

# The International Tobacco Control Policy Evaluation Project ITC Mauritius National Report



RESULTS OF THE WAVE 3 SURVEY

MAY 2012



Promoting Evidence-Based Strategies to Fight the Global Tobacco Epidemic



Mauritius Institute of Health



International Tobacco Control  
Policy Evaluation Project

UNIVERSITY OF  
**WATERLOO**





Results from the ITC Mauritius Wave 3 Survey  
**Mauritius National Report**

2012

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## Message



Since the implementation of the National Action Plan on Tobacco Control and the enforcement of the Public Health (Restrictions on Tobacco Products) Regulations, 2008, Mauritius has made significant progress in fighting the tobacco epidemic—an epidemic that still stands as the single greatest preventable cause of death and disease worldwide.

Our commitment to tobacco control is indeed very strong. Our partnership with the International Tobacco Control Policy Evaluation Project (the ITC Project)—a global evaluation system for tobacco control policies that is being conducted in 23 countries—over the past 3 years is a vivid example of our commitment. The ITC Mauritius Survey has now been conducted over three waves, and this has allowed us to gauge our progress and to identify areas where our efforts need to be strengthened.

Mauritius was the first country in the Africa region to introduce pictorial warnings on tobacco product packaging. The ITC Mauritius Survey has demonstrated that these warnings have led to significant increases in awareness, knowledge and emotional responses about the health risks of smoking. Our system of health warnings stands as an important model for other countries, and the findings from the ITC Mauritius Survey have provided powerful scientific data documenting the effectiveness of the warnings.

However, the results of this survey also suggest that there is a need for us to revise and strengthen the warnings. This is in line with best practices in communication, which emphasizes the importance of constant reviewing of important health messages. My Ministry will also look into advances taking place in other countries with respect to increasing the effectiveness of informing the people about the ill-effects of cigarette and reducing the voice of the tobacco industry as it continues to promote its products. Australia, for instance, is reviewing its legislation to require the industry to package its products in plain packaging while the graphic warnings remain.

With respect to smoke-free laws, Government has been firm in its policies to eliminate—as much as possible—exposure to tobacco smoke pollution, also known as second-hand smoke. Scientific evidence shows that there is a need for smoke-free legislation, and Mauritius is proud to have introduced and enforced the world's first ban on smoking in cars with any passengers, not just children. We are also enforcing smoke-free legislation in public places. The findings of the ITC Mauritius National Report indicate that although compliance and support are very high, there is still need for improvement. Government endeavours to consolidate the enforcement of the law.

I seize this opportunity to thank the World Lung Foundation and the ITC Project for their collaboration with my Ministry to create, support and evaluate the media campaign, “**Sponge**”, that took place in the middle of 2011. The ITC results showed that the vast majority of Mauritians had seen or heard the campaign and it had a positive impact on them.

The ITC Mauritius Survey also tells us about the need to increase taxation and the overall price of cigarettes. In the year between Wave 2 and Wave 3 of the survey, cigarettes decreased in affordability, but only at a rate of less than 1% a year, much less than other countries with strong tobacco control policies such as Australia and France. We know that increasing price through taxation is the policy with the greatest potential for increasing quitting among smokers and reducing the likelihood that youth will start to smoke.

I am grateful to the ITC Mauritius Project team and the University of Waterloo in Canada for providing our country with information about how Mauritius is doing in its determination to reduce deaths and diseases from cigarettes.

I look forward to future collaboration with the University of Waterloo.

L. Bundhoo  
Minister of Health and Quality of Life

“Up to now, the Government of Mauritius has showed great commitment and political will to fight the tobacco epidemic. As Minister of Health and Quality of Life, I am pleased to be able to fulfill our obligations in promoting tobacco cessation and providing tobacco dependence treatment.”

Honourable Lormus Bundhoo, Minister of Health and Quality of Life, October 3, 2011  
(Opening of a Three-Day Smoking Cessation Training Workshop)

# Table of Contents

i	Message from the Minister of Health and Quality of Life
iii	Table of Contents
iv	List of Tables and Figures
vii	ITC Policy Evaluation Project
1	Background
2	Key Findings
4	The Tobacco Landscape in Mauritius
10	Methods
15	Findings
15	Smoking and Quitting Behaviour
19	Smoke-Free Public Places and Workplaces
23	Health Warning Labels
26	Tobacco Advertising, Promotion, and Sponsorship
28	Education, Communication, and Public Awareness
30	Tobacco Price and Taxation
32	Illicit Cigarette Trade in Mauritius
33	Conclusions and Implications of the Findings
39	ITC Survey Project Contacts and Funding Sources

# List of Tables and Figures

## Figures

Table 1.	Packaging and labeling of tobacco products timeline	6
Table 2.	Smoke-free public places and workplaces policy timeline	7
Table 3.	Demographic characteristics of ITC Mauritius Survey respondents participating at Wave 3	12
Table 4.	Wave 3 Survey characteristics	12
Figure 1.	Text-based health warning labels mandated in Mauritius from 1999 to 2009	5
Figure 2.	Set of eight pictorial health warning labels implemented in Mauritius as of June 1, 2009	6
Figure 3.	Mauritius tobacco policy timeline in relation to the ITC Mauritius Surveys	11
Figure 4.	Smokers' opinions: 'Why did you start smoking cigarettes?' Percentage who reported "yes", Wave 2 (2010) and Wave 3 (2011)	15
Figure 5.	Smokers' opinions: 'Which reasons made me think of quitting smoking?' Percentage who reported "very much" or "somewhat", by wave	16
Figure 6.	Type of cessation assistance received by smokers who visited a doctor or health professional, by wave	17
Figure 7.	Percentage of smokers who supported stronger government actions to support cessation, by wave	18
Figure 8.	Percentage of smokers and non-smokers who noticed smoking indoors in areas not designated for smoking, by wave*†	19
Figure 9.	Percentage of smokers and non-smokers who noticed smoking in restaurants or tea rooms at last visit, by wave	20
Figure 10.	Percentage of smokers and non-smokers who noticed smoking in bars or pubs at last visit, by wave	21

# List of Tables and Figures

## Figures

Figure 11.	Percentage of smokers who reported smoking is “never” allowed in their home, by country	22
Figure 12.	Impact of health warnings on smokers’ perceptions and behaviours in the last month at Waves 2 and 3 (pictorial health warnings) vs. Wave 1 (text-only warnings)	23
Figure 13.	Percentage of smokers who noticed warning labels “often/very often”, by country	24
Figure 14.	Percentage of smokers who believe that smoking causes specific health effects at Wave 2 and 3 (pictorial health warnings) vs. Wave 1 (text-only warnings)	25
Figure 15.	Type of media/venues where smokers noticed information about the dangers of smoking or encouraging quitting in the last six months, Wave 3 (2011)	28
Figure 16.	Sponge campaign images	29
Figure 17.	Affordability of cigarettes and change in affordability per year in 16 ITC countries	31
Figure 18.	Percentage of smokers’ cigarette packs showing evidence of possible tax avoidance/evasion including illicit trade in ITC low-and middle-income countries, at most recent wave	32

# **“Maurice Ile Durable - Maurice Ile Sans Tabac”**

Mrs. Véronique Le Clézio – President, ViSa (NGO)

World No Tobacco Day 2011

# ITC POLICY EVALUATION PROJECT

The International Tobacco Control Policy Evaluation Project (the ITC Project) is a multi-country prospective cohort study designed to measure the psychosocial and behavioural impact of key policies of the World Health Organization Framework Convention on Tobacco Control (FCTC). This Report presents the findings from the most recent wave (Wave 3) of the ITC Mauritius Survey. The ITC Mauritius Survey is a face-to-face survey of a nationally representative sample of smokers and non-smokers. The Wave 1 Survey was conducted during April 20 and May 24, 2009, approximately two months after the implementation of Phase 1 of the Public Health (Restrictions on Tobacco Products) Regulations (2008). These Regulations strengthened existing policies on smoking in public places and advertising, promotion, and sponsorship of tobacco products. Other measures included a ban on the sale of tobacco to minors and by minors; a ban on the display of tar and nicotine content or carbon monoxide yield on packs; and measures to reduce the illicit trade of cigarettes. Wave 2 was conducted between August 30 and October 2, 2010, approximately 14 to 15 months after the Phase 2 Regulations were implemented which strengthened policies related to packaging, including the requirement for pictorial warnings. Wave 3 was conducted between June 20 and July 11, 2011 and continued to measure the effectiveness and strength of both Phase 1 and Phase 2 Regulations that were implemented in 2009. Another focus of the Wave 3 Survey was to evaluate a mass media campaign designed to increase awareness of the harms of tobacco smoke for smokers and non-smokers.

## ITC Mauritius Survey Team

### ITC Mauritius Team

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## ITC Mauritius Project Funding

- International Development Research Centre (Waves 1 and 2)
- Bill and Melinda Gates Foundation (Waves 1 and 2)
- Mauritius Ministry of Health and Quality of Life
- Canadian Institutes of Health Research
- Bloomberg Global Initiative – International Union Against Tuberculosis and Lung Disease
- Ontario Institute for Cancer Research
- World Lung Foundation

## ITC Mauritius National Report

The preparation of this Report was coordinated by Ms. Lorraine Craig and Ms. Lisa Hickman with the collaboration of Ms. Grace Li, Mr. Pete Driezen, Dr. Janet Chung-Hall, Ms. Megan Tait, Ms. Michelle Bishop, Dr. Geoffrey T. Fong, and Dr. Anne Quah at the University of Waterloo, and Mr. Premduth Burhoo at the Mauritius Institute of Health.

# BACKGROUND

## The ITC Project Surveys

The International Tobacco Control Policy Evaluation Project (the ITC Project) is the first-ever international cohort study of tobacco use. Its overall objective is to measure the psychosocial and behavioural impact of key national level policies of the WHO Framework Convention on Tobacco Control (FCTC). The ITC Project is a collaborative effort with international health organizations and policymakers in 23 countries so far, inhabited by more than 50% of world's population, 60% of the world's smokers, and 70% of the world's tobacco users. In each country, the ITC Project is conducting longitudinal surveys to assess the impact and identify the determinants of effective tobacco control policies in each of the following areas:

- Health warning labels and package descriptors
- Smoke-free legislation
- Pricing and taxation of tobacco products
- Education and support for cessation
- Tobacco advertising and promotion

All ITC Surveys are developed using the same conceptual framework and methods, and the survey questions are designed to be identical or functionally equivalent across countries in order to allow strong cross-country comparisons. The ITC Project aims to provide an evidence base to guide policies enacted under the FCTC, and to systematically evaluate the effectiveness of these legislative efforts.

## The ITC Mauritius Survey

In 2009, researchers from the Mauritius Institute of Health (MIH) partnered with researchers from the World Health Organization, and the Mauritius Ministry of Health and Quality of Life in collaboration with the University of Waterloo to create the ITC Mauritius Survey. One of the main goals of the ITC Mauritius Survey is to evaluate the effectiveness of new Public Health (Restrictions on Tobacco Products) Regulations.<sup>1</sup> These Regulations were passed on November 28, 2008 and were implemented in two phases. Phase 1 Regulations, which were implemented as of March 1, 2009, included:

- a ban on smoking in public indoor and outdoor areas, hospitality venues, recreational venues, and in private vehicles carrying passengers; smoking restrictions in workplaces with provision for designated smoking areas;
- a ban on the sale of tobacco to minors and by minors;
- a ban on advertising, promotion, and sponsorship of tobacco products (with the exception of internet advertising), including a ban on display of tobacco products at point of sale (with the exception of duty free shops at airports);
- measures to reduce the illicit trade of cigarettes; and
- an increase on the penalties for failures to adhere to the tobacco control regulations.

Phase 2 Regulations, which were implemented on June 1, 2009, focused on cigarette packaging, and included:

- the first-ever implementation of pictorial health warnings in the African Region;
- a ban on descriptors such as 'light', 'mild', or 'low tar' on cigarette packs;
- a ban on the display of tar and nicotine content or carbon monoxide yield on cigarette packs; and
- a ban on the sale of single cigarettes or loose cigarettes and packs of less than 20 cigarettes.

Wave 1 of the ITC Mauritius Survey was conducted between April 20 and May 24, 2009, after the implementation of the majority of the policies in the Public Health (Restrictions on Tobacco Products) Regulations 2008, but before the implementation of the Phase 2 Regulations, including pictorial health warnings and smoking cessation clinics. The Wave 2 Survey was conducted between August 30 and October 2, 2010. The Wave 3 Survey was conducted between June 20 and July 11, 2011 with three specific evaluation objectives:

1. To evaluate the impact of pictorial health warning labels (implemented in October, 2009);
2. To evaluate the impact of smoke-free initiatives in public places and workplaces, and to assess adherence to the strengthened enforcement (enacted in 2009).
3. To evaluate the impact of a mass media campaign – an adaptation of the World Lung Foundation (WLF) "Sponge Campaign" (implemented in Mauritius between May 30 and June 19, 2011).

A total of 1750 households were randomly selected from 60 Enumeration Areas to establish an accurate sampling frame from which survey participants were randomly drawn. In Wave 1, a total of 598 smokers and 239 non-smokers aged 18 years and older were surveyed via face-to-face interviews. In Wave 2, 601 smokers and 239 non-smokers including recontact and replenishment respondents were surveyed. At Wave 3, a total of 578 cohort smokers and quitters, and 229 non-smokers were recontacted and successfully reinterviewed. This represents an extremely high retention rate of 96.2% for smokers and 95.8% for non-smokers (corresponding attrition rates of only 3.8% for smokers and 4.2% for non-smokers). This retention rate was much higher in comparison to other ITC countries, where the typical retention rate is 75-80%.

Those smokers and non-smokers lost to attrition were replaced by new smokers and non-smokers who were randomly selected from the same sampling frame. In the process of selecting this replenishment sample at Wave 3, 50 new households were enumerated, of which 48 agreed to participate. From these new households, 24 new smokers and 9 non-smokers were randomly selected for participation and interviewed.

This Report presents findings from the ITC Mauritius Wave 3 Survey of smokers and non-smokers, and compares these with the results from Wave 1 and Wave 2. The findings presented in this Report will focus on describing smoking and quitting behaviour at Wave 3, assessing public support for and use of cessation services, evaluating the effectiveness of smoking bans in public places and workplaces, evaluating the effectiveness of pictorial warnings, and evaluating the effectiveness of the World Lung Foundation (WLF) "Sponge Campaign".

1. Mauritius Government (2008). The Public Health Act. Regulations made by the Minister under sections 193 and 194 of the Public Health Act. Government Notice No. 263 of 2008.

# KEY FINDINGS

## Smoking and Quitting Behaviour

1. The majority of smokers in Mauritius have very negative views on smoking and the vast majority want to quit. However, perceived societal disapproval of smoking has declined between Wave 1 (2009) and Wave 3 (2011), which suggests that smoking is still normative in Mauritius.
2. Friends are a powerful source of influence for the initiation and maintenance of adult smoking behaviour.
3. Smoke-free laws and pictorial health warnings have been successful in getting smokers to think about the health risks of smoking, and to think about quitting.
4. The majority of smokers who visit a doctor or health care professional are not receiving advice to quit or referrals to cessation services.

## Smoke-free Public Places and Workplaces

5. There is very strong support among smokers and non-smokers for comprehensive smoke-free policies in all public places.
6. Since the implementation of the 2009 smoke-free regulations in Mauritius, there is a high prevalence of complete smoking bans in restaurants, bars, and public transportation. However, further effort is needed to increase the prevalence of complete smoking bans in workplaces and to strengthen enforcement and improve compliance with smoking bans in bars.
7. The implementation of smoke-free laws in indoor workplaces and public places has increased the prevalence of smoke-free homes in Mauritius. ITC cross-country comparison analyses show that smokers in Mauritius have the highest rate (68% of male smokers' homes) of home smoking bans among 8 ITC low- and middle-income countries and the second highest rate of home smoking bans among smokers in all 19 ITC countries.

## Health Warning Labels

8. The replacement of text-only warning labels with pictorial health warnings in October 2009 resulted in dramatic increases in smokers' awareness of health warnings at Wave 2 (2010) 10 to 11 months after their implementation. In fact, ITC cross-country comparison analyses show that Mauritius has the highest percentage of smokers who noticed warning labels "often" or "very often" among 19 ITC countries. The pictorial warnings also dramatically increased thinking about the health risks, thinking about quitting, and knowledge of the various health effects addressed on the labels.
9. Wave 3 (2011) results indicate that the set of eight pictorial warnings appear to be having less impact on smoking behaviour at 20 to 21 months post-implementation. There is evidence of wear-out (decline in effectiveness)—the majority of warning label effectiveness indicators showed either a decline or no further improvement from Wave 2 (2010). This suggests that there is a need to revise and strengthen the pictorial warnings to prevent further declines in label effectiveness.

At Wave 3 (2011) there was evidence of a decline in effectiveness of pictorial warnings: the majority of warning label effectiveness indicators showed either a decline or no further improvement compared to Wave 2 (2010).

**Although Mauritius has banned the sale of single cigarettes, it is still the case that one-third of smokers reported purchasing single cigarettes in 2011.**

## Tobacco Advertising, Promotion, and Sponsorship

10. The Public Health (Restrictions on Tobacco Products) Regulations 2008 have been effective in reducing, and in some cases virtually eliminating the presence of tobacco marketing and promotion in Mauritius via advertising campaigns, industry sponsored events, and brand stretching. However, cigarette smoking continues to be highly visible in the entertainment media, a form of promotion that has been recently recognized by the U.S. Surgeon General as leading to the initiation of smoking among youth.

## Education, Communication, and Public Awareness

11. Efforts to promote public awareness on the dangers of smoking and the benefits of cessation in Mauritius have been effective. Anti-smoking messages are highly visible in Mauritius, with cigarette packs being reported as the most common source of anti-smoking information by nearly all smokers in 2011 (Wave 3).
12. The national “Sponge” anti-smoking mass media campaign that ran from May 30 to June 19, 2011 was highly successful in reaching smokers and non-smokers in Mauritius. Nearly all (94%) respondents reported being exposed to the campaign at least once. The campaign increased smokers’ awareness of the risks of smoking and exposure to secondhand smoke, in addition to motivating smokers to quit.

## Price and Tax

13. The 25% increase in excise duty on cigarettes in November 2010, (i.e., between Wave 2 and Wave 3) which was followed by an increase in the price of cigarettes, has not contributed to significant reductions in the overall affordability of cigarettes in Mauritius. Cigarettes became slightly less affordable (by less than 1%) between Waves 2 and 3.
14. The price of cigarettes is not cited by smokers as a primary reason to quit and money spent on cigarettes does not divert spending from essential household expenditures – indicators that cigarettes are still highly affordable in Mauritius.
15. Compliance with the ban on the sale of single cigarettes is low. In 2011, almost one-third of smokers reported purchasing single cigarettes, and half of smokers reported that it is easy to buy singles in Mauritius.

## Illicit Trade

16. Measures implemented to limit illicit trade in Mauritius (i.e., the display of official excise stamps and health warning labels on cigarette packs) have been effective. Findings from the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) suggest that, overall, the prevalence of illicit cigarette packs is very low.

