISTORY AND SUPPORT FOR THE NUTRITIONAL NEEDS OF THE HIV-INFECTED COMMUNITY

through providing grants to HIV/AIDS organizations.
"It is with great pride that we have partnered with numerous organizations within the HIV/AIDS community to bring attention and additional resources to bear in this terrible disease."

—PHILIP MORRIS, HIV/AIDS Grantmaking program, 1997

SMOKING AND ALCOHOL ABUSE

Smoking status for hazardous drinking:
percent of hazardous drinking among different types of smokers, USA, 2002

HAZARDOUS DRINKING DEFINITIONS	
MEN	> 14 drinks per week or 5+ drinks per day at least once in the past year
WOMEN	> 7 drinks per week or 4+ drinks per day at least once in the past year

Never-smoker	Former smoker	Daily smoker
19.2%	22.0%	43.4%

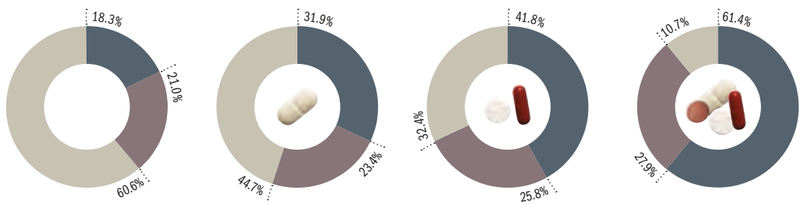
Current smokers are more likely to be hazardous drinkers than are both never-smokers and former smokers, and at higher risk of adverse effects of both smoking- and alcohol-related diseases.

SMOKING AND MENTAL ILLNESS

Smoking prevalence among people with lifetime mental illnesses or psychological distress: USA, 2007

NEVER SMOKER FORMER SMOKER CURRENT SMOKER

MENTAL ILLNESSES SURVEYED	
BIPOLAR DISORDER	DEMENTIA
SCHIZOPHRENIA	PHOBIAS/FEARS
ATTENTION DEFICIT/HYPERACTIVITY	SERIOUS PSYCHOLOGICAL DISTRESS



NO MENTAL ILLNESS | 1 MENTAL ILLNESS | 2 MENTAL ILLNESSES | 3+ MENTAL ILLNESSES

Current smoking prevalence increased with greater numbers of mental illness, ranging from 18.3% for people with no illness to 61.4% for people with three or more mental illnesses.

IN ITS EFFORTS TO UNDERMINE AND DIMINISH THE DEVASTATING EFFECTS OF SMOKING ON HEALTH,

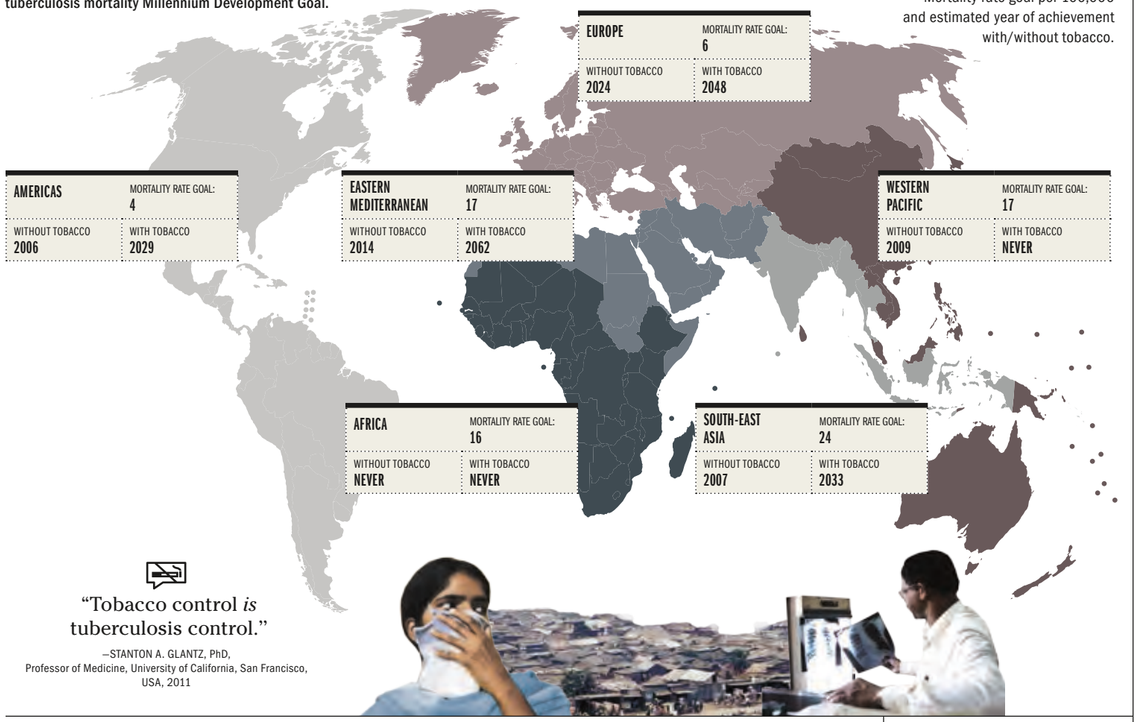
British American Tobacco has argued that "there are other issues [besides smoking & health] which we believe should be of greater significance to the PRC [China] and the WHO including hepatitis which is very prevalent in China and a major health concern."

—British American Tobacco, 1997

SMOKING AND TB

Smoking will prevent countries from meeting their tuberculosis mortality Millennium Development Goal.

Mortality rate goal per 100,000 and estimated year of achievement with/without tobacco.



"Tobacco control *is* tuberculosis control."

—STANTON A. GLANTZ, PhD,
Professor of Medicine, University of California, San Francisco, USA, 2011

Certain populations smoke at higher rates than the general population, including those who use alcohol to excess, or have mental illness, or who are affected by other diseases such as tuberculosis (TB) and HIV/AIDS. As a result, smoking has a tremendous impact on several other grave public health crises.

Most cases of TB occur in places where tobacco use is extremely common or rising rapidly. China and India alone, which have high smoking rates, account for 40% of all cases of tuberculosis in the world. A recent study showed that 21% of tuberculosis cases in adults were attributable to tobacco. As most patients with TB are relatively young, excess morbidity and mortality from tobacco-related tuberculosis takes a toll on persons in their most economically-productive years SMOKING AND TB.

HIV-infected persons are even more susceptible to the dangers of tobacco than are persons without HIV infection. In settings where treatment for HIV infection has become widely available, HIV-infected tobacco smokers are losing more life-years to smoking than to HIV infection itself SMOKING AND HIV.

Smokers are more likely to consume excessive amounts of alcohol, and smoking may independently affect an individual's propensity to abuse alcohol and vice versa SMOKING AND ALCOHOL ABUSE. These people are at risk of adverse effects of both tobacco and alcohol-related diseases.

Mental health disorders are also tied closely to tobacco use. Persons with mental illness have high smoking rates, and for certain illnesses, such as anxiety disorders, tobacco use may cause or worsen the problem SMOKING AND MENTAL ILLNESS. Additionally, smoking is associated with increased severity of symptoms of schizophrenia and bipolar disorder. Persons with mental illness die disproportionately from smoking-related diseases. In California, USA, approximately half of deaths among people with mental illness were due to diseases caused by smoking.

INDIA

Smoking increases the risk of poor outcomes from TB infection. In India, TB is the leading cause of smoking-associated excess deaths.

AMONG INDIAN MEN AGES 30–69, 38% OF TB DEATHS ARE ATTRIBUTED TO SMOKING.

CALL TO ACTION

Governments should strive to prevent people from starting tobacco use because it is the best way to avoid the consequences tobacco inflicts on human health.

BRAIN CELLS

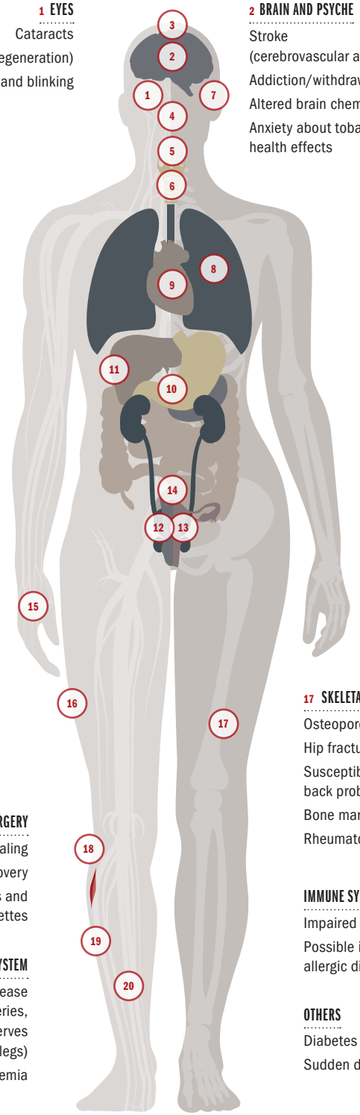
Tobacco smoke can affect brain cells adversely. Several studies have shown

ATROPHY OF GREY MATTER IN SMOKERS' BRAINS,

which may make them more susceptible to dementia. Also, children born to mothers who smoked during pregnancy have neural alterations similar to those in children with attention-deficit/hyperactivity disorder.

HARM FROM TOBACCO

Tobacco causes disease and disability to almost every organ.



1 EYES
- Cataracts
- Blindness (macular degeneration)
- Stinging, excessive tearing and blinking

2 BRAIN AND PSYCHE
- Stroke (cerebrovascular accident)
- Addiction/withdrawal
- Altered brain chemistry
- Anxiety about tobacco's health effects

3 HAIR
- Odor and discoloration

4 NOSE
- Cancer of nasal cavities and paranasal sinuses
- Chronic rhinosinusitis
- Impaired sense of smell

5 TEETH
- Periodontal disease (gum disease, gingivitis, periodontitis)
- Loose teeth, tooth loss
- Root-surface caries, plaque
- Discoloration and staining

6 MOUTH AND THROAT
- Cancers of lips, mouth, throat, larynx and pharynx
- Sore throat
- Impaired sense of taste
- Bad breath

7 EARS
- Hearing loss
- Ear infection

8 LUNGS
- Lung, bronchus and tracheal cancer
- Chronic obstructive pulmonary disease (COPD) and emphysema
- Chronic bronchitis
- Respiratory infection (influenza, pneumonia, tuberculosis)
- Shortness of breath, asthma
- Chronic cough, excessive sputum production

9 HEART
- Coronary thrombosis (heart attack)
- Atherosclerosis (damage and occlusion of coronary vasculature)

10 CHEST AND ABDOMEN
- Esophageal cancer
- Gastric, colon and pancreatic cancer
- Abdominal aortic aneurysm
- Peptic ulcer (esophagus, stomach, upper portion of small intestine)
- Possible increased risk of breast cancer

11 LIVER
- Liver cancer

12 MALE REPRODUCTION
- Infertility (sperm deformity, loss of motility, reduced number)
- Impotence
- Prostate cancer death

13 FEMALE REPRODUCTION
- Cervical and ovarian cancer
- Premature ovarian failure, early menopause
- Reduced fertility
- Painful menstruation

14 URINARY SYSTEM
- Bladder, kidney, and ureter cancer

15 HANDS
- Peripheral vascular disease, poor circulation (cold fingers)

16 SKIN
- Psoriasis
- Loss of skin tone, wrinkling, premature aging

17 SKELETAL SYSTEM
- Osteoporosis
- Hip fracture
- Susceptibility to back problems
- Bone marrow cancer
- Rheumatoid arthritis

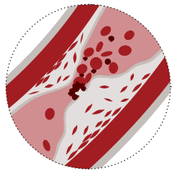
18 WOUNDS AND SURGERY
- Impaired wound healing
- Poor postsurgical recovery
- Burns from cigarettes and from fires caused by cigarettes

19 LEGS AND FEET
- Peripheral vascular disease, cold feet, leg pain and gangrene
- Deep vein thrombosis

20 CIRCULATORY SYSTEM
- Buerger's disease (inflammation of arteries, veins and nerves in the legs)
- Acute myeloid leukemia

IMMUNE SYSTEM
- Impaired resistance to infection
- Possible increased risk of allergic diseases

OTHERS
- Diabetes
- Sudden death



Exposure to secondhand smoke or active smoking causes the

THICKENING OF ARTERIAL WALLS

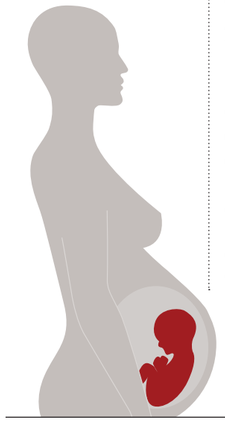
(an early stage of atherosclerosis) starting as young as 15 years of age.

SMOKING DURING PREGNANCY

Health risks to mothers and children associated with maternal smoking

MOTHER
- Placental abruption
- Placenta previa
- Premature rupture of membranes
- Premature birth
- Spontaneous abortion/ miscarriage
- Ectopic pregnancy

FETUSES, INFANTS, CHILDREN
- Stunted gestational development
- Stillbirth
- Sudden infant death syndrome (SIDS)
- Reduced lung function and impaired lung development
- Asthma and bronchitis exacerbation
- Acute lower respiratory infection (bronchitis and pneumonia)
- Respiratory irritation (cough, phlegm, wheeze)
- Childhood cancers
- Orofacial cleft
- Possible increased risk of allergic diseases
- Possible increased risk of learning disability and attention-deficit/ hyperactivity disorder



SMOKING AND THE LUNG

CONSTITUENTS OF TOBACCO SMOKE HAVE MANY ADVERSE EFFECTS ON THE LUNG

For example, as scavenger cells engulf particles of impurities and debris from tobacco smoke, the color of smokers' lungs becomes gray-black over time.

HEALTHY HUMAN LUNG

TOBACCO SMOKER'S LUNG

CLEFT PALATE/LIP

Maternal tobacco use and cleft palate/lip

MATERNAL SMOKING INCREASES RISK OF CLEFT PALATE AND CLEFT LIP IN BABIES

Risk of cleft lip is approximately 30% higher in children born to women who smoke during pregnancy. Heavy maternal smoking (≥25 cigarettes/day) can increase risk of bilateral cleft palate in newborns four-fold.

Due to their limited resources for surgical repairs, children born with cleft palate/lip in low- and middle-income countries can be at higher risk of death for not being adequately treated in a timely manner. Surgeries at older ages can be associated with worse outcomes.

Tobacco smoke has more than 7000 chemicals, hundreds of which are toxic and negatively affect almost all organ systems HARM FROM TOBACCO. Children born to women who smoke during pregnancy are at higher risk of congenital disorders, cancer, respiratory disease, and sudden death SMOKING DURING PREGNANCY CLEFT PALATE/LIP. Smokers and non-smokers who are exposed to secondhand smoke are at higher risk of a long list of serious health conditions, including cancer and pulmonary and cardiovascular diseases. Both active and secondhand smoking increase cardiovascular disease risk by promoting atherosclerosis, blood clot formation, and several other mechanisms. There are at least 69 carcinogens in tobacco smoke, which can cause many types of cancer. Smoking increases risk of death from ischemic heart disease by more than 2.5-fold and death from lung cancer and chronic obstructive pulmonary disease by 20-fold.

Smoking also causes common health problems that may not be associated with immediate serious danger, but that carry substantial costs at the population level. For example, among 18–64-year-olds in the USA in 2008, 16% of current smokers had self-reported poor oral health status, which was 4 times greater than for never-smokers.

Several tobacco products have been introduced that claim to reduce harm, but some of them have already shown harmful effects. The World Health Organization has classified smokeless tobacco as an established cause of cancers of the mouth, esophagus, and pancreas. Smokeless tobacco, water pipes, and low-tar cigarettes expose users to carcinogens that are present in cigarette smoke. Preliminary studies have shown that e-cigarette smokers may be exposed to some harmful compounds or suffer some acute symptoms, but overall, e-cigarettes appear to be less harmful than traditional cigarettes as they do not involve combustion. Nevertheless, their overall impact on public health is unclear (see Chapter 12: *E-cigarettes*). As there is no safe tobacco product, the best way to prevent tobacco-associated harms is to avoid starting use (or for tobacco users to quit).

Due to limited access to care for early detection and treatment of tobacco-related diseases, individuals with low socioeconomic status or in low- and middle-income countries are likely to suffer more from the harms of tobacco.

PHILLIP MORRIS

"Philip Morris USA agrees with the overwhelming medical and scientific consensus that

CIGARETTE SMOKING CAUSES LUNG CANCER, HEART DISEASE, EMPHYSEMA

and other serious diseases in smokers. Smokers are far more likely to develop such serious diseases than non-smokers."

—Philip Morris USA Website, 2014

"I felt that I only really had the

CHOICE BETWEEN GIVING UP SMOKING AND GIVING UP BREATHING."

—MICHAEL WILKEN, a COPD patient, European Federation of Allergy and Airways Diseases Patients Associations' COPD Working Group, 2011

Chapter 04

CALL TO ACTION

Smoke-free legislation must be enacted to reduce involuntary exposure to tobacco smoke, especially in children. People should be informed about the risks of secondhand smoke and the potential harms of thirdhand smoke.

One of the statements that tobacco companies were required to publish in the United States (newspapers, TV, their websites, and on cigarette packs) after a federal court in 2012 concluded that the companies "deliberately deceived the American public:"

"THERE IS NO SAFE LEVEL OF EXPOSURE TO SECONDHAND SMOKE."

In 2007, South Australia became the first Australian state to ban smoking in cars in which children were traveling. "While it is an adult's right to choose to smoke and expose themselves to all the associated and well-known health risks,

THIS BAN AIMS TO PROTECT CHILDREN WHO COULD NOT OTHERWISE PROTECT THEMSELVES."

—KATY GALLAGHER, Chief Minister of the Australian Capital Territory

HARMS

Level of evidence for harms caused by secondhand smoke in children and adults

SUFFICIENT EVIDENCE

ADULTS

- Coronary artery disease
- Lung cancer
- Reproductive effects in women
- Stroke
- Nasal irritation

CHILDREN

- Sudden Infant Death Syndrome (SIDS), low birth weight
- Impaired lung function; lower respiratory illness; respiratory symptoms, e.g. cough, wheeze, breathlessness
- Middle ear disease

SUGGESTIVE EVIDENCE

ADULTS

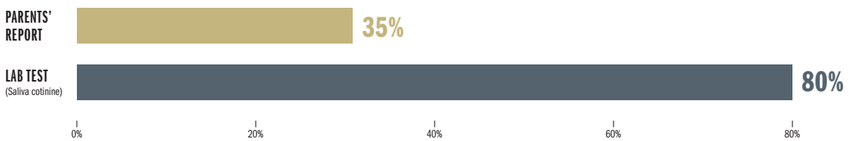
- Breast cancer, preterm delivery
- Chronic obstructive pulmonary disease, chronic respiratory symptoms, asthma, impaired lung function
- Atherosclerosis
- Cancer of the nasal sinus, pharynx, and larynx

CHILDREN

- Learning disability and attention deficit/ hyperactivity disorder
- Asthma, tuberculosis
- Allergic diseases (including rhinitis, dermatitis, food allergy), lymphoma leukemia

UNDERESTIMATED EXPOSURE

Exposure to secondhand smoke in children brought to a hospital for asthma or breathing problems: Cincinnati, USA, 2010–2011



While only one third of parents reported that their children were exposed to secondhand smoke, laboratory tests confirmed that, in reality, 80% of children brought to a hospital (Cincinnati Children's Hospital Medical Center) in the United States for asthma or breathing problems were exposed to secondhand smoke. These findings indicate that many respiratory diseases that might not be linked to secondhand smoke based on self-reports may in fact be related to the exposure.

162,200

Each year, secondhand smoking in the United Kingdom causes over 20,000 cases of lower respiratory tract infection, 120,000 cases of middle ear disease, 22,000 new cases of wheeze and asthma, and 200 cases of bacterial meningitis in children alone.

SECONDHAND SMOKE PREVALENCE

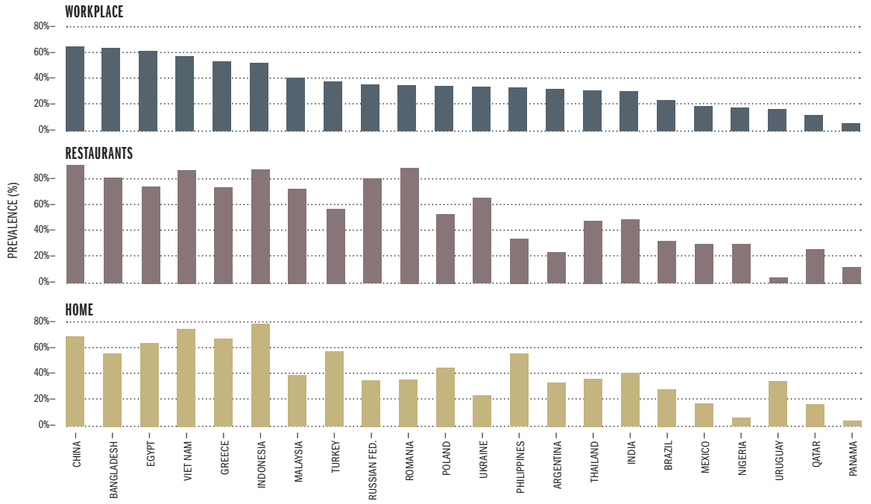
Secondhand smoke exposure (%): in adults age ≥ 15, Global Adult Tobacco Survey, 2008–2013

- **WORK** — Among those who work outside of the home who usually work indoors or both indoors and outdoors
- **RESTAURANTS** — Among those who visited restaurants in the past 30 days
- **HOME** — Somebody smokes in the home at least monthly

Based on a survey in 15 low- and middle-income countries in 2008–2011, people are

61% MORE LIKELY TO MAKE THEIR HOMES SMOKE-FREE VOLUNTARILY

if smoking in workplace and public place is banned.



Smoking bans in public places have a major effect on reducing exposure to secondhand smoke (see Chapter 23: *Smoke-Free*). For example, Uruguay adopted comprehensive smoke-free national legislation in 2006. Air nicotine concentrations in public places dropped by 90% in Uruguay from 2002 to 2007.

Exposure to secondhand smoke can cause many of the same diseases as active smoking. It increases the risks of contracting lung cancer by 30% (small cell lung cancer by 300%) and coronary heart disease by 25%. Exposure to secondhand smoke killed more than 600,000 non-smokers in 2010. Ischemic heart disease, lower respiratory tract infections, asthma, and lung cancer are the most common causes of deaths related to secondhand smoke. Women suffer the greatest number of deaths among non-smoking adults. In 2010, 740 million women were exposed to secondhand smoke in China alone.

Although most health effects of active smoking appear in older ages, many victims of exposure to secondhand smoke are children or even unborn babies HARMS. Because these effects occur at early ages, the number of years of healthy life lost due to sickness, disability or early death related to secondhand smoke in children is much higher than in adults. Laboratory tests revealing exposure to smoke suggest that harmful effects of exposure to secondhand smoke in children may even be vastly underestimated UNDERESTIMATED EXPOSURE.

People can be exposed to secondhand smoke in homes, indoor work and public places, cars, outdoor places, and in multiunit buildings—even if nobody smokes in one's own apartment but people smoke elsewhere in the building. The health effects of exposure to vapor from e-cigarettes are currently unknown, but several countries have included or are considering the inclusion of e-cigarettes in smoke-free regulations to prevent abatement of smoke-free laws by e-cigarette smoking. This inclusion would prevent any potential harm from exposure to e-cigarette vapor.

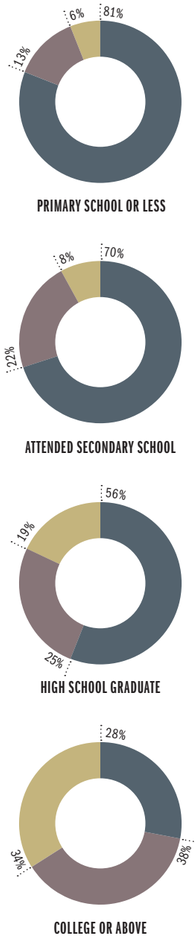
Nicotine and other tobacco compounds accumulate on various surfaces (such as clothes, furniture, walls, and vehicles) and can stay there several months after smoking has stopped, even after the surfaces have been washed. These residues, or thirdhand smoke, contain several toxic compounds and have shown harmful effects on human cells and animals in laboratory studies, but the nature and magnitude of any health effects in humans needs further investigation. Nevertheless, measures to eliminate secondhand smoke, such as banning smoking in public places, houses, and vehicles (see Chapter 23: *Smoke-Free*), can also reduce thirdhand smoke.

EXPOSURE BY SOCIOECONOMIC STATUS

Voluntary smoking ban at home by education level: Guangdong, China, 2010

NO BAN | PARTIAL BAN* | FULL BAN

*Partial ban: smoking was allowed in certain areas and/or at certain times only.



Families with low socioeconomic status may be more likely to be exposed to secondhand smoke at home.

CALL TO ACTION

Governments should legislate safe, environmentally-sustainable tobacco farming practices and hold the tobacco industry accountable for the costs their products inflict on farmers and the environment.

DANGEROUS PESTICIDES

Common pesticides used in growing tobacco, and their potential harms

As a monocrop, tobacco plants are vulnerable to a variety of pests and diseases, prompting many farmers to apply large quantities of chemicals and pesticides, which harm human health and the environment.

ALDICARB

Affects brain, immune and reproductive system in animals and humans; highly toxic even at low doses; soil and ground water contaminant.

USA, PHASING OUT BY 2018. EU MEMBER STATES, HIGHLY RESTRICTED USE.

CHLORPYRIFOS

Affects brain and respiratory system at high doses; found widely in soil, water, air, and food.

USA, BANNED FOR HOME USE IN 2000.

1,3-DICHLOROPROPEN

Highly toxic effects on skin, eye, respiratory and reproductive system; leaches readily into groundwater; probable cancer-causing agent in humans.

EU MEMBER STATES, PHASED OUT IN 2009.

IMIDACLOPRID

Affects brain and reproductive system; highly toxic to bees and other beneficial insects and certain bird species; persistent in the environment in soil, water, and as a food contaminant; contains naphthalene and crystalline quartz silica, which are cancer-causing agents; used in large volumes in agriculture.

EU MEMBER STATES, TWO-YEAR BAN FOR USE ON CROPS ATTRACTIVE TO BEES IN 2013.

METHYL BROMIDE

Affects skin, eye, brain and respiratory system; may cause fluid in lungs, headaches, tremors, paralysis or convulsions; volatile, ozone-depleting agent.

PHASING OUT BY 2015 UNDER MONTREAL PROTOCOL OF THE UNITED NATIONS ENVIRONMENT PROGRAMME.

CHLOROPICRIN

Lung-damaging agent; high-level exposures cause vomiting, fluid in lungs, unconsciousness and even death; toxic to fish and other organisms; used as a tear gas in WWI.

EU MEMBER STATES, BANNED SINCE 2011.

CARBARYL

Affects brain, and immune and reproductive system; likely cancer-causing agent, linked with cancer among farmers; linked with low sperm counts among exposed men; toxic to bees and other beneficial insects and aquatic life; contaminant in air and water.

EU MEMBER STATES, BANNED SINCE 2007.

In 2001, a senior manager at Philip Morris observed, "Creating social value starts with the product. Yet, except to the smoker,

THERE IS NO PERCEIVED SOCIAL VALUE TO OUR PRODUCT..."

Tobacco companies tout their Corporate Social Responsibility and take up environmental causes such as the "Keep America Beautiful" campaign, but in reality this stance is designed to protect the value of their business.

"...an estimated 4.5 trillion of the estimated annual 6 trillion globally consumed cigarettes [are] deposited as butts somewhere into the environment each year. This material comprises

THE LARGEST PERCENTAGE OF WASTE

... collected globally during the coastal cleanups each year."

—THOMAS E. NOVOTNY and ELLI SLAUGHTER, San Diego State University, 2014

"Cigarette butt waste is

THE LAST SOCIALLY ACCEPTABLE FORM OF LITTERING

in what has become an increasingly health and environmentally conscious world."

—CHERYL G. HEALTON (American Legacy Foundation) et al, Commentary in *Tobacco Control*, USA, 2011

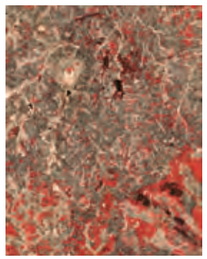
FARMING & VEGETATION LOSS

Tobacco farming contributes to vegetation loss and climate change.

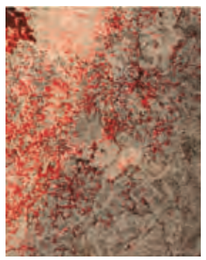
Clearing of land for cultivation and the large amounts of wood needed for curing tobacco cause massive deforestation at a rate of approximately 200,000 ha per year, and the subsequent release of greenhouse gases contributes to climate change.

■ DECREASE IN VEGETATION

1990–2010
CORONEL MOLDES, SALTA, ARGENTINA



1975–2010
KASUNGU, CENTRAL REGION, MALAWI



1975–2010
NENO, SOUTHERN REGION, MALAWI

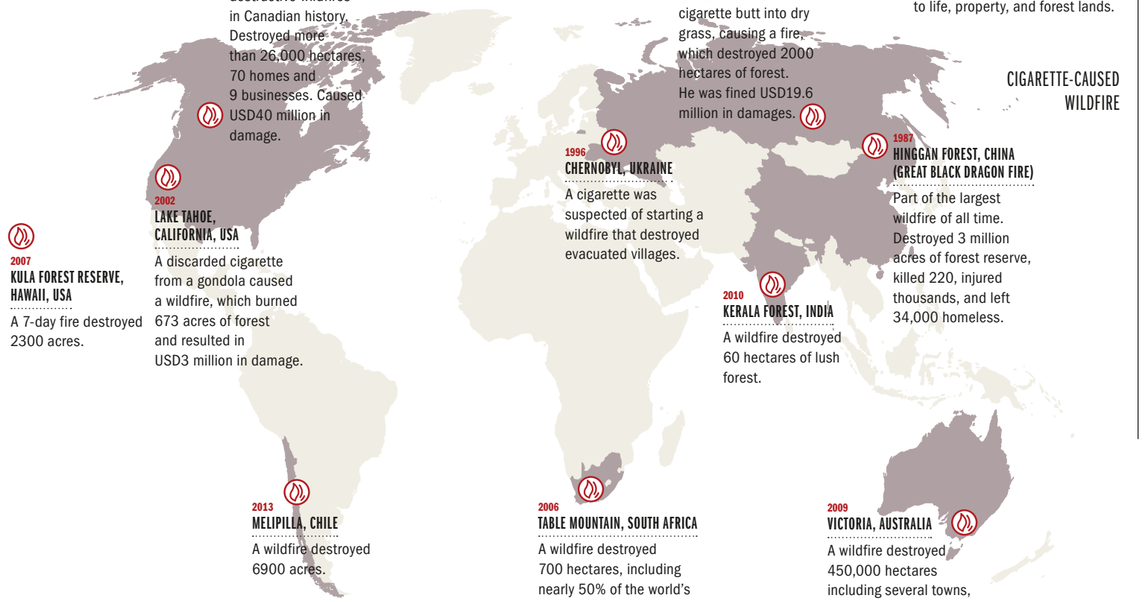
1990–2010
URAMBO, TABORA, TANZANIA

In 2010-2011, subsequent to this image, Urambo District in Tanzania lost 1.3 million m^3 trees worth USD10.5 million, which would occupy an area of 145 km^2, the equivalent of 2½ times the size of Manhattan.

WILDFIRE CAUSE

Cigarette butts are a common cause of wildfires, and a threat to life, property, and forest lands.

CIGARETTE-CAUSED WILDFIRE



2007 KULA FOREST RESERVE, HAWAII, USA
A 7-day fire destroyed 2300 acres.

2002 LAKE TAHOE, CALIFORNIA, USA
A discarded cigarette from a gondola caused a wildfire, which burned 673 acres of forest and resulted in USD3 million in damage.

2003 BRITISH COLUMBIA, CANADA
One of the most destructive wildfires in Canadian history. Destroyed more than 26,000 hectares, 70 homes and 9 businesses. Caused USD40 million in damage.

2013 MELIPILLA, CHILE
A wildfire destroyed 6900 acres.

1996 CHERNOBYL, UKRAINE
A cigarette was suspected of starting a wildfire that destroyed evacuated villages.

2009 SIBERIAN REPUBLIC OF BURYATIA
A man discarded a cigarette butt into dry grass, causing a fire, which destroyed 2000 hectares of forest. He was fined USD19.6 million in damages.

2010 KERALA FOREST, INDIA
A wildfire destroyed 60 hectares of lush forest.

1987 HINGGAN FOREST, CHINA (GREAT BLACK DRAGON FIRE)
Part of the largest wildfire of all time. Destroyed 3 million acres of forest reserve, killed 220, injured thousands, and left 34,000 homeless.

2006 TABLE MOUNTAIN, SOUTH AFRICA
A wildfire destroyed 700 hectares, including nearly 50% of the world's silverleaf tree population.

2009 VICTORIA, AUSTRALIA
A wildfire destroyed 450,000 hectares including several towns, killing 208 and leaving 10,000 people homeless.

The tobacco industry damages the environment in many ways, and in ways that go far beyond the effects of the smoke that cigarettes put into the air when they are smoked. The harmful impact of the tobacco industry on deforestation, climate change, litter, and forest fires is enormous and growing.

Tobacco farming is a complicated process involving heavy use of pesticides, growth regulators, and chemical fertilizers DANGEROUS PESTICIDES. These can create environmental health problems, particularly in low- and middle-income countries with lax regulatory standards. In addition, tobacco, more than other food and cash crops, depletes soil of nutrients, including nitrogen, potassium, and phosphorus. As a result, in many low- and middle-income regions of the world, new areas of woodlands are cleared every year for tobacco crops (as opposed to re-using plots) and for wood needed for curing tobacco leaves, leading to deforestation FARMING & VEGETATION LOSS. This deforestation can contribute to climate change by removing trees that eliminate CO_2 from the atmosphere.

Litter from cigarettes fouls the environment as well. Internationally, cigarette filters (which are not generally biodegradeable) are the single most collected item in beach cleanups. Material that leaches out of these filters is toxic to aquatic life. To combat this, a bill to ban the sale of single-use filtered cigarettes was submitted to the California Legislature in 2014.

Damage to people and the environment by fires caused by cigarette smoking is considerable and deadly WILDFIRE CAUSE. According to data from the United States Fire Administration, cigarette smoking is the first or second-leading cause of fire-related deaths every year in the USA. Young and elderly persons are among the most commonly affected, and data from CDC indicate that fire and burns are annually among the 10 leading causes of unintentional death in the United States.

20¢

In 2009, San Francisco implemented a 20-cent per pack Cigarette Litter Abatement fee to help recover the cost of cleaning up cigarette litter.

"I will quit if plastic sachets are no more available."
—SATYABIPRA PATRA, 9-year gutka user, 2011

PLASTIC BANS

India banned plastic wrapping for tobacco products in 2011.

ENVIRONMENTAL & PUBLIC HEALTH BENEFITS

- Passed in an effort to decrease plastic litter and toxic environmental waste
- Paper packaging increased prices and decreased sales and consumption of cigarettes, bidi, and chewing tobacco in Jaipur, Rajasthan
- Decreased consumption could confer health benefits such as decreased cancer rates
- Lack of plastic packages may discourage customers

CALL TO ACTION

Governments should strengthen tobacco control programs to prevent tobacco consumption from impoverishing citizens and impeding economic development.