# THE TOBACCO LANDSCAPE IN MAURITIUS

This section provides an overview of tobacco use and tobacco control policies in Mauritius at the time of the Wave 1, Wave 2, and Wave 3 ITC Mauritius Surveys. Mauritius has become a world leader for tobacco control in Africa. The WHO Framework Convention on Tobacco Control (FCTC) was signed by Mauritius in June 2003 and ratified in May 2004. Mauritius has taken significant steps to fulfill its obligations under the FCTC. In 2007, the Mauritius government, in collaboration with the World Health Organization and several other stakeholders, developed a National Action Plan on Tobacco Control 2008-2012. The main objective of the Action Plan is to reduce tobacco-related mortality and morbidity by preventing the use of tobacco products, promoting cessation, and protecting the population from exposure to secondhand smoke. Mauritius passed the Public Health (Restrictions on Tobacco Products) Regulations 2008, which updated 1999 policies on smoking in public places; packaging and labeling of tobacco products; tobacco advertising, promotion, and sponsorship; and illicit trade. One of the main goals of the ITC Mauritius Survey is to evaluate the effectiveness of the new Public Health (Restrictions on Tobacco Products) Regulations.

## Smoking Prevalence

Tobacco is the most important preventable cause of death in the world today.<sup>2</sup> The Mauritius Non-Communicable Diseases Survey 2009 found that the smoking prevalence in Mauritius in 2009 was 40.3% for men and 3.7% for women (between the ages of 25 and 74 years) – among the highest smoking prevalence rates in Africa.<sup>3</sup> Estimates of smoking prevalence from the ITC Mauritius Wave 1 Survey were somewhat lower: 32.4% for men and 2.6% for women (aged 18 years and older).<sup>4</sup> Differences in prevalence between the two surveys may be attributable to differences in survey methodology.

## Tobacco Control Policies

The FCTC, the world's first public health treaty, addresses the global tobacco epidemic through a variety of measures to reduce tobacco smoke (Article 8), packaging and labeling of tobacco products (Article 11), tobacco advertising and sponsorship (Article 13), and cessation and treatment (Article 14).<sup>5</sup> With 174 member Parties as of April 2012, the FCTC is one of the most successful treaties ever established.

Mauritius has taken significant steps to fulfill its obligations under the FCTC. Mauritius has implemented some of the strongest and most progressive tobacco policies in Africa. The Public Health (Restrictions on Tobacco Products) Regulations 2008, came into force in two phases. Regulations to strengthen policies on smoking in public places; and tobacco advertising, promotion, and sponsorship were implemented on March 1, 2009. Regulations on pictorial warning labels, packaging descriptors, and the sale of single cigarettes followed on June 1, 2009. The following section summarizes the tobacco control policies in Mauritius at the time of the ITC Wave 1 (April 20 to May 24, 2009), Wave 2 (August 30 to October 2, 2010), and Wave 3 (June 20 to July 11, 2011) Surveys, organized according to the tobacco control domains of the FCTC.

Mauritius has become a world leader for tobacco control in Africa. Other African countries have been inspired by the Mauritius five-year Action Plan on Tobacco Control 2008-2012.

2. World Health Organization. (2008). *WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER package*. Geneva, World Health Organization.

3. Republic of Mauritius, Ministry of Health and Quality of Life. (2009). *The Trends in Diabetes and Cardiovascular Disease Risk in Mauritius: The Mauritius Non Communicable Diseases Survey 2009*. <http://www.gov.mu/portal/goc/moh/file/ncd/ncd-2009.pdf>

4. ITC Project (2010). *ITC Mauritius Wave 1 Technical Report*. <http://www.itcproject.org/projects/mauritius>

5. World Health Organization (2003). *WHO Framework Convention on Tobacco Control*. Geneva, World Health Organization.

In 2009,  
Mauritius  
became the  
first nation  
in the African  
Region to  
implement  
pictorial  
warning  
labels. The  
set of eight  
labels are  
among the  
largest in  
the world,  
covering 70%  
of the back  
and 60% of  
the front of  
the pack.

## Public Health (Restrictions on Tobacco Products) Regulations 2008

### March 1, 2009 (Pre-Wave 1)

- Total ban on advertising, promotion and sponsorship, with the exception of the internet
- Ban on product display at point of sale, with the exception of duty free shops in airports
- No tobacco products offered for free or at a discounted price
- Smoke-free policy strengthened to include public indoor and outdoor areas, hospitality venues, recreational venues, and private vehicles carrying passengers; designated smoking areas still permitted in workplaces, and smoking permitted outdoors in some venues
- No vending machine sales
- No sale of tobacco to minors, or by minors (under 18 years)
- No sale of sweets or toys in the form of cigarettes

### June 1, 2009 (Post-Wave 1)

- 8 rotating graphic pictorial warning labels
- No descriptions such as ‘light’, ‘mild’, or ‘low tar’ permitted on packs
- Packs must not display the tar or nicotine content or the carbon monoxide yield
- No sale of single cigarettes; only packs of 20 cigarettes sold.

### Packaging and Labeling of Tobacco Products

Article 11 of the FCTC stipulates that each Party shall adopt and implement effective packaging and labeling measures. New Article 11 Guidelines recommend pictorial warnings on at least 50% of the package and call for key requirements for the content, position, and size of warnings.

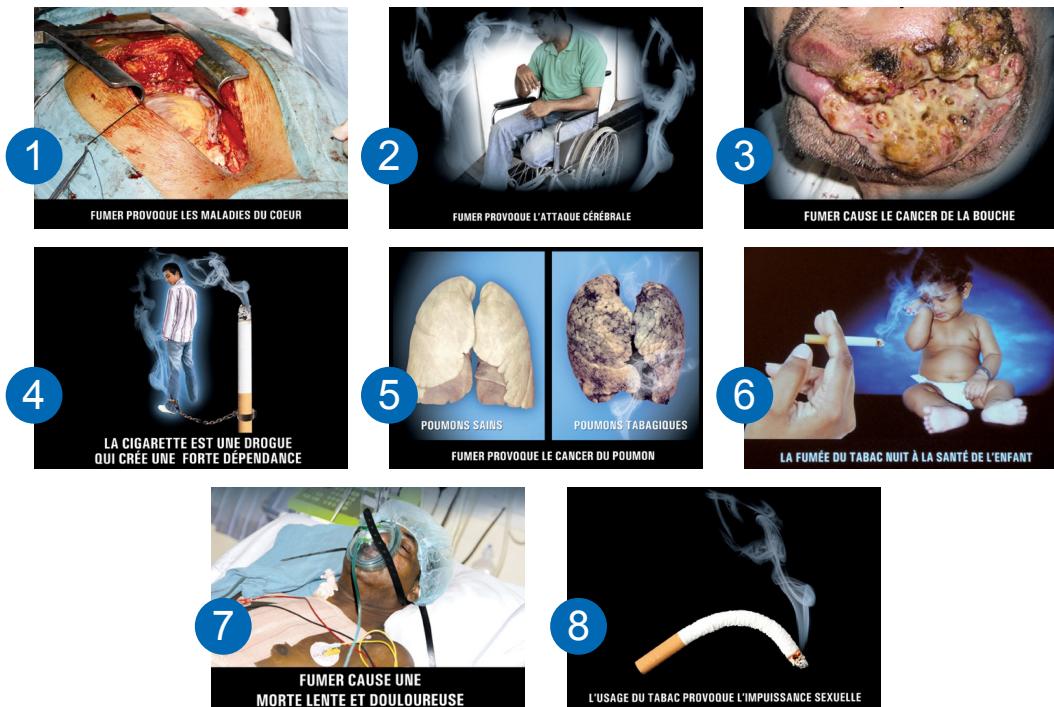
The packaging and labeling of tobacco products in Mauritius was a major focus of the 2008 Regulations. Since 1999, health warning labels on cigarette packs in Mauritius had only one text-based message that read: “GOVERNMENT WARNING: Smoking causes cancer, heart disease and bronchitis”, which appeared on the side of the pack. There were no requirements to set the warning apart from the packaging design, such as a thick black border and different-colored background. As a result, the warning was not noticeable, blending into the background of the pack design, as shown in Figure 1.

Figure 1. Text-based health warning labels mandated in Mauritius from 1999 to 2009



Mauritius was the first nation in the African Region to implement pictorial health warning labels—a set of eight rotating images appearing on the front and the back of packs, in both English (occupying 70% of back) and French (occupying 60% of front) in 2009. These labels are among the largest in the world. Text messages also appear on 65% of the side of packs in both French and English.<sup>6</sup> The set of images that appeared on the eight pictorial health warning labels officially implemented in Mauritius on June 1, 2009 are provided in Figure 2.

**Figure 2. Set of eight pictorial health warning labels implemented in Mauritius as of June 1, 2009**



Furthermore, as per the 2008 Regulations, misleading descriptors on cigarette packs such as “light” and “mild” are not permitted; cigarette packs must not display the tar or nicotine content or the carbon monoxide yield (as described above); the sale of single or ‘loose’ cigarettes and packs containing 10 cigarettes was banned – cigarette packs must contain 20 cigarettes; and distributors of tobacco products must not obscure any part of the warnings. Table 1 outlines the progression of legislation regarding packaging and labeling of tobacco products.

**Table 1. Packaging and labeling of tobacco products timeline**

Packaging and Labeling of Tobacco Products		
Prior to 2008 Regulations	2008 Regulations (Phase 1) March 1, 2009; Pre-Wave 1	2008 Regulations (Phase 2) June 1, 2009; Post-Wave 1
Since 1999, health warnings labels on tobacco packs had one text-based message that read ‘Smoking causes cancer, heart disease and bronchitis’.	Pictorial health warning labels are implemented—a set of 8 rotating images appearing on the front and the back of packs, in both English (occupying 70% of back) and French (occupying 60% of front) in 2009. These labels are among the largest in the world.  Text messages also appear on 65% of the side of packs in both French and English.  Misleading descriptors on cigarette packs such as ‘light’ and ‘mild’ are not permitted.	

It is important to note that the official date of implementation for the provisions related to packaging and labeling of tobacco products was June 1, 2009. However, the first pictorial warning labels were reported to be in public circulation on October 17, 2009. A Technical Committee was set up in 2011 to develop and propose a new set of pictorial health warnings. A list of topics has been determined while details regarding the text and pictorial messages are currently being finalized.

6. For more about Mauritius' pictorial health warning label images, see the Tobacco Labeling Resource Centre website. <http://www.tobaccolabels.ca/currentl/mauritius>

## Pricing and Taxation

Increasing taxes on tobacco products is considered to be one of the most effective components of a comprehensive tobacco control strategy, particularly among young people. Article 6 of the FCTC obligates countries that have ratified the treaty to adopt pricing and taxation measures that reduce tobacco consumption such as sales restrictions and limitations on international travelers importing tax and duty free tobacco products. Mauritius does not manufacture any tobacco products locally. This means that 100% of the cigarettes sold to consumers in Mauritius are imported from other countries. As of July 2008, a custom excise duty of MUR 2,200 (\$ 74.00 US) is imposed per thousand cigarette sticks and a Value Added Tax (VAT) of 15% of the total of both abovementioned taxes plus the base cost of cigarettes is applied prior to sale. Since then, there have been two successive annual increases on the excise duty. The first increase took effect as of November 2010 when excise duty went up to MUR 2,750 (\$ 92.50 US) i.e., an increase of 25%. The second increment was to MUR 3,160 (\$ 106.30 US) i.e., another increase of 15%. The VAT has remained at 15% of the retail price. In addition, in an effort to curb illicit trade, an affixed excise stamp must appear on cigarette packs.

## Smoke-free Public Places and Workplaces

Article 8 of the FCTC requires the adoption of effective measures to provide protection from exposure to tobacco smoke. The 1999 Regulations included a provision that banned smoking indoors in health care institutions, educational institutions, sports premises, public transportation, office premises or workplaces open to the public, public places (museums, post office, etc.) as well as when preparing, serving, or selling food to the public. In 2008, the Regulations were revised to be more comprehensive and now include: indoor and outdoor premises of health and educational institutions, indoor and outdoor sporting premises, any public conveyance, bus stands and stations, any indoor workplace (excluding designated smoking areas), any indoor area open to the public, recreational public places like gardens (except beaches), cafés, bars, night clubs, and restaurants, while preparing, serving or selling food for/to the public, and while driving or travelling in a private vehicle carrying passengers. "No smoking" signs (with regulated colour, size, and text font) have been placed in public places. Table 2 outlines the progression of legislation regarding smoke-free locations.

It is important to note that the Mauritius government recognizes that allowing 'designated smoking areas' in workplaces is a problem because it creates a loophole in the legislation. Work is underway with the Ministry of Labour, Industrial Relations and Employment to revise this legislation so that such 'designated smoking areas' will not be allowed.

Table 2. Smoke-free public places and workplaces policy timeline

Smoke-free Locations		
Prior to 2008 Regulations	2008 Regulations (Phase 1) March 1, 2009; Pre-Wave 1	2008 Regulations (Phase 2) June 1, 2009; Post-Wave 1
Pursuant to the 1999 Regulations, the following venues were deemed smoke-free indoors: <ul style="list-style-type: none"><li>- Healthcare institutions</li><li>- Educational institutions</li><li>- Sports premises</li><li>- Public transportation</li><li>- Any part of any office premises or other workplaces open to public</li><li>- Public places (museums, post office, etc.)</li><li>- Any place involving a person preparing or selling food to the public</li></ul>	The following venues are deemed smoke-free indoors and outdoors: <ul style="list-style-type: none"><li>- Healthcare institutions, Educational institutions, Sports premises</li></ul> The following venues are deemed smoke-free indoors: <ul style="list-style-type: none"><li>- Any indoor workplace (excluding designated smoking areas)</li><li>- Any indoor area open to the public</li><li>- Cafés, bars, night clubs, restaurants</li><li>- Any place involving a person preparing or selling food to the public</li><li>- Any private vehicles while driving or traveling with passengers</li><li>- Any public conveyances</li><li>- Bus stations</li></ul>	
Penalties for failures to adhere to the conditions of the Public Health (Restrictions on Tobacco Products) Regulations 1999 include the following: <ul style="list-style-type: none"><li>- At first conviction, a fine of not less than MUR 1,000 and not more than MUR 2,000;</li><li>- At second conviction, a fine of not less than MUR 2,000 and not more than MUR 5,000; and</li><li>- At third or subsequent conviction, an imprisonment for a term not exceeding 3 months.</li></ul>	The following venues are deemed smoke-free outdoors: <ul style="list-style-type: none"><li>- Recreational public places (not including beaches), Bus stands</li></ul> 'No smoking' signs (with regulated colour, size, and text font) have been placed in public places. Penalties for failures to adhere to the conditions of the regulations for the Public Health (Restrictions on Tobacco Products) Regulations 2008 include the following: <ul style="list-style-type: none"><li>- At first conviction, a fine of not less than MUR 5,000 and not more than MUR 8,000;</li><li>- At second conviction, a fine of not less than MUR 8,000 and not more than MUR 10,000; and</li><li>- At third or subsequent conviction, an imprisonment for a term not exceeding 12 months.</li></ul>	

## **Education, Communication, Training, and Public Awareness**

Under Article 12, Parties must promote and strengthen public awareness of tobacco control issues through education and public awareness programs on the health risks of tobacco consumption and the benefits of cessation, and provide public access to information on the tobacco industry.

Mauritius has made efforts to increase public awareness and communication about the harmful effects of exposure to tobacco smoke and the use of tobacco products. In addition to an ongoing public education campaign, the government launched campaigns to raise awareness of the new regulations through mass media and other channels in February 2009. As part of their Action Plan, the Mauritius government has also planned to organize awareness-raising and advocacy sessions in order to bring consensus and support amongst key stakeholders for the implementation and enforcement of their smoke-free policy.

Part of the plan to enhance the effectiveness of the existing smoke-free law in Mauritius was to conduct a media campaign to increase public awareness of the harms of secondhand smoke.

In May 2011, before launch of the ITC Mauritius Wave 3 Survey, an adaptation of the World Lung Foundation's (WLF) "Lungs Are Like Sponges" or "Sponge" mass media campaign was implemented in Mauritius as an initiative to coincide with the national level World No Tobacco Day. The Sponge campaign ran from May 30 until June 19, 2011. The ITC Mauritius Project partnered with the WLF to evaluate the Sponge campaign. Thus, there were additional survey questions added to the ITC Mauritius Wave 3 Survey in order to assess the public's reactions to the Sponge campaign.

## **Tobacco Advertising, Promotion, and Sponsorship**

Article 13 of the FCTC requires Parties to implement effective measures against tobacco advertising, promotion, and sponsorship. Guidelines for Article 13 recommend a comprehensive ban on tobacco advertising, promotion, and sponsorship (or apply restrictions that are as comprehensive as possible). Included among the recommended measures are bans on: Cross-border advertising, promotion and sponsorship; display of tobacco products at points of sale; tobacco product vending machines; internet sales; and attractive packaging and product features.

A ban on tobacco advertising and promotion, as well as a ban on sponsorship by tobacco companies, has been in place in Mauritius since 1999. Effective as of March 1, 2009, the regulations were made more comprehensive to include a ban on the offer or supply of tobacco products free of charge or at a discounted price. The display of tobacco products at point of sale was also banned, with the exception of airport duty free shops in Mauritius and Rodrigues.

*The Mauritius government recognizes that allowing 'designated smoking areas' in workplaces is a problem because it creates a loophole in the legislation. Work is under way to revise this legislation so that such 'designated smoking areas' will not be allowed.*

**In May 2011,  
an adaptation  
of the  
World Lung  
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(WLF) "Lungs  
are Like  
Sponges"  
mass media  
campaign was  
implemented  
to coincide  
with World No  
Tobacco Day.**

To discourage the uptake of smoking by youth, the sale of single or ‘loose’ cigarettes is now banned, and packs being sold must contain 20 cigarettes.

## Cessation

Article 14 of the FCTC promotes the implementation of programs for smoking cessation, including programs for diagnosing, counselling, preventing, and treating tobacco dependence, as well as facilitating accessible and affordable treatments.

Reduction measures concerning tobacco dependence and cessation efforts in Mauritius include a pilot smoking cessation clinic implemented in December 2008 by the Ministry of Health and Quality of Life.

As of November 2011, 7 smoking cessation clinics were operational once a week at the regional level. One significant goal of the Mauritian government is to conduct brief interventions at all primary health care points to assess readiness to quit and provide referrals for counseling and pharmacological therapies in smoking cessation clinics at the regional level. These clinics were launched after the Wave 3 fieldwork, so will be evaluated during Wave 4 of the Mauritius survey.

Currently, counselling, nicotine patches of 5, 10, and 15 mg doses, and Bupropion Hydrochloride tablets of 150 mg (Zyban) are all available at the smoking cessation clinics. Nicotine replacement therapy (NRT) items like nicotine spray, gum, patches, and lozenges are available over the counter without prescriptions in private pharmacies. In addition, private physicians and psychiatrists can prescribe NRT and Bupropion to their patients.

## Illicit Trade in Tobacco Products

To curb illicit trade of tobacco products in Mauritius, the 2008 Regulations included a provision that requires the country of origin to be noted on cigarette packs. Packs must also carry the statement ‘sale allowed in Mauritius only’ and the Excise (Amendment) Regulations 2008 of the Excise Act prescribes that an excise stamp be affixed.

## Sales to and by Minors

The sale of tobacco to minors in Mauritius has been illegal since 1999; however, the sale of tobacco by minors was made illegal in March 2009. To discourage the uptake of smoking by youth, the sale of single or ‘loose’ cigarettes is now banned, and packs being sold must contain 20 cigarettes (as described earlier). The sale of tobacco through vending machines is prohibited and any person selling tobacco must seek out evidence of legal age. The seller of tobacco must also display a prohibition sign. The sale of sweets, toys, etc., in the form of cigarettes has also been banned.

## Penalties for failures to adhere to the Public Health (Restrictions on Tobacco Products) Regulations 2008

Penalties for failures to adhere to the conditions for the smoke-free laws include the following: at first conviction, a fine of not less than MUR5,000 and not more than MUR8,000; at second conviction, a fine of not less than MUR8,000 and not more than MUR10,000; and at third or subsequent conviction, an imprisonment for a term not exceeding 12 months.

*Mauritius has taken significant steps to fulfill its obligations under the FCTC and has implemented some of the most progressive tobacco control policies in Africa.*

# METHODS

## OVERVIEW

### The ITC Project

The International Tobacco Control Policy Evaluation Project (the ITC Project) is an international research collaboration across 23 countries – Canada, United States, United Kingdom, Australia, Thailand, Malaysia, South Korea, China, Mexico, Uruguay, New Zealand, France, Germany, the Netherlands, Bhutan, France, Brazil, India, Bangladesh, Kenya, Zambia, Nigeria, and Mauritius. The primary objective of the ITC Project is to conduct rigorous evaluation of the psychosocial and behavioural effects of national level tobacco control policies of the WHO Framework Convention on Tobacco Control (FCTC). The ITC Project is conducting large-scale annual prospective cohort surveys of tobacco use to evaluate FCTC policies in countries inhabited by half of the world's smokers. Each ITC Survey includes key measures for each FCTC policy domain that are identical or functionally similar across the 23 countries to facilitate cross-country comparisons. The evaluation studies conducted from the ITC Surveys take advantage of natural experiments created when an ITC country implements a policy: changes in policy-relevant variables in that country from pre- to post-policy survey waves are compared to other ITC countries where that policy has not changed. This research design provides high levels of internal validity, allowing more confident judgments regarding the possible causal impact of the policy. For description of the conceptual model and objectives of the ITC Project, see Fong et al. (2006)<sup>7</sup>; for description of the survey methods, see Thompson et al. (2006).<sup>8</sup>

The International Tobacco Control Policy Evaluation Project in Mauritius (the ITC Mauritius Project) was created in 2009 to rigorously evaluate the psychological and behavioural effects of Mauritian tobacco control legislation and national level smoking cessation clinics, using methods that the ITC Project has employed in many other countries throughout the world. The project objective is to provide an evidence base to guide policies enacted under the FCTC and to systematically evaluate the effectiveness of these legislative efforts.

### The ITC Mauritius Survey: Waves 1, 2, and 3

In 2009, the Mauritius Institute of Health (MIH) in collaboration with the World Health Organization, the Ministry of Health and Quality of Life, the University of Mauritius, and the Non-governmental Organization ViSa, partnered with the University of Waterloo in Canada to create the ITC Mauritius Survey. There were two specific evaluation objectives, which were aligned with the African Tobacco Situational Analysis (ATSA) priorities:

1. To evaluate the impact of pictorial health warning labels (officially in force as of June 1, 2009),
2. To evaluate the impact of smoke-free initiatives in public and workplaces, and to assess adherence to the strengthened enforcement (implemented as of March 1, 2009), and

A third evaluation objective was added for the Wave 3 Survey:

3. To evaluate the impact of a mass media campaign – an adaptation of the World Lung Foundation (WLF) “Sponge Campaign” – that was implemented in Mauritius from May 30 to June 19, 2011.

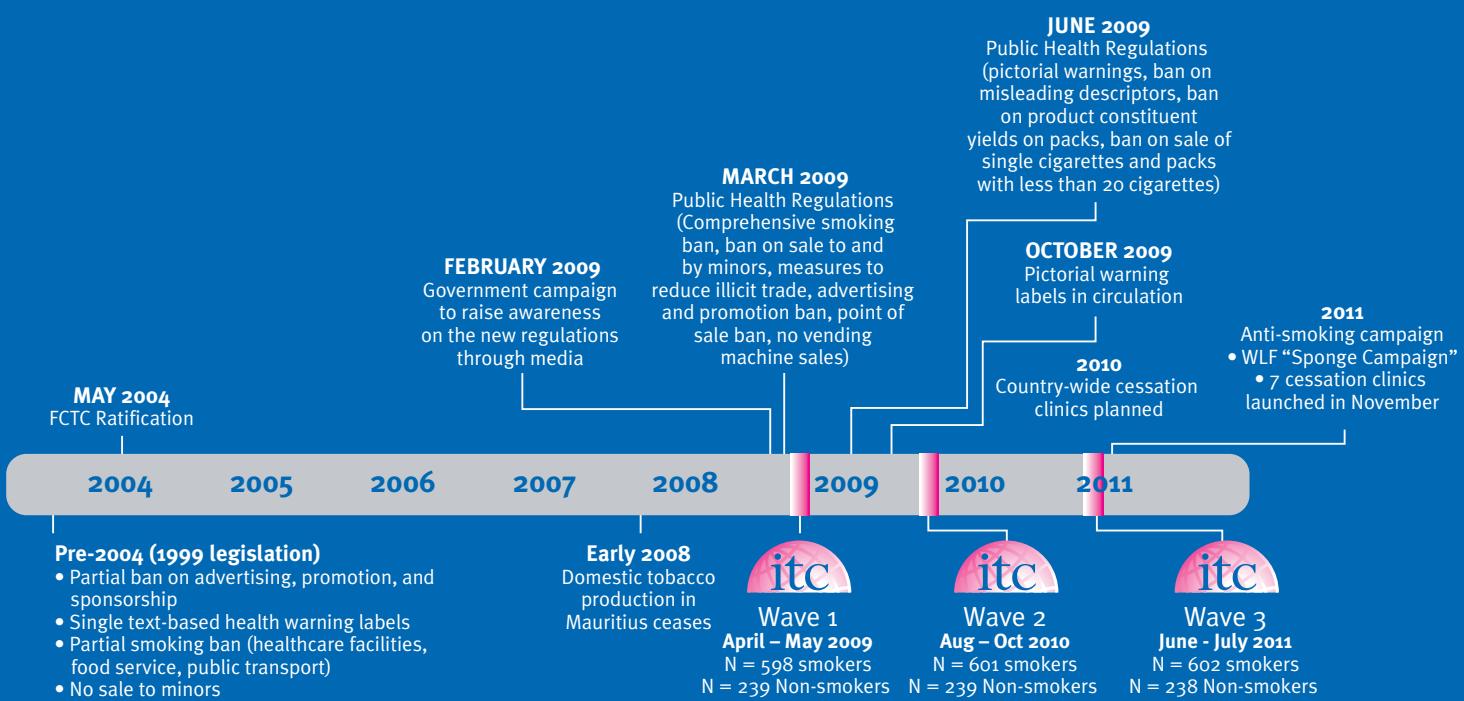
The Wave 1 Survey was conducted between April 20 and May 24, 2009, 2 to 3 months after the implementation of the Phase 1 Regulations, but before the implementation of Phase 2 Regulations. As stated earlier, Phase 1 Regulations, which included more comprehensive smoke-free, advertising and promotion laws, as well as regulations to prevent sales to and by minors, and the illicit trade of cigarettes, came into effect in March 1, 2009. Phase 2 Regulations, which included tobacco control policies related to packaging (i.e., the implementation of graphic pictorial health warnings, the requirement that only packs of 20 cigarettes be sold, and the requirement that cigarette packs contain no misleading wording, such as “light”, “mild”, or “low tar”) came into effect on or after June 1, 2009. Wave 2 was conducted between August 30 and October 2, 2010, 18 to 19 months after the Phase 1 Regulations came into effect, and 14 to 15 months after the Phase 2 Regulations officially came into effect. Wave 3 was conducted between June 20 and July 11, 2011, 28 months after Phase 1 Regulations were implemented in Mauritius and 24 months after the Phase 2 Regulations came into effect. Figure 3 presents an overview of the ITC Mauritius Survey timeline in relation to Mauritian tobacco control policy initiatives.

7. Fong GT, Cummings KM, Borland R, Hastings G, Hyland A, Giovino GA, Hammond D, Thompson ME (2006). The conceptual framework of the International Tobacco Control (ITC) Policy Evaluation Project. *Tob Control*;15 (Suppl III):iii3-iii11.

8. Thompson ME, Fong GT, Hammond D, Boudreau C, Driezen P, Hyland A, Borland R, Cummings KM, Hastings G, Siahpush M, MacKintosh AM, Laux FL (2006). Methods of the International Tobacco Control (ITC) Four Country Survey. *Tob Control*;15 (Suppl III):iii12-iii18.



**Figure 3. Mauritius tobacco policy timeline in relation to the ITC Mauritius Surveys**



## Sampling Design

For the ITC Mauritius Wave 1 Survey, a nationally representative probability sample was constructed in collaboration with the Mauritius Central Statistics Office to ensure random selection of households within strata defined by the nine geographic districts spanning the island, which also provided similar urban-rural representation (43% urban, 57% rural) in the study sample. The sampling design comprised 60 Enumeration Areas (EAs), of which each included approximately 100-125 households. Of these households, 50 from each EA were randomly selected to be contacted.

A total of 1,750 households were originally enumerated during Wave 1 to establish an accurate sampling frame from which survey participants would be drawn. A total of 600 smokers and 240 non-smokers aged 18 years and older were surveyed using a face-to-face survey interviewing methodology in Creole language.

For the Wave 2 Survey, a total of 601 smokers and 239 non-smokers, that included both cohort and replenishment respondents, were surveyed. The sample constructed at Wave 2 was recontacted for participation in Wave 3. The retention rate was 96.2% for smokers 95.8% for non-smokers. The corresponding attrition rates were only 3.8% for smokers and 4.2% for non-smokers. This retention rate was much higher than in other ITC countries, where the typical retention rate is 75-80%. A total of 50 new households were enumerated from 61 enumeration areas (EAs) at Wave 3, of which 48 agreed to participate. A total of 24 new smokers and 9 non-smokers were randomly selected for participation and interviewed at Wave 3. This resulted in a total sample of 602 smokers and 238 non-smokers aged 18 years and older that were surveyed using a face-to-face survey interview conducted in Mauritian Creole.<sup>9, 10, 11</sup>

## Characteristics of the Wave 3 Sample

ITC Mauritius Surveys (Waves 1 to 3, 2009-2011) were conducted by interviewers hired by the Mauritius Institute of Health. Smokers were defined as having smoked more than 100 cigarettes in their lifetime and at least once in the past 30 days. Table 3 presents the demographic characteristics of the ITC Mauritius Wave 3 Survey sample.

9. ITC Project (2010). ITC Mauritius Wave 1 Technical Report. Available at: <http://www.itcproject.org/projects/mauritius>

10. ITC Project (2012). ITC Mauritius Wave 2 Technical Report. Available at: <http://www.itcproject.org/projects/mauritius>

11. ITC Project (2012). ITC Mauritius Wave 3 Technical Report. Available at: <http://www.itcproject.org/projects/mauritius>

**Table 3. Demographic characteristics of ITC Mauritius Survey respondents participating at Wave 3**

	Recontact				Replenishment			
	Smokers/Quitters N=578		Non-Smokers N=229		Smokers N=24		Non-Smokers N=9	
	Frequency	%	Frequency	%	Frequency	%	Frequency	%
<b>Gender</b>								
Male	546	94.5	67	29.3	23	95.8	3	33.3
Female	32	5.5	162	70.7	1	4.2	6	66.7
<b>Age</b>								
18-24	49	8.5	17	7.4	2	12.5	-	-
25-39	175	30.3	79	34.5	9	37.5	4	44.4
40-54	222	38.4	80	34.9	8	33.3	4	44.4
55+	132	22.8	53	23.1	4	16.7	1	11.1
<b>Annual household income (MUR)</b>								
<15,000	370	64.3	127	56.7	13	59.1	4	57.1
15,000 to < 25,000	138	24.0	60	26.8	6	27.3	1	14.3
≥ 25,000	67	11.7	37	16.5	3	13.6	2	28.6
<b>Education</b>								
Up to Form 4	403	69.7	131	57.2	13	54.2	3	33.3
SC/HSC/Vocational	138	23.9	79	34.5	10	41.7	5	55.6
Some/completed university	37	6.4	19	8.3	1	4.2	1	11.1
<b>Marital status</b>								
Married	443	76.6	160	69.9	16	66.7	6	66.7
Divorced or Separated	23	4.0	10	4.4	1	4.2	-	-
Widowed	16	2.8	31	13.5	-	-	1	11.1
Single	96	16.6	28	12.2	7	29.2	2	22.2

### Types of Survey Questionnaires at Wave 1, 2, and 3

For the Wave 1 Survey, two versions of the survey were developed and fielded: one for smokers and one for non-smokers. The average length of the Wave 1 Survey was 60 minutes for smokers and 30 minutes for non-smokers.

At Wave 2 and Wave 3, five versions of the survey were developed and fielded. The greater number of surveys was required to account for (1) two types of respondents at Waves 2 and 3—those who had already participated in previous Waves (recontact smokers and recontact non-smokers) and those who were being newly recruited to replace those respondents who were lost to attrition (replenishment smokers and replenishment non-smokers); (2) those respondents who were smokers at Wave 2 but who reported not smoking at Wave 3 (quitters)—these respondents were of special interest because their change (from smoking to not smoking) represents the desirable behaviour change for tobacco control. The resulting five survey types, the participant type to whom the survey would be administered, and the average length of each type of Wave 3 Survey is provided in Table 4.

**Table 4. Wave 3 Survey characteristics**

Types of Survey at Wave 3	Participant Characteristics	Average Time (Mins)
1) Recontact Smoker Survey	Smokers who participated in Wave 2 and were still smoking at Wave 3.	60
2) Recontact Non-Smoker Survey	Non-smokers who participated in Wave 2 and were still non-smokers at Wave 3.	30
3) Recontact Quitter Survey	Smokers who participated in Wave 2, but who had quit smoking by Wave 3.	60
4) Replenishment Smoker Survey	Smokers who were newly recruited into the cohort at Wave 3 to replace a participant from Wave 2 who had dropped out or become ineligible.	60
5) Replenishment Non-Smoker Survey	Non-smokers who were newly recruited into the cohort at Wave 3 to replace a participant from Wave 2 who had dropped out or become ineligible.	30

# Content of the ITC Mauritius Survey

The ITC Mauritius Survey was developed by the project team with members from both Mauritius and University of Waterloo, Ontario, Canada. The survey methods and a large proportion of the survey questions were adapted from standardized protocols and surveys used in ITC Surveys conducted in 19 other countries around the world.

## Smokers and quitters at Wave 3 responded to questions on:

- 1. Smoking- and cessation-relevant questions.** Smoking history and frequency, as well as current smoking behaviour and dependence, and quitting behaviours;
- 2. Knowledge and basic beliefs about smoking.** Knowledge of the health effects of smoking and important beliefs relevant to smoking and quitting, perceived risk, and perceived severity of tobacco-related diseases;
- 3. Policy-relevant questions.** Awareness of, impact of, and beliefs relevant for each of the FCTC demand reduction policy domains (warning labels, taxation/price, advertising/promotion, smoke-free bans, light/mild);
- 4. Media campaigns.** Awareness of the “Sponge” campaign including cognitive, affective, and behavioural impacts;
- 5. Other important psychosocial predictors** of smoking behaviour and potential moderator variables (e.g., normative beliefs, self-efficacy, intentions to quit);
- 6. Individual difference variables relevant to smoking** (e.g., depression, stress, time perspective);
- 7. Demographics** (e.g., age, marital status, income, education).

Respondents who were non-smokers were asked parallel survey questions from categories 2 to 7, as listed above for the smoker survey. Question phrasing was revised where necessary for the non-smoker context. The inclusion of non-smoker survey items is important in allowing accurate interpretation of survey results for the entire population of Mauritius.

Between Wave 2 and Wave 3, each questionnaire type was updated to ensure that it was relevant for the target respondent (i.e., continuing smoker, quitter, etc.) within the context of the tobacco control landscape in Mauritius.

The ITC Mauritius Surveys were first developed in English. The surveys were translated into Mauritian Creole by team members at the Mauritius Institute of Health. The translated surveys were then reviewed by a committee composed of five members who were bilingual in English and Creole and who also had experience in population surveys. Nuances in wording were discussed and resolved by this bilingual committee. This method of translation is generally favored over traditional double translation methods.

The ITC Mauritius Wave 1, Wave 2, and Wave 3 Survey questionnaires are available at:  
<http://www.itcproject.org/research/surveys/mauritius>.

# THE CONTENT OF THIS REPORT

This ITC Mauritius National Report presents the findings from the most recent wave (Wave 3) of the ITC Mauritius Survey and compares these with the findings from Wave 1 and Wave 2. The intent is to provide a detailed picture of the tobacco control policy landscape in Mauritius, including smokers' and non-smokers' beliefs, attitudes and behaviours in the context of the implementation, in 2009, of the Public Health (Restrictions on Tobacco Products) Regulations 2008, and to describe how these may have changed over time from Wave 1 until Wave 3.

Wave 3 provides a continuing picture of the effectiveness of the smoke-free regulations over time, an evaluation of the effectiveness of pictorial warning labels, and also provides a third pre-implementation assessment of Mauritians' perceptions of the need for, and support for national cessation clinics. Wave 3 also provides an evaluation of a mass media campaign, the "Sponge" campaign, that was implemented in Mauritius to increase awareness of the harms of tobacco to both smokers and non-smokers.

In this Report, weighted estimates presented for Wave 3 include respondents who have participated in both previous survey waves (Wave 1 and Wave 2), as well as new respondents recruited into the cohort at Wave 2 and Wave 3 to replace those who were lost to follow up (i.e., the Wave 2 and Wave 3 replenishment samples).

For analyses that compare measures over time, the complete sample of smokers and non-smokers present in one or more of Waves 1 through 3 are included, unless otherwise stated. Thus, quitters are only included in the comparison where the measures of interest might apply to both smokers and quitters.

For the purposes of comparing policy measures across several ITC countries, the full sample present in Wave 3 was used. This includes smokers participating in Wave 3 who were recruited in Wave 1, Wave 2, or Wave 3. Quitters are included where appropriate. Since not all ITC countries sampled non-smokers, they are typically excluded from the multi-country comparisons. Given the different composition of the samples from each of the ITC countries, estimates for multi-country comparisons are adjusted to account for differences in the samples across countries. Multi-country comparisons control for differences in the following factors: age, smoking status, and time-in-sample (or the number of times a given respondent participated in the survey over time). Because the prevalence of smoking among women varies across the ITC countries, estimates for these comparisons are based upon male smokers only.

# FINDINGS

## SMOKING AND QUITTING BEHAVIOUR

Wave 1 (2009) to Wave 3 (2011) of the ITC Mauritius Survey provides an assessment of tobacco use, quitting behaviours, and beliefs and attitudes towards smoking, including perceived societal norms about smoking. The Survey also measures use of cessation assistance and attitudes towards government support for cessation.

### Cigarette Consumption

At both Wave 1 (2009) and Wave 2 (2010), nearly all smokers (91% of 598 smokers at Wave 1; 94% of 553 smokers at Wave 2) reported that they were daily cigarette smokers. The percentage of daily smokers did not change at Wave 3 (2011). Among the 535 smokers surveyed at Wave 3 (2011), the vast majority (91%) reported that they are daily cigarette smokers.

Among daily smokers, the average number of cigarettes smoked was about half a pack a day (an average of 9.9 cigarettes per day).

### Personal Opinions and Perceived Norms about Smoking

Smokers hold very negative opinions and beliefs about their smoking. Similar to findings in 19 other ITC countries, over six out of seven (87%) smokers reported that they had a “bad” or “very bad” opinion of smoking at Waves 1 to 3 (2009-2011).

The majority of smokers express regret for taking up smoking. At Wave 1 (2009), over three-quarters (78%) of smokers “agreed” or “strongly agreed” that if they had to do it over again, they would not have started smoking. This percentage of smokers who regretted taking up smoking increased to 87% at Wave 2 (2010), and remained at 87% at Wave 3 (2011).