TOBACCO IMPOVERISHES COUNTRIES

TANZANIA

$40M

OF $50M REVENUE

Tanzania earns $50 million per year from tobacco but spends $40 million for tobacco-related cancers alone.

UNITED STATES

$6000

EXCESS COST PER SMOKER

US smokers cost their employers an excess of $6000 a year per smoker due to lower on-the-job productivity, higher absences, and excess healthcare costs.

BRAZIL

100M

REALS

The cost to Brazil due to tobacco is approximately 100 million reals per thousand smokers in lost productivity.

Productivity loss and healthcare cost burdens undermine economic development in many countries.

"[In 2004-2005], tobacco consumption **[IMPOVERISHED] ROUGHLY 15 MILLION PEOPLE IN INDIA."**

—RIJO M JOHN et al, *Tobacco Control*, 2011

CHILD LABOR

Working in tobacco fields affects school attendance and retention rates.

Suza in Kasungu district and Katalima in Dowa district of Malawi: 2008

63%

of children of tobacco-growing families were involved in child labor.

10–14%

of children from tobacco-growing families are out of school because of working in tobacco fields.

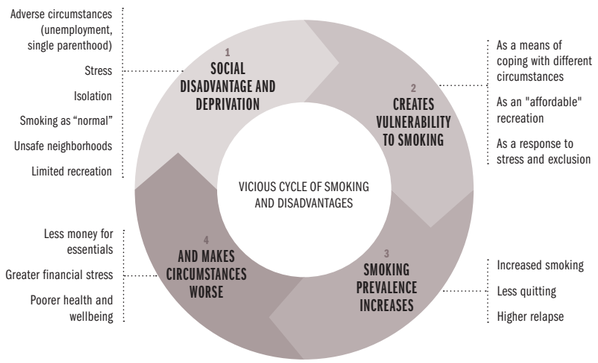
16%

of parents said their children were out of school because of an inability to pay educational fees and buy uniforms and shoes.

Lack of education drives individuals further into poverty.

VICIOUS CYCLE

Disadvantage increases smoking likelihood, and smoking increases likelihood of disadvantaged circumstances.



"…when child and maternal mortality are falling universally around the world,

THE THREAT OF A RISE IN TOBACCO IS HEADING IN THE WRONG DIRECTION…

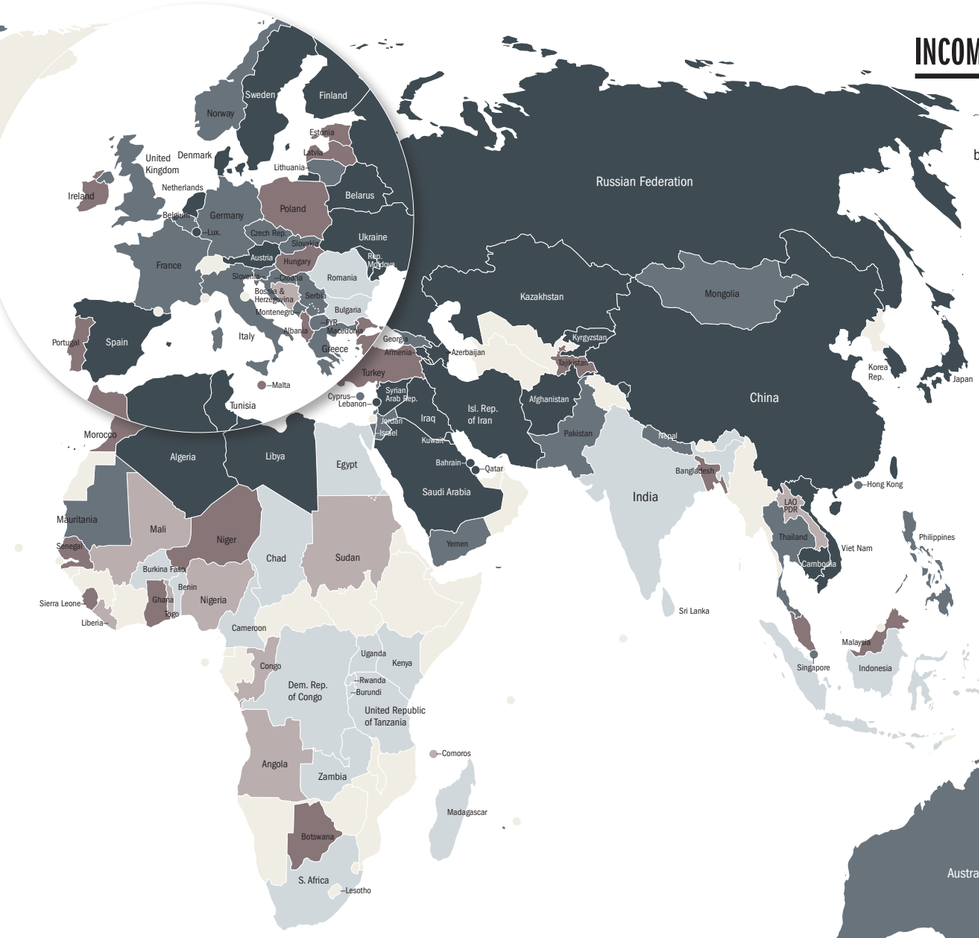
The developing world is about to enter a phase of rapid growth in tobacco at a time when it can least afford it."

—KEITH HANSEN, The World Bank Group, 2012

FINANCIAL STRAIN

Percentage of male smokers who spent money on cigarettes instead of household essentials

Smokers spend money on cigarettes instead of on household essentials such as food and education. This could exacerbate the poor's disadvantaged circumstances and standard of living.



INCOME UP IN SMOKE

Percentage of median household income needed to buy 10 of the cheapest brand of cigarettes per day: 2012

- 10.00–100.00%
- 7.50–9.99%
- 5.00–7.49%
- 2.50–4.99%
- 0.00–2.49%
- NO DATA

There is an inextricable and pernicious relationship between tobacco and poverty. In many ways, tobacco and poverty are part of the same vicious cycle VICIOUS CYCLE. Across the globe, smoking is generally common among the poorest segments of the population. These groups, already under financial stress, have little disposable income to spend on cigarettes. Consumption of tobacco adds directly to financial stress FINANCIAL STRAIN. For example, in a city such as New York, a pack-per-day smoker living at the poverty level spends as much as 20% of his household income in supporting his smoking habit. In lower-income countries, the World Health Organization estimates that as much as 10% of household income can be spent on tobacco products, leaving less money for food, education, housing, and clothing.

There are costs to smokers that go far beyond the money that they pay to buy cigarettes. Smokers develop many more illnesses than non-smokers, which places enormous cost stresses on any country's health care expenditures, and makes it more difficult to afford health coverage. As a result, in places where individuals purchase health insurance, those costs are proportionately much higher than they are for non-smokers. Smoking-related illness takes workers out of the work force, adding to the indirect costs of tobacco and creating further downward pressure on the economy, especially in LMICs TOBACCO IMPOVERISHES COUNTRIES.

Furthermore, working in the tobacco industry can trap people in poverty. In LMICs, many small tobacco farmers are often forced to sell their crop at a low, fixed price and have few choices but to over-pay the tobacco companies for fertilizer, seeds, technical advice, and other items. Trapped in a type of indentured servitude, they are added to the lists of those victimized directly or indirectly by the tobacco economy.

BURKINA FASO

In Burkina Faso in 1998, a Rothman's representative said, "the average life expectancy here is 40 years, infant mortality is high, **THE HEALTH PROBLEMS WHICH SOME SAY ARE CAUSED BY CIGARETTES JUST WON'T BE A PROBLEM HERE."**

Tobacco companies view vulnerable populations as market opportunities, not as human beings.

PRODUCTS

AND THEIR USE

The tobacco industry has invested billions of dollars marketing new products to new people in new markets, often purporting that their sole goal is to reduce harm to their customers. We know, however, that their real aim is simply to sell more products and create more addiction, with little concern for who or what is harmed.

POVERTY

The poorest smokers in Uruguay smoke twice as many cigarettes as the wealthiest smokers.

EQUALITY

There are only two countries in the world where more women smoke than men, but there are 24 where more girls smoke than boys.

DEVELOPMENT

Without effective policy interventions, Africa's share of the world's smokers will triple by the end of the century.

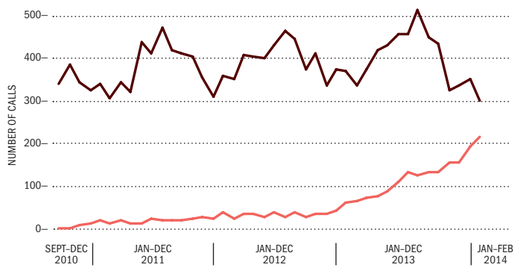
CALL TO ACTION

Because nicotine is not a benign drug, products containing nicotine must be regulated in a manner commensurate with the harm that they cause.

DANGEROUS POISON

E-cigarettes and liquid nicotine poisoning calls on the rise in the USA

■ CIGARETTES ■ E-CIGARETTES AND LIQUID NICOTINE



The number of poison center calls involving e-cigarettes and liquid nicotine rose from one per month in September 2010 to 215 per month in February 2014 in the USA. Approximately 50% of the calls to poison centers involving e-cigarettes and liquid nicotine were for children under age 6.

"It's not a matter of if a child will be seriously poisoned or killed [by e-liquid], it's a matter of when."

—LEE CANTRELL, Director of the San Diego division of the California Poison Control System, 2014

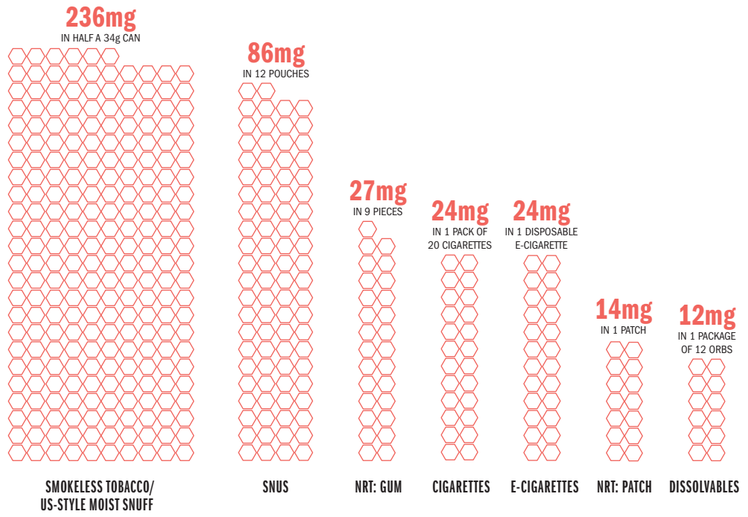
Both poison control centers and emergency rooms in the USA are receiving

INCREASED CALLS AND VISITS REGARDING E-LIQUID POISONINGS AND EXPOSURES.

Nicotine is a poison and e-liquid is absorbed through inhalation, ingestion and skin contact. Colorful product packaging makes e-liquid bottles attractive to toddlers and children, who are at a considerable risk for e-liquid poisoning.

VARIATIONS IN NICOTINE LEVELS

Daily nicotine consumption illustrated through select product and usage examples



A typical vial (10mL) of liquid nicotine contains

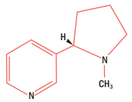
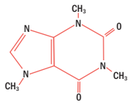
A LETHAL DOSE

if ingested. Labeling a vial of nicotine with pictures of Gummi Bears and candy can be

APPEALING TO CHILDREN.

NICOTINE AND CAFFEINE

Some claim that nicotine is as benign as caffeine, but studies show that nicotine is more likely to cause dependence, may help cancers grow, and is considered lethal at a much smaller dose than caffeine.

	NICOTINE	CAFFEINE
		
WITHDRAWAL SYMPTOMS	Nicotine withdrawal caused a more intensive degree of irritability, restlessness and difficulty concentrating compared with caffeine withdrawal.	Caffeine withdrawal symptoms, including headache, fatigue and difficulty focusing, are common after consuming large quantities of caffeine at a time. Typically, these symptoms are short-term and users of caffeine, alcohol and tobacco report feeling most dependent on tobacco.
PSYCHOLOGICAL EFFECT	Nicotine produces a psychoactive, stimulant effect. Nicotine increases the speed of sensory information processing, and induces a feeling of relaxation and reduced stress.	Caffeine is a stimulant. It induces alertness, elevates mood, facilitates thinking, and increases feelings of motivation.
POSSIBLE EFFECTS ON CANCER	In cell and animal studies, nicotine helps cancer grow and spread and may weaken chemotherapy.	In cell and animal studies, caffeine prevents some events that may help cancer grow.
LETHAL DOSE	**50–60mg** oral dose of liquid nicotine	**10g** oral caffeine dose

TYPES OF NICOTINE DELIVERY SYSTEMS

Continuum of harm

CLINICALLY APPROVED

NICOTINE REPLACEMENT THERAPY (NRT)
NRT is highly regulated and if used as recommended for cessation, there are few adverse outcomes. NRT is not recommended for certain populations, such as pregnant women, but most would agree NRT is safer than smoking.

UNCERTAIN SAFETY

Many popular tobacco products exist in a research and regulatory vacuum. It is uncertain if these products are dangerous to users and how much exposure must occur for harm to be detected. Examples include:

E-CIGARETTES
Traditionally sold by entrepreneurial companies, but increasingly e-cigarette companies are owned by tobacco companies. These products contain an atomizer that heats liquid nicotine and other flavors and additives, creating a vapor that is then inhaled.

SNUS
A smokeless tobacco product originally from Sweden. Due to manufacturing and storage processes (see Chapter 14: *Smokeless Tobacco*), snus has lower concentrations of harmful chemicals and cancer-causing agents, yet is still harmful, although less so than other forms of smokeless tobacco.

DISSOLVABLE TOBACCO PRODUCTS
Products such as wafers, lozenges, sticks, strips and orbs often resemble candy or are flavored.

HEAT-NOT-BURN PRODUCTS
These new products are similar to e-cigarettes but contain tobacco. The external heat source for heat-not-burn products, such as Philip Morris's Heat Stick, vaporizes nicotine from tobacco, purportedly avoiding the toxic compounds from combusted cigarettes.

ESTABLISHED HARMS

SMOKELESS TOBACCO
The use of smokeless tobacco, with the possible exception of snus, increases the risk of oral, head, and neck cancers.

WATER PIPES
The risk from using water pipes is similar to that from smoking cigarettes, and the volume of smoke inhaled while using water pipes can be substantially more than that inhaled while smoking cigarettes (see Chapter 13: *Water Pipes*).

COMBUSTED TOBACCO
Cigarettes kill at least half of all lifetime users. There are thousands of toxic chemicals in cigarette smoke, and 69 cancer-causing agents. Other dangerous combusted products include cigars, little cigars and cigarillos.

Nicotine is the addictive agent in cigarettes. Cigarettes kill at least half of lifetime users, and tobacco companies continue to look for "safer" or less harmful ways to provide nicotine to consumers. While the smoke that results from combustion is the deadliest aspect of smoking, this does not mean that nicotine is benign.

Nicotine affects the nervous system and the heart. The effects of nicotine on the body include decreased appetite, mood elevation, increased heart rate, increased blood pressure, nausea, and diarrhea. Symptoms of nicotine withdrawal include intense craving, anxiety, depression, headache, increased appetite, and difficulty concentrating NICOTINE AND CAFFEINE.

The level of harm from nicotine is based on how nicotine is delivered to the body. Combustion is the most efficient method of delivering nicotine to the brain, and because of the tars and carcinogens in smoke is also the most harmful method of consuming nicotine.

Acute exposure to nicotine through the skin or through ingestion can also be harmful. If ingested, nicotine is rapidly absorbed by the small intestine, and typically produces symptoms between 15 minutes and 4 hours after exposure. Death may occur within one hour of severe exposure. Numerous cases of nicotine poisoning have been documented since the early twentieth century when nicotine was used as a pesticide. Exposure to liquid nicotine was relatively rare until the newfound popularity of e-cigarettes DANGEROUS POISON.

The risk of nicotine addiction depends on the dose of nicotine delivered and the method in which it is delivered VARIATIONS IN NICOTINE LEVELS. There are a variety of ways to consume nicotine, and some methods are currently regulated, such as nicotine replacement therapy. Other methods, such as e-cigarettes and other novel nicotine products, are currently unregulated in most countries, yet these products are growing in popularity. Because of its addictiveness and the other known harms of nicotine, a framework is needed to regulate all nicotine delivery systems in a manner consistent with the harm that they cause TYPES OF NICOTINE DELIVERY SYSTEMS.

"NICOTINE IS ADDICTIVE AND VERY HABIT FORMING, AND IT IS VERY TOXIC

by inhalation, in contact with the skin, or if swallowed. Nicotine can increase your heart rate and blood pressure and cause dizziness, nausea, and stomach pain. Inhalation of this product may aggravate existing respiratory conditions."

— Altria's MarkTen e-cigarette warning label, 2014

Chapter 08

CONSUMPTION

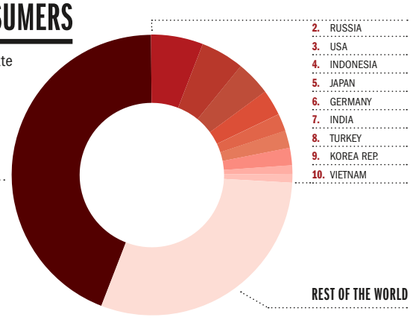
PRODUCTS

CALL TO ACTION

Our largest objective is to dramatically reduce the consumption of combustible cigarettes.

TOP 10 CONSUMERS

Distribution of cigarette consumption: 2014



1. CHINA

More cigarettes are now smoked in China than in the next top 29 cigarette-consuming countries combined.

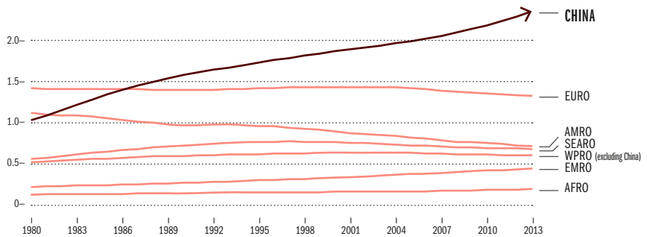
5.8 TRILLION: number of cigarettes smoked worldwide in 2014.

Many of the nations which significantly reduced their smoking prevalence during the last decade, including Canada, Denmark, Iceland, New Zealand, and Uruguay, have seen that their remaining smokers are those who smoke the most cigarettes per day. Increased tobacco control efforts must be targeted at those diehard users, who are often

THE MOST VULNERABLE MEMBERS OF SOCIETY.

CONSUMPTION BY REGION

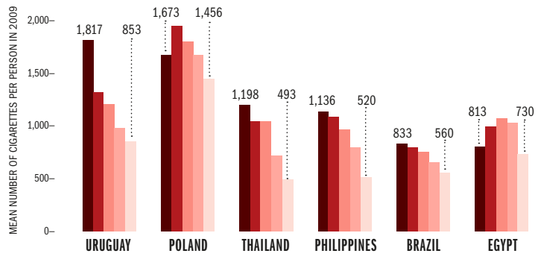
Global cigarette consumption by WHO region: 1980–2013, in trillions



The disproportionate increase in the number of cigarettes smoked in China is a combined effect of China's population growth and an increase in smoking intensity. In 2013, an average smoker in China smoked 22 cigarettes a day, nearly 50% more than in 1980.

SMOKING AND WEALTH

Disparities in cigarette consumption in selected Global Adult Tobacco Survey countries by wealth group: LOWEST LOW MIDDLE HIGH HIGHEST



Lower socioeconomic groups smoke more not only in high-income but also in low- and middle-income countries.

"The underlying business continues to perform well […]

OUR GROWTH STRATEGY CONTINUES TO DELIVER."

—NICANDRO DURANTE, CEO, British American Tobacco, 2013

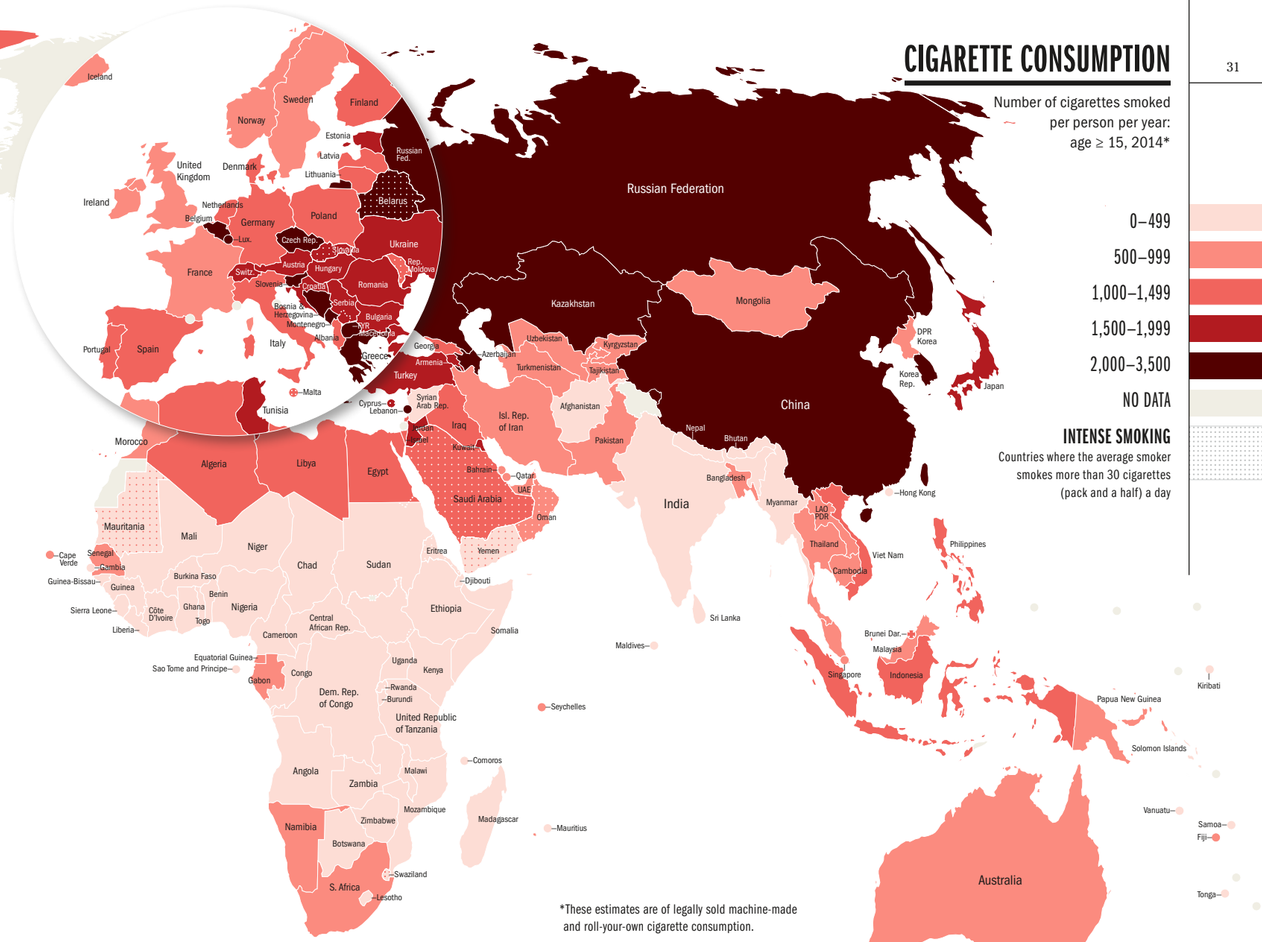
"THE MARKET COMPETES ON ADDICTION

—the most addictive products win out. With research, they [firms], like the cigarette companies, may find out which of their ingredients is most effective in increasing sales/addiction. […]they are loath to give up these profit opportunities, no matter the costs to society."

—JOSEPH E. STIGLITZ,
Recipient of the Nobel Memorial Prize in Economic Sciences, 2008

CIGARETTE CONSUMPTION

Number of cigarettes smoked per person per year: age ≥ 15, 2014*



0–499
500–999
1,000–1,499
1,500–1,999
2,000–3,500
NO DATA

INTENSE SMOKING

Countries where the average smoker smokes more than 30 cigarettes (pack and a half) a day

*These estimates are of legally sold machine-made and roll-your-own cigarette consumption.

About 5.8 trillion (5,800,000,000,000) cigarettes were smoked worldwide in 2014. The significant reductions in smoking rates in the United Kingdom, Australia, Brazil, and other countries that implement increasingly tight tobacco control laws have been offset by the growing consumption in a single nation: China. The Chinese market now consumes more cigarettes than all other low- and middle-income countries combined TOP 10 CONSUMERS.

Other regions are increasingly playing larger roles in the growing global smoking epidemic. The WHO Eastern Mediterranean Region (EMRO) now has the highest growth rate in the cigarette market, with more than a one-third increase in cigarette consumption since 2000 CONSUMPTION BY REGION. Due to its recent dynamic economic development and continued population growth, Africa presents the greatest risk in terms of future growth in tobacco use. Without appropriate prevention policies across the continent, Africa will lose hundreds of millions of lives in this century due to tobacco smoking.

Patterns of cigarette consumption vary widely within countries. Cigarette consumption displays large disparities and is associated with lower socioeconomic status, even in low- and middle-income countries SMOKING AND WEALTH. These inequalities can be reduced by the use of targeted tobacco control measures. For example, revenue from cigarette tax increases could be directed to fund tobacco prevention and cessation programs for disadvantaged groups.

Consumption of other combustible tobacco products is also on the rise. Since 2000, global consumption of cigarette-like cigarillos has more than doubled, while consumption of roll-your-own tobacco and pipe tobacco both increased by more than a third. This increase is partly because these other tobacco products are often taxed at lower rates than cigarettes and are, therefore, more affordable.

China and Eastern and Southern Europe consume the most cigarettes per person. This is not only because of the high smoking prevalence (see Chapter 9: *Male Smoking* and Chapter 10: *Female Smoking*) but also

HIGH SMOKING INTENSITY

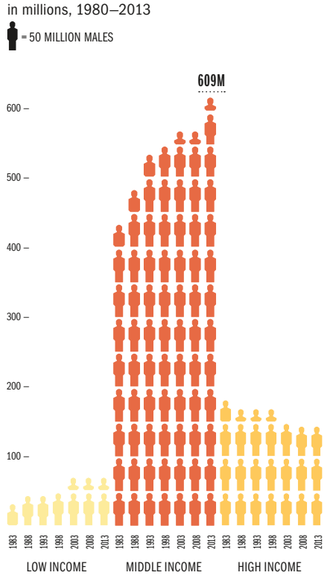
—the large number of cigarettes smoked by average smoker per day.

CALL TO ACTION

All countries need to fund and implement more effective tobacco control policies to increase cessation and reduce initiation.

TRENDS BY INCOME LEVEL

Change in number of daily male smokers: age ≥15 in high-, middle-, and low-income countries, in millions, 1980–2013



Middle-income countries have seen the greatest increase.

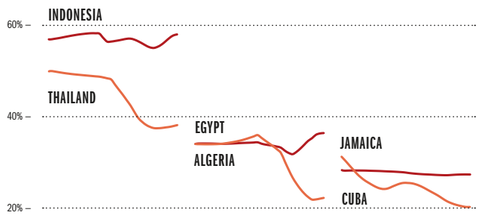
10M+

Countries with 10,000,000 or more daily male smokers: age ≥15, in millions, 2013

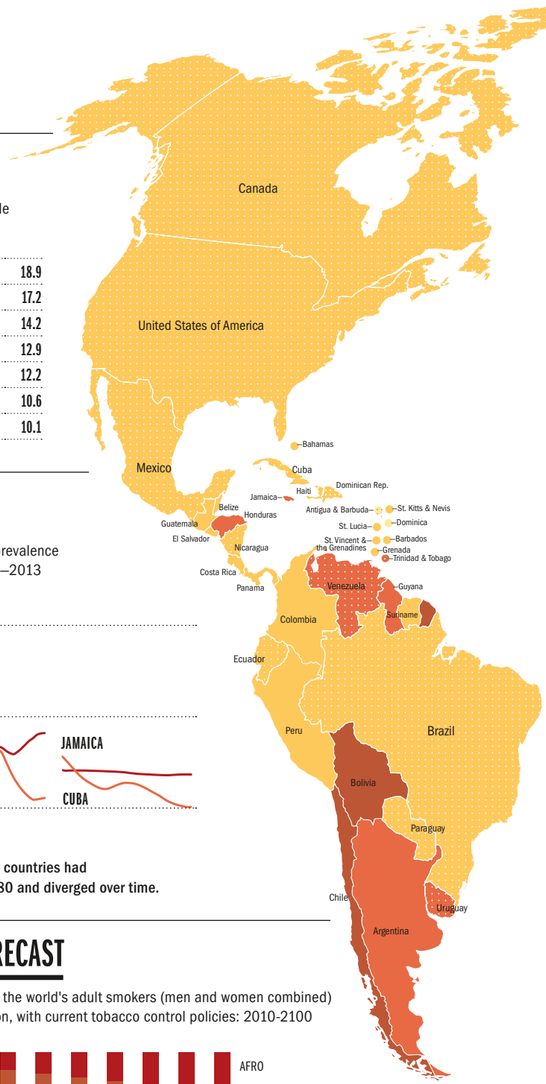
CHINA	264.0	JAPAN	18.9
INDIA	106.0	PAKISTAN	17.2
INDONESIA	50.6	VIET NAM	14.2
RUSSIAN FEDERATION	27.7	PHILIPPINES	12.9
BANGLADESH	24.5	BRAZIL	12.2
UNITED STATES OF AMERICA	21.6	TURKEY	10.6
		EGYPT	10.1

SMOKING TRENDS

Adult male age-standardized daily smoking prevalence in select middle-income countries (%): 1980–2013

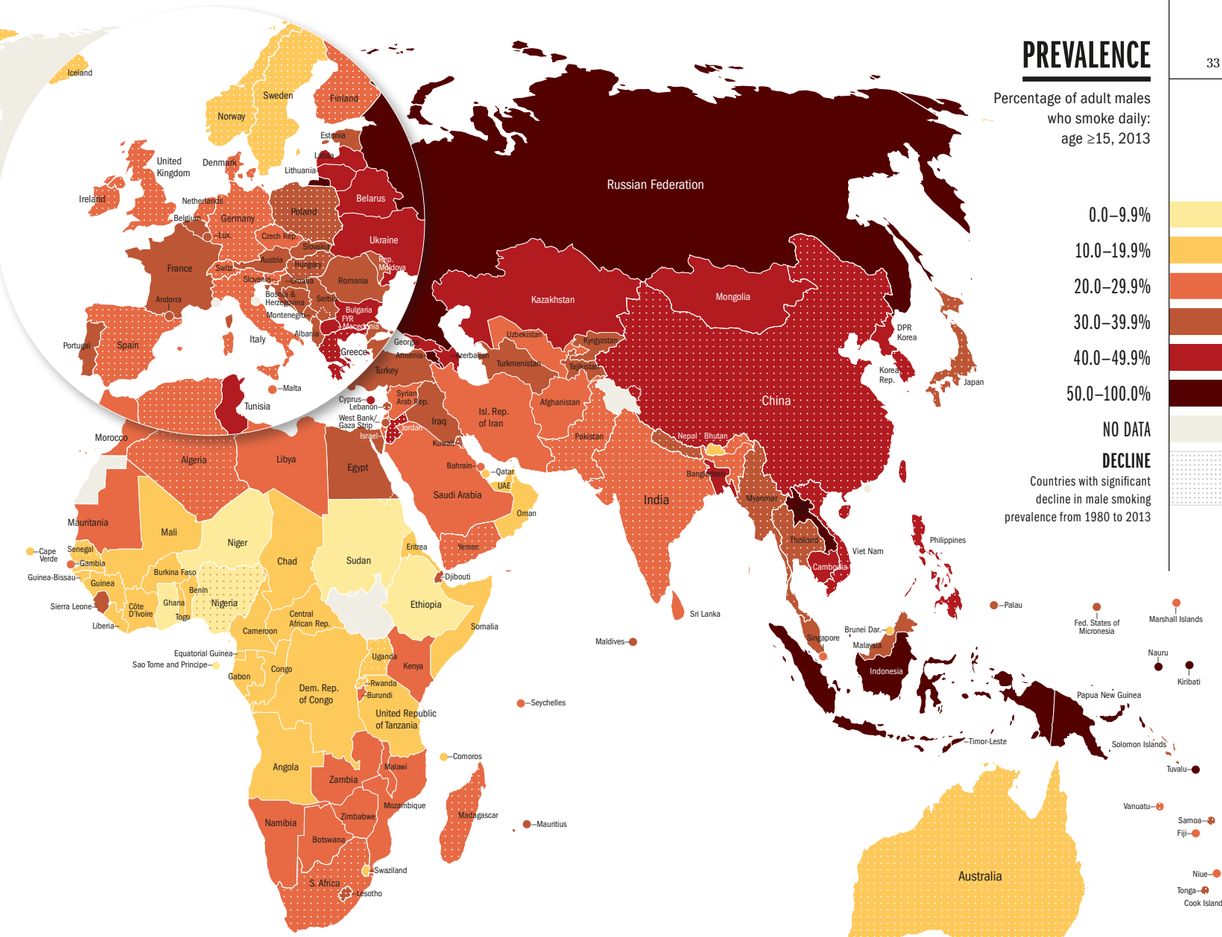


In these three different regions, neighboring countries had comparable male smoking prevalence in 1980 and diverged over time.



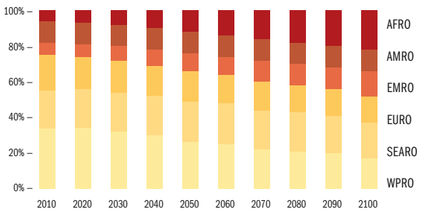
PREVALENCE

Percentage of adult males who smoke daily: age ≥15, 2013



REGIONAL FORECAST

Estimated proportion of the world's adult smokers (men and women combined) living in each WHO region, with current tobacco control policies: 2010-2100



The majority of the predicted increase in the AFRO region is attributed to men.

INDONESIA

"If we stop selling cigarettes here someone else is going to do it instead."

—ANNE EDWARDS, Director External Communications, Philip Morris International, on Sex, Lies and Cigarettes, 2011

SUCCESSFUL INTERVENTIONS

Uruguay has been quite successful in tobacco control. Adult male current smoking prevalence rates have

DECLINED FROM 39% TO 31% IN ONLY SIX YEARS

(2003–2009).

"What is happening today in Uruguay could happen to any country that implements very effective tobacco control measures."

—DR. EDUARDO BIANCO, president of Uruguay's leading tobacco control organization, CIET, 2010

Globally, nearly a third of men ages 15 years or older, or around 820 million people, are current smokers. In the last 30 years, the global age-standardized prevalence of daily smoking among men has decreased approximately 10%. However, the trend in smoking prevalence in men varies substantially worldwide, from a 24% decrease in Canada to a 16% increase in Kazakhstan from 1980 to 2013.

Although most of the countries with the greatest reductions in male smoking are high-income countries, smoking prevalence has also substantially decreased in many low- to middle-income countries (LMICs) SMOKING TRENDS. However, many other LMICs have made only slight reductions or have even experienced an increase in their smoking prevalence TRENDS BY INCOME LEVEL. Most of these countries are located in Southern and Central Asia, Eastern Europe, and Africa. For example, with no reduction in smoking prevalence from 1980 to 2013, Indonesia has more than 50 million male daily smokers, and ranks third globally for the number of male smokers. If current tobacco trends continue, smoking prevalence in men and women combined in Africa will increase from 16% in 2010 to 22% in 2030, most of which is expected to be among men REGIONAL FORCAST. Because the African population is growing much more rapidly than the rest of world, Africa will see a much higher number of male smokers in the future if no additional tobacco control policies are implemented.