Overall, smokers also perceive that society disapproves of smoking. At Wave 1 (2009), nearly two-thirds (65%) of smokers “agreed” or “strongly agreed” that Mauritian society disapproves of smoking. However, perceived societal disapproval of smoking decreased to 60% at Wave 2 (2010), and further decreased to 50% at Wave 3 (2011).

### Reasons to Start Smoking

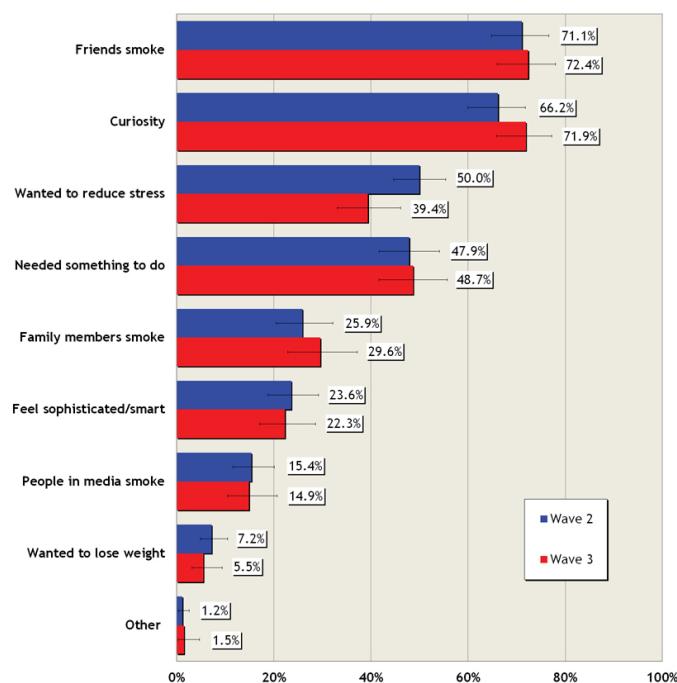
Beginning in Wave 2 (2010) and continuing in Wave 3 (2011), the ITC Mauritius Survey asked smokers to report on why they had started smoking.

Findings provide evidence that having friends who smoke was the most powerful source of influence for smoking uptake (Figure 4). Nearly three-quarters (71% at Wave 2; 72% at Wave 3) of smokers reported that they started smoking because they had friends who smoked.

In contrast, the influence of family members on smoking initiation was much less pronounced. At both Wave 2 (2010) and Wave 3 (2011), just over one-quarter (26% at Wave 2; 30% at Wave 3) of smokers reported that they had started smoking because members of their family smoked. It is worth noting that “curiosity” (66% at Wave 2; 72% at Wave 3), “stress reduction” (50% at Wave 2; 39% at Wave 3), and “something to occupy time” (48% at Wave 2; 49% at Wave 3) were all more commonly cited as reasons to start smoking than having family members who were smokers.

The results also suggest that smokers may be likely to affiliate with and form friendships primarily with other smokers. Almost half of smokers across all three waves (42% at Wave 1; 45% at Waves 2 and 3) reported that all five of their closest friends that they spend time with on a regular basis are smokers. In contrast, a minority of smokers (8% at Wave 1; 4% at Wave 2; 5% at Wave 3) at each of the three waves reported that only one out of their five closest friends is a smoker.

**Figure 4. Smokers’ opinions: ‘Why did you start smoking cigarettes?’ Percentage who reported “yes”, Wave 2 (2010) and Wave 3 (2011)**



## Quit Attempts and Quit Intentions

At Wave 2 (2010), 8% (n=48) of smokers at Wave 1 (2009) had quit smoking. Of these quitters, the vast majority (86%, n=39) remained quit at Wave 3 (2011).

Among 531 smokers at Wave 2 (2010), 6% (n=28) reported that they had quit smoking by Wave 3 (2011). Out of 578 participants who joined the ITC survey as a smoker either at Wave 1 (2009) or Wave 2 (2010) and again surveyed at Wave 3 (2011), 12% (n=67) reported that either they have stayed quit since Wave 2 (2010) or had quit smoking at Wave 3 (2011).

Among the total sample of 67 quitters at Wave 3 (2011), one year was reported as the average length of time for which they had managed to stay quit.

Among 598 smokers at Wave 1 (2009), about two-thirds (65%) reported that they had tried to quit smoking “at least once”. The majority of smokers (74%) had plans to quit at some point in the future, with almost one-quarter (22%) having plans to quit within the next six months.

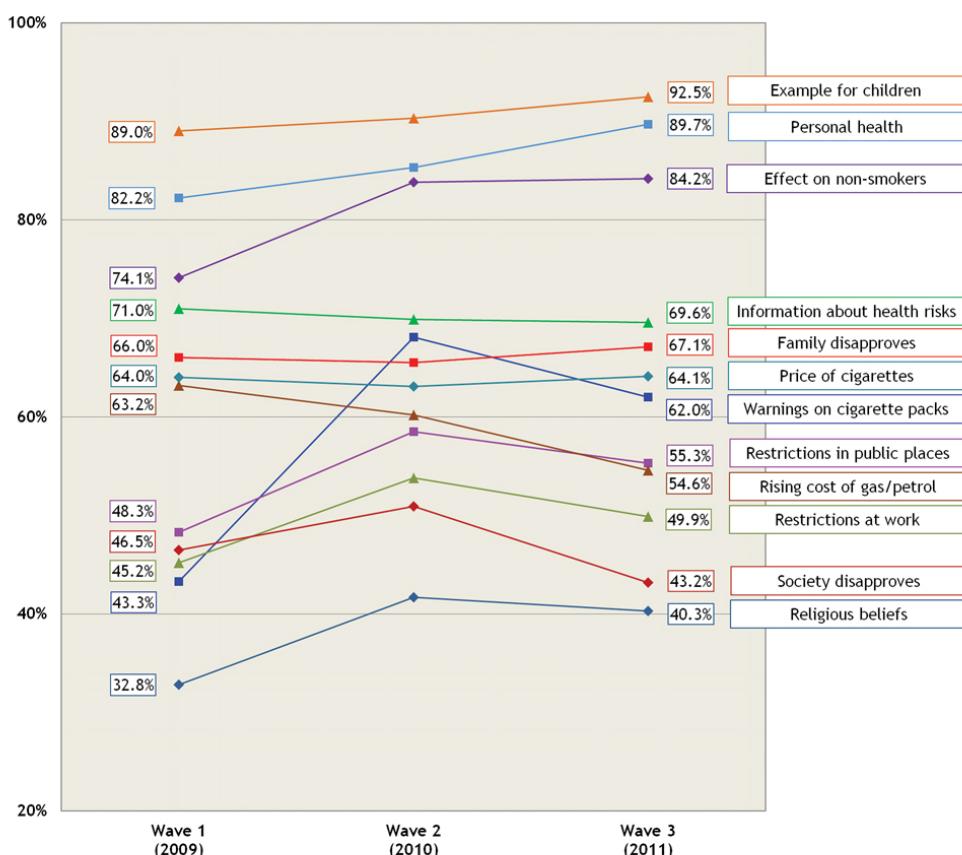
There was a small gradual increase in the percentage of smokers who tried to quit smoking at subsequent survey waves. More than two-thirds of smokers tried to quit “at least once” (69% of 553 smokers at Wave 2 (2010); 73% of 535 smokers at Wave 3 (2011)). As found in Wave 1 (2009), almost one-quarter of smokers (21% at Wave 2; 23% at Wave 3) had plans to quit within the next six months. However, the percentage of smokers with plans to quit at some point in the future decreased substantially from 74% at Wave 1 (2009) to 55% at Wave 2 (2010), and then levelled off at 52% at Wave 3 (2011).

## Reasons to Quit Smoking

Among the 67 quitters at Wave 3 (2011), over half cited the following as the most important reasons that led them to quit or to stay quit:

1. Concern for personal health (93%),
2. Concern about the effects of cigarette smoke on non-smokers (88%),
3. Wanting to set an example for their children (85%),
4. Advertisements or information about the health risks of smoking (74%),
5. Warning labels on cigarette packs (72%),
6. Close friends’ or family disapproval of smoking (71%),
7. Mauritian society’s disapproval of smoking (58%),
8. Price of cigarettes (55%), and
9. Smoking restrictions in public places (54%).

**Figure 5. Smokers’ opinions: ‘Which reasons made me think of quitting smoking?’  
Percentage who reported “very much” or “somewhat”, by wave**



At Wave 3 (2011), of those smokers who wanted to quit, over half cited the following as the most important reasons for wanting to quit (Figure 5):

1. Wanting to set an example for their children (93%),
2. Concern for personal health (90%),
3. Concern about the effects of cigarette smoke on non-smokers (84%),
4. Advertisements or information about the health risks of smoking (70%),
5. Close friends’ or family disapproval of smoking (67%),
6. Price of cigarettes (64%),
7. Warning labels on cigarette packs (62%), and
8. Smoking restrictions in public places (55%).

Common reasons that smokers gave for wanting to quit which changed the most between Waves 1 (2009) to 3 (2011) included:

1. Warning labels on cigarette packs (43% at Wave 1 vs. 62% at Wave 3),
2. Concern about the effects of cigarette smoke on non-smokers (74% at Wave 1 vs. 84% at Wave 3), and
3. Concern for personal health (82% at Wave 1 vs. 90% at Wave 3).

It is important to note that the increase in the reported frequency of the above reasons is an indicator of the effectiveness of pictorial warnings and the “Sponge” mass media campaign (see sections on Health Warning Labels and Education, Communication, and Public Awareness for further information).

The following reasons that smokers commonly cited for wanting to quit changed only slightly or not at all between Wave 1 (2009) to Wave 3 (2011):

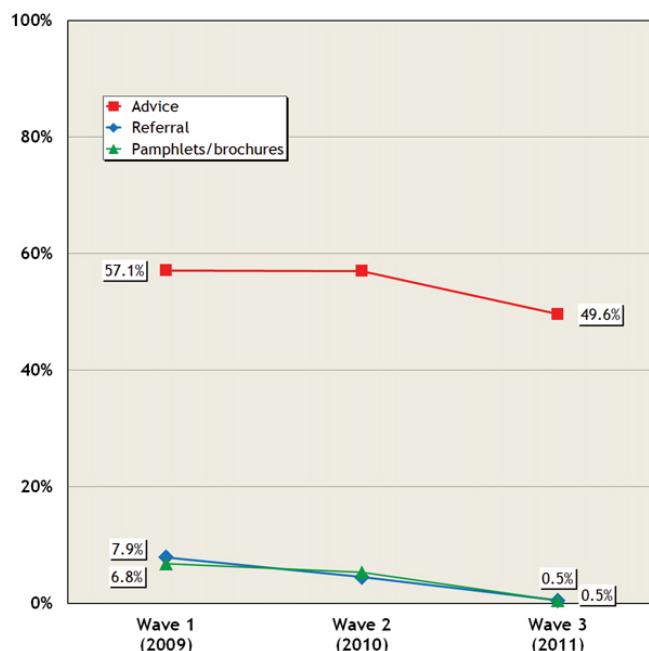
1. Advertisements or information about the health risks of smoking (71% at Wave 1 vs. 70% at Wave 3),
2. Close friends’ or family disapproval of smoking (66% at Wave 1 vs. 67% at Wave 3), and
3. Price of cigarettes (64% at Wave 1 and Wave 3).

## Use of Cessation Assistance

The ITC Mauritius Survey (Waves 1 to 3, 2009-2011) asked smokers whether they had visited a doctor in the last six months. At all three waves, approximately one-quarter of smokers (26% of 598 smokers at Wave 1; 29% of 552 smokers at Wave 2; 24% of 535 smokers at Wave 3) had visited a doctor in the last six months.

Findings show that although doctors generally advise smokers to quit, they do not provide other forms of support for cessation. Across all three waves, at least half (57% at both Wave 1 and Wave 2; 50% at Wave 3) of smokers who had visited a doctor were given advice to quit (Figure 6). In contrast, only a small minority (less than 10%) of smokers received other forms of support for cessation, and this percentage has continued to decline over time. Between Wave 1 (2009) and Wave 2 (2010), there was a decrease in the percentage of smokers who received a referral to a cessation service (8% at Wave 1 vs. 4% at Wave 2), or were given pamphlets or brochures on how to quit (7% at Wave 1 vs. 5% at Wave 2). By Wave 3 (2011), virtually no smokers (less than 1%) received a referral to another cessation service, or were given pamphlets or brochures on how to quit from their doctors. These very low percentages indicate the need for greater involvement among doctors—and likely from other health care professionals—in providing support and advice to their smoking patients to help them with quitting.

**Figure 6. Type of cessation assistance received by smokers who visited a doctor or health professional, by wave**



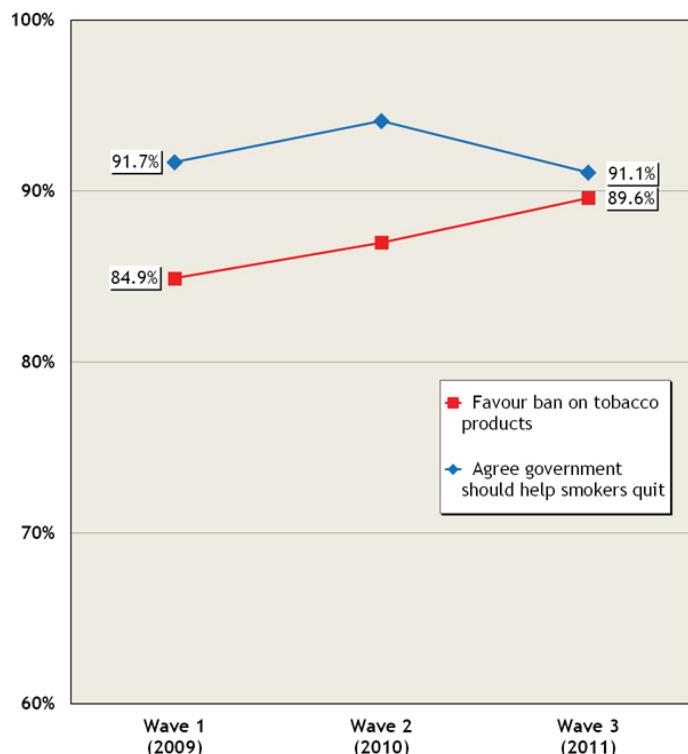
*There is a need for greater involvement among doctors—and likely from other health care professionals—in providing support and advice to their smoking patients to help them with quitting.*

## Support for Stronger Government Actions to Support Cessation

From Wave 1 (2009) to Wave 3 (2011), the vast majority of smokers and non-smokers supported the government of Mauritius in playing a stronger role to help smokers quit. At Wave 1 (2009), 92% of smokers “agreed” or “strongly agreed” that the government should do more to help smokers give up smoking (Figure 7). This percentage increased to 94% at Wave 2 (2010) and decreased slightly to 91% at Wave 3 (2011). Support for further government actions to support cessation was almost unanimous among non-smokers. At Wave 1 (2009), 97% of non-smokers “agreed” or “strongly agreed” that the government should do more to help smokers quit. This increased to 99% at Wave 2 (2010) and decreased to 97% at Wave 3 (2011).

The people of Mauritius, both smokers and non-smokers, strongly support even more extreme measures to help smokers to quit. Across all three waves of the ITC Mauritius Survey (2009-2011) the great majority of smokers and non-smokers reported that they would “strongly support” or “support” a total ban on tobacco products within 10 years, if the government provided assistance such as cessation clinics to help smokers quit. At Wave 1 (2010), 85% of smokers “strongly supported” or “supported” a total ban within 10 years (Figure 7). This percentage increased to 87% at Wave 2 (2010) and then increased again to 90% at Wave 3 (2011). Non-smokers were almost unanimous in their support for a total ban on tobacco products—96% of non-smokers supported a total ban at Wave 1, 99% at Wave 2 (2010), and 96% at Wave 3 (2011).

Figure 7. Percentage of smokers who supported stronger government actions to support cessation, by wave\*



\*The percentages reported are for those who “agreed” or “strongly agreed” that the government should be doing more to help smokers quit, and for those who “supported” or “strongly supported” a total ban on tobacco products within 10 years

## Conclusions

The majority of smokers in Mauritius smoke cigarettes on a daily basis. Mauritians have very negative views on smoking and the vast majority of smokers regret ever having started smoking. Nevertheless, smokers’ perceptions that society disapproves of smoking declined between Wave 1 (2009) to Wave 3 (2011), which suggests that smoking is still normative in Mauritius.

The smoking behaviour of friends is a significant source of influence on the initiation and maintenance of adult smoking behaviour. These results suggest that smoking prevention and cessation programs that focus on changing the behaviours and attitudes of individuals as well as members of their close social networks may be more effective than those that target individuals only.

The ITC Mauritius Survey findings provide evidence that Mauritian smokers want to quit smoking. Results show that smoke-free laws and pictorial health warnings on cigarette packs have been successful in getting smokers to think about the health risks of smoking, and to think about quitting. There was evidence of a greater awareness of the impact of smoking on personal health and the health of others as there was an increase over time in these cited as reasons to quit.

Although Mauritian smokers have a high degree of readiness to quit smoking, overall support for helping them to take steps towards quitting successfully remains low and has decreased over the past three years, especially from doctors or other health professionals. There is a need for stronger governmental efforts to improve the provision of cessation assistance in primary health care settings, and to increase access to cessation services in Mauritius. Health professionals should be trained to play a stronger role in advising their patients to quit and providing linkages to cessation services.

To further reduce smoking prevalence in Mauritius, the government needs to continue strong implementation of tobacco control policies across all domains—smoke-free, price and tax, warning labels, advertising and promotion. Mass media campaigns are an effective strategy for denormalizing smoking behavior and should be well-funded as a critical element of a comprehensive tobacco control program.

# SMOKE-FREE PUBLIC PLACES AND WORKPLACES

As of March 1, 2009, smoking is prohibited in all indoor public places, including hospitality venues such as restaurants, tea rooms, and bars or pubs in Mauritius. Smoking is also banned in all indoor workplaces with the exception of designated smoking areas.

The ITC Mauritius Wave 1 Survey (2009) was conducted 2 to 3 months after the introduction of the smoke-free laws, providing an initial assessment of the effectiveness of these policies. Follow-up surveys at Wave 2 (2010; 18 to 19 months post-implementation of smoke-free laws) and Wave 3 (2011; 28 months post-implementation of smoke-free laws), provide an ongoing assessment of the impact of smoke-free policies in Mauritius.

## Smoking in indoor workplaces

### Prevalence of Smoking Bans in Workplaces

Beginning in Wave 2 (2010) and continuing in Wave 3 (2011), the ITC Mauritius Survey asked smokers and non-smokers who work indoors to describe the indoor smoking policy at their workplaces. At Wave 2 (2010), 276 (63%) Mauritian smokers and 102 (84%) non-smokers worked at indoor workplaces. The majority of these smokers (76%) and non-smokers (92%) reported that smoking is not allowed in any indoor areas at their workplaces. At Wave 3 (2011), 255 (59%) Mauritian smokers and 107 (83%) non-smokers worked at indoor workplaces. The prevalence of complete bans decreased at Wave 3 (2011), as 71% of smokers and 81% of non-smokers indicated that smoking is not permitted in any indoor areas of their workplaces.