China has one third of all male smokers worldwide. Although awareness about the importance of tobacco control appears to be increasing, and several tobacco control policies have recently been established in China, simulation models suggest that additional tobacco control programs could reduce smoking rates in China by more than 40% and potentially save more than 12.7 million lives by 2050. Countries with limited tobacco control policies could see comparable or even greater reductions in smoking prevalence if they were to establish more effective policies.

Since 1980, although smoking rates in men have not substantially changed in several Southeast Asian countries,

THE RATES HAVE HALVED

in Hong Kong (China), Japan, and Singapore.

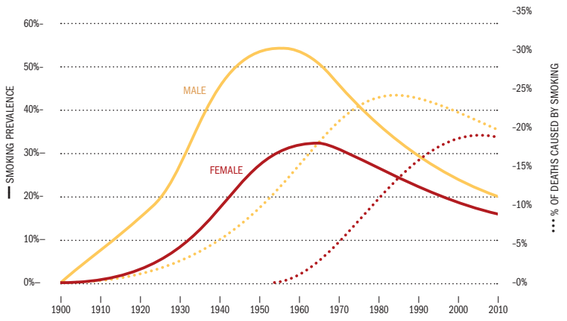
CALL TO ACTION

One of the largest public health opportunities available to governments in the 21st century is to prevent an increase in smoking among women in low- and middle-income countries.

TREND, USA

Estimated smoking prevalence and smoking-attributable mortality: USA, 1900–2010

MALE ■ FEMALE ■ —% PREVALENCE ···% OF DEATHS CAUSED BY SMOKING



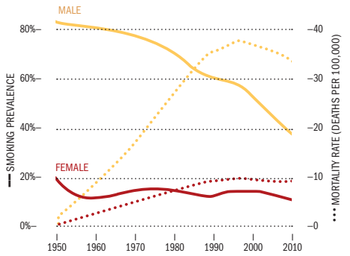
In high-income settings, smoking and smoking-related deaths in women follow the patterns in men by about three decades—but this is not inevitable.

TREND, JAPAN

Age-standardized smoking prevalence and lung cancer mortality: Japan, 1950–2010

MALE ■ FEMALE ■ —% PREVALENCE ···LUNG CANCER MORTALITY RATE

IN JAPAN, FEMALE SMOKING HAS NOT FOLLOWED THE GLOBAL EPIDEMIC MODEL.



3M+

Countries with 3,000,000 or more daily female smokers: age ≥15, in millions, 2013

UNITED STATES	17.7
CHINA	12.2
INDIA	12.2
RUSSIA	9.9
BRAZIL	8.6
GERMANY	6.9
FRANCE	6.4
JAPAN	5.4
ITALY	5.2
UNITED KINGDOM	4.9
SPAIN	4.2
POLAND	3.9
TURKEY	3.9

"As globalization brings iPhones, movies, and fashion to the developing world, it also brings…

THE LIES OF TOBACCO COMPANIES

in need of new female customers. I know these lies because I heard them all—smoking makes you stylish or attractive or independent. No on all counts—smoking kills, plain and simple."

—NANCY G. BRINKER, founder of the Susan G. Komen for the Cure Foundation, 2010

No single institution owns the copyright for beauty.
—Virginia Slims advertisement

UNDERREPORTING OF USE

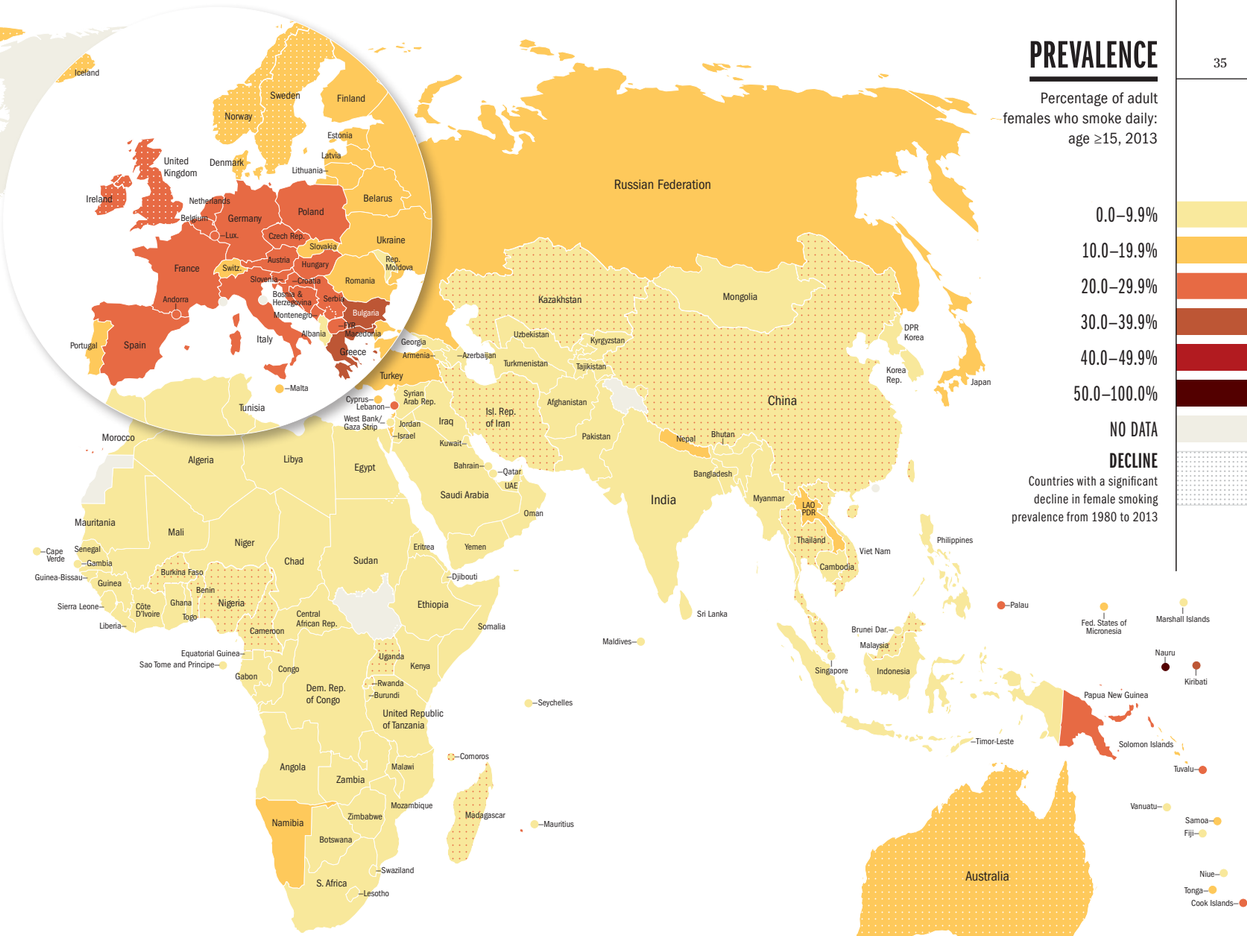
Underreporting of tobacco use among women in South Korea: 2008

UNDERREPORTING LEADS TO UNDERESTIMATION OF IMPACT ON WOMEN

Of 1,620 chemically-verified smokers, 12% of men and 59% of women classified themselves as non-smokers. In societies such as South Korea, where it is generally not socially acceptable for women to smoke in public, smoking in private may still occur and stay hidden to survey researchers. This underreporting will lead to the underestimation of the impact tobacco use has on women in such societies.

PREVALENCE

Percentage of adult females who smoke daily: age ≥15, 2013



0.0–9.9%
10.0–19.9%
20.0–29.9%
30.0–39.9%
40.0–49.9%
50.0–100.0%
NO DATA
DECLINE

Countries with a significant decline in female smoking prevalence from 1980 to 2013

Approximately 176 million adult women worldwide are daily smokers. Smoking rates in women significantly decreased from 1980 to 2013 in several high-income countries. However, smoking among women is still more common in high-income than in low- and middle-income countries.

Although smokeless tobacco use by South Asian women is relatively common (see Chapter 14: *Smokeless Tobacco*), female cigarette smoking in most Asian and African countries is uncommon. Furthermore, smoking rates decreased in several Asian and African countries from 1980 to 2013. However, appropriate tobacco control programs must be in place to prevent an increase in smoking rates among women in the future to ensure that low- and middle-income countries will not follow the pattern of the global smoking epidemic. In this model, first the male smoking prevalence substantially increases, and over the following 3–5 decades smoking rates increase among women TREND, USA.

The example of Japan shows that this second stage of the epidemic (the increase in female smoking prevalence) is not inevitable TREND, JAPAN.

Tobacco companies attempt to link smoking to women's rights and gender equality, as well as glamor, sociability, enjoyment, success, and slimness. They use various strategies to promote the social acceptability of smoking in women, including product development (e.g. flavors and aromas), product design (e.g. packs that are more appealing to women) and advertising, involvement in social responsibility programs, and using the influence of popular media.

Some people, especially women, smoke in order to lose or control weight. Healthy diet and exercise have shown to be more efficient and less harmful ways to control weight or obesity, with additional benefits beyond weight control alone.

"One [hypothesis] is the greater concern women have that if they stop smoking they will gain weight.

THIS FEAR UNDOUBTEDLY PREVENTS MANY WOMEN from desiring to stop smoking."

– Lorillard, 1973

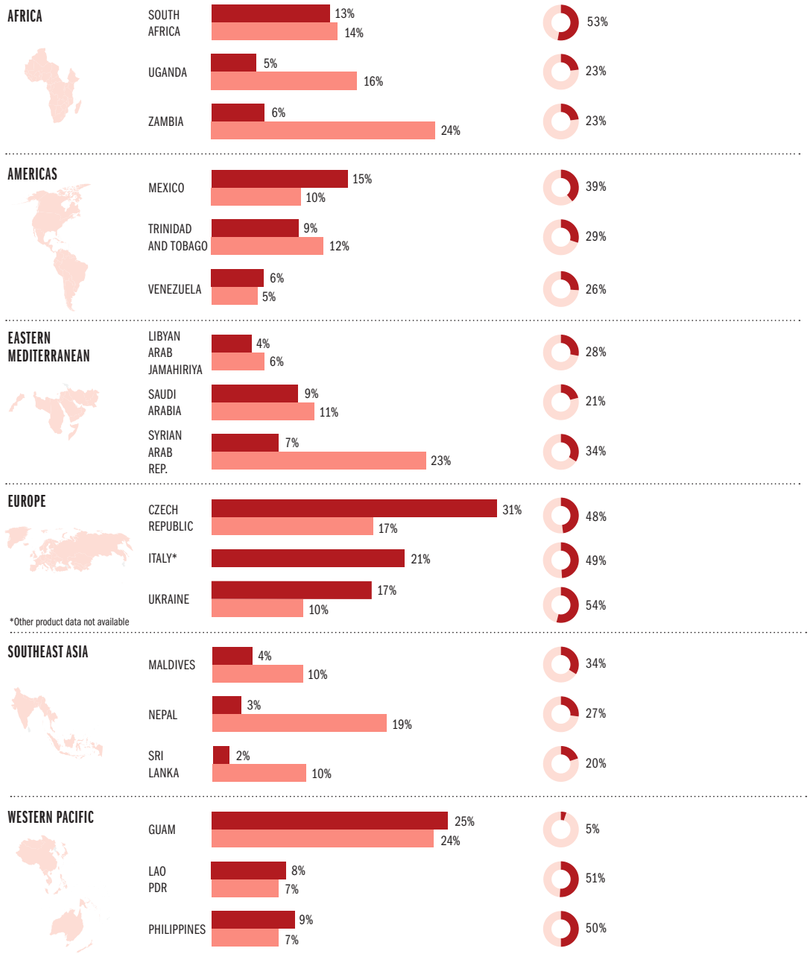
CALL TO ACTION

In order to prevent youth tobacco use, comprehensive regulations to reduce the affordability and accessibility of tobacco products must be implemented or enforced, including taxation, bans on tobacco advertising, promotion and sponsorship (TAPS), and the minimum legal sale age. These regulations must include all tobacco products.

STUDENT TOBACCO USE

Prevalence of current use of tobacco products: by World Health Organization region, in students ages 13–15 in select countries (%), 2010–2011

■ CIGARETTES ■ OTHER PRODUCTS



*Other product data not available

In addition to cigarette smoking, other tobacco products are commonly used by youth: in some regions, the rates are even higher than cigarette smoking rates.

PURCHASING CIGARETTES

Percentage of current smoker students who usually get their cigarettes by purchasing them in a store: ages 13–15, 2010–2011

The percentage of youth smokers who usually get tobacco products by purchasing them in a store is high in many countries.

In October 2013, a German court banned the "Be Marlboro" campaign, finding that in violation of Germany's tobacco advertising law it encouraged children to smoke.

"THE FACT THAT PMI [PHILIP MORRIS INTERNATIONAL] CONTINUES WITH THE MARLBORO CAMPAIGN IN ASIA DESPITE BEING FOUND GUILTY IN GERMANY only goes to show they want Asia's children no matter what. We have to stop them and protect our children using stringent laws."

—MARY ASSUNTA, senior policy advisor, Southeast Asia Tobacco Control Alliance, 2014

5.6M

Although youth smoking rates in the United States halved during 1997–2011, one out of every 13 American children under age 18 alive today (around 5.6 million children) **WILL DIE PREMATURELY** from smoking-related diseases unless current smoking rates drop further.

"VULNERABLE POPULATIONS ARE MORE SUSCEPTIBLE AND HIGHLY RECEPTIVE TO MARKETING.

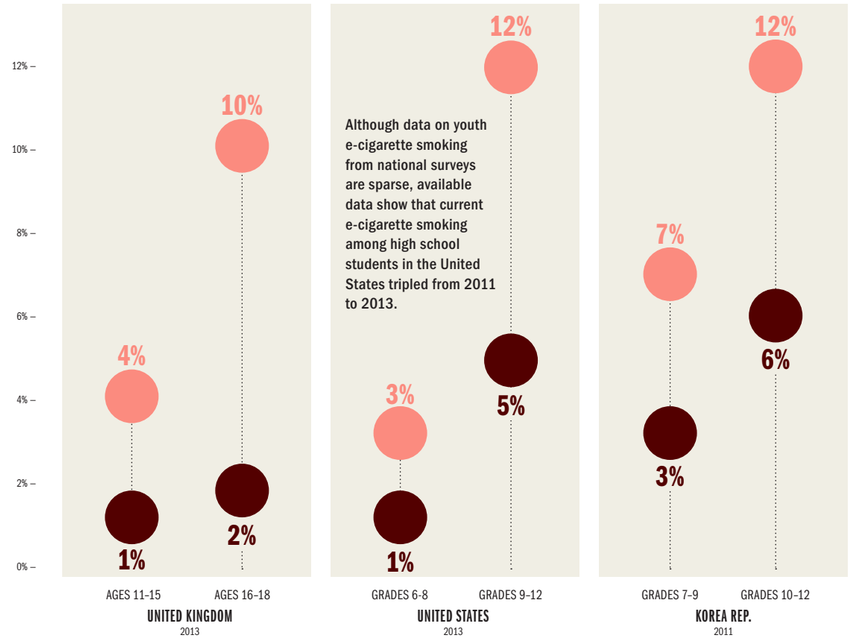
Predatory tobacco industry retail marketing practices aimed at the culture and lifestyle of youth and low socioeconomic status communities undermine the public health benefits of US and global tobacco control efforts."

—LA TANISHA C. WRIGHT, an anti-tobacco activist and a former trade marketing manager at Brown & Williamson tobacco company, 2013

E-CIGARETTE USE

Prevalence of e-cigarette use in youth by age or school grade (%): 2011–2013

■ EVER ■ CURRENT/FREQUENT refers to e-cigarette use during last month (United States and Korea Rep.) or at least monthly (United Kingdom)



Globally, cigarette smoking is common among youth. Another serious concern is that other tobacco products—including pipes, hookahs, smokeless tobacco, or bidis—are also commonly used by youth worldwide. In fact, prevalence of use of these products is higher than that of cigarettes in many countries, particularly in Southeast Asia, the Eastern Mediterranean, and sub-Saharan Africa STUDENT TOBACCO USE. These rates are even higher than the corresponding rates in adults in many countries. This indicates the necessity for tobacco regulations for adolescents to include tobacco products other than cigarettes, and the need to increase awareness about their harms.

Most regular smokers initiate smoking before 20 years of age. Youth may have several reasons for starting tobacco use, including looking 'cool', 'mature', or 'sociable', or believing that tobacco use is good for coping with stress and weight control. The factors increasing youth tobacco initiation may vary across countries, but some common factors are: tobacco use by parents or peers; exposure to tobacco advertising; acceptability of tobacco use among peers or in social norms advertised in movies or tobacco commercials; having depression, anxiety, or stress; and higher accessibility and lower prices of tobacco products.

Tobacco pricing and stronger regulations are crucial to addressing the youth tobacco epidemic. Teens are particularly sensitive to tobacco pricing; higher prices prevent many of them from becoming regular tobacco users. Tobacco regulations are also important. As water pipe smoking may be exempt from smoking bans in public places, more young people may smoke water pipes in social gatherings in hookah (water pipe) lounges. The percentage of youth smokers who usually obtain tobacco products in a store is high in many countries, but it can be reduced by banning tobacco product sales to minors or enforcing the existing bans PURCHASING CIGARETTES. The minimum legal sale age for tobacco products in several countries is now 21 years, which is more effective in reducing youth exposure to tobacco products than is the 18-years limit in effect in many other countries.

"IT'S A SHAME FOR OUR FAMILY LINE THAT YOU AND YOUR BROTHER ARE NOT SMOKING

—all the men in our family smoke—your father, your grandfather. You are breaking the chain of our family's smoking history."

—A young Indonesian man recounting his uncle's shame that he does not smoke, 2009

In 2009, **41% OF INDONESIAN BOYS** ages 13–15 were current cigarette smokers. Of teens in the same age range who bought cigarettes in a store, 59% were not refused purchase because of their age.

In the United Kingdom in 2011, **EVERY DAY AROUND 600 BOYS AND GIRLS** ages 11–15 (over 200,000 a year) **TOOK UP SMOKING.**

In contrast to scientific evidence, there is still an **INCORRECT BELIEF THAT SOME TOBACCO PRODUCTS ARE SAFE.**

"Our parents don't mind us smoking 'shisha' [a local water pipe] and it is not dangerous."
"I play sports and would never smoke a cigarette because it harms the body and you get cancer, but 'shisha' is quite safe."

—Two Pakistani young adults, 2009

CALL TO ACTION

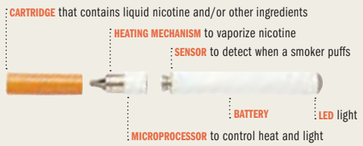
E-cigarettes should be regulated in such a way as to reduce smoking of combusted tobacco products to the greatest extent possible.

E-CIGARETTE MECHANICS

How does an e-cigarette work?

E-CIGARETTES are battery-powered devices that resemble cigarettes and heat liquid nicotine, producing a vapor that is inhaled.

E-CIGARETTE COMPONENTS



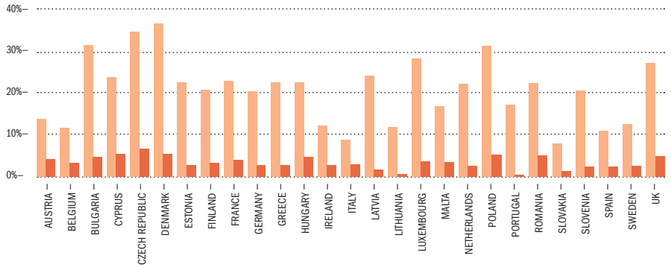
TANK SYSTEMS function similarly as e-cigarettes but have larger atomizers, batteries and nicotine cartridges, or tanks. Users are able to add different concentrations of liquid nicotine to tank systems resulting in varying, and typically higher, doses of nicotine delivery.

PREVALENCE & USE

E-cigarette prevalence and use as a cessation aid in 27 European Countries, 2012

EVER USED USED AS CESSATION AID

In a 2012 survey of 27 European countries, 20.3% of all current smoker respondents had ever used e-cigarettes, and 3.7% had used them as a cessation aid.



"There is ongoing debate within the nicotine and tobacco research community concerning whether electronic cigarettes

WILL OFFER A WAY OUT OF THE SMOKING EPIDEMIC OR A WAY OF PERPETUATING IT.

Robustly designed, implemented and accurately reported scientific evidence will be the best tool we have to help us predict and shape which of these realities transpires."

—SARA HITCHMAN, ANN MCNEILL & LEONIE BROSE, Editorial in *Addiction*, 2014

"We're trying to bring back the chic attitude,

THE SEXINESS IN SMOKING."

—OLIVER GIRARD, Chief Executive of Smarty Q E-Cigarettes, 2013

USA E-CIG REGULATION

E-cigarette concerns & implications for policy

	ISSUES & CONCERNS	POLICY RECOMMENDATIONS
YOUTH	Initiation doubled in one year.	Implement minimum age of purchase laws.
CURRENT SMOKERS	Most e-cig users continue to smoke, although some may quit completely.	Discourage long-term dual use.
EX-SMOKERS	Returning to "safe" nicotine may be attractive to former smokers (potential relapse to smoking).	Restrict marketing targeted at ex-smokers (e.g. "Welcome Back" campaign).
NON-SMOKERS' RIGHTS	Companies are advocating e-cigs be used anywhere to increase their acceptance and use.	Regulate vaping in indoor areas so that it does not undermine existing clean indoor air laws.
NICOTINE POISONING	Upsurge in calls to poison control centers for children under 6 years from liquid nicotine poisoning.	Require child-proof packaging and appropriate labelling of liquid nicotine.
DRUG DELIVERY DEVICES	E-cigs are being used for other drugs, particularly hash oil.	Consider regulating e-cigs as drug delivery devices, or even as drugs (like nicotine replacement therapy), to allow for possible future health claims.

E-CIGARETTE MARKETING CONCERNS

Marketing in the absence of regulation resembles traditional cigarette advertising.

"WELCOMING BACK" EX-SMOKERS

E-cigarettes are being marketed to "Welcome Back" smokers who have previously quit.

"Though the primary message is that people can smoke e-cigarettes indoors, FIN's choice of a diner from the 1950's—a time when smoking was perfectly acceptable—is the ad's booster engine, a subtle but powerful underlying sell that runs on pure nostalgia."

—*Adweek*, May 2012

MARKETING TO YOUTH

Lorillard's claim that "responsible e-cigarette manufacturers, including blu e-cigs, do not market to youth" is clearly false.

UNSUBSTANTIATED CLAIMS

Unsubstantiated health and wellness claims are a concern in e-cigarette marketing. Nutri Cigs purports to help users lose weight, sleep better and increase energy.

CELEBRITY ENDORSEMENTS

E-cigarette companies are using famous spokespeople, such as Jenny McCarthy, to market their products.

THE VARYING STATE OF E-CIGARETTES WORLDWIDE

80%

"The World Health Organization reckons that of the one billion smokers globally, 80% live in low- & middle-income countries, most of which are markets that

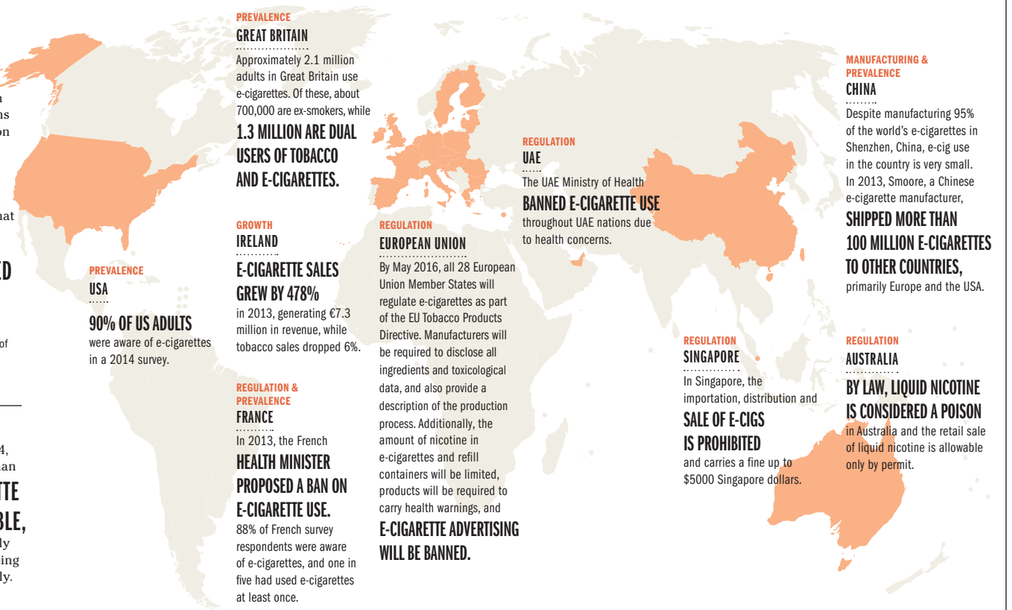
HAVE NOT YET BEEN PENETRATED BY E-CIGS."

—DEREK YACH, SVP & Executive Director of Vitality Institute, 2014

As of January 2014, there were more than

7700 E-CIGARETTE FLAVORS AVAILABLE,

with approximately 200+ new flavors being introduced monthly.



PREVALENCE
GREAT BRITAIN
Approximately 2.1 million adults in Great Britain use e-cigarettes. Of these, about 700,000 are ex-smokers, while **1.3 MILLION ARE DUAL USERS OF TOBACCO AND E-CIGARETTES.**

PREVALENCE
USA
90% OF US ADULTS were aware of e-cigarettes in a 2014 survey.

GROWTH
IRELAND
E-CIGARETTE SALES GREW BY 478% in 2013, generating €7.3 million in revenue, while tobacco sales dropped 6%.

REGULATION & PREVALENCE
FRANCE
In 2013, the French **HEALTH MINISTER PROPOSED A BAN ON E-CIGARETTE USE.** 88% of French survey respondents were aware of e-cigarettes, and one in five had used e-cigarettes at least once.

REGULATION
EUROPEAN UNION
By May 2016, all 28 European Union Member States will regulate e-cigarettes as part of the EU Tobacco Products Directive. Manufacturers will be required to disclose all ingredients and toxicological data, and also provide a description of the production process. Additionally, the amount of nicotine in e-cigarettes and refill containers will be limited, products will be required to carry health warnings, and **E-CIGARETTE ADVERTISING WILL BE BANNED.**

REGULATION
UAE
The UAE Ministry of Health **BANNED E-CIGARETTE USE** throughout UAE nations due to health concerns.

MANUFACTURING & PREVALENCE
CHINA
Despite manufacturing 95% of the world's e-cigarettes in Shenzhen, China, e-cig use in the country is very small. In 2013, Smoore, a Chinese e-cigarette manufacturer, **SHIPPED MORE THAN 100 MILLION E-CIGARETTES TO OTHER COUNTRIES,** primarily Europe and the USA.

REGULATION
SINGAPORE
In Singapore, the importation, distribution and **SALE OF E-CIGS IS PROHIBITED** and carries a fine up to $5000 Singapore dollars.

REGULATION
AUSTRALIA
BY LAW, LIQUID NICOTINE IS CONSIDERED A POISON in Australia and the retail sale of liquid nicotine is allowable only by permit.

Electronic cigarettes, also known as e-cigarettes or electronic nicotine delivery systems, were introduced to the market by Chinese entrepreneurs in 2004 and have skyrocketed in awareness, use, and controversy over the past decade PREVALENCE & USE. E-cigarettes represent a booming industry, estimated at USD2.5 billion in the USA in 2014.

E-cigarettes mimic traditional cigarettes in design and are often assumed to be "safer" than traditional cigarettes, or to help smokers quit E-CIGARETTE MECHANICS. While these health claims are implied, they are not usually stated explicitly, as this might trigger additional regulation.

Many governments, organizations, companies and consumers are uncertain how e-cigarettes should be regulated. E-cigarettes deliver nicotine, and their health effects are unknown; yet they are assuredly less harmful than traditional tobacco products that burn tobacco. Tobacco companies recognize the potential of this growing market and are investing heavily in e-cigarette brands BIG TOBACCO & E-CIGS.

On an individual level, e-cigarettes are likely less harmful to a user than traditional cigarettes, but additional research is needed about the effects of e-cigarettes, long-term consequences of use, and ingredients. Public health experts are concerned that e-cigarette use could renormalize smoking, delay or prevent cessation attempts, promote youth use, and draw former smokers back into nicotine addiction USA E-CIG REGULATION. Additionally, this booming industry is increasingly run by tobacco companies—the same companies that have long promoted dangerous products over consumer health. On the other hand, many believe that e-cigarettes represent the best hope for a disruptive technology that can begin the end of traditional smoking, saving millions of lives.

Currently, there is a significant focus on e-cigarettes and much research is underway to determine health impacts and help inform regulations. For now, this multi-billion dollar industry continues to grow as more people use e-cigarettes out of curiosity, a desire to quit smoking, or a safer way to continue a nicotine addiction.

Nearly 48% of US adult e-cigarette users have used combustible cigarettes and e-cigarettes on the same day. Dual use of e-cigarettes and traditional cigarettes is a public health concern, as

SMOKERS COULD BE EXPOSED TO EVEN HIGHER AMOUNTS OF NICOTINE.

BIG TOBACCO & E-CIGS

All major tobacco companies have e-cigarette products on the market or under development.

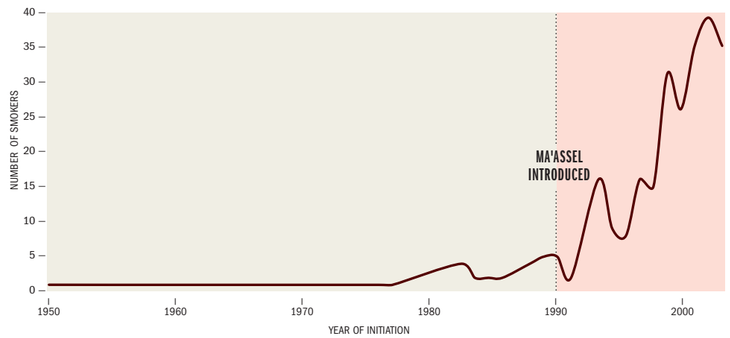
COMPANY	E-CIG
Lorillard	Blu, Skycig
Imperial	Puritane
BAT	Vype
Altria	Mark Ten
Reynolds	Vuse
JTI	E-Lites
PMI	Nicolite

CALL TO ACTION

Governments should regulate water pipes and their use in the same ways as all other combustible tobacco products, and the use of water pipes in public places should not be exempted from smoke-free laws.

MA'ASSEL IN SYRIA

Most water pipe smokers in Syria started smoking in the early 1990s, after the introduction of ma'assel.



In a 2002 survey of water pipe cafés in Aleppo, most water pipe smokers reported initiating smoking after 1990, a date marked by the introduction of ma'assel smoking tobacco.

NAMES FOR WATER PIPES

English and native script and the countries where a name predominates

HOOKAH हुक्का / حُقّة
India, Pakistan, United Kingdom, USA

NARJILA نرجيلة
Armenia, Azerbaijan, Cyprus, Greece, Iraq, Israel, Italy, Jordan, Lebanon, Palestine, Syria, Turkey, Uzbekistan

(N) ARGHILE НАРГИЛЕ
Bosnia and Herzegovina, Bulgaria, Croatia, Republic of Macedonia, Serbia

QALYAN قليان
Iran

ĐIẾU CÀY ĐIẾU CÀY
Viet Nam

SHISHA شيشة
Egypt, South Africa

A SINGLE PUFF FROM A WATER PIPE

(450mL) is nearly equal to the volume of smoke inhaled from an entire cigarette (500mL).

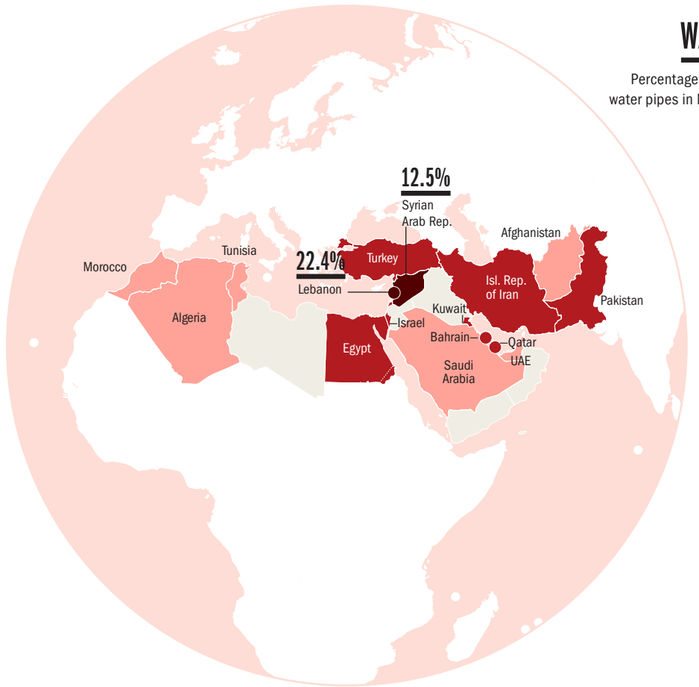
The promotion of water pipe use is rooted in wilful ongoing misinformation that hookah water can magically clean up tobacco smoke. Nothing could be further from the truth.

"WATER... HAS ONLY A SMALL EFFECT ON THE REMOVAL OF TAR AND TOTAL NICOTINE."

—British American Tobacco Research & Development, 1967

WATER PIPE USE

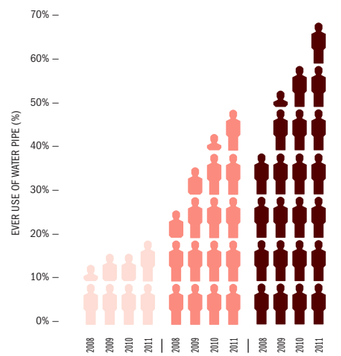
Percentage of adults currently using water pipes in Middle Eastern countries



INCREASING PREVALENCE

Evidence from Jordan and USA

FLORIDA BOYS AND GIRLS | JORDANIAN GIRLS | JORDANIAN BOYS



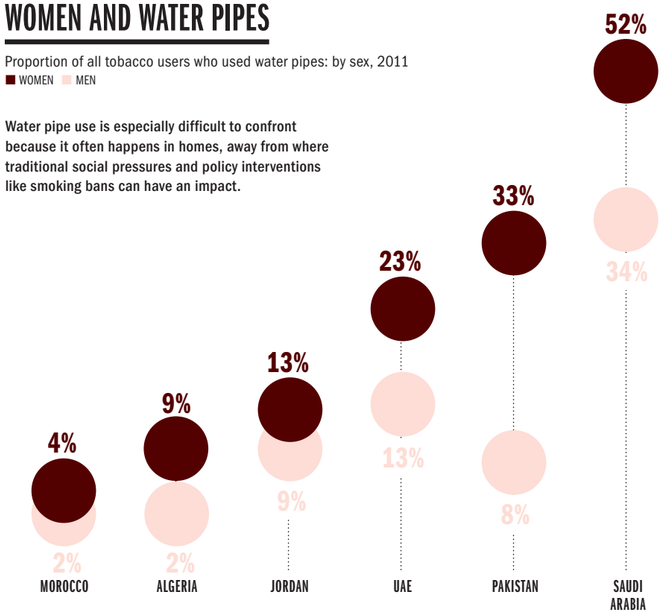
The prevalence of water pipe use among students has increased dramatically in Jordan and the USA.

WOMEN AND WATER PIPES

Proportion of all tobacco users who used water pipes: by sex, 2011

WOMEN | MEN

Water pipe use is especially difficult to confront because it often happens in homes, away from where traditional social pressures and policy interventions like smoking bans can have an impact.



The water pipe is a tobacco smoking device with roots in India, Africa, and the Middle East. Water pipes have been used for centuries, but the introduction of ma'assel in the early 1990s, a molasses-soaked smoking tobacco, triggered a surge in use outside the traditional water pipe user base of older males MA'ASSEL IN SYRIA. Water pipes employ an indirect heat source (such as lit charcoal) to slowly burn tobacco leaves while users draw smoke down through a water chamber and into their mouths through hoses. Along with the sugary molasses, ma'assel is flavored heavily with apple, banana, orange, vanilla, and other fruit or candy tastes.

Water pipe smokers often falsely believe that their form of tobacco use is safer than smoking cigarettes, a notion which must be dispelled by thorough, aggressive educational efforts. When hot smoke passes through water at the base of the water pipe, the smoke cools, and is then easily and deeply inhaled by even first-time tobacco smokers. The heavily flavored and cooled water pipe smoke is inhaled in massive quantities. The water's cooling effect may actually be increasing harm by enabling water pipe smokers to inhale smoke deeper into their lungs.

Water pipe smoking is associated with elevated risks of lung, lip, mouth, and esophageal cancers. As widespread water pipe use is a recent phenomenon, large-scale high-quality studies on the long-term health effects of water pipes are still forthcoming. However, health scientists confidently predict that water pipe smoking will cause large-scale sickness and death similar to other forms of tobacco.

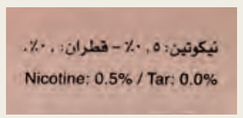
Water pipe use has spread beyond the Middle East and is becoming integrated into the global tobacco market NAMES FOR WATER PIPES. In 2012, Japan Tobacco International purchased Al Nakhla, then the world's largest water pipe tobacco manufacturer. Other transnational tobacco companies have explored moving into the water pipe tobacco market. Otherwise-strong smoking bans in Europe and North America sometimes have specific exemptions allowing the smoking of water pipes in cafés, enabling public smoking in otherwise smoke-free areas. Water pipe use is also on the rise among adolescents and young adults on college campuses and beyond, even among people who explicitly refuse to smoke cigarettes WOMEN AND WATER PIPES, INCREASING PREVALENCE. Researchers must quantify the harms to health of this method of tobacco use and determine the best methods to stem the rise of water pipe use around the globe.

MA'ASSEL

Ma'assel, the molasses-soaked smoking tobacco commonly burned in water pipes in the Middle East, Europe, and North America, was introduced to the world in the early 1990s.

Up to 77% of ma'assel packages indicate the percentage of 'tar' in the product as 0.0%.

THE TOBACCO INDUSTRY DELIBERATELY MISREPRESENTS THE HARM POSED BY SMOKING WATER PIPE TOBACCO.



CALL TO ACTION

Because smokeless tobacco products are not harmless, their regulation should be tightly integrated into tobacco control policies.

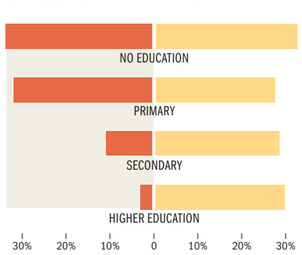
By using existing laws, tobacco control proponents were able to ban gutkha sales in India: "Product not to contain any substance which may be injurious to health:

TOBACCO AND NICOTINE SHALL NOT BE USED AS INGREDIENTS IN ANY FOOD PRODUCTS."

—Food Safety and Standards Authority of India, 2011

EDUCATION AND USE

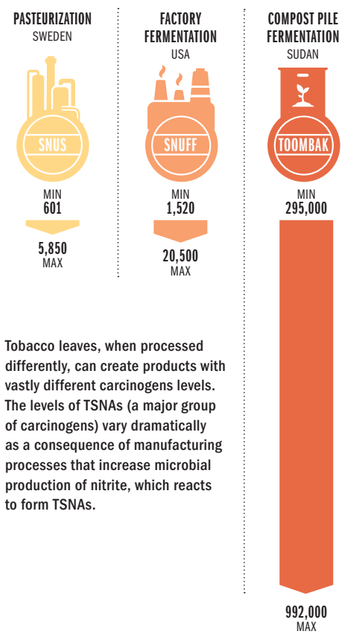
Adult male tobacco use by level of education in Madagascar: ages 15–59, 2009



Smokeless tobacco use in Malagasy men decreases as they become more educated, making smokeless the burden of the poor. By contrast, smoking tobacco is used equally by men of all education levels.

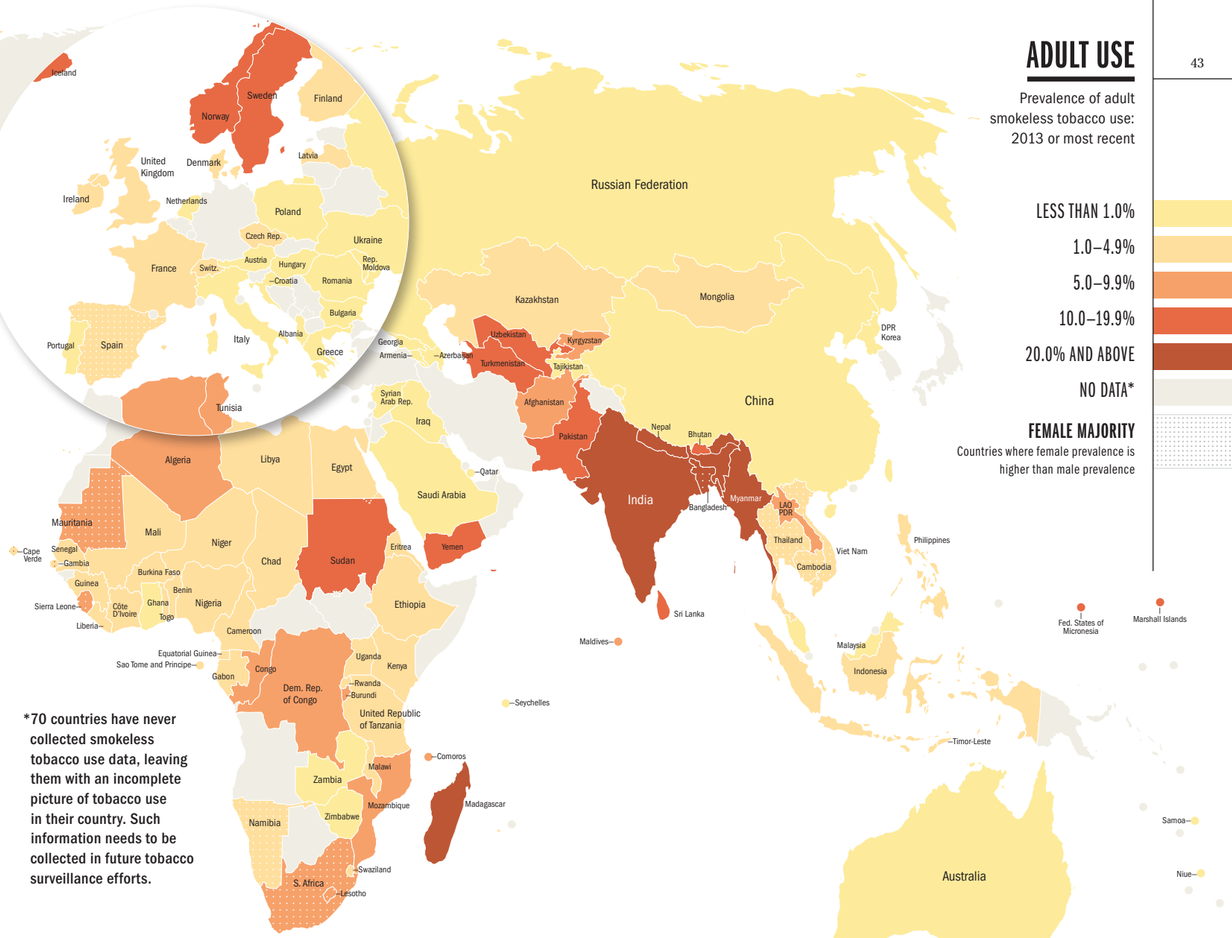
PROCESSING IMPACTS CARCINOGENS

Effect of processing on a key group of carcinogens in smokeless tobacco products from around the world: Tobacco-Specific Nitrosamines (TSNAs) in ng/g



Tobacco leaves, when processed differently, can create products with vastly different carcinogens levels. The levels of TSNAs (a major group of carcinogens) vary dramatically as a consequence of manufacturing processes that increase microbial production of nitrite, which reacts to form TSNAs.

OVER 50% OF ORAL CANCERS IN SUDANESE MEN are caused by the use of smokeless tobacco products.



ADULT USE

Prevalence of adult smokeless tobacco use: 2013 or most recent

- LESS THAN 1.0%
- 1.0–4.9%
- 5.0–9.9%
- 10.0–19.9%
- 20.0% AND ABOVE
- NO DATA*

FEMALE MAJORITY

Countries where female prevalence is higher than male prevalence

***70 countries have never collected smokeless tobacco use data, leaving them with an incomplete picture of tobacco use in their country. Such information needs to be collected in future tobacco surveillance efforts.**

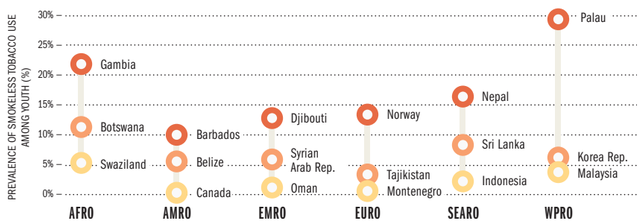
Flavored smokeless tobacco products have consistently been perceived… as "for beginners" or a way to recruit younger men to try the product. A former [US Tobacco] sales representative revealed that

"CHERRY SKOAL IS FOR SOMEBODY WHO LIKES THE TASTE OF CANDY, IF YOU KNOW WHAT I'M SAYING."

—*Wall Street Journal*, 1994

YOUTH USE

Prevalence of smokeless tobacco use among youth: Aged 13 to 15 years, by WHO region, 2013 or most recent



Smokeless tobacco use among youths ensures that the health harms caused by smokeless tobacco are not likely to soon fade.

Over 300 million people around the world, the vast majority of whom live in South Asia, use smokeless tobacco products YOUTH USE. In over a dozen countries, more women than men use smokeless tobacco, reflective of the differing norms in each culture of smokeless use. Smokeless tobacco use definitively causes cancers of the head and neck. More than 40 types of smokeless tobacco products are ingested by nose or mouth around the world. An ongoing chain of chemical reactions during the preparation of smokeless tobacco products between bacteria and tobacco leaves makes up the chemical-microbial dynamic PROCESSING IMPACTS CARCINOGENS. This dynamic influences the concentration of the same deadly chemicals in smokeless tobacco that cause disease in combustible tobacco users.

The size of the smokeless tobacco market in high-income countries remains relatively stable. The 2014 European Union Tobacco Products Directive left a ban on snus sales in place in every EU country except Sweden. In recent years, the test marketing of dissolvable products failed in the United States, and snus brand extensions were commercial failures in Canada and South Africa. By contrast, in 2012, the Indian Supreme Court disrupted the world's largest smokeless tobacco market when it ruled that gutkha and pan masala were dangerous food products, the sale of which could be temporarily banned under Indian food safety laws. India's manufacturers responded by producing smokeless tobacco products that are not classified as food. The reaction of India's smokeless tobacco users to the bans remains unclear.

Bringing smokeless tobacco products into tobacco control regulatory frameworks is essential to managing the harms caused by these products. Research will inform future policy action on smokeless tobacco. The question of whether using smokeless tobacco changes the likelihood of a person to use cigarettes is hotly debated EDUCATION AND USE. There is more to learn about opportunities to regulate product flavorings, health warnings, and novel products.

Smokeless tobacco products are often sold with more flavorings than candy. Wintergreen smokeless tobacco products have been found to have

6 TIMES MORE

flavoring than wintergreen candies. Without these flavorings, smokeless tobacco use would be much more difficult to initiate.

The tobacco industry profits on the harm caused to their customers.

INDUSTRY

The tobacco industry, driven only by profit, seeks to manipulate consumers to buy more of their products with no regard for the consequent harms. Governments and societies must not only seek to end the industry's deplorable behaviors, but also using the lessons from fighting this epidemic—particularly effective population-level policy interventions—they can make certain that something similar does not happen with other industries that potentially harm our well being.

VULNERABLE POPULATIONS

"So ladies and gentlemen, this is the kind of tobacco industry tactic. They just want more and more market share. They could not care less if they are killing children."

—DR MARGARET CHAN,
Director-General of the WHO, 2014

DECEPTION

The tobacco industry often facilitates illicit trade, exaggerates the scope of the problem, and makes unsubstantiated claims about new tobacco control measures' impacts on illicit trade levels.

DEVELOPMENT

Over 85% of all cigarettes smoked globally are being produced by only six transnational companies, each having gross revenue that is comparable to the gross domestic product of a small country. In the battle for public health, few low- and middle-income countries have the experience and resources that could match those of the transnational tobacco industry.

CALL TO ACTION

International organizations and national governments must help tobacco farmers to ease the transition to alternative crops beyond tobacco.

"The hardest of all the crops we've worked in is tobacco. You get tired. It takes the energy out of you. You get sick, but then you have to go right back to the tobacco the next day."

—DARIO A., 16-year-old tobacco worker in Kentucky, USA, 2013

TOBACCO AND UNDERNOURISHMENT

Countries that are among the top 25 tobacco leaf producing countries AND have more than 10% undernourishment

= 10,000 TONNES

COUNTRY	TONNES (2012)	UNDERNOURISHMENT (2011-13)
Lao PDR	40,600	27%
Philippines	48,075	16%
Mozambique	54,450	37%
Zambia	61,500	43%
DPR Korea	80,000	31%
Bangladesh	85,419	16%
Pakistan	98,000	17%
Zimbabwe	115,000	31%
United Rep. of Tanzania	120,000	33%
Malawi	151,500	20%
India	875,000	17%
China	3,201,850	11%

The populations in many of the top tobacco-growing nations suffer from undernourishment.

3/4

A US study found that nearly three quarters of children aged 7-17 who were laboring in tobacco fields in the USA

EXPERIENCED SYMPTOMS OF GREEN TOBACCO SICKNESS.

This is ironic as it is illegal for children under 18 to purchase cigarettes, yet they can be employed in tobacco fields and experience illness from their labors.

According to a US Department of Labor 2012 report,

16 COUNTRIES USE CHILD LABOR IN THE PRODUCTION OF TOBACCO.

ALTERNATIVE CROP CASE STUDIES

Crop substitution is a viable and lucrative alternative to growing tobacco. However, while some countries have had success, others are struggling.

CHINA'S ALTERNATIVE CROP EXPERIENCE

In 2008, a tobacco crop substitution pilot project began among more than 450 families in the Yuxi municipality of the Yunnan Province in China. In 2010, farmers increased their annual profit per acre by up to 110% by growing other crops.

CROPS	AVG. REVENUE	− COST	= AVG. NET PROFIT (PER ACRE)	INCREASE IN PROFIT
Tobacco	$9,940	$5,106	$4,834	
White Mushroom	$12,877	$4,173	$8,704	80%
Grapes	$15,255	$5,080	$10,175	110%

ALL FIGURES IN USD

KENYA'S ALTERNATIVE CROP EXPERIENCE

The Tobacco To Bamboo Project, which began in Kenya in 2006, has shown that shifting to bamboo growing is possible due to farmer willingness and training at the community level. It is estimated that annual income from bamboo farming will be 4–5 times higher than tobacco at farm gate prices, and 10 times higher when processed at the community level to make products such as baskets, furniture, etc.

ROOM FOR IMPROVEMENT WITH ALTERNATIVE CROPS

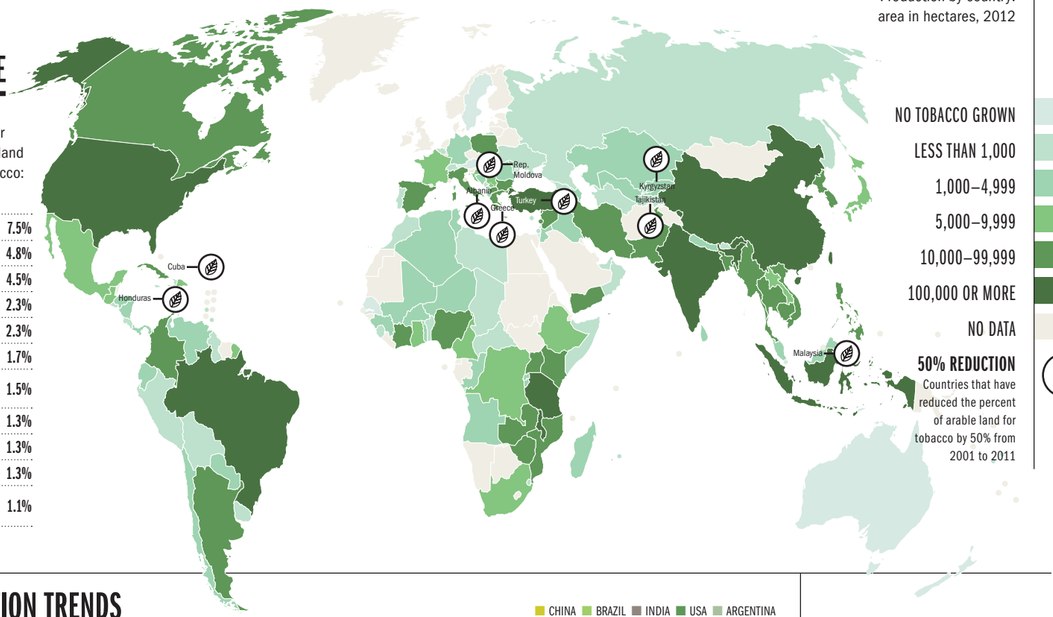
Only 15% of WHO FCTC parties that completed a 2014 implementation report and that grow tobacco reported the presence of support for viable alternatives for tobacco growers. Five percent reported alternatives being promoted for tobacco workers, and only 3% reported alternatives being promoted for tobacco sellers. Much progress is needed worldwide in promoting and providing the resources for countries to transition to economically viable alternatives to tobacco growing.

LAND DEVOTED TO GROWING TOBACCO

LAND USE

Countries who dedicated 1% or more of arable land to growing tobacco: 2011

LEBANON	7.5%
FYR MACEDONIA	4.8%
MALAWI	4.5%
DPR KOREA	2.3%
ZIMBABWE	2.3%
ZAMBIA	1.7%
UNITED REPUBLIC OF TANZANIA	1.5%
JORDAN	1.3%
CHINA	1.3%
MOZAMBIQUE	1.3%
ST. VINCENT AND THE GRENADINES	1.1%



Production by country: area in hectares, 2012

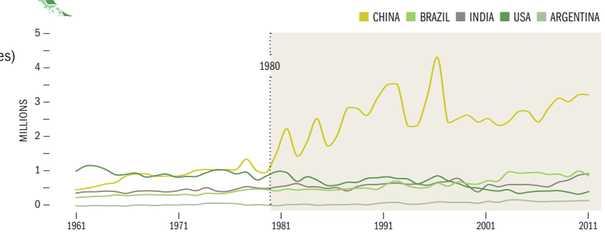
NO TOBACCO GROWN
LESS THAN 1,000
1,000–4,999
5,000–9,999
10,000–99,999
100,000 OR MORE
NO DATA

50% REDUCTION
Countries that have reduced the percent of arable land for tobacco by 50% from 2001 to 2011

PRODUCTION TRENDS

Trends in tobacco production (in metric tonnes) by the major tobacco-producing countries

In 1980, China's tobacco production was similar to the other major producers. Since that time, China has tripled its tobacco production.



CHINA GROWS TOBACCO ON MORE AGRICULTURAL LAND
than that of India, Brazil, Indonesia, Malawi and United Republic of Tanzania combined.

Tobacco leaf is grown in at least 124 of the world's countries. In 2012, nearly 7.5 million tonnes of tobacco leaf was grown on almost 4.3 million hectares of agricultural land, an area larger than Switzerland. China is the world's leader in tobacco production, with 3.2 million tonnes of tobacco leaf grown in 2012.

In the same way that consumers are addicted to nicotine, tobacco farmers are trapped in a vicious cycle of growing tobacco, which tobacco companies exploit. Tobacco companies are often the major buyers in countries, setting the price and process of selling tobacco and requiring enormous labor and land inputs. Moreover, the tobacco companies typically supply inputs very readily, but at above-market prices and on poor credit terms that are unfavorable to the farmers.

Over the past 50 years, tobacco farming has shifted from high- to low- and middle-income countries PRODUCTION TRENDS. During this time, Africa has seen a significant increase in tobacco farming. More than 20 African countries grow tobacco. Many farmers and government officials believe that tobacco is a cash crop essential to their economic success. The short-term benefits of a crop that generates cash for farmers are offset by the long-term consequences of increased food insecurity, frequent sustained debt, environmental damage, and illness and poverty among farm workers.

Food insecurity and poverty is a concern in many of the world's largest tobacco-growing countries TOBACCO AND UNDERNOURISHMENT. In October 2013, an expert meeting of the Conference of the Parties to the WHO FCTC discussed economically sustainable alternatives to growing tobacco ALTERNATIVE CROP CASE STUDIES. Because the transition from growing tobacco to growing healthful food products can be difficult and complex, support from governments and international organizations is necessary to break the cycle of poverty and illness resulting from growing tobacco.

"R.J. Reynolds doesn't employ farm workers or grow its own tobacco. Because

FARM WORKERS ARE NOT OUR EMPLOYEES,

we have no direct control over their sourcing, their training, their pay rates, or their housing and access to human services."

—R.J. Reynolds Tobacco Company, 2014

CALL TO ACTION

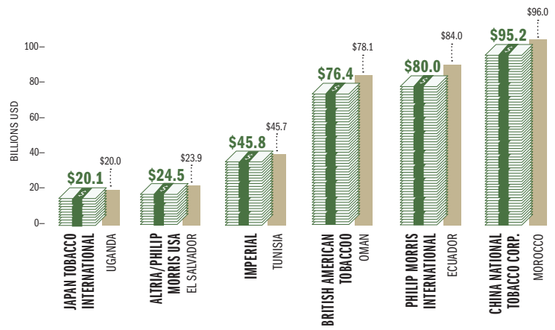
Tobacco companies should be strictly regulated in ways that minimize the harm caused by their products.

REVENUE AND COUNTRY GDP

Revenue of top tobacco companies in comparison to the GDP in select countries: in USD

TOBACCO COMPANY GROSS REVENUE: 2012 (2011 DATA FOR CNTC)

COUNTRY GDP: 2013



$44.1B The 2013 profits of the top six tobacco companies are **EQUIVALENT TO THE COMBINED PROFITS** of The Coca-Cola Company, Walt Disney, General Mills, FedEx, AT&T, Google, McDonald's and Starbucks in the same year.

E-CIGARETTE AND VAPOR MARKET

The state of the e-cigarette market in the USA: in USD

Tobacco companies are investing heavily in e-cigarettes to ensure they are part of this growing market.

2013

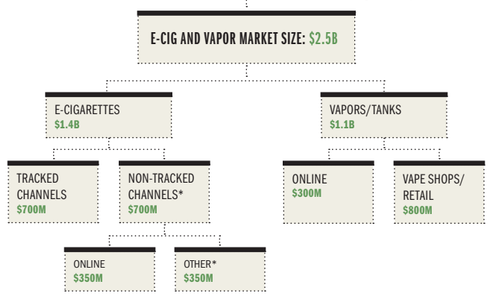
USA MARKET LEADER
Lorillard's e-cigarette brand, Blu, held 47% of the e-cigarette market share in the USA.

2014

USA E-CIG AND VAPOR MARKET VALUE
Projected at $2.5 billion, compared to the nearly $80 billion for traditional cigarettes.

2024

FUTURE OF THE MARKET
Wells Fargo analyst Bonnie Herzog estimates that e-cigs will surpass traditional cigarettes by 2024.



*NON-TRACKED CHANNELS include sales from small vapor shops and other channels that are not routinely collected due to size, and are thus estimates. OTHER non-tracked channels include tobacco-only outlets and other e-cig retail locations.

"We have developed **A CLEAR COMPETITIVE EDGE** when it comes to reduced-risk products. We believe that these products may provide us with a unique opportunity for accelerated profitability growth over the longer term."

—ANDRÉ CALANTZOPOULOS, Chief Executive Officer, Philip Morris International, 2014

NICOTINE MARKET

Recent moves by tobacco companies to consolidate the nicotine market

2009 ALTRIA
Acquired **U.S. SMOKELESS TOBACCO**, the world's leading moist smokeless tobacco manufacturer, for USD11.7 billion.

2009 REYNOLDS AMERICAN
Acquired **NICONOVUM AB**, a Sweden-based nicotine replacement therapy company.

2010 BAT
Established **NICOVENTURES** to develop and commercialize non-nicotine tobacco products.

2011 JTI
Secured a minority share in **PLOOM**, a US company which developed a pocket-sized smoking device that heats tobacco to vaporize nicotine and flavor.

2012 LORILLARD
Acquired **BLU E-CIGS** in 2012 for USD235 million. In 2013, Lorillard acquired British e-cigarette company **SKYCIG** for GBP30 million.

2013 IMPERIAL
Acquired **DRAGONITE INTERNATIONAL LTD'S ELECTRONIC CIGARETTE** unit for USD75 million.

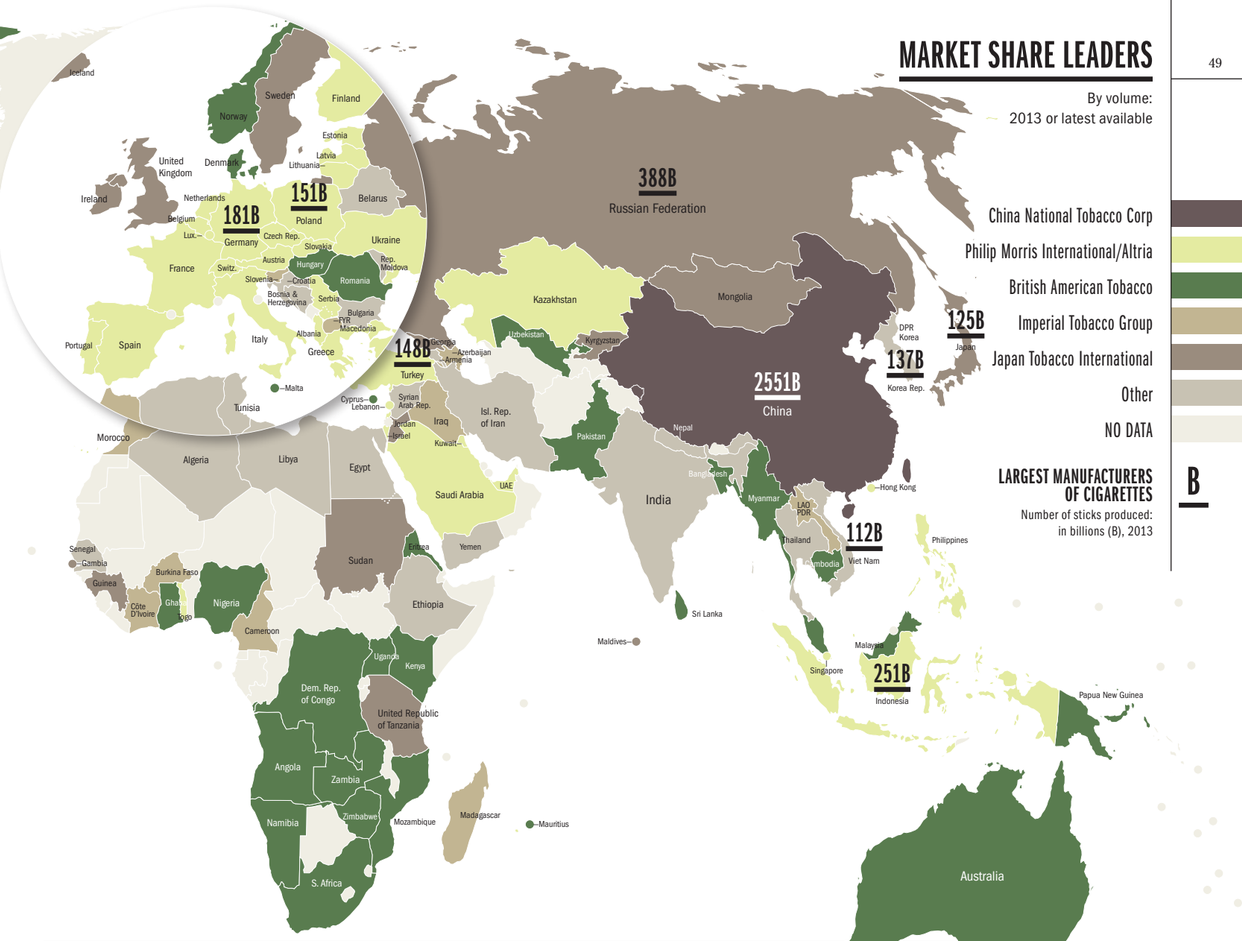
2014 PHILIP MORRIS INTERNATIONAL
MARLBORO HEATSTICKS to be released in Japan and Italy in late 2014, and expanded to other markets in 2015.

2014 TOBACCO COMPANY MERGERS
In the ultimate market consolidation, Reynolds American has proposed a merger with Lorillard, pending regulatory approval. If the deal is finalized as proposed, it will merge the second and third largest tobacco companies in the USA.

Most of the major tobacco companies have expanded their product lines to include non-combustible nicotine products.

MARKET SHARE LEADERS

By volume:
2013 or latest available



LARGEST MANUFACTURERS OF CIGARETTES

Number of sticks produced: in billions (B), 2013

- China National Tobacco Corp
- Philip Morris International/Altria
- British American Tobacco
- Imperial Tobacco Group
- Japan Tobacco International
- Other
- NO DATA

B

The big business of tobacco is global in nature, and each part of the tobacco business, from growing the leaf to manufacturing products, contributes to the multi-billion dollar tobacco industry. Six companies lead the world's tobacco business, but there are at least 40 smaller businesses or state-owned monopolies that manufacture cigarettes REVENUE AND COUNTRY GDP.

Each year, the tobacco industry produces six trillion cigarettes, enough to create a continuous chain from Earth to Mars and back, multiple times. Nearly 500 tobacco factories have been documented worldwide, with the location of another 200 suspected but unconfirmed.

China grows more tobacco, manufactures more cigarettes, and also consumes more tobacco than any other country in the world. China National Tobacco Corporation (CNTC) posted revenues of USD95.2 billion and profits of USD19 billion in 2011. The Chinese government profits financially from the manufacture and sale of tobacco, as well as from tobacco taxes collected by the government. CNTC contributes 7–10% of the country's total annual revenue through tobacco tax and profits. The complicated relationship between the Chinese tobacco industry and tobacco control is best characterized by a 2012 report which stated, "China's top political leadership and the national tobacco bureaucracy are among the most crucial stakeholders in the country's tobacco development and control."

In spite of decades' worth of scientific and medical evidence about the dangers of smoking, one billion people continue to smoke worldwide. The decline in smoking rates in high-income countries is more than offset by increased tobacco use in middle- and low-income countries. Tobacco companies know they must find replacement smokers, and focus much of their effort in these low- and middle-income markets, which have the potential for economic and demographic growth, and thus increased profits E-CIGARETTE AND VAPOR MARKET, NICOTINE MARKET.

"Neither nature, human evolution, nor fate created the new burdens of chronic diseases and injuries. Rather, it was **HUMAN DECISIONS** made in corporate boardrooms, advertising and lobbying firms, and legislative and judicial chambers."

—NICHOLAS FREUDENBERG, *Lethal But Legal: Corporations, Consumption, and Protecting Public Health*, 2014

CALL TO ACTION

Governments should not heed tobacco industry threats of rising illicit trade as an excuse to postpone or avoid implementing strong tobacco control measures, but should take active measures to fight illicit trade, such as employing comprehensive track-and-trace systems.

EXAGGERATED IMPACT

THE INDUSTRY SAYS	THE TRUTH	THE PROOF: NO INCREASES IN ILLICIT TRADE

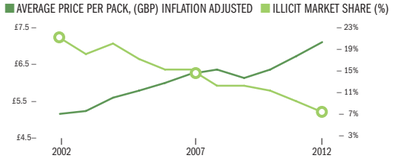
TAX INCREASES

"**THIS TAX RISE IS FURTHER GOOD NEWS FOR CRIMINALS** who already view the UK as a smugglers' paradise and do not care what age their customers are."

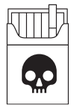
—Japan Tobacco International, 2010

Due to periodic cigarette tax increases, the inflation-adjusted price of cigarettes in the UK increased by 37% from 2001 to 2012. At the same time the **ILLICIT MARKET SHARE DROPPED BY OVER TWO THIRDS.**

CIGARETTE PRICES VS. ILLICIT MARKET SHARE



PLAIN PACKAGING

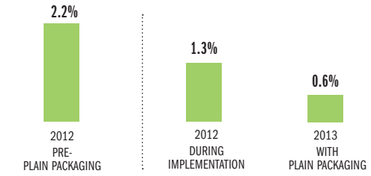


"At the end of the day **NO ONE WINS FROM PLAIN PACKAGING EXCEPT THE CRIMINALS** who sell illegal cigarettes around Australia."

—British American Tobacco Australia, 2012

NO INCREASE IN AVAILABILITY OF ILLICIT TOBACCO was observed following the implementation of plain packaging in Australia.

PERCENTAGE OF STORES OFFERING ILLICIT CIGARETTES



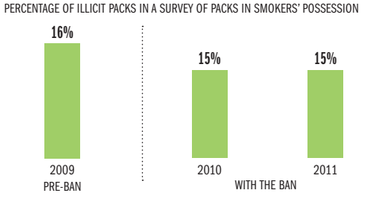
DISPLAY BANS

"**WE BELIEVE THAT PRODUCT DISPLAY BANS ... FOSTER ILLICIT TRADE IN TOBACCO PRODUCTS**, as it is much easier to disseminate such products if they do not need to be displayed."

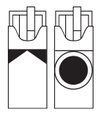
—Phillip Morris International, 2010

NO CHANGE IN PREVALENCE of illicit cigarettes was observed following the 2009 implementation of display bans in Ireland.