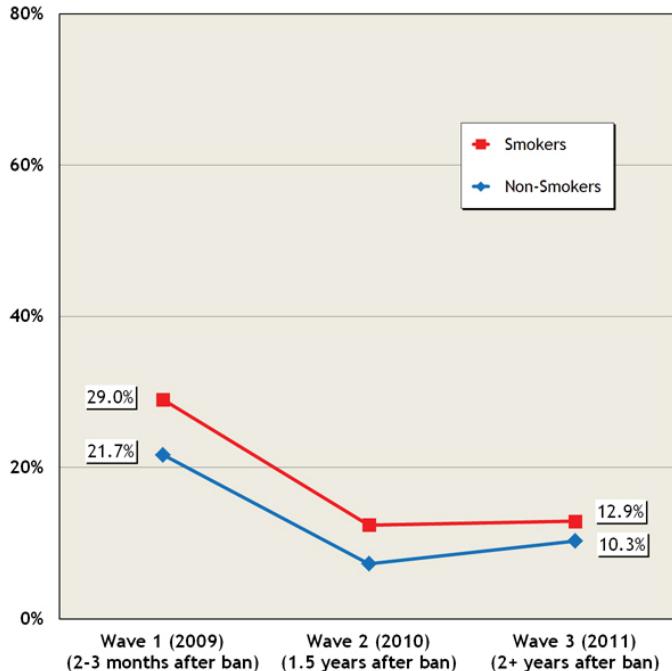
### Noticing Smoking in Workplaces

The ITC Mauritius Surveys (Waves 1 to 3, 2009-2011) asked respondents who work indoors whether they had noticed people smoking in indoor areas in the workplace. Overall, the percentage of smokers and non-smokers who observed smoking anywhere indoors in the workplace (in either designated smoking areas or non-smoking areas) did not change considerably over the three waves. Less than one-third of smokers observed smoking anywhere indoors across the three waves (29% at Wave 1 (2009); 28% at Wave 2 (2010); 30% at Wave 3 (2011)). Slightly fewer non-smokers observed smoking anywhere indoors across the three waves (22% at Wave 1 (2009); 16% at Wave 2 (2010); 23% at Wave 3 (2011)). To further determine the location of indoor smoking in workplaces, the Wave 2 (2010) and Wave 3 (2011) Surveys asked smokers whether they observed smoking in designated areas only or in areas not designed for smoking. Approximately 10% of respondents at Wave 2 (12% of smokers and 7% of non-smokers) and 12% of respondents at Wave 3 (13% of smokers and 10% of non-smokers) noticed smoking indoors in areas not designated for smoking (Figure 8).

### Support for Smoking Bans in Workplaces

The vast majority of Mauritians support complete smoking bans in workplaces. Across all three waves, nearly all smokers (84% at Wave 1; 88% at Wave 2; 92% at Wave 3), quitters (98% at Waves 2 and 3), and non-smokers (93% at Wave 1; 96% at Wave 2; 97% at Wave 3) “supported” or “strongly supported” complete smoking bans in workplaces.

**Figure 8. Percentage of smokers and non-smokers who noticed smoking indoors in areas not designated for smoking, by wave\*†**



\*Only among those who work outside the home in indoor environments (at least some of the time).

† Note the Wave 1 survey question only asked about noticing smoking in any indoor areas in the workplace.

## Smoking in restaurants or tea rooms

### Prevalence of Smoking Bans in Restaurants or Tea Rooms

Beginning at Wave 2 (2010) and continuing at Wave 3 (2011), the ITC Mauritius Survey asked respondents about the scope of smoke-free regulations in restaurants and tea rooms. Across both waves, the vast majority of smokers (91% at Wave 2; 89% at Wave 3) and non-smokers (89% at Wave 2; 91% at Wave 3) reported that smoking is not allowed in any indoor areas of restaurants or tea rooms.

### Noticing Smoking in Restaurants or Tea Rooms

The ITC Mauritius Survey asked smokers who had visited a restaurant or tea room in the last six months whether they had noticed anyone smoking at last visit. Among smokers who had visited a restaurant or tea room (42% at Wave 1; 56% at Wave 2; 53% at Wave 3), less than one-quarter (19% at Wave 1; 17% at Wave 2; 14% at Wave 3) reported noticing smoking at last visit (Figure 9).

Among non-smokers who had visited a restaurant or tea room (32% at Wave 1; 45% at Wave 2; 51% at Wave 3), only a minority (13%) noticed people smoking at Wave 1 (2009). This percentage almost doubled to 22% at Wave 2 (2010) and decreased to 13% at Wave 3 (2011) (Figure 9).

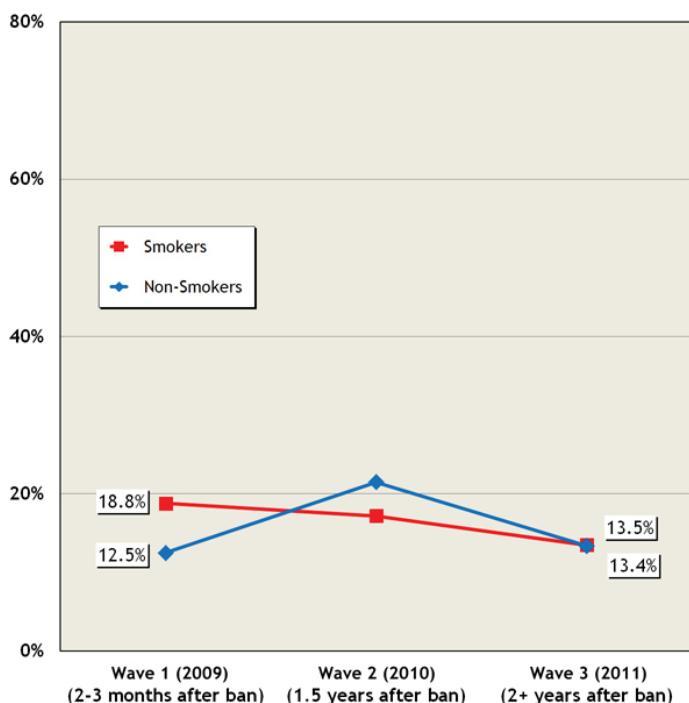
### Support for Smoking Bans in Restaurants or Tea Rooms

There is strong support for complete smoking bans in restaurants and tea rooms among Mauritians. At all three waves, over 85% of smokers (86% at Wave 1; 90% at Wave 2; 92% at Wave 3) “supported” or “strongly supported” complete smoking bans in restaurants or tea rooms. Similarly, nearly all non-smokers (94% at Wave 1; 97% at Wave 2 and 3) expressed that they “supported” or “strongly supported” complete smoking bans in restaurants or tea rooms.

### Enforcement of Smoking Bans in Restaurants or Tea Rooms

The ITC Mauritius Survey asked respondents to report on the extent to which local restaurants are enforcing smoking bans at Waves 1 to 3 (2009-2011). Strict enforcement of smoking bans in restaurants or tea rooms decreased from Wave 1 (2009) to Wave 2 (2010). At Wave 1 (2009), about two-thirds of smokers (63%) and non-smokers (67%) reported that smoking bans in restaurants or tea rooms were “totally” enforced. At Wave 2 (2010), there was no dramatic change in the percentage of smokers (59%) who reported that smoking bans in restaurants or tea rooms were “totally” enforced, but the percentage of non-smokers reporting the latter decreased substantially to 42% (a 25% decrease from Wave 1). Some improvement in the enforcement of smoking bans in restaurants or tea rooms was observed at Wave 3 (2011) – with approximately three-quarters (71%; 12% increase from Wave 2) of smokers and half (50%; 8% increase from Wave 2) of non-smokers reporting that smoking bans were “totally” enforced.

Figure 9. Percentage of smokers and non-smokers who noticed smoking in restaurants or tea rooms at last visit, by wave\*



\*Only among those who visited restaurants in the last six months

*While there is evidence of a gradual reduction in smoking in restaurants and tea rooms according to smokers, other ITC countries (France, Ireland, Scotland) have demonstrated that further reductions can be achieved with strong education and enforcement.*

## Smoking in bars or pubs

### Prevalence of Smoking Bans in Bars or Pubs

Beginning at Wave 2 (2010) and continuing at Wave 3 (2011), the ITC Mauritius Survey asked respondents to report on the scope of smoke-free regulations in bars or pubs. Overall, there were no considerable changes from Wave 2 (2010) to Wave 3 (2011) – at both waves, the vast majority of smokers (77% at Wave 2; 79% at Wave 3) and non-smokers (76% at Wave 2; 73% at Wave 3) reported that smoking is not allowed in any indoor areas of bars or pubs.

### Noticing Smoking in Bars or Pubs

Among smokers who had visited a bar or pub in the last six months (26% at Wave 1; 35% at Wave 2; 30% at Wave 3), the percentage reporting that they had noticed people smoking increased from Wave 1 (2009; 40%) to Wave 2 (2010; 47%) (Figure 10). At Wave 3 (2011), the prevalence of observed smoking in bars or pubs decreased to 40%, the same level as that seen at Wave 1 (2009).

The prevalence of observed smoking in bars or pubs was considerably higher among non-smokers who had visited a bar or pub in the last six months (9% at Wave 1; 14% at Wave 2; 15% at Wave 3), however these findings are not conclusive given the small sample size. At Wave 1 (2009) more than half (54%) of non-smokers reported observing smoking in bars or pubs at last visit (Figure 10). This percentage was relatively the same at Wave 2 (2010; 55%), but increased at Wave 3 (2011) to 59% of non-smokers.

### Support for Smoking Bans in Bars or Pubs

There is a high level of support for complete smoking bans in bars or pubs in Mauritius. Across all three waves, at least three-quarters of smokers (74% at Wave 1; 83% at Wave 2; 84% at Wave 3) and nearly all non-smokers (92% at Wave 1; 96% at Wave 2; 94% at Wave 3) “supported” or “strongly supported” complete smoking bans in bars or pubs.

### Enforcement of Smoking Bans in Bars or Pubs

The percentage of smokers reporting that smoking bans in bars or pubs were “totally” enforced decreased from Wave 1 (2009; 44%) to Wave 2 (2010; 34%). There was evidence for some improvement in the enforcement of smoking bans in bars or pubs at Wave 3 (2011), when about half (47%; a 13% increase from Wave 2) of smokers reported that smoking bans were “totally” enforced.

Substantially fewer non-smokers reported strict enforcement of smoking bans in bars or pubs than smokers, however these findings are not conclusive given the small sample size. At Wave 1 (2009), less than one-quarter (18%) of non-smokers reported that smoking bans in bars or pubs were “totally” enforced. Enforcement of smoking bans in bars or pubs improved slightly at Wave 2 (2010) and Wave 3 (2011). Approximately one-quarter of non-smokers (26% at Wave 2; 22% at Wave 3) reported that smoking bans in bars or pubs were “totally” enforced.

## Smoking on public transportation

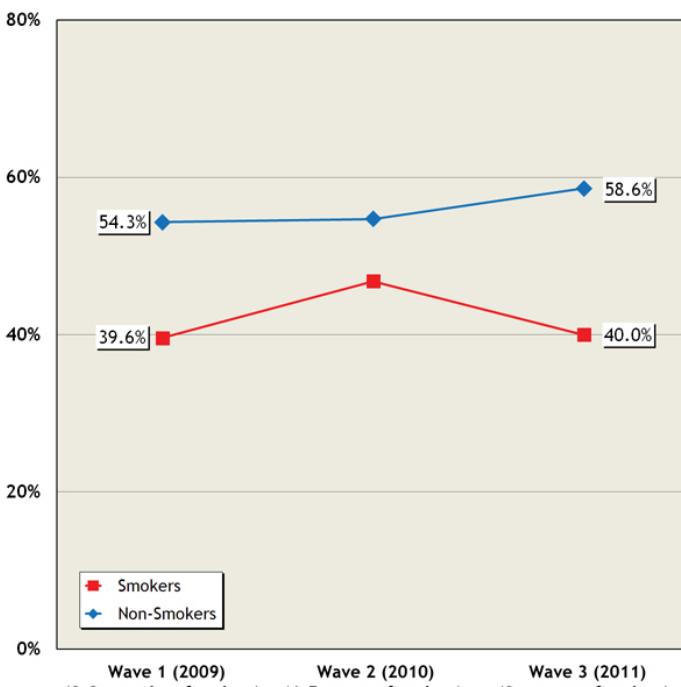
### Noticing Smoking on Public Transportation

Among respondents who used public transportation such as taxis or buses in the last six months (75% at Wave 1; 86% at Wave 2; 81% at Wave 3), a minority reported noticing people smoking on public transportation. At all three waves, less than 10% of smokers (9% at Wave 1; 7% at Wave 2; 8% at Wave 3) and less than 15% of non-smokers (6% at Wave 1; 12% at Wave 2; 14% at Wave 3) reported noticing people smoking on public transportation.

### Enforcement of Smoking Bans on Public Transportation

Overall, there appears to be strong enforcement of smoking bans on public transportation in Mauritius. Across all three waves, over three-quarters (78% at Waves 1 and 2; 79% at Wave 3) of smokers and approximately two-thirds (67% at Wave 1; 61% at Wave 2; 71% at Wave 3) of non-smokers reported that smoking bans on public transportation were “totally” enforced.

Figure 10. Percentage of smokers and non-smokers who noticed smoking in bars or pubs at last visit, by wave\*



\*Only among those who visited a bar in the last six months

## Smoking in cars

While several countries have banned smoking in cars with children, Mauritius is the only country that has banned smoking in cars with any passengers. At Wave 3 (2011), more than two years after the ban, there was close to unanimous support among both smokers and non-smokers for this strong smoke-free policy. Support for the ban has gradually increased since the ban was implemented in March, 2009. Among smokers, support increased from 90% at Wave 1 (2009; 2 to 3 months after the ban), to 95% at Wave 2 (2010; 18 to 19 months after the ban), to 97% at Wave 3 (2011; 28 months after the ban). Among non-smokers, support increased from 92% at Wave 1, to 97% at Wave 2, to 100% at Wave 3.

The majority of smokers do not allow smoking in their cars. Among smokers who have a family car, more than three out of four (77% at Wave 1 (2009); 79% at Wave 2 (2010); 76% at Wave 3 (2011)) “never” allow smoking in their car. The prevalence of smoking bans in cars is higher among non-smokers. At Wave 1 (2009) 87% of non-smokers “never” allowed smoking in their car. This percentage increased to 95% of non-smokers at Wave 2 (2010) and 95% at Wave 3 (2011).

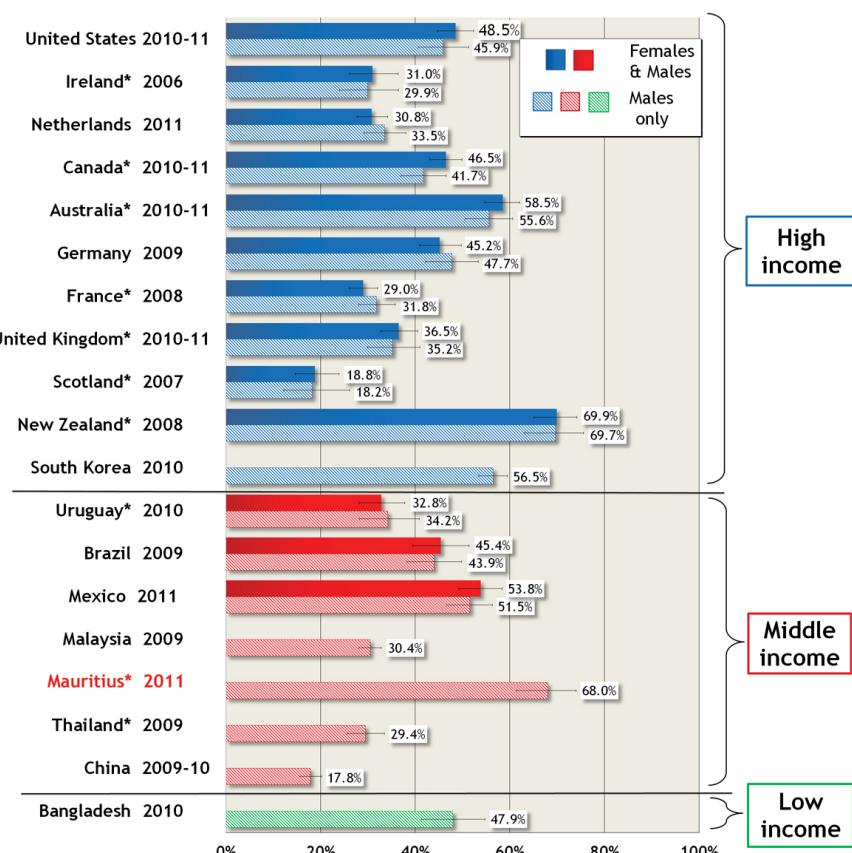
## Smoking in the home

The implementation of smoke-free laws in indoor workplaces and public places has had an impact on the prevalence of smoke-free homes in Mauritius. The percentage of smoke-free homes has increased steadily since smoke-free laws first came into effect. At Wave 1 (2009), half (51%) of smokers reported they had made their homes smoke-free. This increased to 56% of smokers at Wave 2 (2010). By Wave 3 (2011), more than half (61%) of smokers reported that they resided in smoke-free homes. In addition, across all three waves, of those smokers who smoke in their home, about half (53% at Wave 1; 45% at Wave 2; 46% at Wave 3) expressed intentions to make their homes smoke-free within the next year.

ITC cross-country comparison analyses show that male smokers in Mauritius have the highest rate of home smoking bans of 8 ITC low- and middle-income countries and the second highest rate of home smoking bans among 19 ITC countries (Figure 11).

Smokers who continued to smoke in their homes after smoke-free regulations were implemented reported that they reduced the number of cigarettes smoked at home after the implementation of smoke-free regulations. The percentage of smokers who reported smoking fewer cigarettes inside their homes than they did one year ago increased following the introduction of smoking bans – from 42% of smokers at Wave 1 (2009) to nearly half (47% at Wave 2; 49% at Wave 3) of smokers at Waves 2 (2010) and 3 (2011).

Figure 11. Percentage of smokers who reported smoking is “never” allowed in their home, by country



\*Countries with complete smoking bans in bars, restaurants and workplaces in effect at time of survey

## Conclusions

Findings from the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) indicate that there is very strong support among smokers and non-smokers for comprehensive smoke-free policies in all public places in Mauritius. Since the implementation of the 2009 smoke-free regulations in Mauritius, there is a high prevalence of complete smoking bans in restaurants, bars, public transportation, and private homes and cars. However, there is evidence that further effort is needed to increase the prevalence of complete bans in workplaces and to strengthen enforcement and improve compliance with smoking bans in bars. Removing the provision for designated smoking rooms in workplaces is recommended to protect smokers and non-smokers from secondhand smoke exposure and to provide an environment that will support smokers in quitting.

# HEALTH WARNING LABELS

From 1999 to 2009, there was a single text-only health warning on tobacco packages sold in Mauritius, which read: "GOVERNMENT WARNING: Smoking causes cancer, heart disease and bronchitis". Legal provisions for the implementation of pictorial health warnings were officially implemented on June 1, 2009. Following a grace period for conversion by the industry, the first set of new pictorial warnings went into circulation in October 2009 and remain the current set as of May 2012. These labels consist of eight rotating pictorial health warnings printed on the front and back of packs in both English (covering 70% of the back) and French (covering 60% of the front). The display of a text message on 65% of the side of packs in both English and French is also required. In addition, misleading descriptors on cigarette packs such as "light" and "mild" are prohibited.