PERCENTAGE OF ILLICIT PACKS IN A SURVEY OF PACKS IN SMOKERS' POSSESSION



PACK SIZE RESTRICTIONS

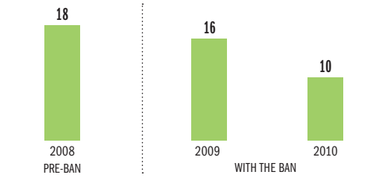


"The introduction of minimum pack sizes of 20 for cigarettes... would ban the sale of 2 in 5 cigarette packs..., thereby **FORCING SMOKERS TO BUY... MUCH CHEAPER PRODUCTS FROM ILLICIT CHANNELS."**

—Japan Tobacco International, 2012

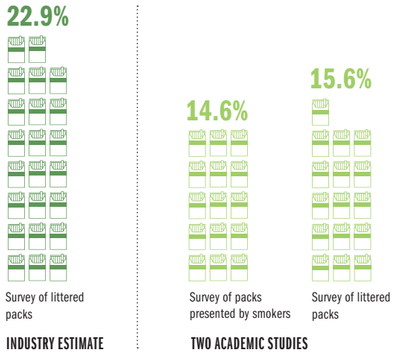
While in the mid-2000s more than 15% of all cigarettes smoked in Finland were sold in packs of less than 20 sticks, these packs were banned in 2008. As indicated by seizure data, there is **NO SIGN THAT THE BAN WAS FOLLOWED BY AN INCREASE IN ILLICIT CIGARETTE TRADE.**

NUMBER OF CONTRABAND CIGARETTES SEIZED BY FINNISH CUSTOMS IN MILLIONS OF STICKS



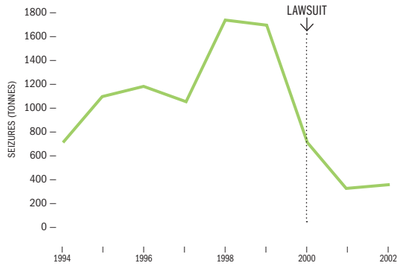
EXAGGERATED SCOPE

Tobacco industry estimates of illicit cigarette trade vs. estimates from two surveys using transparent and rigorous academic methods: Warsaw, Poland, September–October, 2011



INDUSTRY INVOLVEMENT

The tobacco industry was, and almost certainly still is, involved in cigarette smuggling. Cigarette seizures in Italy



In November 2000, the European Commission filed a civil action against Phillip Morris and RJ Reynolds, accusing the companies of being involved in smuggling cigarettes. Just after the lawsuit, the inflow of illicit cigarettes to Europe suddenly declined.

EXAGGERATED URGENCY

In South Africa, the tobacco industry has created the false impression that illicit trade was rapidly growing, which according to the industry's own estimates was not the case.

INDUSTRY'S DESCRIPTION OF THE ILLICIT MARKET

*Median from survey of media reports citing the industry

Tobacco companies countered policy proposals aimed to control tobacco use in the past by arguing that cigarettes were not harming the health of smokers. Few people would believe those arguments today. That is why tobacco lobbyists reoriented the debate, and today the primary argument that the tobacco industry uses to oppose regulation is that new tobacco control measures will cause a massive increase in cigarette smuggling EXAGGERATED IMPACT.

Because of the competing interests between profit-maximizing tobacco companies and public health and welfare concerns, arguments regarding illicit tobacco trade that tobacco companies are presenting in public discussions around new tobacco control regulations should be treated with particular caution. Studies paid for and presented by cigarette manufacturers are generally not independently-verified or peer-reviewed and, unlike academic research studies, are not replicable EXAGGERATED URGENCY. Growing evidence suggests that these industry-commissioned studies overstate the illicit cigarette trade problem EXAGGERATED SCOPE.

Tobacco companies are among the main stakeholders benefiting from illicit cigarette trade. Smuggling helps these companies generate higher profits by enabling them to pay tobacco taxes in jurisdictions with lower levies, or to not pay taxes at all. It has been well documented that the tobacco industry's various business strategies to expand tobacco sales facilitated the illicit cigarette trade. Worldwide, transnational tobacco companies have been found guilty of organizing illicit tobacco trade, and have paid billions of dollars in fines and penalties in compensation INDUSTRY INVOLVEMENT.

Implementation of tracking and tracing measures, such as unique codes on every pack, would help to combat illicit trade. The Protocol to Eliminate Illicit Trade in Tobacco Products, the first Protocol to the WHO FCTC, requires parties to implement such tracking and tracing systems. "Codentify," a track-and-trace system promoted by the tobacco industry, has many limitations, but there are other effective systems for monitoring the supply chain of tobacco products that are independent from the tobacco industry.

Illegal Cigarettes: Who's in Control?, a video created and distributed by British American Tobacco tries to

LINK GOVERNMENT REGULATIONS OF THE TOBACCO MARKET TO ILLICIT TRADE, VIOLENCE, AND CRIME.

"*Illicit* is the industry's perfect response to controls on tobacco."

—ANNA GILMORE, professor of public health at the University of Bath, UK, 2014

The UK employs thousands of well-equipped staff working to detect, investigate, and stop the illicit tobacco trade. Each year, at a cost of under GBP100 million, this strategy

PREVENTS A LOSS OF GBP1 BILLION

in tobacco taxes: A return on investment of 10 to 1.

CALL TO ACTION

Governments must decide how to regulate the marketing of new products such as e-cigarettes that could potentially reduce harm.

MARKETING TACTICS COMPARISON

E-cigarette ads today mirror cigarette ads of the past

	VINTAGE CIGARETTE	CONTEMPORARY E-CIGARETTE
SEX APPEAL	 1938	 2013
TOUGH GUYS	 1958	 2013
NIGHTLIFE	 1933	 2012

"The ability to attract new smokers and develop them into a young adult franchise is **KEY TO BRAND DEVELOPMENT."**

—Philip Morris Report, 1999

MARKETING TO YOUTH

Manufacturers of e-cigarettes use the same tactics long used to market traditional cigarettes to youth.

FRUIT FLAVORS

SPORTS SPONSORSHIPS

Tobacco companies spend more than **$900,000 AN HOUR** in the USA alone to market their products.

DISCOUNTS DOMINATE

Cigarette marketing expenditures by category, USA, 2011: USD, in millions

Largely due to the ban on direct and indirect ads and sponsorship in the USA, the tobacco industry spends most of its marketing dollars (85.6%) on price discounts and coupons.

Advertising and promotional expenditures for cigarettes increased from $8.0 billion in 2010 to $8.4 billion in 2011; however, the total number of cigarettes sold decreased by 8.1 billion units (2.9%).

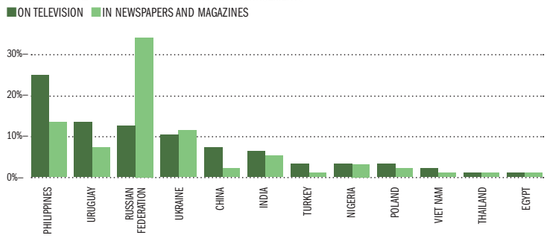
"THE EVIDENCE IS SUFFICIENT to conclude that advertising and promotional activities by the tobacco companies cause the onset and continuation of smoking among adolescents and young adults."

—US Surgeon General's Report, 2014

GLOBAL CIGARETTE ADVERTISING

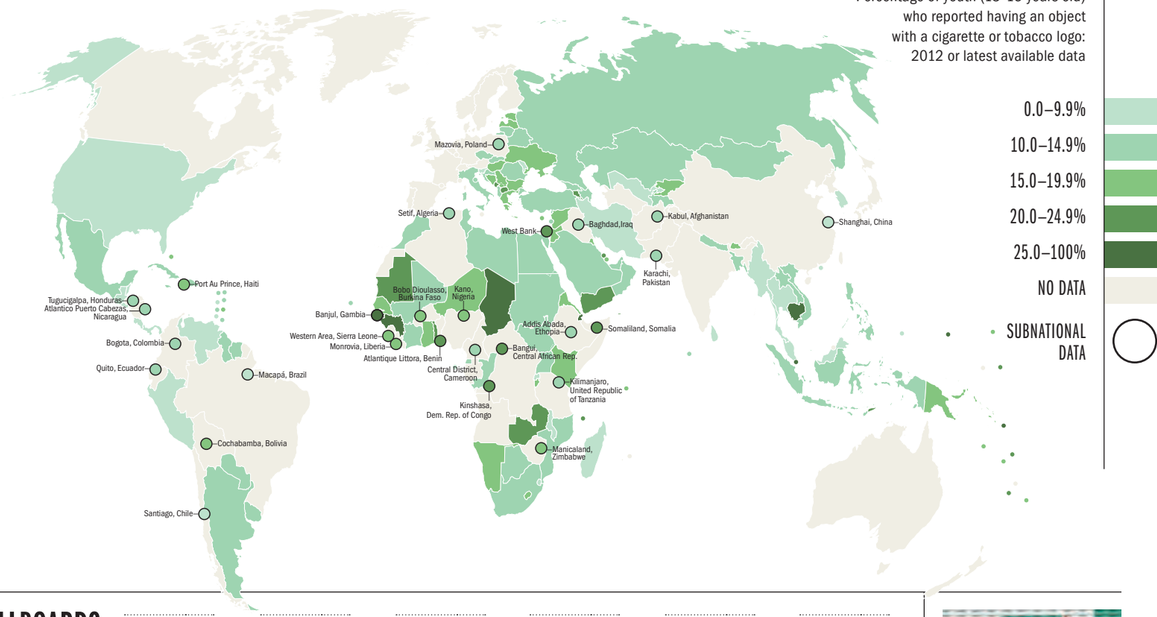
Cigarette advertising among adults in selected countries: 2010 or latest available data

PERCENTAGE OF ADULTS WHO NOTICED CIGARETTE ADVERTISEMENTS



MARKETING TO YOUTH

Percentage of youth (13–15 years old) who reported having an object with a cigarette or tobacco logo: 2012 or latest available data



BILLBOARDS

Countries in which more than 70% of youth (13–15 years old) noticed tobacco advertising on billboards during the last 30 days

*SUBNATIONAL DATA

URUGUAY	93.4%	LEBANON	82.4%	ARGENTINA	80.6%	CÔTE D'IVOIRE	76.7%	VENEZUELA	73.7%	WEST BANK	71.9%
INDONESIA	89.3%	ECUADOR*	82.3%	DOMINICAN REPUBLIC	80.3%	BURKINA FASO*	76.1%	BANGLADESH	73.5%	VANUATU	71.3%
PARAGUAY	89.0%	KENYA	82.2%	NEPAL	79.1%	SOMALIA*	76.0%	UNITED REPUBLIC OF TANZANIA*	73.0%	MOROCCO	70.8%
BOLIVIA*	85.6%	KUWAIT	81.2%	CHILE*	78.9%	COLOMBIA*	75.8%	LITHUANIA	72.9%	SOLOMON ISLANDS	70.5%
PAPUA NEW GUINEA	83.8%	GUATEMALA	81.0%	BAHRAIN	78.8%	SENEGAL	75.0%	GAZA STRIP	72.7%	KYRGYZSTAN	70.5%
HONDURAS*	83.4%	COSTA RICA	80.8%	TUVALU	78.2%	MEXICO	74.8%	MARSHALL ISLANDS	72.2%	GREECE	70.3%
NICARAGUA*	83.2%	PHILIPPINES	80.7%	RUSSIAN FEDERATION	76.8%	ARMENIA	74.6%			QATAR	70.2%

Tobacco companies claim publicly that they only market their products to influence the behavior of current adult smokers, and not to attract young people or nonsmokers. However, research shows that tobacco marketing contributes substantially to the smoking behavior of young people MARKETING TO YOUTH. One-third of youth experimentation occurs as a result of exposure to tobacco advertising, promotion, and sponsorship, and 78% of youth aged 13–15 report regular exposure to tobacco marketing worldwide.

Besides the direct marketing of tobacco products, smoking is infused throughout contemporary culture and adversely influences the behavior of adolescents. Half of all movies for children under 13 contain scenes of tobacco use, and images and messages normalize tobacco use in magazines, on the Internet, and at retail stores frequented by youth. Moreover, under the guise of corporate social responsibility programs—which may include offering scholarships or sponsoring schools—the industry preserves its access to the youth market.

In 2011, the largest cigarette companies in the USA spent USD8.37 billion on marketing, spending the most on discounts to reduce the price of cigarettes to consumers DISCOUNTS DOMINATE. Tactics include point-of-sale advertisements, allowances paid to retailers for conspicuous product placement, and "buy one, get one free" promotions. Globally, the tobacco industry endorses sports teams and public arenas, sponsors concerts and public events, and advertises through broadcast and print media GLOBAL CIGARETTE ADVERTISING.

In recent years, there has been an explosion in e-cigarette marketing. In the USA, advertisements for "smoking materials and accessories," including e-cigarettes, increased from USD2.7 million in 2010 to USD20.8 million in 2012. Using images of glamour, sex appeal, and high social status, e-cigarette advertisements are often reminiscent of the tactics used by the major cigarette manufacturers before these practices were banned MARKETING TACTICS COMPARISON.

Japan has hosted each Volleyball World Cup since 1997.

JTI* SPONSORED THE 2012 VOLLEYBALL WORLD CUP, placing its logo on national team uniforms, courtside digital billboards, and "gift packages" distributed to spectators.

*Japan Tobacco International

CALL TO ACTION

Parties to the WHO FCTC must comply with their obligations under Article 5.3 to combat overt and covert tobacco industry interference and undue influence, including industry attempts to improve their image and create the appearance of being good corporate citizens.

FUNDING CHARITIES

US charitable contributions from the Altria Companies: in millions USD, 2013

CATEGORY/ PROGRAM	TOTAL AMOUNT	NUMBER OF GIFTS	AVERAGE GIFT PER ORG	FACT
MIDDLE SCHOOL EDUCATION AND SUPPORT (E.G. SUCCESS 360°)	$25.40	78	$0.33	78 different educational institutions and programs received funding
ARTS AND CULTURE	$4.40	28	$0.16	The Smithsonian Institution received funding
CIVIC	$2.00	44	$0.05	Two donations were to healthcare organizations
EMPLOYEE PROGRAMS	$4.40	89	$0.05	88 different organizations received funding through employee programs
ENVIRONMENT	$2.80	15	$0.19	Six charities in Virginia, a top tobacco-growing state, received funding
HUMANITARIAN AID AND MILITARY SERVICE SUPPORT	$1.60	13	$0.12	The American Red Cross and its Virginia chapter received funding
BUSINESS-DIRECTED GIVING	$4.30	390	$0.01	The Texas Conservative Coalition Research Institute received funding
IN-KIND GIVING	$1.20	24	$0.05	485 charitable events received wine donated by Ste. Michelle Wine Estates, of which Altria is the parent company
REGIONAL GIVING	$1.10	115	$0.01	6 chapters of the Boys & Girls Club received funding
TOTALS, IN MILLIONS	$47.20	796	$0.97	

Tobacco company charitable giving is small compared to profits and creates a conflict of interest when donated to youth or healthcare organizations.

1.04%

In 2013, Altria topped charitable giving among major tobacco companies. Altria's charitable donations accounted for a mere 1.04% of its profits

(USD47 MILLION),

while BAT, Imperial and Philip Morris International each donated less than one half of one percent of their profits.

"Let's be clear about one thing.

OUR FUNDAMENTAL INTEREST IN THE ARTS IS SELF-INTEREST.

There are immediate and pragmatic benefits to be derived as business entities."

—GEORGE WEISSMAN, Chairman of Philip Morris USA, 1980

EXERTING POLITICAL INFLUENCE

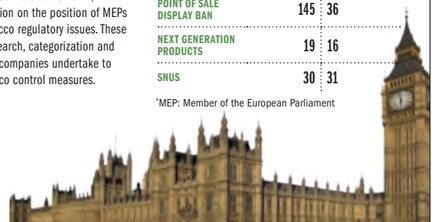
Tobacco company interference: EU Tobacco Products Directive

In March 2014, the European Union (EU) adopted the EU Tobacco Products Directive to regulate the manufacture, presentation and sale of tobacco products. Leaked Philip Morris International (PMI) documents prove PMI launched a multi-million Euro lobbying campaign to undermine the Directive. A third of the Members of the European Parliament (233 MEPs) were lobbied. As of June 2012, PMI had collected information on the position of MEPs regarding various tobacco regulatory issues. These data exemplify the research, categorization and lobbying that tobacco companies undertake to delay or prevent tobacco control measures.

DATA COLLECTED BY PMI TO TRACK POSITIONS OF MEPs*

	PRO-TOBACCO MEPs	ANTI-TOBACCO MEPs
GENERIC PACKAGING	170	33
EXTENDED HEALTH WARNINGS	139	42
INGREDIENT BAN	126	32
POINT OF SALE DISPLAY BAN	145	36
NEXT GENERATION PRODUCTS	19	16
SNUS	30	31

*MEP: Member of the European Parliament



"Evidence from tobacco industry documents reveals that tobacco companies have operated for many years with

THE DELIBERATE PURPOSE OF SUBVERTING THE EFFORTS OF THE WORLD HEALTH ORGANIZATION

to control tobacco use. The attempted subversion has been elaborate, well financed, sophisticated, and usually invisible."

—WHO Report of the Committee of Experts on Tobacco Industry Documents, July 2000

GLOBAL EXAMPLES

Undue influence: examples of tactics used by tobacco companies

CHARITABLE GIVING

TURKEY

Turkey received more money (USD7,651,234) than any other country in donations from Philip Morris International (PMI) in 2013.

JAPAN

In 2013, Japan received the largest number of donations (16) to various charities from PMI.

LOBBYING

KENYA

British American Tobacco (BAT) previously held a tobacco monopoly in Kenya and developed close ties with political leaders. When a tobacco competitor emerged, BAT drafted legislation, that was passed by the Kenyan government, which encouraged farmers to sell tobacco leaf to BAT rather than competitors.

SRI LANKA

In 2013, Health Minister Maithripala Sirisena was offered money from tobacco companies to not introduce graphic warning labels on cigarette packages. "The company representatives continuously tried to approach me when I was in Parliament, at home and in office. But I did not meet them because I do not have anything to talk with them."

EUROPEAN UNION

In 2014, PMI spent more money (GBP5.25 million) on lobbying in the EU than any other corporation.

PUBLIC RELATIONS

AUSTRALIA

From 2010–2012, BAT launched a national campaign against plain packaging in Australia. The campaign created and distributed promotional materials in print, billboards, on the radio, and through social media. The two-year campaign was valued at AUS$3,482,247.

PHILANTHROPY

SWITZERLAND

The Red Cross and Red Crescent Museum in Geneva received donations from Japan Tobacco International (JTI) in 2012. The museum tried to return the funds following protest from advocacy groups, but JTI did not accept the repayment and the funds were moved to an account overseen by the museum's lawyer.

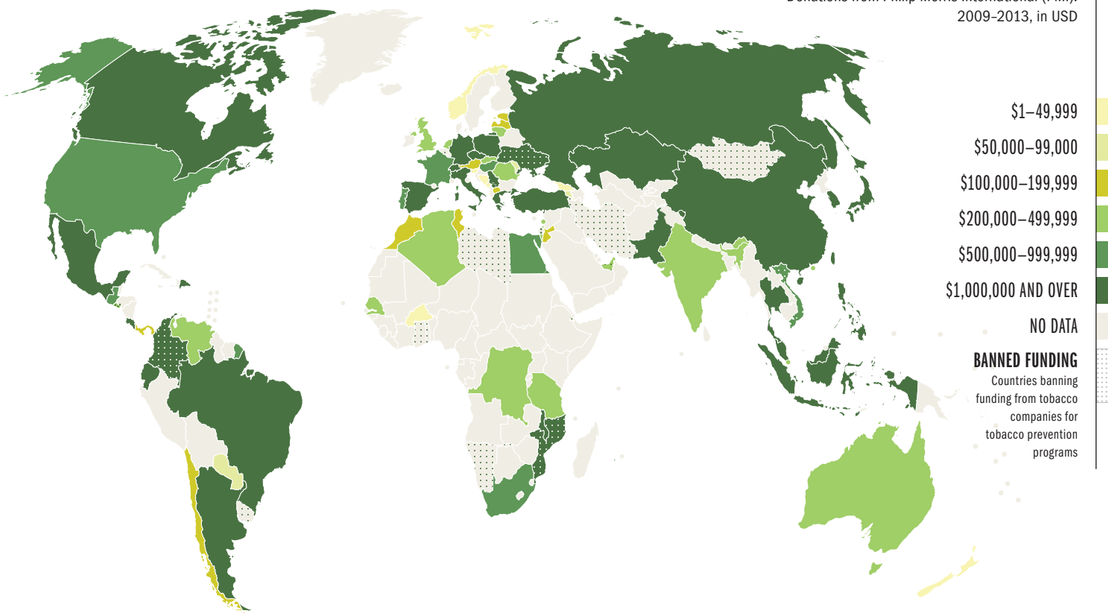
CORPORATE SOCIAL RESPONSIBILITY

USA

Santa Fe Natural Tobacco Company (SFNTC), a subsidiary of Reynolds American, is a Life Member of the Carolina Farm Stewardship Association (CFSA), which promotes sustainable farming. Between 2009 and 2011, SFNTC provided more than USD190,000 in funding to help organic tobacco farmers in North Carolina grow organic wheat in rotation with organic tobacco. In 2011, SFNTC purchased USD11 million worth of US-grown, organic flue-cured tobacco, mostly from farmers in North Carolina.

"CHARITABLE" GIVING

Donations from Philip Morris International (PMI): 2009–2013, in USD



Tobacco companies have a long history of exerting influence to promote their own agendas, further company awareness, or promote goodwill. This is not done innocently or to be good corporate citizens, but rather in an effort to achieve "innocence by association" EXERTING POLITICAL INFLUENCE. Like most major corporations, tobacco companies make donations, attempt to influence politics and exert undue influence to promote their own brands, companies and profits FUNDING CHARITIES. The difference is that tobacco companies do this to sell a product that is addictive and deadly.

The global tobacco industry spends tens of billions of dollars (USD) each year on tobacco advertising, promotion and sponsorship. Though tobacco lobbying expenditures and political contributions are mostly tracked and readily available in the USA, these practices of formal and informal tobacco lobbying, building strategic political relationships, and providing payoffs occur throughout the world. In the USA, over $26 million was spent on tobacco lobbying in 2012, with 23 tobacco companies employing 174 lobbyists. All major tobacco companies make charitable contributions, though the amount donated is miniscule in comparison to the overall profits of the companies. Additionally, these donations often support charities or projects that are in the best interest of tobacco companies, such as PMI's 2012 donation in Spain to support an entrepreneurship program for young tobacco growers GLOBAL EXAMPLES.

Many countries and organizations are working diligently to expose the undue influence of tobacco companies, and the best way to do this is to follow the WHO FCTC guidelines and recommendations for Article 5.3, which states, "Parties should protect the formulation and implementation of public health policies for tobacco control from the tobacco industry to the greatest extent possible." The influence exerted by tobacco companies is observed worldwide, and it is time for countries to seriously enforce the provisions of Article 5.3 and to stand against the various forms of undue influence exerted by all tobacco companies.

WHO DEFINITIONS

Tobacco companies resist effective tobacco control measures through a number of avenues that have been outlined by the WHO.

- Intelligence gathering
- Public relations
- Political funding (campaign contributions)
- Lobbying
- Consultancy (use of "independent" experts)
- Funding research, including universities
- Smokers' rights groups
- Creating alliances and front groups
- Intimidation (use of legal & economic power)
- Philanthropy
- Corporate social responsibility
- Youth smoking prevention programs
- Retailer education programs
- Litigation
- Smuggling
- International treaties
- Joint manufacturing and licensing agreements
- Pre-emption (prohibits localities from enacting laws more stringent than state law)

ARTICLE 5.3 OF THE WHO FCTC

Article 5.3 urges parties to actively protect the creation and implementation of public health policies from the interest of the tobacco industry with the following principles:

There is a fundamental and irreconcilable conflict between the tobacco industry's cointerests and public health policy interests.

Parties, when dealing with the tobacco industry or those working to further its interests, should be accountable and transparent.

Parties should require the tobacco industry and those working to further its interests to operate and act in a manner that is accountable and transparent.

Because their products are lethal, the tobacco industry should not be granted incentives to establish or run their businesses.

For specific examples on how to avoid tobacco industry interference, countries and others should review the specific implementation recommendations in the WHO FCTC Guidelines for Implementation of Article 5.3.

Through effective policies, governments and citizens can engender global health success.

SOLUTIONS

Many of the most effective tobacco control solutions are population-level policies—a set of approaches that will also work for addressing other avoidable non-communicable disease risk factors. But the key to winning these battles is societies' successful engagement in advocating for these policies—governments will need to take the necessary policy steps, but it is people across broader societies that must demand change and hold governments responsible.

NON-COMMUNICABLE DISEASES

A key target of the WHO Global NCD Action Plan is a 30% reduction in tobacco use prevalence by 2025.

DEVELOPMENT

Tobacco control interventions are relatively inexpensive to implement. Only USD600 million per year would deliver four "best buy" tobacco control interventions to all LMICs. This amount is equal to just less than 0.17% of what citizens of LMICs spent on tobacco products in 2013.

POVERTY

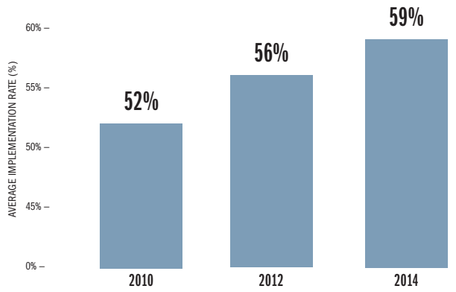
While only 25% of high-income countries are covered by cessation programs at WHO-recommended levels, not one low-income country enjoys the prescribed coverage.

CALL TO ACTION

Accession to the WHO FCTC is a critical and immediate need for all countries that have not yet done so. Following ratification or accession, adequate funding for and full implementation of all articles and protocols are necessary to effectively combat tobacco use.

WHO FCTC IMPLEMENTATION

Progress towards implementation of substantive articles:
percent of 126 Parties analyzed, as reported by governments, 2010–2014



DEATH CLOCK

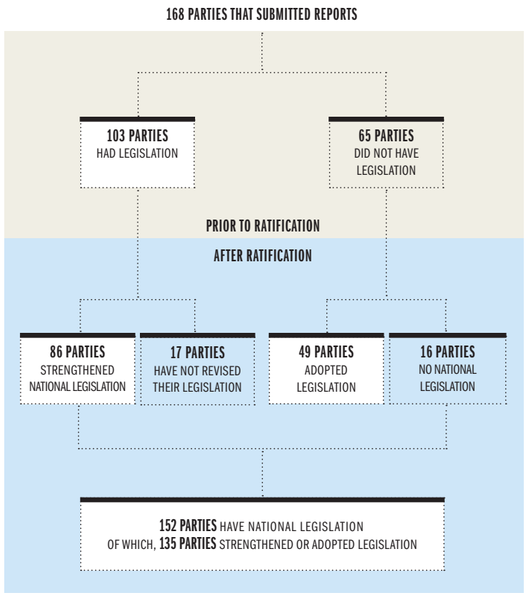
Even though the WHO FCTC has already helped to prevent many thousands of deaths, the toll from tobacco-related diseases continues to rise.

MORE THAN 70 MILLION PEOPLE HAVE DIED

from tobacco-related diseases since the opening of the first FCTC working group on 28 October 1999.

BEFORE AND AFTER THE RATIFICATION OF THE WHO FCTC

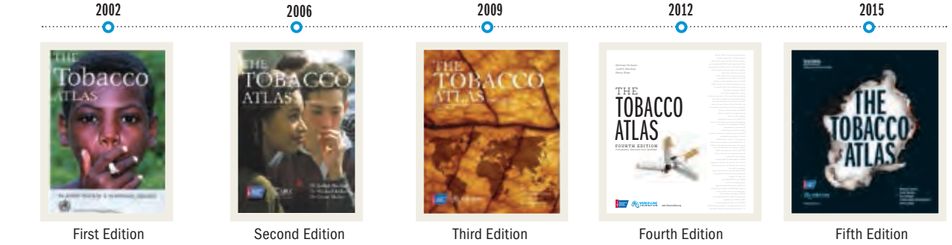
Adoption of legislative, executive, administrative, and other measures (as per Article 5.2(b)) in relation to ratification of the WHO FCTC, 2014



FCTC 5.2(b) states that each Party shall, in accordance with its capabilities, adopt and implement effective legislative, executive, administrative and/or other measures and cooperate, as appropriate, with other Parties in developing appropriate policies for preventing and reducing tobacco consumption, nicotine addiction, and exposure to tobacco smoke.

PARTIES TO THE WHO FCTC

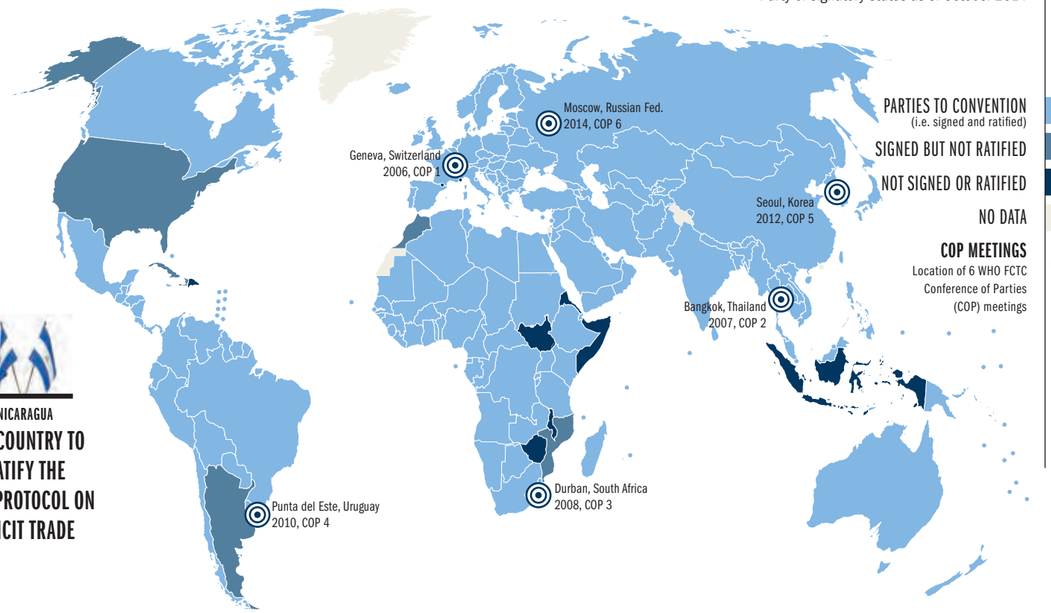
Increase in the number of Parties to the WHO FCTC since the first edition of *The Tobacco Atlas*, 2002–2015



The WHO FCTC now covers about **90%** of the world's population.

SIGNATORIES AND PARTIES TO WHO FCTC

Party or signatory status as of October 2014



The WHO Framework Convention on Tobacco Control (WHO FCTC), the first treaty negotiated under the auspices of the WHO, reaffirms the right of all people to the highest standard of health. Most WHO Member States have ratified the WHO FCTC, making it one of the most rapidly embraced international treaties of all time

PARTIES TO THE WHO FCTC, WHO FCTC IMPLEMENTATION.

There are several stages in the WHO FCTC in common with other UN treaties: first, it needed to be adopted by the World Health Assembly (May 2003); then it became open for signature until 29 June 2004. During this period, 168 States signed the WHO FCTC. Countries that had not signed could—and still can—accede, a one-step process equivalent to ratification. The WHO FCTC entered into force on 27 February 2005, 90 days after the 40th Member State had acceded to, ratified, accepted, or approved it BEFORE AND AFTER THE RATIFICATION OF THE WHO FCTC. The Protocols have an independent status, qualify as treaties in their own rights, and follow a very similar procedure; to date there is only one Protocol, on illicit trade.

The Conference of the Parties (COP) is the governing body which regularly reviews and promotes the implementation of the Convention, and adopts protocols, annexes, decisions, and amendments to the Convention. In crafting guidelines and recommendations, this body reaches well beyond the domains of medicine and public health, involving trade, finance, agriculture, education, labor, the environment, law enforcement, and the judicial system.

An explicit WHO FCTC trade provision on the relation between international trade and public health became a contentious issue during the negotiations. As a result, two conflicting positions emerged—health-over-trade and opposition to health-over-trade. Owing to a lack of consensus, a compromise position eliminating any mention of trade emerged. This is an important omission, as trade treaties are increasingly being invoked to challenge tobacco control policy, as in the introduction of plain/standardized packaging in Australia.

Contrary to tobacco industry arguments, implementing tobacco control measures will not harm national economies. The WHO FCTC has mobilized resources (albeit still inadequate), rallied hundreds of non-governmental organizations, encouraged government action, led to understanding of the political nature of health policy, and raised tobacco control awareness in many government ministries and departments.

There are discussions of emulating the WHO FCTC for other health topics, such as global health, diet, and alcohol. This speaks to the success of the WHO FCTC and the need for a harmonized global effort for other major health problems.

"The WHO's proposed Framework Convention on Tobacco Control represents **AN UNPRECEDENTED CHALLENGE TO THE TOBACCO INDUSTRY'S FREEDOM TO CONTINUE DOING BUSINESS."**

—British American Tobacco, 2003

"WHO and its Member States gave birth to the WHO FCTC. The Convention took on a life of its own and now gives birth to another treaty [the first Protocol]. This is how we build ambitions in public health. **THIS IS HOW WE HEM IN THE ENEMY."**

—DR MARGARET CHAN, Director General, WHO, addressing COP5 delegates, 2012

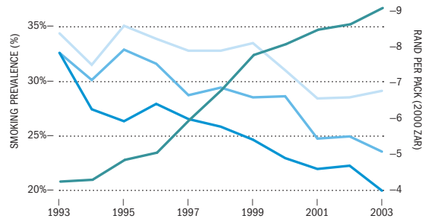
CALL TO ACTION

Tobacco tax increases must, over time, make tobacco products less affordable.

TAXES AND PREVALENCE

Cigarette prices and smoking by income group in South Africa: 1993–2003

LOW INCOME | MIDDLE INCOME | HIGH INCOME | PRICE

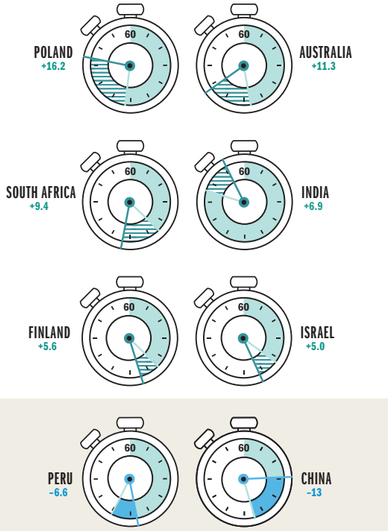


When taxes raise cigarette prices, the poor get more health benefits than the rich.

AFFORDABILITY

Change in minutes of labor to purchase a pack of cigarettes: 2009–2012

2009 | 2012 INCREASE | 2012 DECREASE



The relationship between price and income is very important. When prices increase faster than salaries, people must earn more money to afford their cigarettes, which decreases cigarette consumption and increases the rate of quitting.

"Proposals to earmark excise taxes for health programs are by far

THE MOST SERIOUS THREAT

due to the many health allegations against cigarettes made by anti-smoking groups."

—THE TOBACCO INSTITUTE (an industry trade group in the USA), 1989

"Sugar, rum, and tobacco, are commodities which are nowhere necessaries of life, [but] which are ... objects of almost universal consumption, and which are therefore

EXTREMELY PROPER SUBJECTS OF TAXATION."