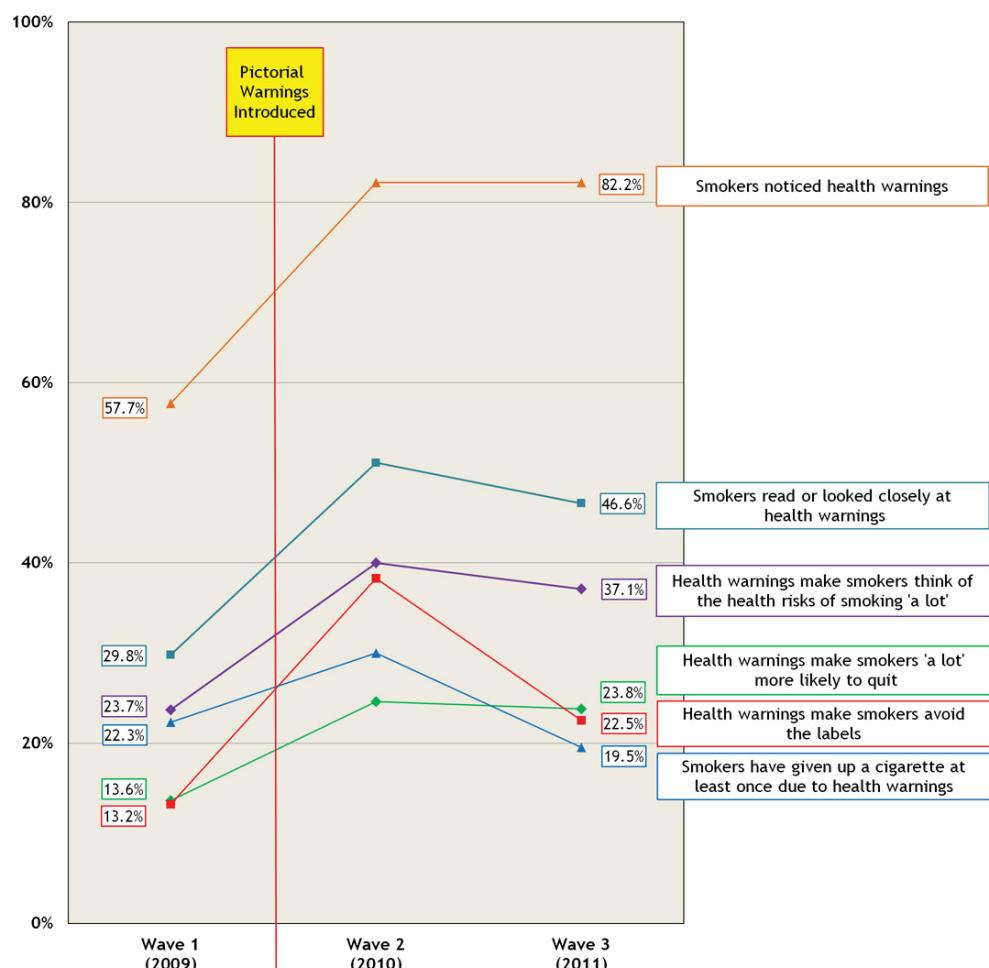
The ITC Mauritius Wave 1 Survey (April to May, 2009) was conducted 5 to 6 months prior to the first circulation of pictorial health warnings. The Wave 2 (August to October, 2010) and Wave 3 (June to July, 2011) Surveys were conducted after the pictorial warnings had been in circulation for 10 to 11 months and 20 to 21 months, respectively, providing two post-implementation assessments of warning label effectiveness.

## Smokers' Awareness of Health Warnings

In general, smokers' awareness of health warnings on cigarette packs increased substantially from Wave 1 (2009) to Wave 2 (2010), but have not continued to increase at Wave 3 (2011). At Wave 1 (2009), when health warning labels on cigarette packs were text-only, slightly more than half (58%) of smokers noticed warnings on cigarette packs "often" or "very often". After pictorial health warnings were implemented, the percentage of smokers who noticed warning labels "often" or "very often" increased by 24% from Wave 1 (2009) – to more than three-quarters (82%) of smokers at both Wave 2 (2010) and Wave 3 (2011) (Figure 12).

However, as Figure 12 shows—there has been a levelling off of awareness. The percentage of smokers noticing the health warnings was the same at Wave 3 as it was at Wave 2. Indeed, this is part of the basic pattern of the findings on health warnings from the ITC Mauritius Survey. This is discussed further below.

Figure 12. Impact of health warnings on smokers' perceptions and behaviours in the last month at Waves 2 and 3 (pictorial health warnings) vs. Wave 1 (text-only warnings)



*The ITC Mauritius Wave 3 Survey shows that 20 to 21 months after the launch of pictorial warnings, there has been a levelling off or decline across all measures of label effectiveness.*

After pictorial health warnings were introduced, there was also a significant increase in the percentage of smokers who “often” read or looked closely at the labels—from about one third (30%) of smokers at Wave 1 (2009) when text warnings appeared on packs to half (51% at Wave 2 (2010); 47% at Wave 3 (2011)) of smokers at Waves 2 (2010) and 3 (2011) after pictorial warnings were implemented. As with noticing, however, the percentage of smokers who often read or looked closely at the labels did not continue to increase.

Similarly, the percentage of smokers reporting that warning labels made them think about the health risks of smoking “a lot” increased from 24% at Wave 1 (2009) to 40% at Wave 2 (2010), and 37% at Wave 3 (2011).

At Wave 1 (2009), only 14% of smokers indicated that text warnings made them more likely to quit smoking “a lot”. Following the introduction of pictorial warnings, this percentage increased to 25% at Wave 2 (2010), and remained at 24% at Wave 3 (2011).

In both of these measures, again, the beneficial effects of the pictorial warnings levelled off at Wave 3.

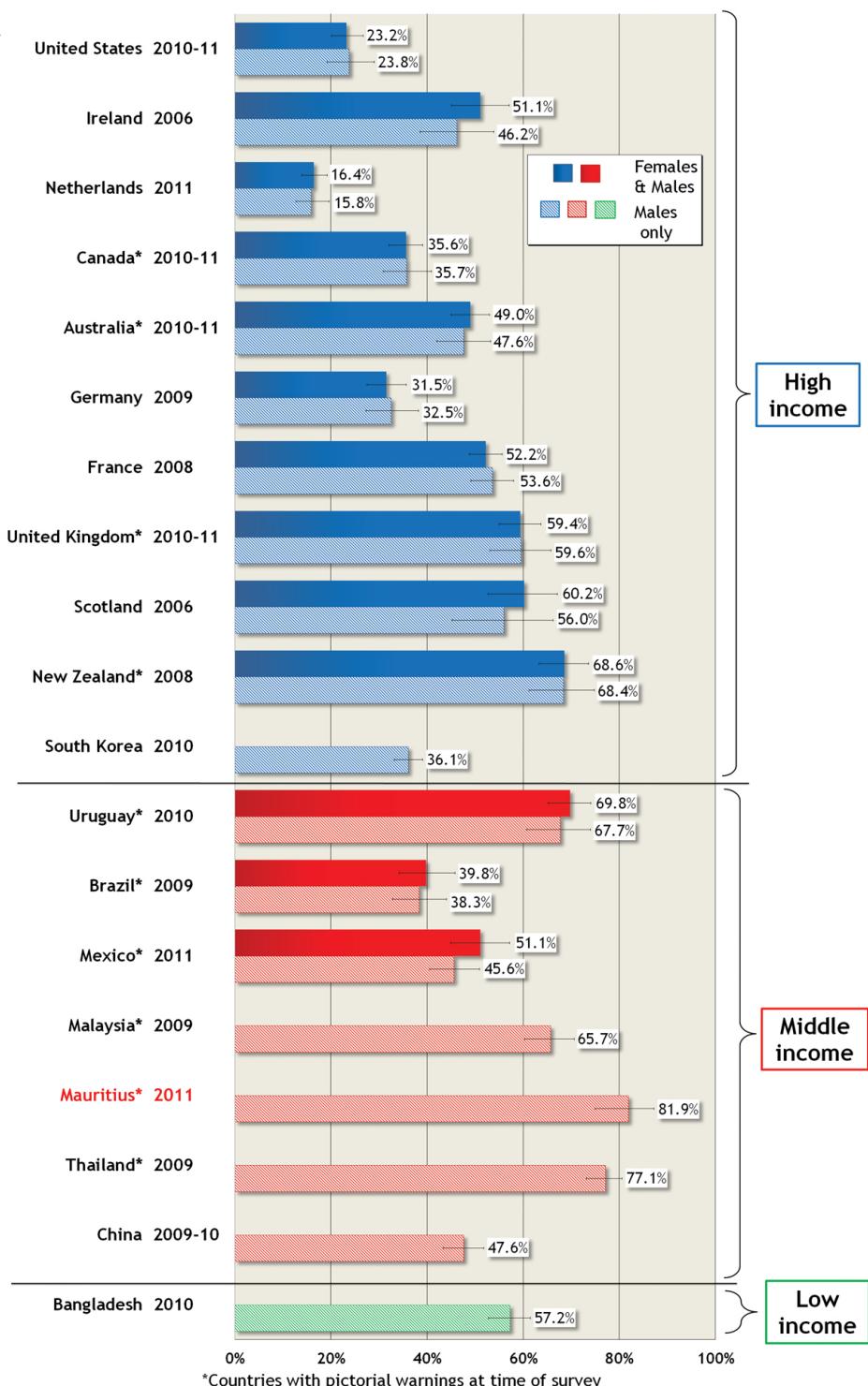
ITC cross-country comparison analyses further demonstrate the high salience of the pictorial warnings relative to warning labels (pictorial and text-only) in other ITC countries. At Wave 3 (2011), Mauritius had the highest percentage of male smokers who noticed warning labels “often” or “very often” among 19 ITC countries (Figure 13).

## Impact of Warnings on Knowledge

The ITC Wave 1 to Wave 3 Surveys (2009–2011) measured knowledge of six of the eight health effects that were addressed in the pictorial warnings (lung cancer in smokers, coronary heart disease, asthma in children caused by secondhand smoke, stroke, mouth cancer, and impotence). The Wave 2 Survey (2010) results showed that after the implementation of pictorial warnings, knowledge of these specific harms of tobacco use increased among smokers from between 1% to 19% (Figure 14). The Wave 2 (2010) and Wave 3 (2011) findings suggest that the largest increase in awareness of health effects occurred in the first 10 to 11 months after the labels were launched. Knowledge of impotence, and mouth cancer increased by only 3% between Wave 2 (2010) and Wave 3 (2011). Knowledge of other health effects decreased slightly—stroke and coronary heart disease knowledge decreased by 5%, knowledge of asthma in children related to secondhand smoke decreased by 1%, while knowledge of lung cancer in smokers did not change.

As seen earlier in the pattern for noticing the warnings, the knowledge or awareness that smoking and secondhand smoke cause various health effects did not continue to increase from Wave 2 (2010) to Wave 3 (2011). This is a reasonable pattern given that smokers were very frequently exposed to the new warning labels from their introduction to the time of the Wave 2 Survey (2010), and the labels did not change in the year between Wave 2 (2010) and Wave 3 (2011), but is an indication for the need for strengthening the messages and for possibly broadening their content to include other negative health effects of cigarette use and exposure to secondhand smoke.

**Figure 13. Percentage of smokers who noticed warning labels “often/very often”, by country**



## Support for More Information on Cigarette Packs

At Wave 1 (2009), before the launch of pictorial warnings, 66% of smokers thought that there should be more health information on warning labels. Even after the implementation of pictorial warnings, more than half (54% at Wave 2 (2010); 51% at Wave 3 (2011)) of smokers wanted more health information on the warnings.

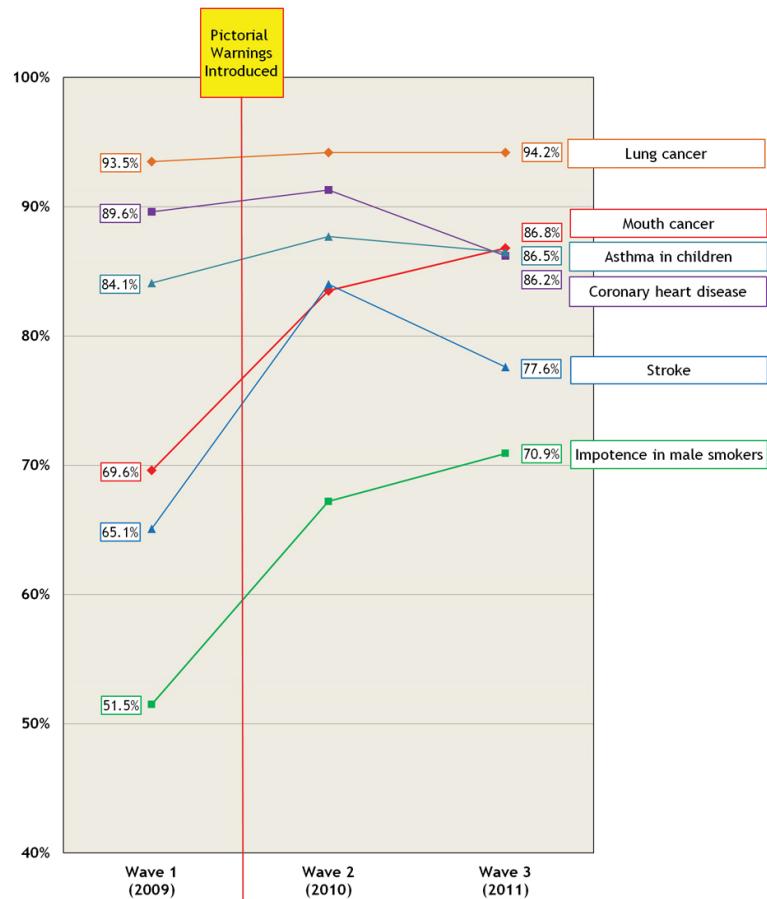
## Impact of Warnings on Behaviour

The use of pictorial health warnings on cigarette packs has had an impact on smokers' avoidance of health warnings, which serves as another indicator of their effectiveness.

The percentage of smokers reporting that they had made an effort to avoid looking at or thinking about health warning labels nearly tripled—from 13% at Wave 1 (prior to the introduction of pictorial warnings) to 38% at Wave 2 (10 to 11 months after the introduction). This percentage then decreased to a considerable degree to 23% at Wave 3 (20 to 21 months after the introduction), showing evidence, possibly, of wear-out (Figure 12).

The introduction of pictorial warnings had an initial impact on changing smoking behaviour. Specifically, approximately one-quarter (22%) of smokers at Wave 1 (2009) reported that they gave up smoking a cigarette “at least once” because of text warning labels. After the introduction of pictorial warnings, this percentage increased to about one-third (30%) of smokers at Wave 2 (2010). However, at Wave 3 (2011), this percentage declined all the way back to 20%, at the level found at Wave 1 (2009), when only text warnings appeared on cigarette packs (Figure 12). On this measure of effectiveness, then, there was evidence of a wear-out effect.

Figure 14. Percentage of smokers who believe that smoking causes specific health effects at Wave 2 and 3 (pictorial health warnings) vs. Wave 1 (text-only warnings)



*Behavioural measures of warning label effectiveness provide evidence of a wear-out effect. At Wave 3 (20-21 months after the pictorial warnings were launched) fewer smokers avoided looking at or thinking about the labels and fewer gave up smoking a cigarette “at least once” because of the labels.*

## Conclusions

Overall, findings from the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) demonstrate that pictorial health warnings are more effective than text-only warnings. The introduction of pictorial health warnings in Mauritius increased the salience of the health warnings, and encouraged smokers to think about the health risks of smoking and the possibility of quitting.

However, there is evidence that the warning labels have begun to show a levelling off of effectiveness, and on some indicators of effectiveness, wear-out (declines in effectiveness): the majority of warning label effectiveness indicators showed either a decline or no further improvement between Wave 2 (2010) and Wave 3 (2011). In view of these findings, the Mauritius government's initiative to introduce a new set of pictorial warnings is timely as it is important to rotate and refresh pictorial warnings frequently in order to mitigate potential wear-out effects over time. The need to revise health warnings is supported by many studies in health communication, and frequent revision of health warnings is suggested in the Article 11 Guidelines of the WHO FCTC.

# TOBACCO ADVERTISING, PROMOTION, AND SPONSORSHIP

Article 13 of the FCTC requires Parties to enact and undertake comprehensive bans on tobacco advertising, promotion, and sponsorship. The Public Health (Restrictions on Tobacco Products) Regulations 2008 prohibited most forms of tobacco advertising, promotion, and sponsorship in Mauritius. Offering or supplying free or discounted tobacco products, and tobacco product displays at point of sale (with the exception of duty free shops at airports of Mauritius and Rodrigues) are also banned under the 2008 Regulations. The ITC Mauritius Wave 1 (April to May 2009), Wave 2 (August to October 2010), and Wave 3 (June to July 2011) Surveys provide an ongoing assessment of the impact of the 2008 Regulations on smokers' awareness of tobacco advertising, promotion, and sponsorship activities.

## Tobacco Advertising

Findings from the ITC Mauritius Surveys (Waves 1 to 3, 2009-2011) provide evidence that the 2008 Regulations have been effective in reducing, and in some cases virtually eliminating the presence of tobacco marketing and promotion in Mauritius. At Wave 1 (2009), only 11% of smokers noticed advertising and pictures of smoking that encouraged or made them think about smoking at least once in the last six months, with further declines seen at Wave 2 (2010, 9%), and at Wave 3 (2011, 4%). Less than 10% of non-smokers reported noticing advertising and pictures of smoking at least once in the last six months, with a slight decline across waves from 8% of non-smokers at Wave 1, to 6% at Wave 2, and 5% at Wave 3.

The Wave 1 (2009) and Wave 2 (2010) Surveys asked smokers where they noticed tobacco advertising. A minority of smokers reported noticing tobacco advertising across various venues. Stores were the most common location of advertising at each wave, and also the location where there was the largest decrease in advertising (from 15% to 10%) between the two waves. At Wave 1 (2009), very few smokers noticed tobacco advertisements on television (8%) and radio (6%), and in papers or magazines (11%), stores (15%), and restaurants or tea bars (10%). Similar trends were seen at Wave 2 (2010) – less than 11% of smokers noticed tobacco advertisements on television (7%) and radio (6%), and in papers or magazines (9%), stores (10%), and restaurants or tea rooms (8%).

## Tobacco Promotion and Sponsorship

Findings from the ITC Mauritius Surveys indicate that sponsorship bans have been effective in limiting tobacco industry sponsored events. At Wave 1 (2009), a small minority of smokers noticed industry sponsorship: university student events (3%), music or sports events (1%), and club or non-governmental organization (NGO) events (0.3%). By Wave 2 (2010), only 1% of smokers noticed industry sponsorship of university student events, whereas tobacco promotion through music or sports events was 0.2%, and around club or NGO events was 0.5%.

Tobacco brand stretching in Mauritius is banned under the 2008 Regulations. The Wave 1 (2009) and Wave 2 (2010) Surveys asked smokers whether they had been exposed to various forms of tobacco promotion. Findings from the ITC Mauritius Surveys suggest a high level of compliance with restrictions on tobacco promotion. At both Wave 1 (2009) and Wave 2 (2010), less than 4% of smokers noticed tobacco being promoted through the distribution of free samples (0.1% at Wave 1; 1% at Wave 2), the offer of promotional gifts or discounts (0.2% at Wave 1; 1% at Wave 2), and the display of a cigarette brand name or logo on clothing or other non-tobacco products (3% at Wave 1; 1% at Wave 2).

**Restrictions on advertising, promotion, and sponsorship have been effective in reducing smokers' exposure to the marketing of tobacco products via advertising campaigns, industry sponsored events, and brand stretching in Mauritius.**

**The U.S. Surgeon General's Report on Preventing Tobacco Use Among Youth and Young Adults (2012) reviewed numerous worldwide studies on the impact of seeing smoking in the movies and smoking initiation among youth. The Report concluded that youth who are exposed to images of smoking in movies are more likely to smoke. In 2010, nearly a third of top-grossing movies produced for children—those with ratings of G, PG, or PG-13—contained images of smoking.<sup>13</sup>**

This evidence of the success of the Mauritius advertising and promotion ban is particularly compelling when compared to effectiveness of comprehensive bans in other countries. For example, in Canada, where advertising on radio, television commercials, billboards, event sponsorship, promotional giveaways and other types of brand advertising were banned in the Tobacco Products Control Act of 1988, 17% of smokers noticed tobacco ads on television in 2002 and in 2003, 41% noticed sports sponsorship, 16% noticed arts sponsorship, 4% had received gifts or discounts, and 11% received branded clothing.<sup>12</sup>

Although the advertising of tobacco products in television, film, radio, and print media is banned in Mauritius, the unpaid depiction of tobacco use or products in these forms of media is still permitted. Findings from the ITC Mauritius Surveys indicate that cigarette smoking continues to be highly visible in the entertainment media. Approximately half of smokers reported having seen people smoking in the entertainment media “often” in the past six months at Wave 1 (2009, 56%), Wave 2 (2010, 45%), and Wave 3 (2011, 44%). A similar percentage of non-smokers reported seeing people smoking in the entertainment media “often”—52% at Wave 1 (2009); 38% at Wave 2 (2010); and 39% at Wave 3 (2011). These findings are of particular concern in light of the 2012 U.S. Surgeon General's Report on Preventing Tobacco Use Among Youth and Young Adults, which reviewed numerous studies conducted in the U.S. and in other countries about the impact of seeing smoking in the movies on smoking initiation among youth. This important Report concluded that there was a causal relationship between depictions of smoking in the movies and the initiation of smoking among youth. The Report concluded that youth who received the most exposure to onscreen smoking were about twice as likely to begin smoking as those who get the least exposure.<sup>13</sup>

12. Harris F, MacKintosh AM, Anderson S, Hastings G, Borland R, Fong GT, Hammond D, Cummings KM for the ITC Collaboration. Effects of the 2003 advertising/promotion ban in the United Kingdom on awareness of tobacco marketing: findings from the International Tobacco Control (ITC) Four Country Survey. *Tob Control.* 2006;15 (Suppl 3):iii26-iii33.

13. U.S. Department of Health and Human Services. *Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General.* Atlanta: GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2012.

*Cigarette smoking continues to be highly visible in the entertainment media in Mauritius. This is of concern as depictions of smoking in the media influence norms, and have been found to be causally linked to smoking initiation among youth.*

## Conclusions

Longitudinal findings of the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) provide evidence that restrictions on advertising, promotion and sponsorship have been effective in reducing smokers' exposure to the marketing of tobacco products via advertising campaigns, industry sponsored events, and brand stretching. However, regulations need to be strengthened in order to reduce the prevalence of tobacco product placement across different forms of entertainment media in Mauritius. Given the high levels of exposure to depictions of smoking in the entertainment media in Mauritius, efforts to warn or restrict youth access to these images should be considered.

# EDUCATION, COMMUNICATION, AND PUBLIC AWARENESS

Article 12 of the FCTC requires Parties to promote and strengthen public awareness of tobacco control issues through education and public awareness on the health risks of tobacco use and the benefits of cessation, and provide public access to information on the tobacco industry. The ITC Mauritius Surveys (Waves 1 to 3, 2009-2011) assess public awareness and sources of information on the dangers of smoking and benefits of quitting.

From May 30 until June 19, 2011, the government of Mauritius launched an adaptation of the World Lung Foundation's (WLF) "Lungs are Like Sponges" or "Sponge" mass media campaign. The Sponge campaign consisted of a series of television, radio, and billboard advertisements (Figure 16). The objective of the nationwide Sponge campaign was to increase public awareness about the negative health consequences of tobacco use and exposure to secondhand smoke. The ITC Mauritius Wave 3 Survey (June 20 to July 11, 2011) included measures to evaluate the Sponge campaign.

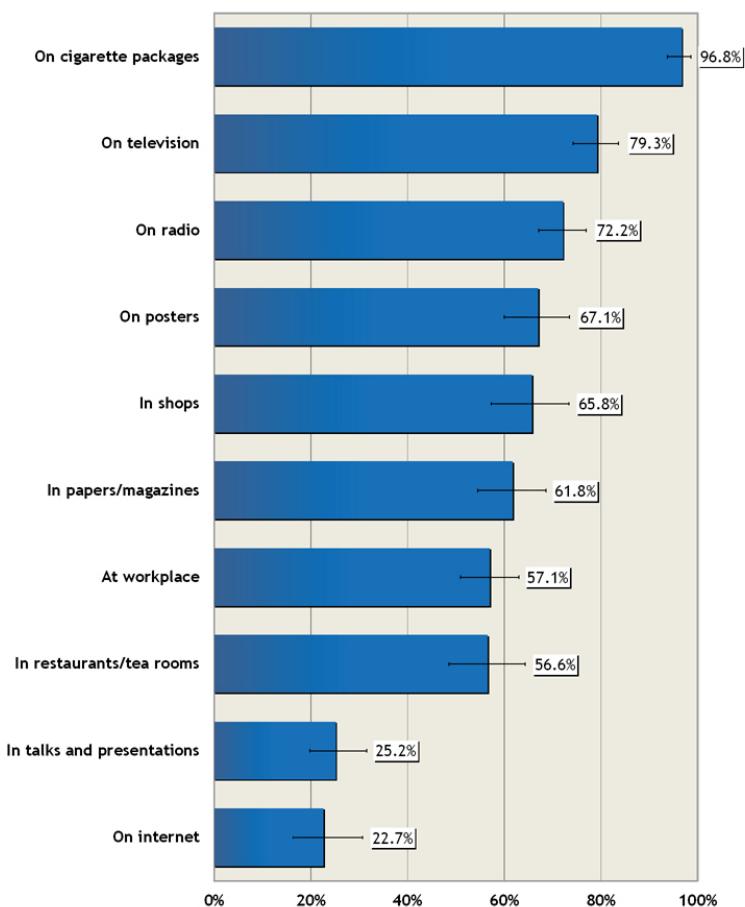
## Exposure to Anti-smoking Messages

Across Waves 1 to 3 (2009-2011), smokers were asked if they had noticed advertising either on the dangers of smoking or that encouraged quitting in the last six months and to report the media or venues where they noticed such information. Results showed that cigarette packs were the most common source of this type of information (Figure 15). At Wave 1 (2009), nearly three out of four (71%) smokers reported noticing anti-smoking advertising on cigarette packs. In subsequent waves (after implementation of pictorial warnings), nearly all smokers (96% at Wave 2; 97% at Wave 3) indicated that they had seen anti-smoking advertising on cigarette packs. These findings provide evidence of the important role that warning labels play in raising awareness of the harms of cigarettes and the effectiveness of pictorial warnings in increasing the salience of these messages.

At Wave 3 (2011), more than two out of three smokers noticed anti-smoking information on television (79%), radio (72%), and posters (67%). These were also the most common sources at Wave 1 (2009) and Wave 2 (2010). Anti-smoking advertising in shops was also identified frequently among smokers in Wave 2 (68%) and Wave 3 (66%) (shops were not included as a response option in the Wave 1 Survey).

The internet was identified as the least common source of information in the Wave 2 (2010) and Wave 3 (2011) Surveys (internet was not included as a response option in the Wave 1 Survey). Only 23% of smokers reported noticing anti-smoking advertising on the internet at both waves.

Figure 15. Type of media/venues where smokers noticed information about the dangers of smoking or encouraging quitting in the last six months, Wave 3 (2011)



*Cigarette packs are the most visible form of information on the harms of smoking and the benefits of quitting.*

## The Sponge Campaign

The Sponge campaign was originally developed by the WLF to convey in a vivid fashion the harms of smoking on smokers' lungs. But in Mauritius, the Sponge campaign was adapted to include a message about the harms of cigarette smoke on the lungs of both smokers and non-smokers. The intent of broadening the messaging to include the harms of secondhand smoke was to increase the effectiveness of smoke-free policies in Mauritius. The campaign included television, radio, and billboard messages. The television and radio ads incorporated an endframe that underscored the message that cigarette smoke harms the health of smokers AND non-smokers. Billboards displayed equivalent messages in print.

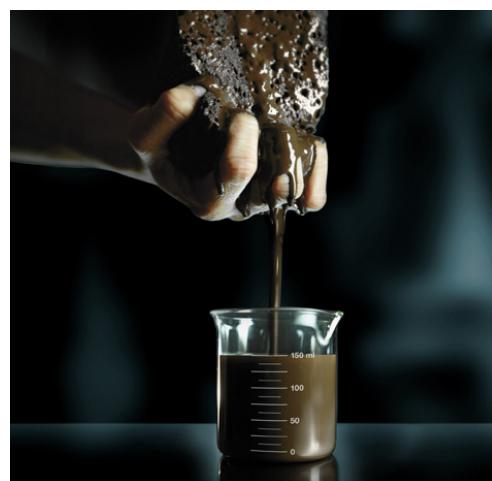
Findings from Wave 3 of the ITC Mauritius Survey (2011) indicated that the Sponge campaign was highly successful in reaching smokers and non-smokers. Nearly all (94%) respondents reported being exposed to the Sponge campaign at least once. Television had the broadest reach, with more than three-quarters of smokers (81%) and non-smokers (87%) reporting that they had seen the Sponge spot on television. In addition, about two-thirds of respondents (65% smokers; 76% non-smokers) reported that they had heard the Sponge spot on the radio, and more than half (59% smokers; 57% non-smokers) reported that they had seen the Sponge spot on billboards.

Overall, respondents perceived the Sponge campaign to be of high quality. Nearly all respondents (91% smokers; 92% non-smokers) "strongly agreed" or "agreed" that the Sponge campaign was easy to understand. The vast majority of respondents also "strongly agreed" or "agreed" that the campaign provided them with new information (80% of smokers; 90% of non-smokers), and more than half "strongly agreed" or "agreed" that the campaign was relevant to their lives (69% of smokers; 49% of non-smokers).

The Sponge campaign also increased public awareness of the harms of smoking, and encouraged smokers to consider the benefits of cessation. The great majority of respondents (79% of smokers; 91% of non-smokers) reported that the campaign made them stop and think. More than four out of five (83%) smokers reported that the campaign made them worry about the effects of their smoking on personal health and the health of their family members. The Sponge campaign also had encouraged smokers to contemplate quitting – more than half (58%) of smokers who reported having seen or heard the campaign also reported that the campaign made them think about quitting as a result of being exposed to the campaign.

Finally, the Sponge campaign had a positive impact on smokers' behaviours. Following exposure to the campaign, almost half (48%) of smokers indicated that they reduced the number of cigarettes smoked, and more than one out of five (21%) smokers had made a quit attempt. In addition, almost two-thirds (64%) of smokers reported smoking fewer cigarettes around other people as a result of the campaign.

**Figure 16. Sponge campaign images**



## Conclusions

Overall, findings from the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) indicate that efforts to promote public awareness on the dangers of smoking and the benefits of cessation in Mauritius have been effective. Anti-smoking messages are highly visible in Mauritius, with cigarette packs being reported as the most common source of anti-smoking information by nearly all smokers in 2011 (Wave 3). This provides evidence of the importance of pictorial warnings as a low cost and highly effective public education strategy. Findings from the Wave 3 Survey (2011) also provide evidence for the success of the Sponge campaign. This anti-smoking campaign had widespread public reach, and increased smokers' awareness on the risks of smoking and exposure to secondhand smoke, in addition to motivating smokers to quit. In order to further reduce the prevalence of smoking and increase the effectiveness of existing tobacco control policies, the government of Mauritius should continue to support the implementation of comprehensive anti-smoking campaigns, including strong pictorial warnings.

# TOBACCO PRICE AND TAXATION

Under Article 6 of the FCTC, Parties are obligated to adopt taxation and pricing measures in order to reduce tobacco consumption. Increasing tobacco excise taxes and prices is widely recognized as the most effective tobacco control measure.<sup>14, 15, 16</sup> In Mauritius, at the time of the survey, a custom excise duty of MUR 2750 (\$92,50 US) was applied per thousand cigarette sticks and a Value Added Tax (VAT) of 15% was applied to the total of both the aforementioned tax plus the base cost of cigarettes, prior to sale. As of December 2010, 72% of the retail price of the most sold brand of cigarettes in Mauritius is comprised of taxes.

As of June 1, 2009, the sale of single cigarettes is prohibited under the Public Health (Restrictions on Tobacco Products) Regulations 2008.

The ITC Mauritius Surveys (Waves 1 through 3, 2009-2011) assessed the extent to which the price of cigarettes influences smokers' brand selection and thoughts about quitting, as well as their perceptions of the costs of smoking. In addition, the effectiveness of the ban on sale of single cigarettes implemented after Wave 1 (2009) was evaluated through changes in smokers' purchasing of single cigarettes in the Wave 1 (2009) to Wave 3 (2011) Surveys.

## Concerns about Money Spent on Cigarettes

The majority of smokers are concerned about the amount of money spent on cigarettes. Across Waves 1 to 3 (2009-2011), at least 69% of smokers "agreed" or "strongly agreed" that they spend too much money on cigarettes. In addition, about half (48% to 51%) of smokers "often" or "very often" thought about the cost of smoking in the last month.

## Price as a Reason to Quit Smoking

Almost two-thirds (63% to 64%) of smokers agreed that the price of cigarettes led them to think about quitting across Waves 1 to 3 (2009-2011). However, family disapproval for smoking (66% to 67%), advertisements or information on the health risks of smoking (70% to 71%), warning labels on cigarette packs (43% to 68%), concern about the effects of smoke on non-smokers (74% to 84%), and personal health (82% to 90%) were equally or more likely to be cited by smokers as reasons for quitting than the price of cigarettes.

## Price and Brand Choice

Across Waves 1 through 3 (2009-2011), over one-third (37% at Wave 1; 46% at Wave 2; 38% at Wave 3) of smokers stated that part of their decision to smoke their current brand was based on price. Other influences on brand selection were more frequently identified by smokers at Wave 3 (2011), including "my friends smoke this brand" (51%); "It is a popular brand" (62%); "high quality" (78%); and "the taste" (83%). The vast majority of smokers (84% at Wave 1; 92% at Wave 2; 92% at Wave 3) reported making an effort in the last six months to buy cigarettes that are less expensive than they could get from local stores.

## Cigarette Affordability

The ITC Mauritius Surveys asked smokers "In the last 6 months, has there been a time in the last six months when the money they spent on cigarettes resulted in not having enough money for household essentials such as food?". At Waves 1 (2009) and 2 (2010), just under one-quarter (21% at Wave 1; 17% at Wave 2) of smokers responded "yes" to this statement. At Wave 3 (2011), this percentage decreased such that only 11% of smokers responded "yes" to this statement.

The ITC surveys also allowed an analysis of affordability of cigarettes. Cigarette affordability refers to the quantity of resources (or income) that is required to purchase a pack of cigarettes. Higher affordability, for example, means that the price of a pack of cigarettes would require a lower percentage of one's daily income. An Affordability Index was constructed using ITC Mauritius data to determine the change in affordability of cigarettes between Wave 2 (2010) and Wave 3 (2011).<sup>17</sup> This analysis took into account price of cigarettes, the number of cigarettes smoked per day (daily dose), and reported household income. These data showed that cigarettes became slightly less affordable between Waves 2 and 3 (an annual decrease in affordability of 0.73%). ITC cross-country comparison data examining changes in affordability show that Mauritius and Mexico are the only 2 countries of 7 ITC low-middle income countries where cigarettes have become less affordable (Figure 17).<sup>18</sup>

## Place of Last Cigarette or Tobacco Purchase

At each of the three waves (2009-2011), the majority (84% at Wave 1; 86% at Wave 2; 89% at Wave 3) of smokers reported that their last purchase of cigarettes for themselves was made at local shops. The second most frequent source of last purchase was supermarkets (12% at Wave 1; 11% at Wave 2; 9% at Wave 3). Restaurants or tea rooms and all other locations were identified as sources of purchase by less than 3% of smokers.

14. World Health Organization (2008). WHO report on the global tobacco epidemic, 2008 – The MPOWER package. Available at: <http://www.who.int/tobacco/mpower/en/>

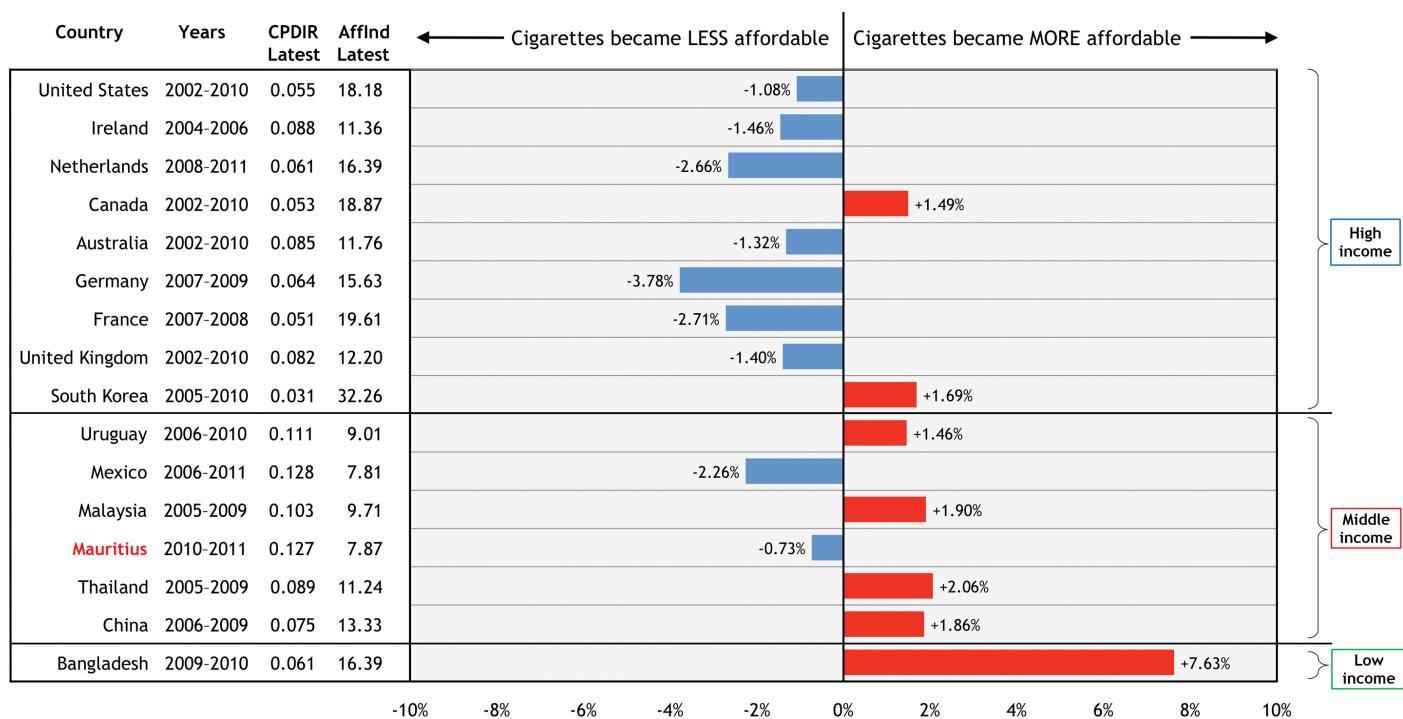
15. International Agency for Research on Cancer (2011). Effectiveness of price and tax policies for tobacco control. IARC Handbooks for Cancer Prevention, Volume 14. Lyon, France: International Agency for Research on Cancer.