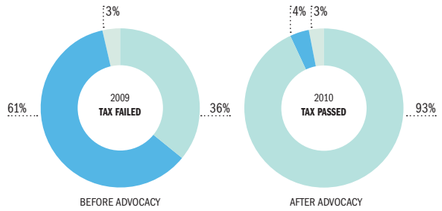
—ADAM SMITH, United Kingdom, 1778

ADVOCATING FOR TAXES

The importance of health advocacy in the creation of tobacco tax laws in Mexico

IN FAVOR | AGAINST | ABSTENTIONS

VOTES ON THE TOBACCO TAX INCREASE



BETWEEN 2009 AND 2010, PUBLIC HEALTH ADVOCATES' EFFORTS:

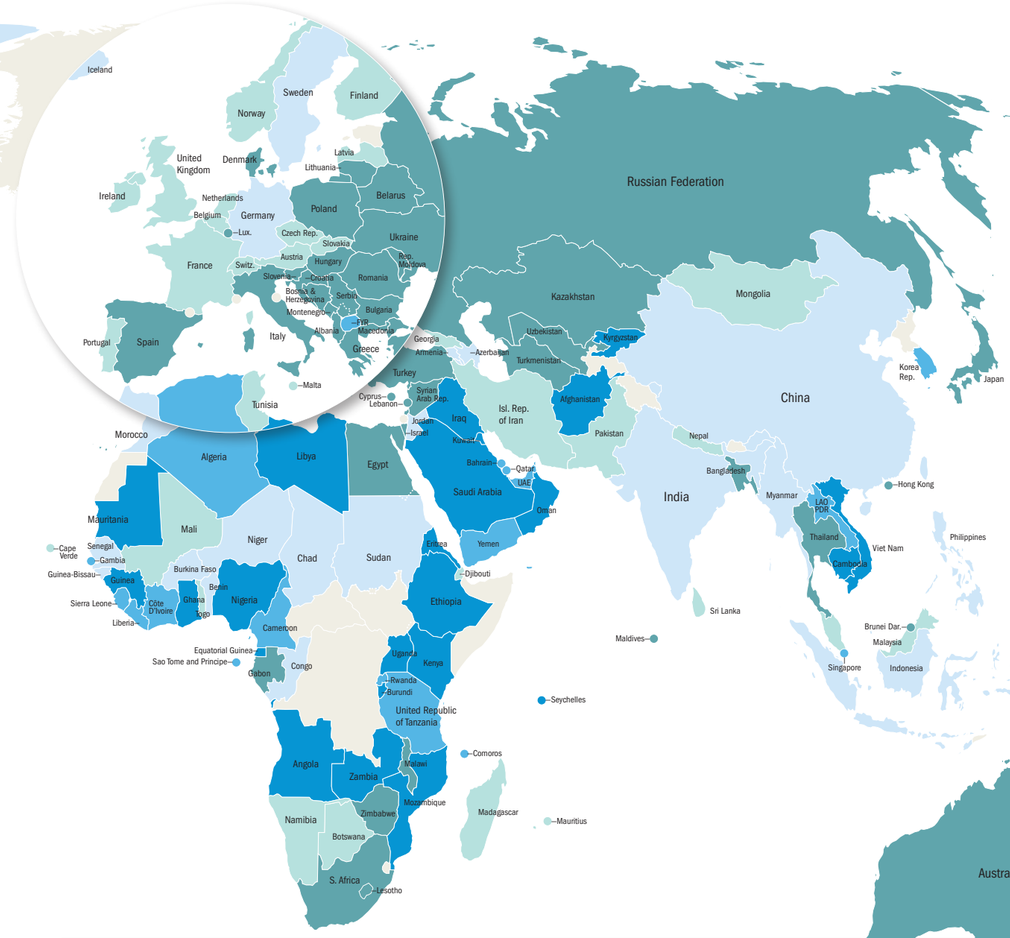
- ✓ Equipped a political champion, Senator Ernesto Saro Boardman, with all the evidence and support necessary to counter tobacco industry arguments in the media and opponents in the legislature
- ✓ Released economic reports to counter false industry arguments, inform the public, and maintain positive media coverage
- ✓ Conducted opinion polling to measure public support
- ✓ Partnered with leaders of congressional health commissions on political forums on tax
- ✓ Launched an intensive mass media campaign

Many health insurance plans in the USA levy tobacco user surcharges on premiums as an economic disincentive to smoke. For a 'pack-a-day' smoker, an $80 monthly tobacco surcharge

INCREASES THE COST OF SMOKING BY $2.25 PER DAY.

In an early study, over 40% of tobacco users reported quitting tobacco to avoid the surcharge.

—LIBER et al, *Nicotine and Tobacco Research*, 2014



TAX CHANGES

Average annual percent change in real excise tax on the most popular price category of cigarettes: 2008–2012

FALL RISE

4.1–75.0%
1.1–4.0%
-1.0–1.0%
-1.1– -4.0%
-4.1– -20.0%
NO DATA

Tobacco excise tax increases that result in higher tobacco product prices are among the most effective tobacco control measures available. The bulk of the peer-reviewed evidence from countries in all stages of economic development confirms that when tobacco product prices increase, people use less of these dangerous products, or quit using them, or never start.

Tobacco companies often claim tax increases are particularly harmful to the poor, but this claim does not hold up to deeper scrutiny. In fact, because they are more sensitive to changes in price than are wealthier people, poorer people get the most health benefits from tobacco tax increases by using less or quitting TAXES AND PREVALENCE. However, people who continue to use tobacco may suffer financial hardship (see Chapter 6: *Poverty*) resulting from continued purchases of tobacco. The positive impact of tax increases on public health multiplies when newly generated revenues are reinvested in health programs (see Chapter 29: *Investing*). This can help alleviate societal health inequities, especially when such programs are directed to help the poorest members of society, as was done by the Philippines with new tobacco taxes implemented in 2013.

Article 6 of the WHO FCTC encourages parties to raise prices of tobacco products by means of excise tax increases. Excise tax levels should be revised often enough to increase the price of tobacco products at a rate above inflation and income growth, making tobacco products less affordable over time AFFORDABILITY.

Tobacco tax increases work best when implemented within a comprehensive tobacco control program. Tax policies should mandate the use of tax stamps, and set up effective tracking and tracing systems for all tobacco products to discourage illicit trade. Government agencies responsible for health should make sure that they participate in the creation of tobacco tax policies alongside finance and revenue agencies ADVOCATING FOR TAXES.

In 2012, Costa Rica earmarked the funds raised from a tobacco tax increase to be

DEDICATED TO TOBACCO CONTROL

efforts, including surveillance and research capacity building.

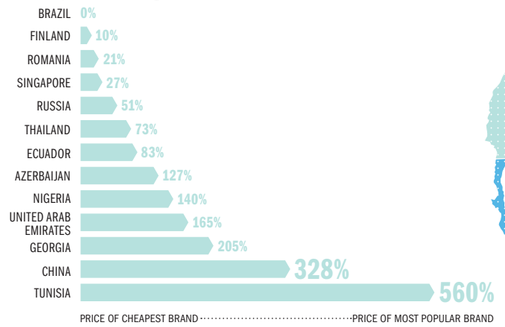
CALL TO ACTION

Continuing to increase the price of tobacco products is a cornerstone of tobacco control.

> **"MY VIEWS AS TO HOW WE SHOULD PASS ON THE PRICE INCREASE** in the event of an increase in the excise tax: … suggest that people stock up to avoid the price increase, and … when people … go to the store to buy more, they will be less likely to remember what they last paid."
>
> — MYRON E. JOHNSTON, Philip Morris researcher, 1987

PRICE GAP

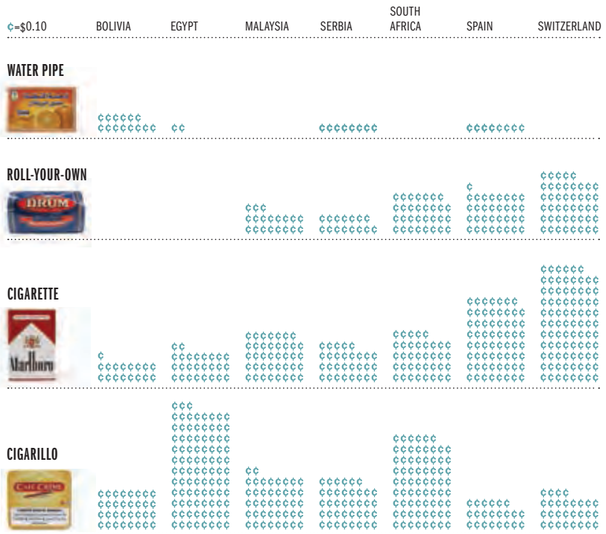
Price difference between a pack of the most popular and the cheapest brand of cigarettes: 2013



A large price spread provides smokers the opportunity to lessen the impact of a price increase by switching to a cheaper brand.

PRICES OF DIFFERENT PRODUCTS

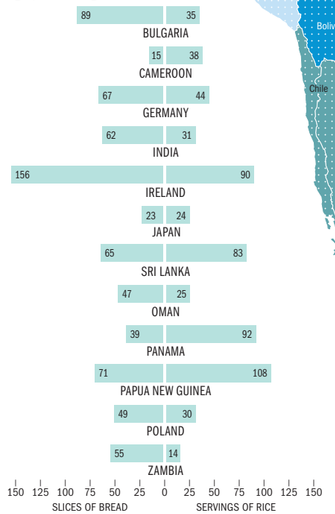
Average prices of equivalent amounts of different tobacco products: 20g or 20-stick pack or 6.67 cigarillos, in USD, 2013



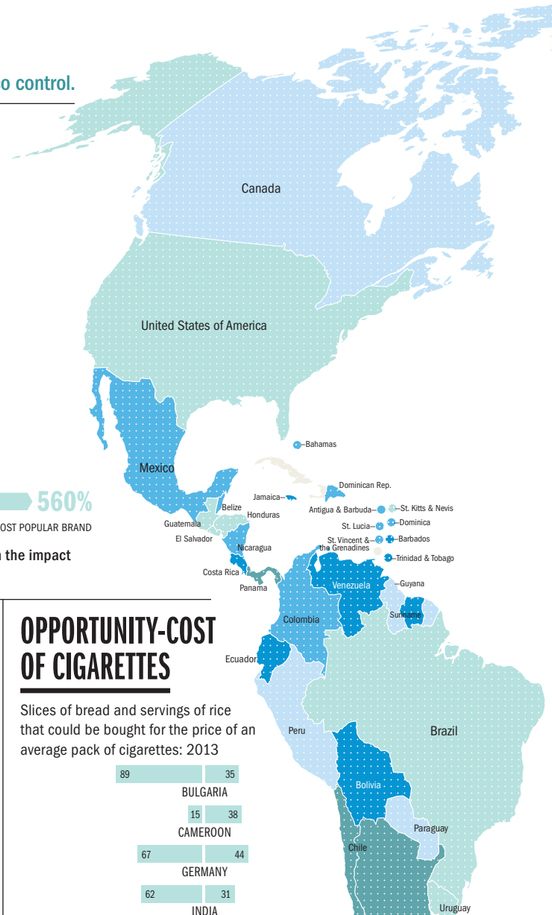
Product prices vary within and among product categories. Tobacco control should always take care to raise prices across all products and places.

OPPORTUNITY-COST OF CIGARETTES

Slices of bread and servings of rice that could be bought for the price of an average pack of cigarettes: 2013

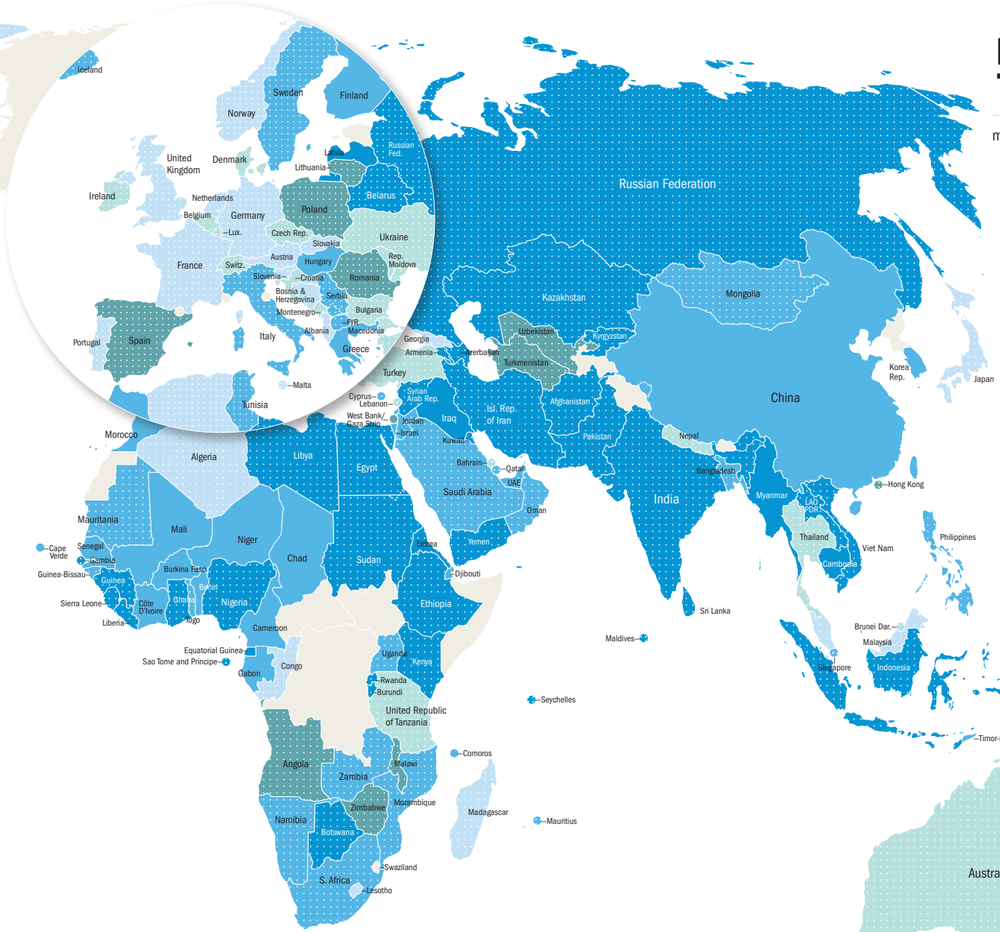


Purchasing the necessities in life is made more difficult with each extra pack of cigarettes purchased. This matters most for people in low socioeconomic status groups, who make the greatest financial trade-offs to continue smoking.



PRICE CHANGES

Average annual percent change in real price on the most popular price category of cigarettes: 2008–2012



THE INDUSTRY IS ALSO RESPONSIBLE FOR PRICE INCREASES

Countries where from 2008 to 2012, increases in cigarette prices exceeded tax increases

Whether a person decides to buy a tobacco product is greatly dependent on the price of the product and the amount of money in a person's pocket. Tobacco prices are central to industry marketing strategies, and it is the tobacco industry that sets the prices of its tobacco products. Cigarettes are a largely uniform product, easily manufactured at low cost on a global scale. Through pricing strategies, the tobacco industry regulates its sales volumes and decides which products and brands will be perceived as "premium" and which will be "economy" brands PRICE GAP.

Cheap brands help the industry broaden its customer base because these products are more affordable to youth. Conversely, by increasing the prices of its products, the industry can wring more money from its addicted customers OPPORTUNITY-COST OF CIGARETTES. When regulations successfully increase the price of one product, such as cigarettes, the industry is able to set the prices of other tobacco products to entice consumers to switch products and keep more people buying their goods.

Prices of tobacco products are of great interest to the public health community because they play such a pivotal role in people's decisions to use tobacco. The overwhelming body of economic evidence confirms that a 10% increase in cigarette price causes the consumption of cigarettes to fall between 2% and 8%. Roughly half of this fall comes from current smokers cutting back on the number of cigarettes they smoke, while the other half results from fewer youths starting to smoke as well as current smokers quitting. Additionally, less variation in the prices of all tobacco products can keep people from switching between products to avoid price increases PRICES OF DIFFERENT PRODUCTS.

Many countries have successfully used tax policies to regulate the price of cigarette products (see Chapter 21: *Taxes*). Policies beyond excise taxes also directly and indirectly influence tobacco product prices, including bans on discounting and price promotions, minimum retail prices, and minimum package sizes.

1/2

Even in the United Kingdom, where almost 90% of the retail price of cigarettes is tax, half of recent price increases (6p of 12p)

ARE DIRECTLY ATTRIBUTABLE TO INDUSTRY PRICING STRATEGIES,

and not to the tax increases themselves.

CALL TO ACTION

Considering the demonstrated health and economic benefits, widespread public support, and low cost of implementation, it is vital that governments act to initiate and fully enforce comprehensive smoke-free legislation.

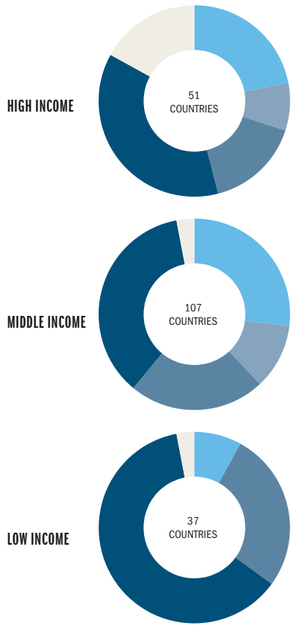
"100% SMOKE-FREE IS THE ONLY ANSWER.
Neither ventilation nor filtration, alone or in combination, can reduce exposure levels of tobacco smoke indoors to levels that are considered acceptable, even in terms of odor, much less health effects."

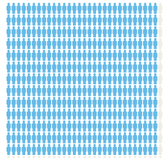
—World Health Organization, 1997

SMOKE-FREE LAWS

Smoke-free legislation by income level: high-, middle-, low-income countries, 2012

NUMBER OF PUBLIC PLACES COMPLETELY SMOKE-FREE:
- All (or at least 90% of the population covered by complete subnational smoke-free legislation)
- Six to seven
- Three to five
- Up to two
- Data not reported/not categorized





16%
Only 16% of the world's population is covered by comprehensive smoke-free laws.

2014 WINTER OLYMPIC GAMES IN SOCHI, RUSSIAN FEDERATION
Smoking was forbidden in all enclosed venues of the Games, and on the territory of the Olympic Park, including all bars and restaurants. It was the **14TH CONSECUTIVE SMOKE-FREE OLYMPIC GAMES.**

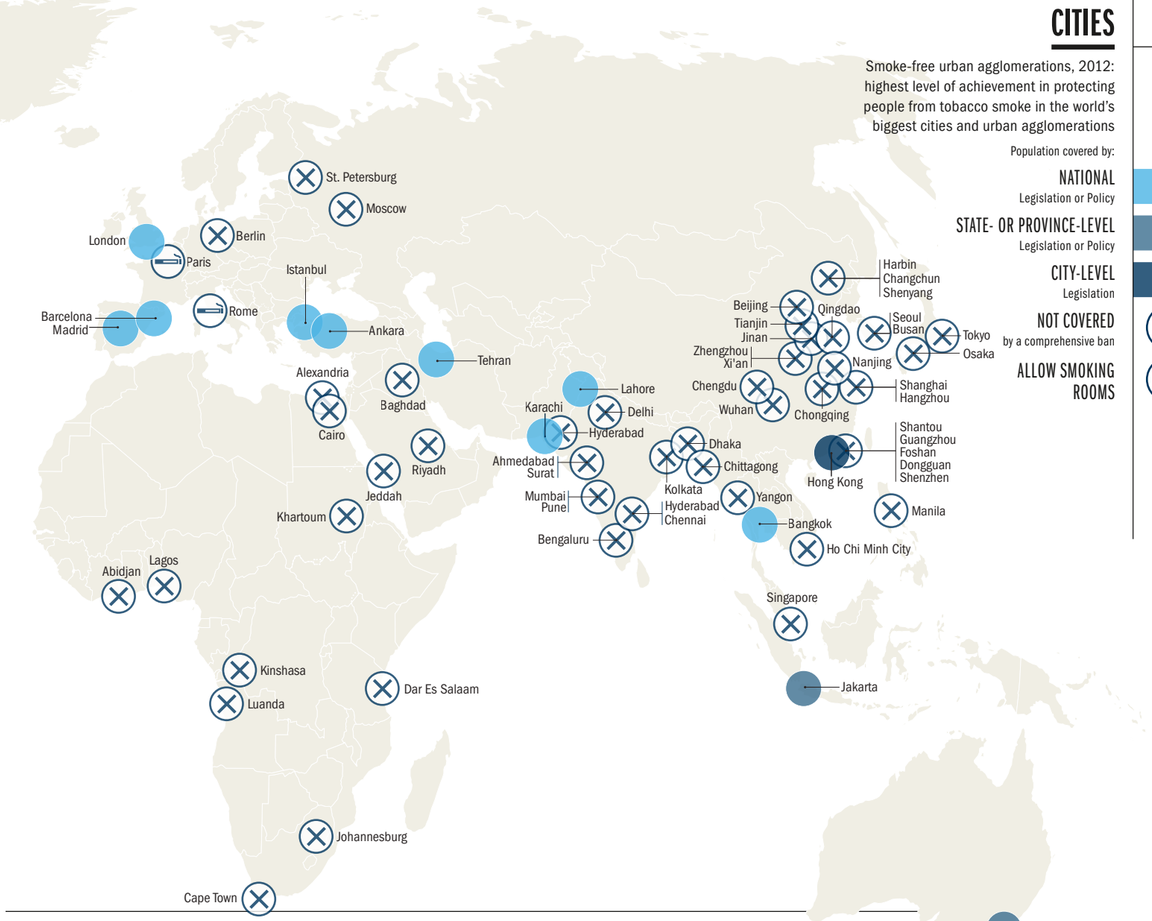
SMOKERS IN CHINA
Support among smokers in China for smoke-free laws in workplaces and bars is greater than it was among smokers in Ireland before their initially unpopular but very **SUCCESSFUL SMOKE-FREE LAW WAS IMPLEMENTED.**

EFFECT OF SMOKING BANS
A ban on smoking in all indoor workplaces **CAN REDUCE THE PREVALENCE OF SMOKING BY 6%,** and a ban on smoking in all indoor restaurants by 2%.

CITIES

Smoke-free urban agglomerations, 2012: highest level of achievement in protecting people from tobacco smoke in the world's biggest cities and urban agglomerations

Population covered by:
- NATIONAL Legislation or Policy
- STATE- OR PROVINCE-LEVEL Legislation or Policy
- CITY-LEVEL Legislation
- NOT COVERED by a comprehensive ban
- ALLOW SMOKING ROOMS



In terms of both countries and population covered, the tobacco control measure with the greatest progress since 2007 has been protecting people from the dangers of tobacco smoke by enacting laws that create smoke-free workplaces and public places. Thirty-two countries, including 26 low- and middle-income counties, adopted complete smoking bans between 2007 and 2012. Since 2007, the population protected by a comprehensive smoke-free law more than quadrupled, as 1.1 billion people (16% of world population) are now protected from the dangers of second-hand smoke SMOKE-FREE LAWS. Most of these newly protected people live in middle-income countries, which have taken the lead in passing complete smoke-free laws.

Smoking bans benefit non-smokers and smokers alike: Non-smokers are exposed to significantly less second-hand smoke, while smokers tend to smoke less, have greater cessation success, and experience increased confidence in their ability to quit. These effects are greatest under the strongest bans. When indoor smoking areas are allowed, ventilation is inadequate to eliminate second-hand smoke, due to doorways, leakage, poor maintenance and difficult enforcement, and the reduction in smoking among smokers is smaller.

Elimination of smoking, thus second-hand smoke, also eliminates the formation of third-hand smoke from the environment. The latter—residual nicotine and other chemicals left on surfaces by tobacco smoke—can linger for months, and is not amenable to normal cleaning.

All combustible tobacco products must be covered for a policy to be comprehensive. The use of e-cigarettes and water pipes poses ongoing legislative challenges, with some countries opting to include these in smoke-free legislation (see Chapter 12: *E-cigarettes* and Chapter 13: *Water Pipes*).

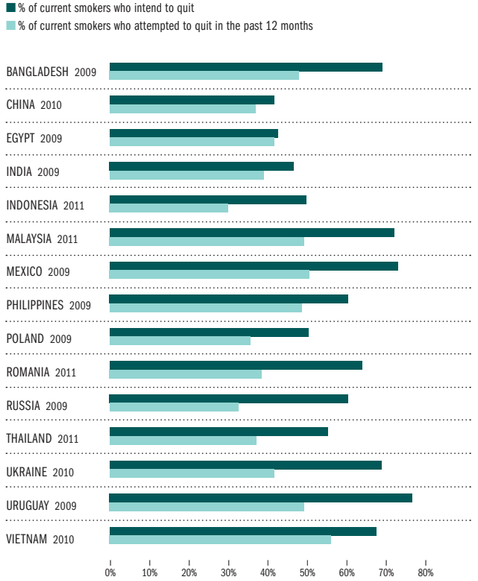
The first three countries to **BAN SMOKING IN VEHICLES CARRYING CHILDREN** were Bahrain, Mauritius, and South Africa.

CALL TO ACTION

Governments should subsidize all aspects of individual- and group-level cessation while simultaneously employing strong population-based cessation strategies.

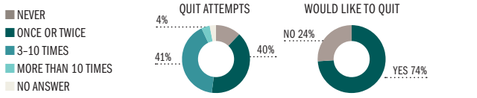
SMOKERS WANT TO STOP

Percent of smokers who intend to quit, or have tried to



In many countries, most current smokers would like to give up smoking. In Malaysia, up to 71% of current smokers intend to quit smoking, and nearly 50% of smokers made attempts to quit in 2011.

UNITED STATES



In the USA, 85% of smokers say they have tried to quit at least once in their lifetime.

"Our estimates of China's burden of mortality attributable to smoking… suggest that substantial health gains could be made—a 40% relative reduction in smoking prevalence and almost

13 MILLION SMOKING-ATTRIBUTABLE DEATHS AVERTED AND MORE THAN 154 MILLION LIFE YEARS GAINED BY 2050

—by extending effective public health and clinical interventions to reduce active smoking."

—DAVID LEVY et al, British Medical Journal, 2012

EFFECTS OVER TIME

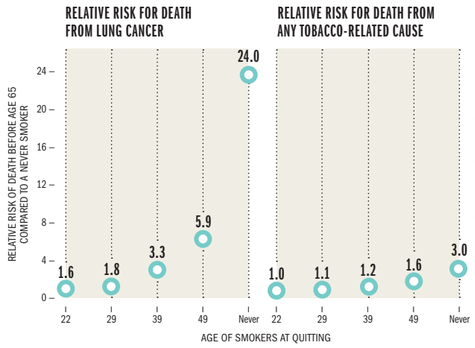
Immediate and long-term health benefits of quitting for all smokers

BENEFICIAL HEALTH CHANGES INCLUDE:

- WITHIN **20** MINUTES — Your heart rate and blood pressure drop.
- WITHIN **12** HOURS — Your carbon monoxide level in the blood drops to normal.
- WITHIN **2–12** WEEKS — Your circulation improves and your lung function increases.
- WITHIN **1–9** MONTHS — Your coughing and shortness of breath decrease.
- WITHIN **1** YEAR — Your risk of coronary heart disease is about half that of a smoker's.
- WITHIN **5** YEARS — Your risk of stroke is reduced to that of a nonsmoker's.
- WITHIN **10** YEARS — Your risk of lung cancer falls to about half that of a smoker's, and your risk of cancer of the mouth, throat, esophagus, bladder, cervix, or pancreas decreases.
- WITHIN **15** YEARS — Your risk of coronary heart disease is that of a nonsmoker's.

BENEFITS OF QUITTING

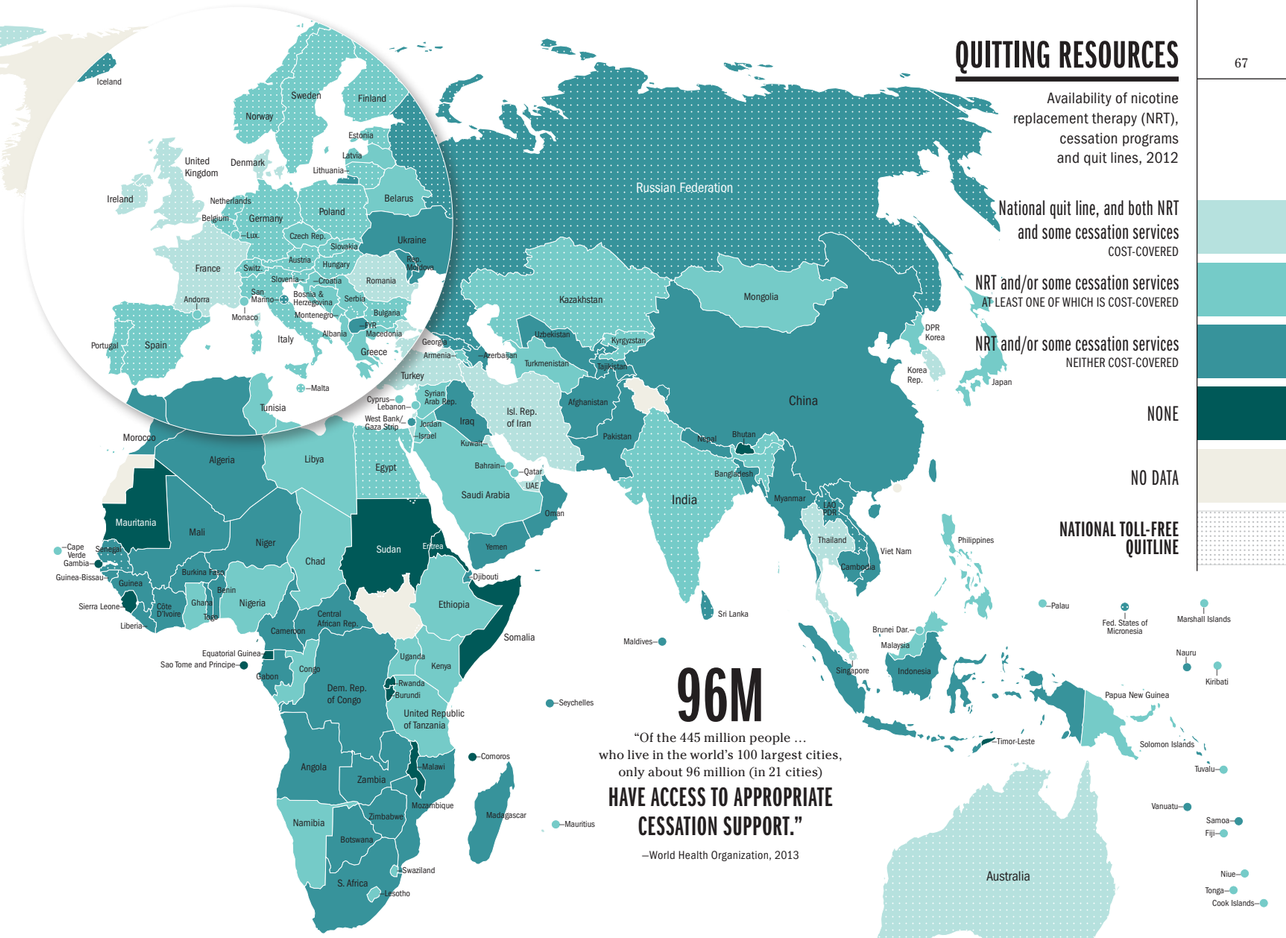
Former smokers' risk of death, by age at quitting:
UK Million Women Study, ages 55–63



Health benefits of cessation emerge rapidly and quitting smoking at any age is beneficial to health. Former smokers who stop smoking at about 30 and 40 years old reduce their risk of dying from lung cancer by 97% and 90%, respectively.

QUITTING RESOURCES

Availability of nicotine replacement therapy (NRT), cessation programs and quit lines, 2012



96M

"Of the 445 million people … who live in the world's 100 largest cities, only about 96 million (in 21 cities)

HAVE ACCESS TO APPROPRIATE CESSATION SUPPORT."

—World Health Organization, 2013

At any age, quitting smoking benefits health; smoking cessation is one of the best ways to add years to a smoker's life. Most smokers will make many attempts to quit over a lifetime, and resources should be more easily available to increase their chances for success SMOKERS WANT TO STOP.

Health professionals should always try to get smokers to stop. People should be *asked* if they smoke; they should always be *advised* to stop; and they should be offered *assistance* in doing so. Several interventions are useful as smoking cessation aids, including counseling and support, nicotine replacement therapy, and the use of medications.

Most people who successfully quit say that simply stopping ("going cold turkey") was the most effective strategy. Although nicotine replacement and treatment with medicines have been shown to lead to higher sustained quit rates, relatively few people use these approaches, and their impact on a population level has been small.

Population-based approaches such as raising prices (see Chapter 21: *Taxes*), limiting advertising (see Chapter 28: *Marketing Bans*), and restricting public smoking (see Chapter 23: *Smoke-Free*) have been very effective in reducing tobacco use. In New York City, where such measures have been aggressively pursued, smoking rates have dropped by one-third. A recent Australian study found that three-fourths of the smoking decline there was due to increased taxation, stronger smoke-free laws and mass media campaigns.

It is also crucial to reach teenagers and other young smokers with smoking cessation messages and aids. The younger someone is when they stop smoking, the greater the benefit in terms of years of life saved EFFECTS OVER TIME. Smokers lose a decade of life because of their habit, and someone who quits before the age of 40 reduces their chance of death from tobacco-related illness by 90% BENEFITS OF QUITTING.

"WE DO NOT HAVE A PRODUCT THAT MEETS THE NEEDS… OF EX-SMOKERS.

Many…will resume smoking, and the product that they choose could cause a swing in market share. These quitters…are dissatisfied with certain aspects of a product that previously met their needs…a textbook example of a market opportunity."

—Philip Morris report, 1988

CALL TO ACTION

Governments should fund and/or legislate sustained tobacco control mass media campaigns to inform the public about the harm of tobacco use and to galvanize public support for tobacco control.

"Our objective is to help countries become self-sufficient in the use of counter-marketing strategies. The sooner governments start using these tools, the more lives will be saved."

—SANDRA MULLIN, Senior Vice President, Policy & Communications, World Lung Foundation, 2014

GRAPHIC ADVERTISEMENTS

TV is the most effective medium for anti-tobacco advertising. In low-income countries where TV may have more limited reach, radio can be an alternative as well as being less expensive.

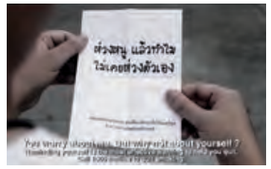
Testimonial PSA, India: "Sunita"

Testimonial PSA, West Africa: "Idrissa"

Ads with visceral images are the most effective at cutting through smokers' defenses.

SOCIAL MEDIA CAMPAIGNS

"SMOKING KID" VIDEO, THAILAND: 2012



Catch phrase: "If it's so bad, why are you smoking?"

When children approached the adult smokers for a light, the adults refused and reminded them that smoking is bad. The children gave each adult a note saying, "You worry about me. Why not about yourself?" Then almost every adult paused and threw away their cigarette. This emotional anti-smoking ad led to a 40% increase in national quitline calls as well as over 5 million YouTube views within 10 days.

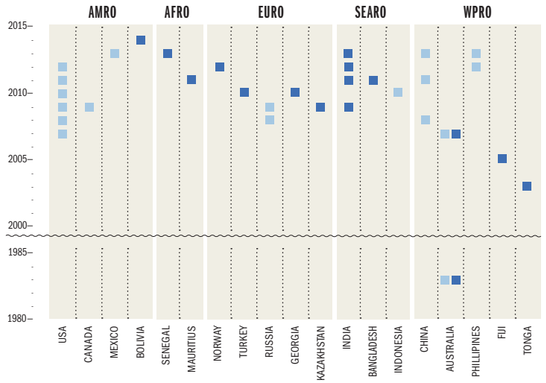
"TIPS FROM FORMER SMOKERS" CAMPAIGN, USA: 2012–2014

The 2012–2014 CDC campaign, "Tips from Former Smokers," included ads on TV, radio, billboards, YouTube, Twitter, and Facebook, featuring hard-hitting, graphic stories told by former smokers.

GLOBAL REACH

Graphic TV ads such as "Sponge," produced by Cancer Institute (NSW) Australia, translate easily and are effectively used in many countries.

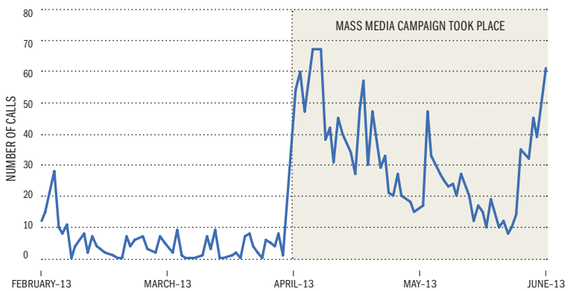
"Lungs are like sponges. If you could wring out the cancer-producing tar that goes into the lungs of a pack-a-day smoker every day, this is how much you would get."



Governments around the world should adapt existing, proven mass media campaigns to implement cost-effective and impactful campaigns.

NATIONAL SENEGALESE QUITLINE

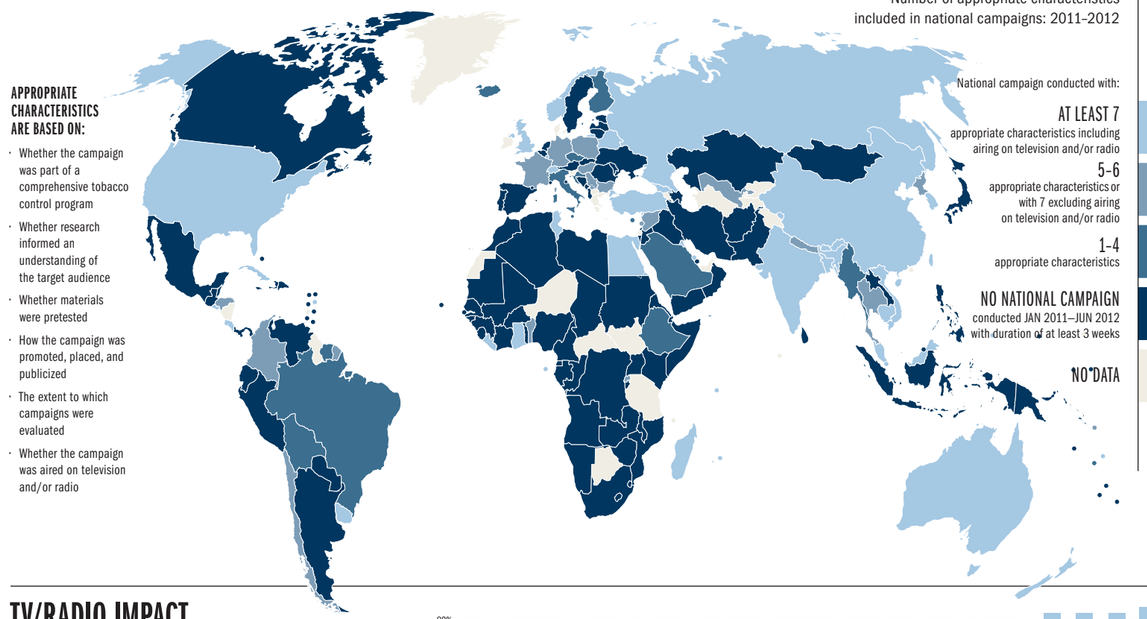
Calls to the national Senegalese quitline before and during a mass media campaign: 2013



"Sponge" campaign resulted in a near 600% increase in calls to the national quitline in Senegal. Campaigns aired in April and May 2013.

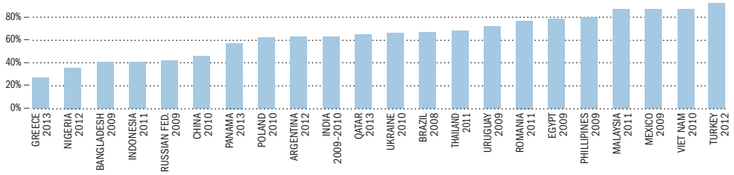
ANTI-TOBACCO MASS MEDIA CAMPAIGNS

Number of appropriate characteristics included in national campaigns: 2011–2012



TV/RADIO IMPACT

Percentage of adults who noticed anti-smoking information on TV or radio



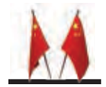
Effectiveness of anti-tobacco campaigns varies widely and depends on the actual content of the advertisements, number of plays they receive on radio or TV, the percentage of the population with access to radio or TV, and other factors.

Mass media campaigns are among the most effective ways to warn about the dangers of tobacco use, to encourage smoking cessation, and to create support for tobacco control policies TV/RADIO IMPACT. For years, the tobacco industry used mass media to its advantage in order to present smoking as an attractive and socially-desirable behavior. Now governments and advocates are using this tool to reverse those perceptions and shift behavior.

On TV, in print, and increasingly through innovative uses of internet-based social media platforms, mass media campaigns now use graphic, emotional images and messages that starkly present the health effects of tobacco use SOCIAL MEDIA CAMPAIGNS. Graphic advertisements convince people about the true dangers of tobacco use, cut through smokers' defenses, and illustrate the urgent need for tobacco control policies GRAPHIC ADVERTISEMENTS. Unlike messages that rely on humor or irony, they translate easily and well across languages and cultures. In Senegal, the "Sponge" campaign generated a 63% recall and a 144% increase in smokers who intended to quit. In Norway, the "Sponge" campaign generated a 68% recall and motivated quit attempts in 59% of people who viewed the ads GLOBAL REACH, NATIONAL SENEGALESE QUITLINE.

Broadcast media should be pressed to provide more free time to anti-tobacco ads. Many countries have this option and fail to use it. For instance, all PSAs (not just anti-tobacco) are allotted 3 percent of free broadcast time in China; in Russia that share is 5 percent. Most notably in Turkey, as part of the comprehensive tobacco control legislation passed in 2008, broadcasters are required to give the government 30 minutes a month of prime-time free PSA time for tobacco control. In countries where tobacco advertising is allowed on television, governments should provide equal time, either in the form of PSAs or paid ads, for anti-tobacco advertising.

Each year, more countries begin using mass media anti-tobacco campaigns, but there are still large rural populations, in Africa and Southeast Asia for example, where people are hard to reach. In such areas, innovative strategies using mobile phones, radio, and print should also be pursued, tested, and refined.



CHINA

Since 2007, the World Lung Foundation (WLF) has advocated for the enforcement of stronger tobacco control laws in more than 43 cities in China. Working in partnership with national and subnational government partners,

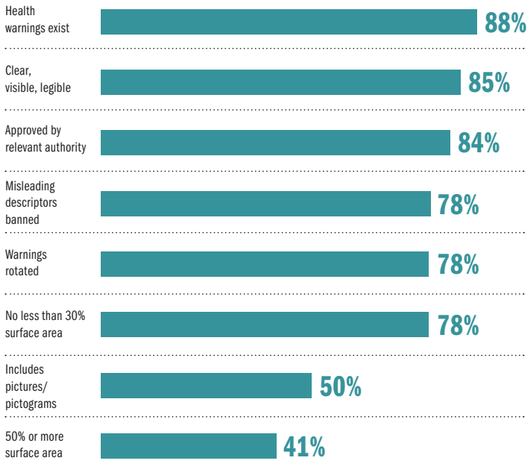
WLF'S CAMPAIGNS HAVE BEEN SEEN BY MORE THAN 300 MILLION CHINESE CITIZENS.

CALL TO ACTION

Governments should legislate removal of all trappings of tobacco promotion on the packaging of all tobacco products, and follow Australia's lead in introducing plain/standardized packaging.

LABEL CHARACTERISTICS

Percentage of Parties which have implemented the WHO FCTC labeling provisions under Article 11 by 2014 (and some have gone above and beyond the FCTC requirements)



MORE THAN 1 BILLION PEOPLE
now live in countries with best-practice packet warning labels.

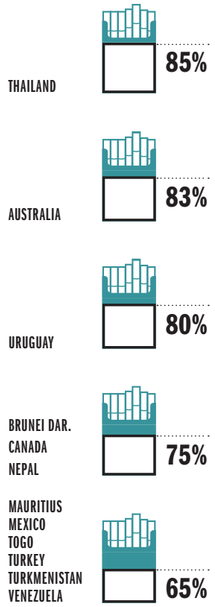
"The tobacco industry uses all elements of the pack, including the outer film, tear-tape, inner frame and pack inserts to promote the product. **[ONLY] STANDARDIZED (PLAIN) PACKAGING WILL STOP THE PACK BEING USED TO PROMOTE THE PRODUCT."**

—CRAWFORD MOODIE and GERARD HASTINGS, University of Stirling, Scotland, 2010

TOBACCO COMPANIES, NOT GOVERNMENTS, ARE RESPONSIBLE FOR THE COSTS OF PRINTING PACKET WARNINGS.

BIGGEST WARNINGS

Top 12 countries in size of graphic labels, as a percentage of pack area: 2014



GRAPHIC WARNING LABELS

Examples by region

2009
AFRICA
MAURITIUS

60% front | 70% back

2009
AMERICAS
CANADA

80% front | 80% back

2012
EASTERN MEDITERRANEAN
DJIBOUTI

50% front | 50% back

2008
EUROPE
BELGIUM

48% front | 63% back

2011
SOUTH-EAST ASIA
THAILAND

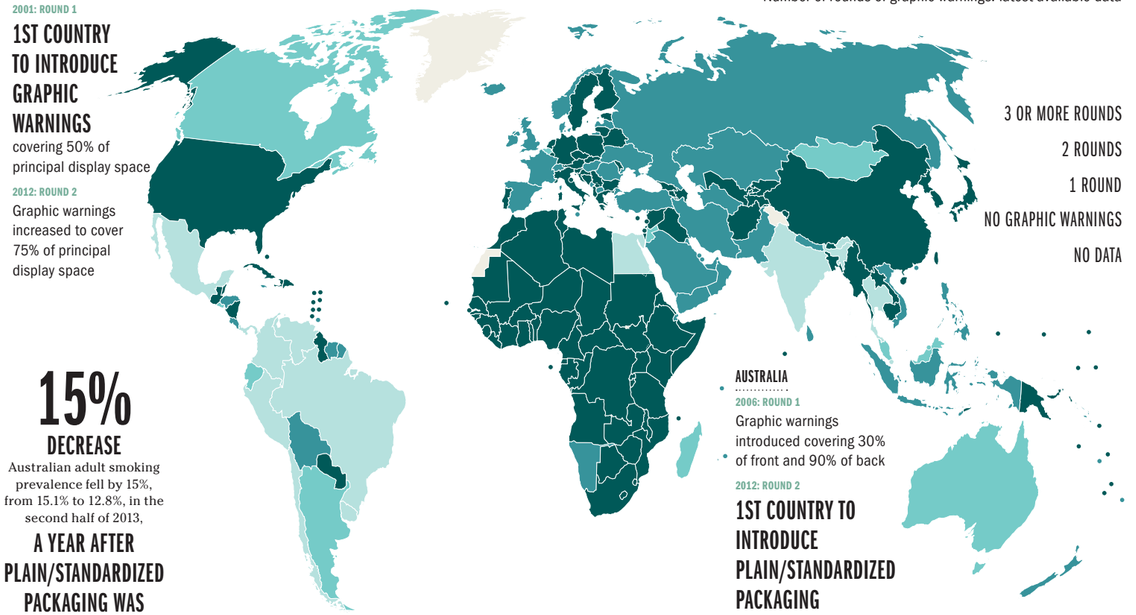
85% front | 85% back

2007
WESTERN PACIFIC
HONG KONG

75% front | 90% back

GRAPHIC PACKET WARNING LABELS

Number of rounds of graphic warnings: latest available data



CANADA

2001: ROUND 1
1ST COUNTRY TO INTRODUCE GRAPHIC WARNINGS
covering 50% of principal display space

2012: ROUND 2
Graphic warnings increased to cover 75% of principal display space

15%
DECREASE
Australian adult smoking prevalence fell by 15%, from 15.1% to 12.8%, in the second half of 2013,
A YEAR AFTER PLAIN/STANDARDIZED PACKAGING WAS INTRODUCED
in December 2012.

AUSTRALIA

2006: ROUND 1
Graphic warnings introduced covering 30% of front and 90% of back

2012: ROUND 2
1ST COUNTRY TO INTRODUCE PLAIN/STANDARDIZED PACKAGING
Graphic warnings increased to cover 75% of front and 90% of back

Warnings on the packaging of all tobacco products have progressed rapidly from small and weak text warnings 40 years ago to the introduction of strong graphic warnings, first adopted by Canada in 2001. Currently, graphic warnings have been adopted by about one third of countries, with several being in their 3rd round of such warnings, so that smokers do not become desensitized to familiar messages GRAPHIC WARNING LABELS.

Warning messages on cigarette packages deliver important information directly to smokers. The message is repeated and reinforced every time a smoker reaches for a cigarette.

In one of its strongest provisions, Article 11 of the WHO Framework Convention on Tobacco Control (FCTC) requires parties, within three years, to require tobacco product warnings that cover at least 30%, and preferably 50%, of the visible area on a cigarette pack LABEL CHARACTERISTICS, BIGGEST WARNINGS. Warnings should be extended to all forms of combustible and smokeless tobacco.

Plain/standardized packaging, with prohibition of all industry logos and color, is a major battleground between the tobacco industry and governments. Australia was the first country to adopt legislation to require plain/standardized packaging, in the face of bitter opposition from the tobacco industry; in spite of legal threats stemming from purported commitments to international economic agreements, plain/standardized packaging has been introduced successfully. In contrast to the tobacco industry's initial arguments, consumer transaction times to purchase tobacco products and product selection errors have actually decreased or stayed the same.

GRAPHIC WARNING LABELS IN AUSTRALIA: 2006 VS. 2012

"IMPERIAL TOBACCO DOES NOT BELIEVE THERE IS ANY CREDIBLE OR RELIABLE EVIDENCE that standardized tobacco packaging will achieve the Government's stated objectives of reducing smoking prevalence among young people or assisting smokers who have, or are trying to, quit."

—Imperial Tobacco response to the Chantler Review on standardized packaging of tobacco products, UK, 2014

CALL TO ACTION

Countries must establish regulatory frameworks that reduce, if not eliminate, the harm caused by the use of tobacco products. These frameworks may require different policies for different products, depending on the associated risks.

In the Russian Federation, a sweeping anti-smoking bill in 2013, tax increases in 2014, and an economic downturn resulted in a 12% drop in cigarette consumption in what had been the world's second largest market. The Russian Federation demonstrated that

REGULATIONS, ESPECIALLY WHEN COMBINED, HAVE THE POTENTIAL TO MAKE BIG DECREASES IN TOBACCO CONSUMPTION.

GROWING

Regulate pesticide use

Provide occupational safety and health safeguards for farmers, including labor protections

Protect the environment and prevent deforestation that occurs from tobacco curing and agricultural practices

Prohibit all incentives to grow tobacco, such as subsidies

MANUFACTURING

Ensure safe manufacturing practices

Set product standards, including regulating nicotine content and additives

PACKAGING AND LABELING

Establish plain/standardized packaging as the gold standard

Require warning labels, including graphic or pictorial images

Disclose ingredients and emissions

Ban "kiddie"-sized packs and sale of single cigarettes

Require application of tax stamps to packaging

MARKETING

Ban or restrict advertising, promotion and sponsorships

Restrict health claims or language suggesting reduced risk, including descriptors such as "mild" or "light"

Ban free samples

Restrict price promotions, including coupons and discounts

POINT OF PURCHASE

Require retail licensing

Set a minimum age of purchase

Mandate face-to-face transactions rather than self-service

Ban vending machines

Ban prominent displays in retail environments

TAX POLICIES

Implement higher tobacco excise taxes

Earmark taxes for tobacco control or other public health programs

DISPOSAL

Establish litter and environmental clean-up regulations

PRODUCT USE

Enforce smoke-free public places (indoor and outdoor)

Ban smoking in multi-family dwellings, homes, and cars with children as passengers

PRODUCTION

DISPLAY

PURCHASE

USE

STAGES OF TOBACCO REGULATION

At each stage of the life of tobacco products, there are many opportunities to limit the harm they can cause.

GLOBAL REGULATORY EXAMPLES

Case studies relating to the stages of tobacco regulation

PACKAGING AND LABELING
CANADA
In 2012,
HEALTH WARNINGS on packs of cigarettes and little cigars
INCREASED FROM 50% TO 75% of the back and front surfaces.

DISPOSAL
SAN FRANCISCO, USA
In July 2009, a 20-cent fee was imposed on every pack of cigarettes sold in the city to partially cover
EXPENDITURES RELATED TO REMOVING CIGARETTE LITTER.

TAX POLICIES
COSTA RICA
Passed a comprehensive tobacco control bill that
INCREASED TOBACCO TAXES BY THE EQUIVALENT OF USD0.80 PER PACK of cigarettes, with all of the new tax revenue earmarked for tobacco control programs and other health initiatives.

TAX POLICIES
MINNESOTA, USA
The only US state that considers
E-CIGARETTES AND E-LIQUID TO BE SUBJECT TO TOBACCO EXCISE TAX, currently 95% of the wholesale cost of any product containing or derived from tobacco.

POINT OF PURCHASE
NEW YORK CITY, USA
In May 2014, the
MINIMUM AGE TO BUY CIGARETTES WAS RAISED TO 21.

MARKETING, PACKAGING AND LABELING
BRAZIL
The first country to
BAN MISLEADING TERMS SUCH AS "LIGHT" AND "LOW-TAR."

PRODUCT USE
IRELAND
The first country to institute an outright
BAN ON SMOKING IN WORKPLACES, in March 2004. Offenders can face up to EUR3000 fines.

MANUFACTURING
FRANCE
In 2009, in an effort to prevent youth smoking,
ADOPTED A LAW RESTRICTING USE OF FLAVORING INGREDIENTS IN CIGARETTES.
This law has impacted sales of vanilla, orange, and chocolate cigarettes in the country.

PRODUCT USE
UNITED KINGDOM
In February 2014, the UK government voted to make it a
CRIMINAL OFFENSE TO SMOKE IN CARS WHEN CHILDREN ARE PASSENGERS.

MARKETING
ISLAMIC REPUBLIC OF IRAN
One of the first countries in the Eastern Mediterranean Region to completely
BAN ALL FORMS OF TOBACCO ADVERTISING, PROMOTION, AND SPONSORSHIP.

PRODUCT USE
ZAMBIA
81% OF SMOKERS IN ZAMBIA SUPPORT A TOTAL BAN on tobacco products if government provides help for quitting.

PRODUCT USE
BHUTAN
DECLARED ITSELF THE WORLD'S FIRST NON-SMOKING NATION in 2005. Violators are fined the equivalent of USD232—more than two months' salary in Bhutan.

GROWING
BANGLADESH
Law prohibits bank loans for tobacco cultivation, bans subsidies on fertilizer to tobacco farms, and stipulates that the government shall provide
EASY-TERM LOANS TO CULTIVATE ALTERNATIVE CROPS.

PACKAGING AND LABELING
MALAYSIA
A minimum pack size of 20 cigarettes was implemented in July 2010. This law
PROHIBITS SALES OF 14-STICK SO-CALLED "KIDDIE PACKS," which accounted for over a third of the Malaysian market in 2009.

PACKAGING AND LABELING
AUSTRALIA
Experienced a decline in smoking after
REQUIRING PLAIN/ STANDARDIZED PACKAGING FOR CIGARETTES.

Regulations should guide the use of tobacco products in ways that eliminate or minimize harm. Regulations can effectively do this throughout the lifecycle of the product—from the time tobacco leaves are grown to the disposal of tobacco product waste STAGES OF TOBACCO REGULATION. Regulations should correspond to the WHO Framework Convention on Tobacco Control and other guidance, and should be adjusted depending on the customs and political environments of specific countries.

Regulatory aspects related to tobacco products are described in greater detail in many chapters of *The Tobacco Atlas*. This chapter provides an overview of the regulatory lifecycle and exemplifies how regulations at every level have the potential to minimize harm. Growing regulations (see Chapter 15: *Growing*) protect tobacco farmers from the harms associated with handling tobacco leaves, and limit the tobacco industry's impact on land use, especially in low- and middle-income countries. Manufacturing regulations protect consumers by monitoring the processes by which products are made, and can restrict additives that make smoking more addictive or appealing to youth.

Packaging and labeling regulations (see Chapter 26: *Warnings & Packaging*) help to diminish the appeal of tobacco and the temptation to use tobacco products by requiring them to be sold in plain packaging and/or packaging that effectively portrays health warnings.

Because it is important to reduce the attractiveness of tobacco, marketing regulations (see Chapter 28: *Marketing Bans*) make it more difficult for the tobacco industry to communicate a deceptive link between smoking and the promise of a more attractive lifestyle. Tax policies (see Chapter 21: *Taxes*), along with marketing regulations that restrict promotional price discounts and coupons, make cigarettes less affordable. Point of purchase restrictions can limit the availability of tobacco products, especially to youth.

Regulations on where products can be used (see Chapter 23: *Smoke-Free*) protect smokers and those exposed to second-hand smoke by prohibiting smoking in certain areas. Disposal regulations (see Chapter 5: *Environment*) can help ensure that cigarette butts, which are toxic waste, are disposed of appropriately, or that cigarette manufacturers are held responsible for collecting and disposing of cigarette waste.

This regulatory framework must evolve with the advent of novel nicotine products that purportedly reduce harm. New nicotine delivery systems may help people to move away from deadly combustible products, but the question remains whether the regulations governing tobacco products should apply to these alternatives (see Chapter 12: *E-cigarettes* and Chapter 7: *Nicotine Delivery Systems*).

"While we support effective evidence-based tobacco regulation, we do not support regulation that

PREVENTS ADULTS FROM BUYING AND USING TOBACCO PRODUCTS

or that imposes unnecessary impediments to the operation of the legitimate tobacco market."

—Philip Morris International, "Regulating Tobacco Products," 2014

"Why should society continue to sanction companies that create no social value and

CREATE SO MUCH HARM FOR SO MANY,

in the process of creating profits for so few?"

—PATRICIA MCDANIEL and RUTH MALONE, American Journal of Public Health, 2012

CALL TO ACTION

Governments should implement comprehensive TAPS (tobacco advertising, promotion and sponsorship) bans in order to protect children, youth, non-smokers, former and current smokers alike.

TYPES OF BANS

Number of countries with specific bans on tobacco promotion

DIRECT ADVERTISING

DIRECT TOBACCO ADVERTISING BANS	NUMBER OF COUNTRIES
National TV and radio	144
International TV and radio	118
Local print	129
International print	86
Billboards	129
Point-of-sale	67
Internet	96

INDIRECT ADVERTISING

INDIRECT TOBACCO ADVERTISING BANS	NUMBER OF COUNTRIES
Free distribution	102
Promotional discounts	84
Tobacco product brands used for non-tobacco products	80
Non-tobacco product brands used for tobacco products	57
Product placement	104
Appearance of tobacco products in TV and films	45
Sponsored events	89

"Obviously I am very much against anything that tries to reduce consumption of a legal product that is used by adults."

—GARETH DAVIES, Chief Executive of Imperial Tobacco, commenting on a proposed advertising ban in the United Kingdom, 1997

"If we do not close ranks and ban tobacco advertising, promotion and sponsorship, adolescents and young adults will continue to be lured into tobacco consumption by an ever-more aggressive tobacco industry."

—DR MARGARET CHAN, Director-General of the WHO, 2013

GERMANY'S INCOMPLETE TAPS BAN

ALLOWED

- National promotion/sponsorship
- Point-of-sale
- Outdoor/billboard
- Brand stretching

BANNED

- TV and radio
- Print media
- Internet
- Cinema before 18:00

Incomplete bans allow the tobacco industry to utilize other media to continue to promote their product.

TAPS POLICIES

Number of countries with varying degrees of advertising bans

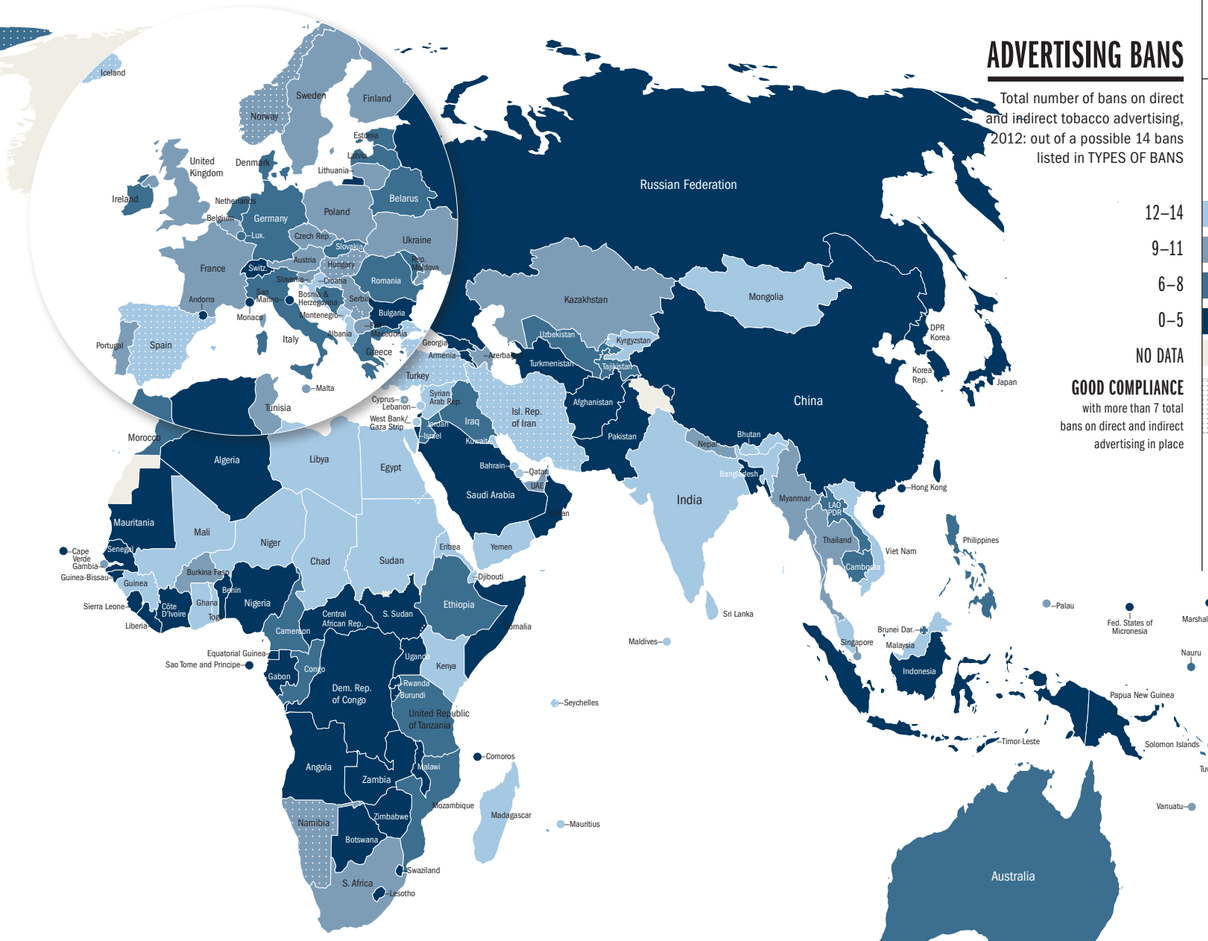
24	103	1	67
COMPLETE	**MODERATE**	**MINIMAL**	**NONE**
Ban on all forms of direct and indirect advertising	Ban on national TV, radio, and print media as well as on some (but not all) other forms of direct and/or indirect advertising	Ban on national TV, radio, and print media only	Complete absence of ban, or ban that does not cover national TV, radio, and print media

10%

Only 10% of the world's population is covered by complete bans on all tobacco advertising, promotion, and sponsorship at the highest level of achievement at the national level.

ADVERTISING BANS

Total number of bans on direct and indirect tobacco advertising, 2012: out of a possible 14 bans listed in TYPES OF BANS



12–14
9–11
6–8
0–5
NO DATA

GOOD COMPLIANCE
with more than 7 total bans on direct and indirect advertising in place

Comprehensive TAPS bans on direct and indirect tobacco advertising, sponsorship and all other forms of promotion are effective at reducing population smoking rates TAPS POLICIES. Partial restrictions are less effective in reducing smoking partly because tobacco companies redirect their marketing efforts to available venues. Voluntary agreements are also inadequate because they are unenforceable. Countries that introduced complete bans together with other tobacco control measures have been able to cut tobacco use significantly within only a few years.

Tobacco companies have opposed the removal of tobacco retail displays, arguing this would compromise retailers' safety, increase retail crime, reduce retailers' income, impose additional costs and be inconvenient. These arguments have successfully delayed policy development in several jurisdictions.

Tobacco companies have become ever more creative in their attempts to lure new consumers into addiction. New use of media, social media, brand stretching, product placement in movies/films and TV programs, event promotion, retailer incentives, sponsorship and advertising through international media, cross-border advertising, internet advertising, and promotional packaging are some of the ways that the tobacco industry circumvents the intent of simple bans. Legislation should include bans on all forms of direct and indirect advertising, promotion, and sponsorship TYPES OF BANS.

Bans deny the tobacco industry one of their tools to recruit new tobacco users to replace those who have quit or died, to maintain or increase use among current users, to reduce a tobacco user's willingness to quit, and to encourage former users to start using tobacco again.

Comprehensive TAPS bans protect youth from the onslaught of tobacco marketing in sports, music venues, the internet, and elsewhere, and help reduce the social acceptability of smoking and tobacco use.

In 41 countries studied, smoking prevalence was

REDUCED 5% WITHIN 3 YEARS

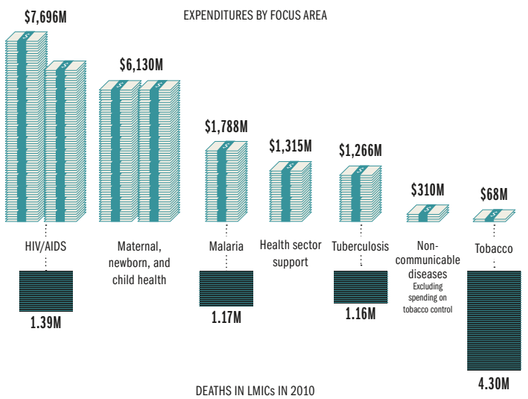
in countries with a ban on direct and indirect marketing, in contrast to 3% that only banned advertising, and 1% that introduced a partial ban.

CALL TO ACTION

Since current tobacco control funding is insufficient to arrest the harm caused by tobacco use, all countries should develop new funding mechanism to support tobacco control efforts.

HEALTH FUNDING

Development assistance for health in low- and middle-income countries (LMICs) which includes funding from bilateral and multilateral donors, non-governmental organizations, private foundations, and the corporate sector:
by focus area, in millions USD, 2011



$68M
IN 2011
was the total international assistance for tobacco control efforts in all low- and middle-income countries. This was also the amount spent
EVERY THREE DAYS
by the tobacco industry to advertise and promote its products in the United States of America.

COST EFFECTIVENESS
"With […] cost-effectiveness rivalled only by basic childhood immunisations, few public investments provide greater dividends."
—World Health Organization, 1997

96%
Governments collect nearly USD145 billion in tobacco excise tax revenues each year, but spend less than USD1 billion combined on tobacco control—96% of this is
SPENT BY HIGH-INCOME COUNTRIES.

AVAILABLE VS. NEEDED FUNDS

Governments spend too little on tobacco control:
USD per capita, 2011

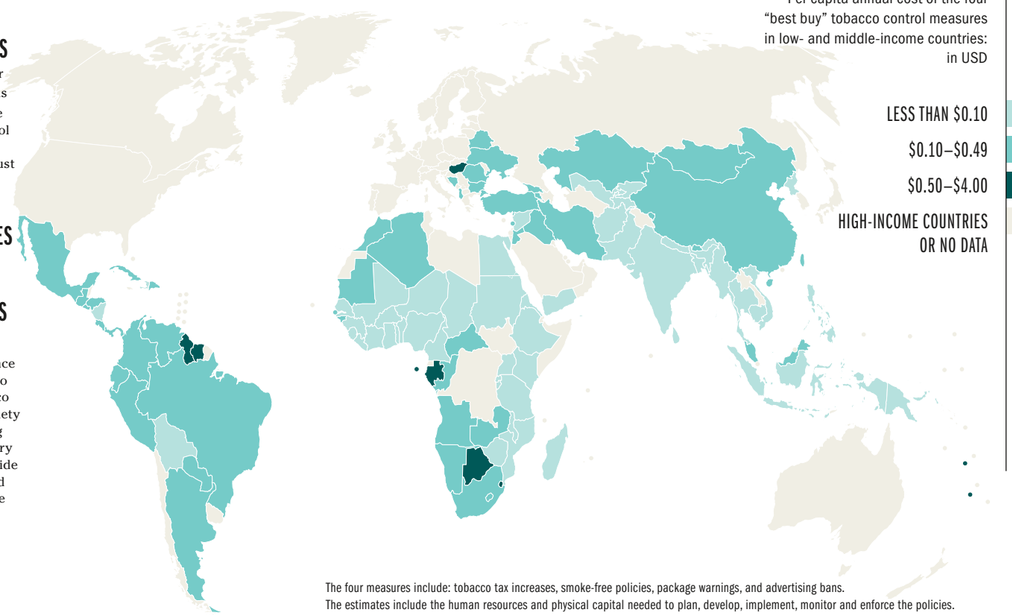
COST-BENEFIT

Savings created by tobacco control interventions:
in millions USD, 2013

	MISSOURI, USA	TAIWAN, CHINA	UNITED KINGDOM	AUSTRALIA	GERMANY
	Tobacco Prevention and Cessation Initiative: Smoke-free policy change	Outpatient Smoking Cessation Services program: Counseling and nicotine replacement therapy	Taxation: 5% increase in cigarette price	Australian National Tobacco Campaign: Intensive 6-month mass media anti-smoking campaign	Smoke-free Class Competition: Reward non-smoking classes to prevent students from becoming established smokers
NET SAVINGS	**$62M** over remaining lifetime of 5761 quitters	**$224M** over 15 years	**$18,461M** over 50 years	**$912M** over remaining lifetime of 190,000 quitters	**$25M** over 1 year
EXAMPLES OF HOW THESE SAVINGS COULD BE SPENT	**Annual budget for restoration and conservation of Missouri's forests and wildlife.**	**Taiwan's annual government budget for environmental protection.**	**Government annual spending on industry, agriculture and employment.**	**Australia's annual governmental investment in early childhood education.**	**Government annual spending on helping ethnic Germans living in Eastern Europe.**

FUNDS NEEDED

Per capita annual cost of the four "best buy" tobacco control measures in low- and middle-income countries:
in USD



The four measures include: tobacco tax increases, smoke-free policies, package warnings, and advertising bans.
The estimates include the human resources and physical capital needed to plan, develop, implement, monitor and enforce the policies.

IN 2011, ABOUT HALF OF ALL CONTRIBUTIONS made by public or private institutions from high-income countries to control tobacco use in LMICs came from just two donors:
BLOOMBERG PHILANTHROPIES and **THE BILL & MELINDA GATES FOUNDATION.**
While this assistance has been critical to progress in tobacco control, a wider variety of funders joining these two exemplary funders would provide a more secure and diverse assistance environment.

The exact global economic cost related to tobacco consumption is unknown, but it is likely over one trillion dollars per year. In the United States alone, the estimated annual smoking-attributable costs, including direct medical costs as well as the cost of lost productivity due to premature death and illness, amounted to more than USD289 billion annually on average for the years 2009 to 2012. The global cost of tobacco use is expected to increase due to increases in the number of tobacco-related disease cases, as well as the growing cost of health care.

A great part of these costs can be averted by investing in tobacco control, which fortunately can bring to bear a set of evidence-based interventions that has proven to be effective COST-BENEFIT. Policymakers and international donors can choose from a number of population-wide and individual-level measures listed in the WHO Framework Convention on Tobacco Control and its guidelines.

Despite its great return on investment, funding for tobacco control remains at levels that are inadequate compared to current needs, and far behind the level of funding directed toward addressing other health problems that cause far fewer deaths HEALTH FUNDING. The total annual cost of delivering core population-based tobacco control measures in all low- and middle-income countries is projected at only USD600 million, or USD0.11 per capita, while both domestic public funding and international development assistance for tobacco control remain at just a fraction of the need AVAILABLE VS. NEEDED FUNDS.

Few low- and middle-income countries have the experience and resources that could match those of the transnational tobacco industry. Therefore, international assistance for tobacco control is necessary, especially at the initial stages of the epidemic. Countries at later stages in the tobacco epidemic can share their tobacco control know-how, and new financing mechanisms could help the international community to raise the funds required to scale up implementation of the measures set out in the MPOWER package. In the long run, knowing the value of investing in tobacco control, each country must learn for itself how best to allocate the funds needed to address the tobacco epidemic.

NEW FINANCING MECHANISMS

SOLIDARITY TOBACCO CONTRIBUTION, a concept developed by WHO, recommends that countries consider dedicating a part of their tobacco tax revenue toward international health-financing purposes, including international tobacco control.

MANDATORY SOLIDARITY LEVY ON AIRLINE TICKETS in some countries supports scaling-up of treatments for HIV/AIDS and tuberculosis. Similar airline ticket taxes could support international tobacco control.

TOURISM TAXES and levies on financial transactions are other ideas to consider for financing international tobacco control efforts.

LEGAL CHALLENGES

Resisting legal challenges to tobacco control: selected countries 2010–2014

2012
USA
FIVE TOBACCO COMPANIES challenged graphic health warning regulations issued by the FDA. The Court found the warnings violated freedom of expression and rejected the regulations. The FDA will redesign the warnings.

2012–2014
PERU
The Specialized Constitutional Court of Lima rejected the **BRITISH AMERICAN TOBACCO** Peru case against Congress, which challenged a ban on packages of less than 10 cigarettes. The Court observed that the WHO FCTC is a human rights treaty that ratifies the idea that economic freedoms should be limited in order to protect economic and social rights.

2012
BRAZIL
Brazilian tobacco **LOBBYING GROUP SINDITABACO** brought an action to stop the National Health Surveillance Agency, ANVISA, from implementing a ban on additives and flavorings, arguing that ANVISA lacked legal authority and the rule was not supported by scientific evidence.

2013
URUGUAY
After several tobacco control laws, affiliates of **PHILIP MORRIS INTERNATIONAL** challenged two additional regulations in 2009, including 80% graphic health warnings, as a violation of a bilateral investment treaty between Switzerland and Uruguay. They also challenged and lost in the domestic courts.

2012
SCOTLAND
IMPERIAL TOBACCO lost its challenge to a ban on vending machines and point-of-sale displays. The Supreme Court stated the law was designed to protect public health by reducing product attractiveness and availability, not prohibiting their sale.

2013
EUROPEAN UNION
THE INDUSTRY mounted an aggressive multi-million-euro lobbying campaign to weaken the Tobacco Products Directive, which was only marginally successful.

2012
NORWAY
The Court accepted some of the challenges by **PHILIP MORRIS** Norway, but upheld a retail display ban, deeming it necessary and that no alternative, less intrusive measure could produce a similar result.

2012
SOUTH AFRICA
The Constitutional Court dismissed an appeal by **BRITISH AMERICAN TOBACCO** over suing the Minister of Health claiming that the Tobacco Products Control Act was unconstitutional. This case involved person-to-person marketing techniques prohibited under a TAPS ban. The Court found that the hazards of smoking far outweigh the interests of smokers, and that South Africa is obliged to observe the WHO FCTC.

2012
PAKISTAN
The Lahore High Court dismissed a petition by **SHISHA CAFÉ OWNERS** against the smoke-free law.

2012
INDIA
The Delhi High Court dismissed a petition by an association of **TOBACCO WHOLESALERS**, which had challenged a ban on selling of tobacco products within 100 yards of any educational institution.

Many cases have been brought against gutkha. The Court of the State of Bihar dismissed a challenge by **DISTRIBUTORS** to the ban on gutkha or pan masala containing tobacco.

2013
SRI LANKA
The Court of Appeal denied **CEYLON TOBACCO COMPANY'S** request to delay 80% graphic pictorial health warnings, but the court also ordered a reduction in the size of the warnings to 50%–60% of the pack.

2013
THAILAND
The petition of **TOBACCO MANUFACTURERS** to stop the Minister of Public Health from implementing larger-sized packet warnings was ultimately denied.

2012
INDONESIA
The Court accepted some challenges, but rejected a constitutional challenge by Indonesian tobacco farmers and industry workers to Indonesia's Health law.

2011+
PHILIPPINES
Various legal cases regarding jurisdiction over tobacco regulations, including graphic health warnings, TAPS bans and smoking bans are ongoing.

2011
AUSTRALIA
The Australian government is fighting challenges to its *Tobacco Plain Packaging Act*. One challenge is from **PHILIP MORRIS ASIA** using a bilateral investment treaty between Australia and Hong Kong. The other challenge is from several countries using the World Trade Organization.

ACRONYMS

FDA	FOOD AND DRUG ADMINISTRATION
WHO FCTC	WORLD HEALTH ORGANIZATION FRAMEWORK CONVENTION ON TOBACCO CONTROL
WTO	WORLD TRADE ORGANIZATION
TAPS	TOBACCO ADVERTISING, PROMOTION AND SPONSORSHIP

CALL TO ACTION

Governments must resist legal challenges and threats from alleged commitments to international economic agreements to prevent, delay, or overturn tobacco control legislation.

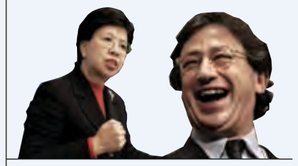
Legal challenges by the industry are being launched around the world to prevent government tobacco control action. The vast legal resources of the large multinational tobacco firms are commonly pitted against the often limited legal resources of a low- or middle-income country. These legal challenges, which may include invoking economic agreements, are expensive to defend and invariably delay implementation of laws passed in the interest of public health. For example, in 2014 British American Tobacco had 450 people in its regulatory-affairs team involved with aggressive lobbying to prevent plain-packaging regulations within the United Kingdom. The threat of litigation is likely stifling legislative and regulatory efforts in many places.

In November 2010, the WHO Framework Convention on Tobacco Control Conference of Parties adopted the Punta del Este Declaration in support of WHO FCTC Parties who are facing legal attacks for implementing the treaty and its guidelines. The Declaration outlined concern regarding legal actions taken by the tobacco industry that seek to subvert and undermine government policies on tobacco control. The Declaration stated that Parties have the right to define and implement national public health policies pursuant to compliance with conventions and commitments under WHO, particularly with the WHO FCTC.

Smokers' rights, neo-libertarian and other front groups, funded by the tobacco industry, are being used globally to challenge tobacco control legislation.

"In my view, something is fundamentally wrong in this world when a corporation can challenge government policies introduced to protect the public from **A PRODUCT THAT KILLS.**"

—DR MARGARET CHAN, Director-General WHO, World Health Assembly, 2014



"WE HAVE THE PEOPLE, PATIENCE, PERSEVERANCE AND RESOLVE to work through even the most difficult litigation challenges."

—LOUIS C. CAMILLERI, Altria/Philip Morris chairman and chief executive officer at the 2003 Annual Meeting of Stockholders in Richmond, VA

LITIGATION

Litigation against tobacco: selected countries

2012
CANADA
ONTARIO V. ROTHMANS INC., AMONG OTHERS
Several provincial governments have brought litigation against industry leaders in Canada over recovery of health care costs and of tax money evaded through **RACKETEERING AND SMUGGLING ACTIVITY FROM AMERICAN COMPANIES.**

SINCE 2000
Different Canadian provinces have sued the tobacco industry for recovery of billions of dollars in health care costs caused by tobacco-related disease, alleging that the tobacco companies engaged in a **DECADES-LONG CONSPIRACY TO MISLEAD ABOUT THE HEALTH RISKS OF SMOKING** and to suppress information about the dangers of smoking.

1998
USA
THE MASTER SETTLEMENT AGREEMENT (MSA) between attorneys general of 46 states, 5 territories and the District of Columbia and five major tobacco companies, settled litigation brought in preceding years. It resulted in a **USD206 BILLION PAYMENT TO LIMIT THE DAMAGE FROM TOBACCO USE OVER 25 YEARS.** The MSA also forbids many forms of tobacco marketing.

1991
BROIN V. PHILIP MORRIS, INC.
A Florida class action brought by flight attendants suffering **HARM FROM SECONDHAND SMOKE, WHICH RESULTED IN A USD300M SETTLEMENT.**

2012–2013
FRANCE
NON-SMOKERS RIGHTS ASSOCIATION V. BRITISH AMERICAN TOBACCO
The Non-Smokers Rights Association **SUCCESSFULLY SUED BAT REGARDING VIOLATIONS OF ADVERTISING BANS,** promoting tobacco use and enhancing its own image by warning about the harms of counterfeit tobacco products.

2000–2014
EUROPEAN UNION
EU V. RJR NABISCO
Court case by the European Community against RJR Nabisco before the US court for racketeering and smuggling practices. The Court stated "[RJR officials] at the highest corporate level [made it] part of their operating business plan to sell cigarettes to and through criminal organizations and to accept criminal proceeds in **PAYMENTS FOR CIGARETTES BY SECRET AND SURREPTITIOUS MEANS."**

2014
KOREA REP.
GOVERNMENT V. THREE TOBACCO COMPANIES
South Korea's National Health Insurance Service is suing the local arms of PMI and BAT, and local market leader KT&G Corp for **USD52M IN HEALTH CARE COSTS FOR SMOKING-RELATED TREATMENT.**

2014
INDONESIA
As of July 2014, a class action suit is being brought against the industry in Indonesia, where tobacco control advocates highlighting **THE ISSUE OF CHILD SMOKERS** will call for more regulations on tobacco products. The action is currently being drafted by the National Commission for Child Protection, a state-established, semi-independent organization.

2013
PHILIPPINES
There are two ongoing legal cases in which tobacco control advocates have called for the DOH and FDA (respectively) to articulate and execute laws regarding graphic pack warnings and regulation of tobacco and tobacco products. These cases are examples of the utility of litigation as a way to leverage existing laws in practice. In July 2014, President Benigno Aquino III **SIGNED A GRAPHIC PACK WARNING REQUIREMENT INTO LAW.**

CALL TO ACTION

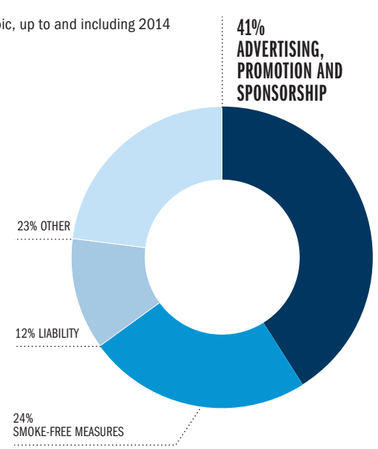
Governments, organizations and individuals should consider taking legal action to support existing tobacco control laws, and to deal with criminal and civil liability, including compensation where appropriate.

Litigation against the tobacco industry has been sponsored by individuals or groups of individuals, public health advocates, organizations or governments to recoup the economic harm from tobacco products. Such litigation has been based on grounds such as "health harms, wrongful death, healthcare costs, involvement in smuggling, racketeering, conspiracy, defective product, concealment of scientific evidence, fraud, deception, misconduct, failure to warn consumers adequately of the dangers of tobacco smoke, negligence and exposing the public to unreasonable danger."

LITIGATION TOPICS

Selected litigation cases by tobacco control topic, up to and including 2014

TOBACCO CONTROL TOPIC	# CASES
ADVERTISING, PROMOTION AND SPONSORSHIP	245
SMOKEFREE MEASURES	146
LIABILITY	69
CONTENTS AND DISCLOSURES MEASURES	45
PACKAGING AND LABELING MEASURES	26
PRICE AND TAX MEASURES	16
ILLICIT TRADE	13
CESSATION	9
PROTECTION OF ENVIRONMENT	9
SALES TO OR BY MINORS	8
INDUSTRY INTERFERENCE	8
ALTERNATIVE ACTIVITIES	2
EDUCATION	0
TOTAL # UNIQUE CASES	596



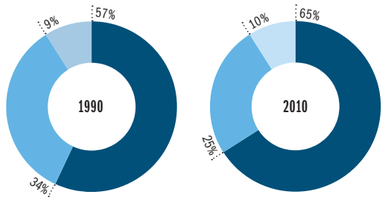
CALL TO ACTION

The tobacco control community must work closely with the broader movement addressing the global non-communicable disease (NCD) crisis; moreover, tobacco control proponents must stand together with other public health communities to lift the fight against NCDs to the very top of the global health and development agendas.

TRENDS IN MORTALITY

Percentage of all deaths by cause, worldwide

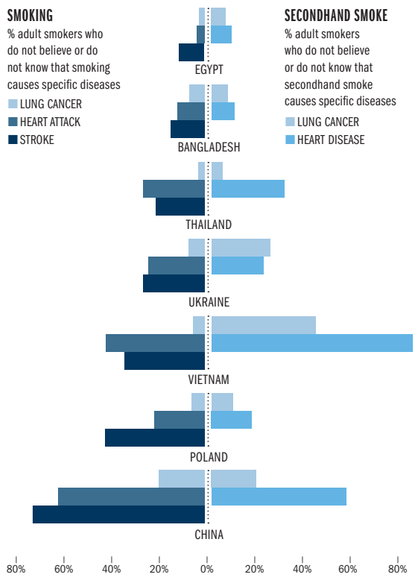
- NCDs
- COMMUNICABLE DISEASES, MATERNAL, NEONATAL, AND NUTRITIONAL DISORDERS
- INJURIES



NCDs are taking more and more lives each year.

LACK OF AWARENESS

Many people do not realize the degree to which tobacco is linked to other diseases, such as cardiovascular diseases and strokes.



SHARING THE TOOLS

Packaging regulations, a method employed to control tobacco use, can also serve to deter people from consuming other unhealthy products.

Existence of a global health treaty (WHO FCTC) as well as effective national and sub-national legislation make tobacco control a model for addressing other pressing NCD-related issues that require better regulations, including harmful use of alcohol and unhealthy diet.

"Mars is concerned that the introduction of mandatory plain packaging in the tobacco industry would also

SET A KEY PRECEDENT

for the application of similar legislation to other industries, including the food and non-alcoholic beverage industries in which Mars operates."

—The Mars Corporation to the UK government, 2012

Smoking accounts for

MORE THAN 20% OF ALL CANCER DEATHS WORLDWIDE.

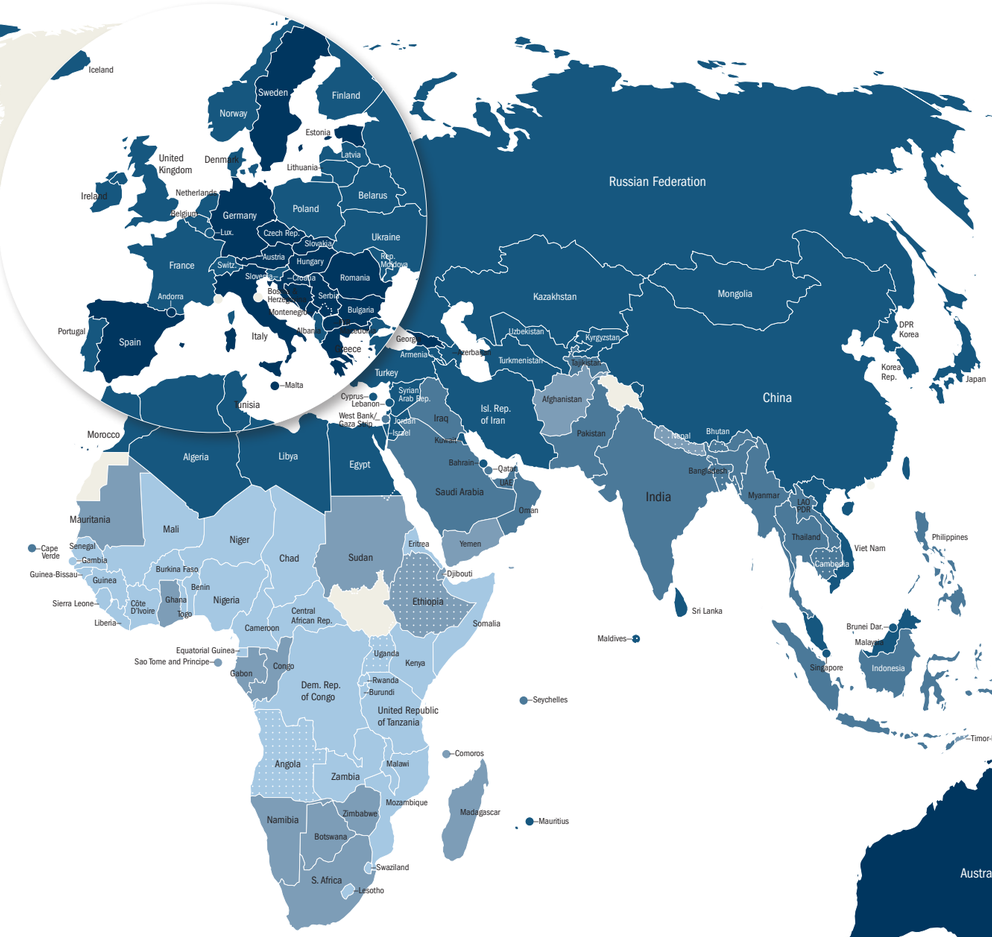
The total number of tobacco-attributable cancer deaths in 2010 was 1,468,950.

TOBACCO AND NCDs

Risk factors for the leading non-communicable diseases worldwide

CAUSATIVE RISK FACTORS	Tobacco use	Physical inactivity	Harmful use of alcohol	Diets high in salt
HEART DISEASE AND STROKE	☠	☠	☠	☠
CANCER	☠	☠	☠	☠
DIABETES	☠	☠	☠	
CHRONIC LUNG DISEASE	☠			
TOTAL DEATHS, 2010 (IN MILLIONS)	6.3	3.2	2.7	3.1

Tobacco use is a shared risk factor for the four leading non-communicable diseases in the world, causing 6.3 million deaths.



TOLL OF NCDs

Share of deaths due to non-communicable diseases (NCDs): 2010

- 15.00–29.99%
- 30.00–49.99%
- 50.00–69.99%
- 70.00–89.99%
- 90.00% AND OVER
- NO DATA

INCREASE

Countries where share of deaths due to NCDs increased by more than half from 1990 to 2010

As economic development continues rapidly and as transnational tobacco, alcohol, food, and beverage companies aggressively promote unhealthy choices, non-communicable diseases (NCDs) such as cardiovascular disease, stroke, diabetes, chronic lung disease, and cancer are becoming more important as causes of global morbidity and mortality TRENDS IN MORTALITY. NCDs have surpassed communicable diseases (e.g. HIV, malaria, tuberculosis, diarrhea, pneumonia) as the leading causes of death in all but the lowest-income nations. Even in low-income countries, deaths from NCDs are rapidly approaching those of communicable disease. Tobacco is a driver of the development of most of the leading NCDs, including chronic lung disease, cardiovascular disease, stroke, cancer, and diabetes TOBACCO AND NCDs.

In 2011, world leaders gathered in New York for a United Nations high-level meeting to give NCDs new prominence in the health and development agendas. Private sector firms and trade associations tried to undermine strong action, and lobbied for self-regulation.

Yet, with strong support from civil society, member states unanimously approved a declaration that acknowledges that fighting these diseases is a global priority requiring urgent action. Multiple initiatives evolved after the United Nations summit, including formulation of the WHO Global NCD Action Plan, a set of nine specific targets toward preventing major NCDs by addressing their major risk factors. A key target is a 30% reduction in tobacco use prevalence by 2025 (see Chapter 32: *The Endgame*).

The tobacco control community pioneered tools to limit markets for unhealthy commodities. Companies that profit from the sales of alcohol, sugary beverages, and foods with high fat, sugar, and salt content—all major NCD risk factors—use strategies similar to those of the tobacco industry. Proven and effective tobacco control measures, such as marketing bans, packaging and labeling regulations, and taxation, can also be used in addressing those other major NCD risk factors SHARING THE TOOLS.

"NCDs are one of the

MAJOR CHALLENGES

to sustainable human development in the 21st century, and therefore must be central to the post-2015 development agenda."

—TEZER KUTLUK, President-Elect, Union for International Cancer Control, 2014

CALL TO ACTION

Policymakers must utilize existing strategies that have been proven effective in reducing tobacco prevalence, and they must explore bold, innovative tactics to achieve the endgame for tobacco use.

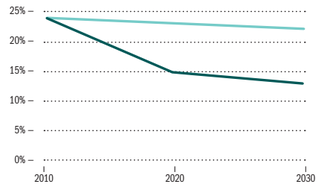
DEFINITIONS

WHO TARGET	30% relative reduction in each country in prevalence of current tobacco use in persons aged 15+ years, by 2025 (from 2010 baseline)
"ENDGAME" TARGET	Prevalence rate of 5% or below by an announced date

PROJECTIONS

Impact of implementation of existing policies: global smoking prevalence, 2010–2030

NO POLICY INTERVENTIONS ■ POLICY INTERVENTIONS



Existing policies have immense potential to greatly decrease global smoking prevalence.

"Together, experience since 1964 and results from models exploring future scenarios of tobacco control indicate that the decline in tobacco use over coming decades will not be sufficiently rapid to meet targets.

THE GOAL OF ENDING THE TRAGIC BURDEN OF AVOIDABLE DISEASE AND PREMATURE DEATH WILL NOT BE MET QUICKLY ENOUGH WITHOUT ADDITIONAL ACTION."

–US Surgeon General's Report, 2014

NOVEL IDEAS

Some examples of proposals to help reach endgame goals:

INGREDIENTS/PRODUCT

- Reduce nicotine to non-addictive levels
- Eliminate cancer-producing substances
- Ban combustibles
- Make cigarettes less appealing (increase pH level to discourage deep inhalation, remove menthol, remove all ingredients besides tobacco, remove filters)
- Ban multiple versions of the same brand
- Ban addition of tobacco to food items (e.g. gutkha)

TOBACCO INDUSTRY

- Nationalize tobacco companies
- Reporting standards for WHO FCTC Article 5.3

AVAILABILITY

- Complete prohibition of tobacco
- Regulate as a controlled substance
- Make tobacco available by prescription only
- Require a smoker's license, renewable annually
- Require staggered starting fees to discourage beginners
- Ban supply of tobacco to anyone born after a certain year (e.g. Singapore, year 2000)
- Stronger licensing laws for selling tobacco
- Limit the number/types of retail outlets

MARKET/ECONOMICS

- Market control measures (e.g. wholesale price floors, import quotas)
- $1 tax on all international air travel that goes to departure country's national tobacco control budget

PACK WARNINGS

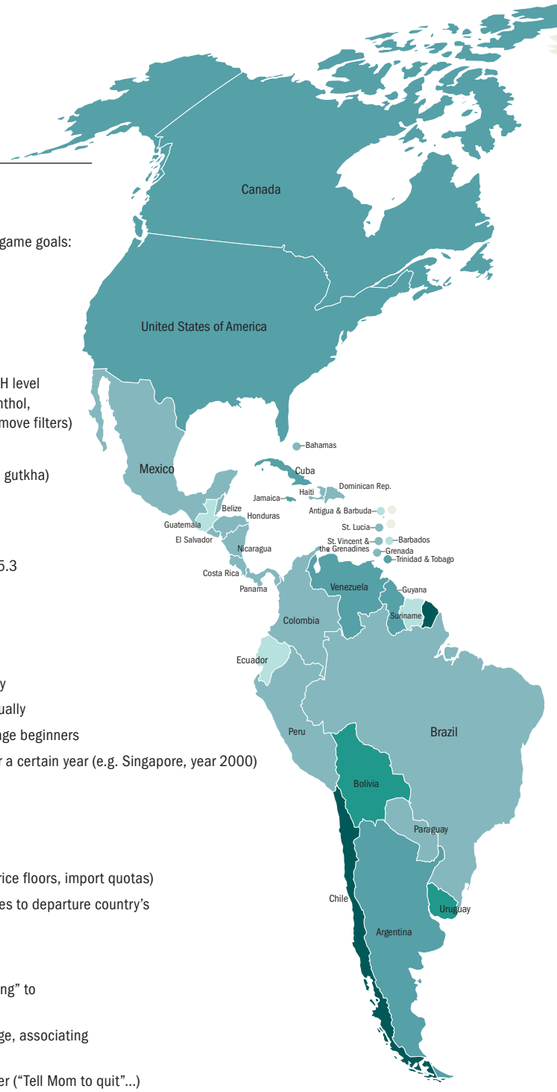
- Change label legislation from "health warning" to "package message"
- Integrate brand name into package message, associating brands themselves with message
- Aim message at party other than the smoker ("Tell Mom to quit"...)
- Plain/standardized packaging with no color, brand images; only brand name

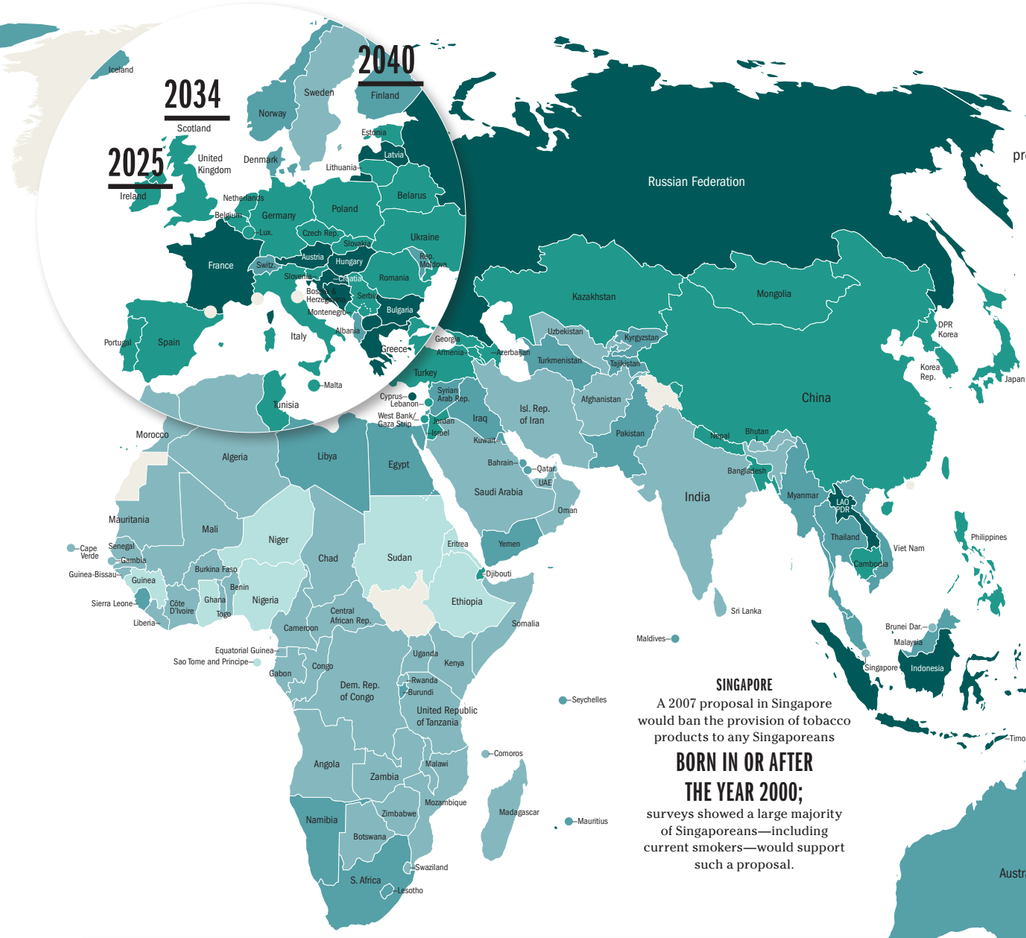
QUITTING

- Make cessation services free to all smokers
- Legalize cytosine, as cheaper, safe alternative to other quit pharmaceuticals

OTHER IDEAS

- Set endgame target date
- Frame tobacco use within toxic waste/environmental health context
- Target harm of discarded cigarette butts by banning cigarettes with filters





SINGAPORE

A 2007 proposal in Singapore would ban the provision of tobacco products to any Singaporeans

BORN IN OR AFTER THE YEAR 2000;

surveys showed a large majority of Singaporeans—including current smokers—would support such a proposal.

2025 TARGETS

Adult prevalence needed to meet WHO target of a 30% relative reduction in prevalence of current tobacco use from 2010 baseline

- 0.0–4.9%
- 5.0–9.9%
- 10.0–14.9%
- 15.0–19.9%
- 20.0–100%
- NO DATA

ENDGAME

1st 4 countries or regions to announce endgame dates

20XX

Full implementation of proven WHO FCTC & MPOWER policies is capable of reducing tobacco use far below current levels DEFINITIONS. Tobacco control has already resulted in many remarkable changes in the last 50 years, with the abolition of most overt tobacco promotion, smoke-free public and workplace laws, large graphic warnings on cigarette packs in over 60 countries, and plain/standardized packaging initiated in Australia PROJECTIONS.

Others believe that the tobacco epidemic is unlikely to be ended by today's evidence-based interventions, and question whether new and radical solutions are required, including fundamental reform of the tobacco industry—whether commercial or government monopoly.

Newly-suggested measures include supply-side strategies to curb the tobacco industry, such as new structures through which tobacco products would be supplied, removal of the profit incentive from selling tobacco products, or even the outright abolition of commercial tobacco product manufacture and sale NOVEL IDEAS. Other ideas include harm reduction by reducing the harmful content of cigarettes, or shifting away from smoking combustible products towards potentially safer ways of delivering nicotine. Some jurisdictions are examining prohibition of possession of tobacco products by all individuals born in or after the year 2000, or framing tobacco as a development and poverty issue in order to attract the attention and thus funding of the development community.

The regulatory framework may differ from country to country. For both implementing existing measures OR introducing new measures, all countries will need to put immediate and much greater emphasis on stronger enforcement, particularly of smoke-free areas and price policies.

Every historical achievement—such as flight, the conquest of Mount Everest, or votes for women—was preceded by many people saying it couldn't be done, wouldn't work, or would create new problems. But the benefits of envisioning an endpoint for the tobacco epidemic are far greater than any risks.

2025

NEW ZEALAND

10 specific strategies to reach 5% endgame by 2025:

1. Smoke-free cars
2. Making cigarettes harder to purchase
3. Plain/standardized packs
4. Smoke-free communities
5. Banning duty-free tobacco
6. Tax hikes
7. Mass media shock tactics
8. Removing all flavor enhancers
9. Transparency of all tobacco lobbyists' dealings with government
10. Quit-smoking support

02 COMORBIDITIES
Tuberculosis collage ©World Lung Foundation 2009

03 HEALTH CONSEQUENCES
Healthy and diseased lungs National Institute on Drug Abuse, USA
Child with cleft palate AP Photo / Carlos Jasso

05 ENVIRONMENT
Deforestation Satellite imagery from ESRI, http://changematters.esri.com ©1987-2014 HERE
Plastic packaging Tahir Turk / World Lung Foundation

PRODUCTS DIVIDER
Smoking man kalapangha / Shutterstock.com

11 YOUTH USE
Boy smoking ©imageBROKER / Alamy
Indonesian teen smoking AP Photo/Irwin Fedriansyah

INDUSTRY DIVIDER
Philip Morris Netherlands HQ image Peter Braakmann / Shutterstock.com
RJR plant Bryan Pollard / Shutterstock.com
Boy with tobacco leaves See credits for Chapter 15, *Growing*

15 GROWING
Boy with tobacco leaves Lowell Georgia/National Geographic/Getty Images

18 MARKETING
Volleyball sponsorship Christopher Johnson/Globalite Magazine

SOLUTIONS DIVIDER
Benigno Aquino See credits for Chapter 30, *Legal Challenges & Litigation*
Margaret Chan See credits for Chapter 30, *Legal Challenges & Litigation*
Nicola Roxon Rex Features via AP Images
Protesters AP Photo / Tatan Syuflana

20 WHO FCTC
Tobacco Atlas covers ©American Cancer Society

25 MEDIA CAMPAIGNS
"Sunita" National Tobacco Control Program (NTCP), Ministry of Health and Family Welfare, India
"Smoke" Ministry of Health and Family Welfare, Bangladesh
"Smoking Kid" Thai Health Promotion Foundation, Thailand
"Tips From Former Smokers" Centers for Disease Control and Prevention, USA
"Sponge" Cancer Institute NSW, Australia

26 WARNINGS & PACKAGING
All graphic warning labels Courtesy Canadian Cardiovascular Society

27 REGULATIONS
Cigarette vending machine ©Graham Oliver / Alamy
Hand with warning label packs William West / AFP / Getty Images

28 MARKETING BANS
Direct advertising AP Photo / Eckehard Schulz
Indirect advertising AP Photo / Dita Alangkara

30 LEGAL CHALLENGES & LITIGATION
Margaret Chan Fabrice Coffrini / AFP / Getty Images
Louis Camilleri Daniel Acker / Bloomberg via Getty Images
Benigno Aquino AP Photo / Aaron Favila
Norma Broin Roberto Schmidt / AFP / Getty Images

CALL TO ACTION

The tobacco control movement must grow its base of support to achieve ever-larger and more ambitious policy and public health successes.

Completely revised, updated, and specially created to be used by students, teachers, researchers, journalists, advocates, and policymakers, the new Fifth Edition of *The Tobacco Atlas* and its companion website tobaccoatlas.org aims to be the most comprehensive, informative, and accessible resource on the most important and current issues in the evolving tobacco epidemic. This edition also presents an invitation to join the tobacco control movement for partners from other communities—including environment, equality, development, and non-communicable disease—whose interests are also dramatically affected by the tobacco epidemic and its human toll.

NEW TOPICS INCLUDE:

- Environmental harms of tobacco
- E-cigarette use, product development and marketing
- Trends in the use of water pipes
- Tobacco's exacerbation of poverty and development
- Tobacco's contribution to tuberculosis, HIV/AIDS, alcohol abuse, and mental illness
- The lifecycle of tobacco regulation
- Integrating tobacco control into the global non-communicable disease agenda
- The endgame to the tobacco epidemic

"We want this document to be used, parsed, quoted, defended, and debated, and ultimately to open minds, to persuade the unconvinced about tobacco's toll, to spur untraditional allies to action, and to help create opportunities to reverse the epidemic."

— JOHN R. SEFFRIN, PhD, Chief Executive Officer, American Cancer Society and PETER BALDINI, Chief Executive Officer, World Lung Foundation

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