16. World Health Organization (2011). WHO report on the global epidemic, 2011: warning about the dangers of tobacco. Available at: <http://www.who.int/tobacco/mpower/en/>

17. Note that missing data at Wave 1 prevented the calculation of the Affordability Index at Wave 1.

18. ITC Project (March 2012). Tobacco Price and Taxation: ITC Cross-Country Comparison Report. University of Waterloo, Waterloo, Ontario, Canada.

**Figure 17. Affordability of cigarettes and change in affordability per year in 16 ITC countries**



#### Notes

- (1) Data presented for Mauritius is for Wave 2 (2010) and Wave 3 (2011). Data for all other countries is for the year of the first survey wave and of the most recent wave.
- (2) CPDIR Latest: the CPRIR (cigarettes per day/income per day) at the most recent survey wave,
- (3) Afflnd Latest: the Affordability Index (the reciprocal of CPDIR) for the most recent wave.

## Form of Last Cigarette Purchase

At Waves 1 to 3 (2009-2011), the majority of smokers (72% at Wave 1; 69% at Wave 2; 70% at Wave 3) reported that their last purchase of cigarettes was in pack form. At Wave 1 (2009), the sale of single cigarettes was still permitted in Mauritius – at that time, about one-quarter (27%) of smokers indicated that they had bought single cigarettes at their last purchase.

As of June 1, 2009, the sale of single cigarettes and packs containing less than 20 cigarettes were banned in Mauritius (effectively banning the sale of packs containing only 10 cigarettes). Findings from the ITC Mauritius Surveys suggest high compliance with the ban on regulations concerning the minimum number of cigarettes per pack. At Wave 1 (pre-ban), about one-third (34%) of smokers reported that the last pack they purchased contained 20 cigarettes. At Waves 2 and 3 (post-ban), nearly all smokers who purchased cigarettes by the pack (99%) reported that the last pack they purchased contained 20 cigarettes.

However, compliance with the ban on the sale of single cigarettes appears to be low. Findings from the ITC Mauritius Survey (Waves 1 to 3, 2009-2011) showed that the percentage of smokers reporting the purchase of single cigarettes did not change after the implementation of this ban. At Wave 1 (2009), 27% of smokers reported buying single cigarettes at their last purchase. At Wave 2 (2010; 14 to 15 months post-ban), nearly one-third of smokers (31%) reported buying single cigarettes at their last purchase. Even at Wave 3 (2011; 24 months post-ban), 29% of smokers still reported the purchase of single cigarettes. Moreover, half of smokers (47% at Wave 2; 50% at Wave 3) said that it was “easy” to buy single cigarettes in Mauritius.

## Conclusions

Despite evidence from the ITC Mauritius Survey indicating that cigarettes have become less affordable in Mauritius between Wave 2 (2010) and Wave 3 (2011), overall, cigarettes are still highly affordable for smokers in Mauritius. Findings from the ITC Mauritius Surveys (2009-2011) indicate that money spent on cigarettes does not divert from essential household expenditures, and that the price of cigarettes is not a primary reason for smokers to quit. Increases in cigarette prices and taxes are necessary in order to reduce tobacco consumption in Mauritius. Price increases must apply to all forms of tobacco (roll-your-own as well as manufactured cigarettes) to help smokers to quit, rather than to switch to less expensive products. Stronger enforcement of bans on the sale of single cigarettes is also needed in order to curb the high prevalence of single cigarette purchases among smokers.

# ILLICIT CIGARETTE TRADE IN MAURITIUS

Article 15 of the FCTC requires Parties to reduce the supply of tobacco by adopting effective measures against all forms of illicit trade in tobacco products including smuggling, illegal manufacturing, and counterfeiting. In an effort to limit the illicit trade of tobacco products in Mauritius, the Public Health (Restrictions on Tobacco Products) Regulations 2008 includes a provision that requires the country of origin, along with the statement “sale allowed in Mauritius only”, to be printed on cigarette packs. An excise stamp also needs to be affixed on all cigarette packs. These requirements were implemented as of March 1, 2009. Regulations that require the display of pictorial health warnings were implemented a few months later on June 1, 2009.

The ITC Mauritius Survey (Waves 1 to 3, 2009-2011) provide some information on the level of compliance with regulations designed to prevent the illicit trade of cigarettes. At each survey wave, smokers were asked to provide information about the cigarette packs they were currently smoking. They were asked either to show their current pack or provide information by self-report to determine whether an official excise tax stamp was visible on the pack and whether there was a health warning label on the pack.

The Wave 1 (2009), Wave 2 (2010) and Wave 3 (2011) Surveys were conducted approximately 2 to 3 months, 18 to 19 months, and 24 months after regulations on the display of tax stamps on cigarette packs came into effect, respectively. The Wave 2 (2010) and Wave 3 (2011) Surveys were conducted 10 to 11 months, and 20 to 21 months after pictorial health warnings were required on cigarette packs, respectively.

## Excise Tax Stamps on Cigarette Packs

Across Waves 1 to 3 (2009-2011), the majority of smokers reported the presence of a tax stamp on the cigarette pack that they were currently smoking. At Wave 1 (2009), 15% of smokers reported that there was no tax stamp visible on their cigarette pack, nor were there any signs to indicate a stamp was ever present. This percentage decreased to 8% of smokers at Wave 2 (2010). By Wave 3 (2011), only 3% of smokers reported that their pack did not have an excise stamp (Figure 18).

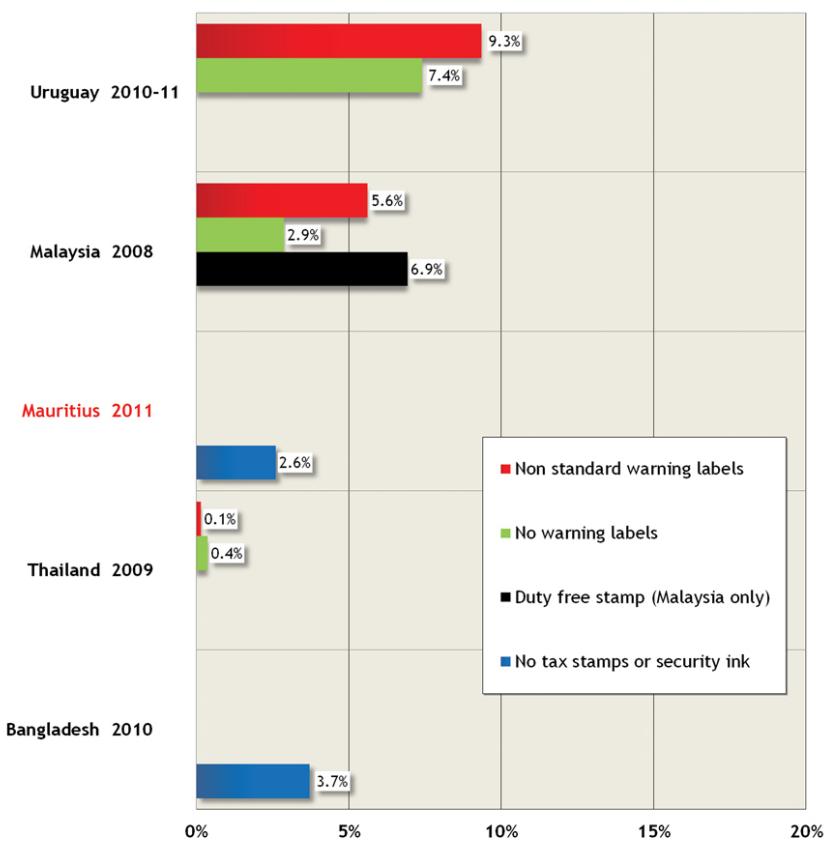
## Health Warning on Cigarette Packs

The vast majority of smokers reported that a health warning label was visible on the cigarette pack they were currently smoking. Less than 1% of smokers at Wave 2 (2010) and Wave 3 (2011) indicated that the health warning was not visible.

## Conclusions

ITC Mauritius Survey (Waves 1 to 3, 2009 – 2011) findings suggest that Mauritius’ measures to limit illicit trade by requiring an official excise stamp and health warning label on packs are effective. While there was some evidence of illicit packs, overall, the prevalence of these packs was very low.

Figure 18. Percentage of smokers’ cigarette packs showing evidence of possible tax avoidance/evasion including illicit trade in ITC low- and middle-income countries, at most recent wave



# CONCLUSIONS AND IMPLICATIONS OF THE FINDINGS

The government of Mauritius has shown strong commitment to reducing the prevalence of tobacco use through the implementation of a broad range of tobacco control measures. For example, the Public Health (Restrictions on Tobacco Products) Regulations (2008) implemented on March 1, 2009 banned smoking in indoor workplaces, hospitality venues, and private vehicles, and strengthened the ban on advertising and promotion of tobacco products. Further measures were passed under the Regulations on June 1, 2009 including the introduction of pictorial warnings (effective October 2009), and a ban on the sale of single cigarettes and packs of less than 20 cigarettes.

The Wave 1 (2009) to Wave 3 (2011) ITC Mauritius Survey evaluated these tobacco control measures and also conducted a pack study to identify the presence of illicit cigarettes. Additional measures were included in the Wave 3 Survey (2011) to evaluate the World Lung Foundation's (WLF) "Lungs are Like Sponges" or "Sponge" mass media campaign that was launched in Mauritius from May 30 to June 19, 2011.

The ITC Mauritius Survey findings provide evidence that Mauritius has attained a number of important tobacco control achievements, including strengthening the effectiveness of warning labels and reducing the presence of tobacco advertising and promotion. The Survey also found high compliance among Mauritian smokers with bans on smoking in cars, and a high prevalence of home smoking bans. However, the Survey also identified areas where stronger policy implementation is needed, including price and taxation policies, and enforcement of the ban on sale of single cigarettes. The section below highlights successes and challenges in tobacco control policy implementation in Mauritius, and identifies key recommendations to further strengthen tobacco control in Mauritius.

# Smoking and Quitting Behaviour

## Successes

Smokers in Mauritius have a high readiness to quit – the majority of smokers hold very negative opinions about their smoking, they regret taking up smoking, and more than two-thirds have tried to quit at least once.

Smoke-free policies and warning labels on cigarette packs have had a positive impact on quitting behaviour by motivating smokers to consider quitting, and helping them to quit successfully. There has also been an increase in smokers' overall awareness on the health risks of smoking from Wave 1 to Wave 3 (2009-2011).

The vast majority (more than 90%) of smokers support the government of Mauritius in playing a stronger role to help smokers to quit. Furthermore, support for a complete ban on tobacco products within 10 years has increased from 85% of smokers at Wave 1 to 90% of smokers at Wave 3.

## Challenges

The price of cigarettes is not frequently cited by smokers as a reason to quit, suggesting that cigarettes are very affordable. This is a critical weakness in Mauritius' tobacco control strategy as it is well established that increasing taxes and price is the single most cost-effective intervention for reducing tobacco consumption and prevalence of tobacco use.

Findings show that doctors do not routinely advise smokers to quit and rarely provide other forms of support for cessation.

Societal disapproval of smoking has an important influence in reducing smoking prevalence. Perceived societal disapproval of smoking in Mauritius has declined, presenting a challenge for creating social environments that are supportive of quitting.

## Recommendations

- In order to create a supportive environment for quitting, the government of Mauritius should continue strong implementation of tobacco control policies across all domains—smoke-free, price and tax, warning labels, advertising and promotion to provide a supportive environment for quitting.
- There is a need for stronger governmental efforts to improve the provision of cessation assistance in primary health care settings, and to increase access to cessation services in Mauritius.
- Mass media campaigns are a critical element of a comprehensive tobacco control program and should be well-funded because they represent an effective strategy for denormalizing smoking behavior.

# Smoke-Free Public Places and Workplaces

## Successes

Since implementation of the 2009 smoke-free regulations in Mauritius, there has been very strong and growing support among smokers and non-smokers for comprehensive smoke-free policies in all public places in Mauritius. At Wave 3 (2011), 92% of smokers “supported” or “strongly supported” smoke-free workplaces; 97% “supported” or “strongly supported” smoke-free restaurants or tea rooms; and 84% “supported” or “strongly supported” smoke-free bars or pubs.

Since the implementation of smoke-free laws in indoor workplaces and public places, the prevalence of smoke-free homes in Mauritius has steadily increased. Mauritius has the highest rate of home smoking bans (68% of smokers) of 8 ITC low- and middle-income countries and the second highest rate of home smoking bans among male smokers in all 19 ITC countries.

There is strong compliance with the ban on smoking in cars with passengers – approximately three-quarters of smokers who own a family car never allow smoking in their car and more than 90% of non-smokers never allow smoking in their car.

There is strong enforcement of smoking bans on public transportation. Across all three waves, less than 10% of smokers and less than 15% of non-smokers reported noticing smoking on public transportation.

The prevalence of smoking in restaurants or tea rooms has continued to decrease gradually according to smokers in Mauritius. According to non-smokers, the prevalence increased at Wave 2, but at Wave 3 prevalence decreased back to Wave 1 levels.

## Challenges

Although the prevalence of observed smoking in bars and pubs, and restaurants and tea rooms has decreased, further reductions are required to fully protect people from the harms of secondhand smoke. For example, strong implementation of smoke-free laws in hospitality venues in Ireland, Scotland, and France has resulted in dramatic reductions to 5% or less in these venues. Exposure to secondhand smoke in the workplace continues as approximately one-quarter of Mauritians who work indoors notice people smoking indoors, both in designated smoking areas and also in non-smoking areas.

## Recommendations

- The Government should remove the provision for designated smoking rooms in workplaces to protect smokers and non-smokers from secondhand smoke exposure and to provide an environment that will support smokers in quitting.
- The Government should strengthen enforcement of the smoke-free regulations, particularly in bars and pubs.

# Health Warning Labels

## Successes

The introduction of pictorial health warnings in Mauritius has increased the salience of the health warnings, and encouraged smokers to think about the health risks of smoking and the possibility of quitting.

## Challenges

There is evidence that the warning labels have begun to show a levelling off of effectiveness, and wear-out (declines in effectiveness) on some indicators of effectiveness. The majority of warning label effectiveness indicators showed either a decline or no further improvement between Wave 2 (2010) and Wave 3 (2011).

## Recommendations

The Mauritius government's initiative to revise the original set of pictorial warnings is timely as it is important to rotate and refresh pictorial warnings frequently in order to mitigate potential wear-out effects over time. The on-line Tobacco Labelling Resource Centre ([www.tobaccolabels.ca](http://www.tobaccolabels.ca)) provides images of warnings implemented in other countries. Mauritius may wish to review the new set of 16 pictorial warnings implemented in Canada as of March 21, 2012, which include several images that emphasize the human suffering associated with tobacco-related diseases. In addition, since their inception in 2001, Canadian warning labels have also included interior label messages that provide tips on quitting. It is recommended that the timeline for introducing new labels in Mauritius be as swift as possible to avoid further declines in warning label effectiveness.

# Tobacco Advertising, Promotion, and Sponsorship

## Successes

The ITC Mauritius Survey findings provide evidence of success in efforts to ban tobacco advertising, promotion, and sponsorship in Mauritius. The percentage of adult smokers who noticed tobacco advertising decreased from 11% in 2009 to 4% in 2011. The high level of compliance with promotion and sponsorship bans has also virtually eliminated the marketing of tobacco through industry sponsored events and brand stretching – between 2009 and 2010, the prevalence of event sponsorship by the tobacco industry, promotional giveaways, and tobacco advertising on non-tobacco merchandise remained steady at less than 4%.

## Challenges

Despite the overall reduction of exposure to tobacco advertising in public venues, smokers report a significant presence of tobacco use in movies, television programs and other entertainment media in Mauritius. In 2009 to 2011, nearly half of smokers often observed the depiction of smoking in the entertainment media. This is of concern as depictions of smoking in the media influence norms, and have been found to be causally linked to smoking initiation among youth.

## Recommendation

- Implement new regulations to extend advertising bans to include strict restrictions on tobacco product placement in television, film, radio, print, and other forms of entertainment media.

# Education, Communication, and Public Awareness

## Successes

Efforts to promote and strengthen public awareness of the dangers of smoking and benefits of quitting have been highly successful in Mauritius. Smokers most often identified pictorial warnings as a source of information about the harms of smoking—nearly all smokers (97% at Wave 3 (2011)) indicated that they had seen anti-smoking advertising on cigarette packs. Television and radio were also identified among more than 70% of smokers at Wave 3 (2011) as sources of information on the harms of tobacco and benefits of quitting.

## Challenges

Warning labels play a strong role in communicating the harms of tobacco use. In order to maintain their effectiveness and avoid wear-out (declines in effectiveness), it is essential that they be replaced periodically. Although mass media anti-smoking campaigns are an effective means of communicating the harms of tobacco, they are expensive to implement relative to cigarette pack warnings.

## Recommendations

- The Government of Mauritius should swiftly design and implement the second round of pictorial warnings based on best-available international evidence on label effectiveness.
- The Government of Mauritius should provide support for the implementation of mass media campaigns on a regular basis. The cost of such media campaigns could be funded by earmarking revenues from tobacco tax increases specifically for these initiatives.

# Tobacco Price and Taxation

## Successes

Mauritius imposes specific excise taxes that are based on quantity or weight and are more effective at reducing consumption than ad valorem excise taxes based on the manufacturer's price or retail price. Between 2010 and 2011, cigarette affordability has decreased in Mauritius.

## Challenges

Although cigarette prices and taxes in Mauritius have increased in recent years, cigarettes are still perceived as highly affordable among smokers. The price of cigarettes was not as strong as other influences on decisions to quit (concerns about personal health and effect on non-smokers were stronger influences) and brand choice decisions (quality, taste, and popularity were stronger influences).

Compliance with the ban on the sale of single cigarettes appears to be low. Almost one-third of smokers continue to purchase singles and half of smokers report that it is easy to buy single cigarettes in Mauritius.

## Recommendations

- Tobacco prices and taxes should be further increased in order to facilitate greater reductions in cigarette consumption. Price increases must apply to all forms of tobacco (roll-your-own as well as manufactured cigarettes) to help smokers to quit, rather than to switch to less expensive products.
- Stronger enforcement of the ban on the sale of single cigarettes is needed.

# Illicit Cigarette Trade in Mauritius

## Successes

Mauritius has taken action to limit illicit trade in the form of two sets of Regulations – (1) the Public Health (Restrictions on Tobacco Products) Regulations 2008 provision requiring the country of origin, along with the statement “sale allowed in Mauritius only”, to be printed on cigarette packs, and (2) the Excise (Amendment) Regulations 2008 of the Excise Act which prescribe that an excise stamp must be affixed to all cigarette packs. The ITC Survey and the accompanying pack study shows that these regulations have been quite effective in curbing illicit trade. The prevalence of illicit packs declined from 15% at Wave 1 (2009) to 3% at Wave 3 (2011).

## Challenges

Low prevalence of illicit cigarettes should not be a cause for complacency. With the recent and anticipated rise in cigarette prices, illicit trade in tobacco products remains a continuous threat and this would increase affordability and accessibility of tobacco products.

## Recommendations

- Ongoing developments in measures for supply chain control should be considered for possible implementation in Mauritius.
- The Government should support the draft WHO Protocol to eliminate illicit trade in tobacco products. The draft Protocol requires Parties to establish a tracking and tracing system for all tobacco products that are manufactured in or imported into its territory taking into account their own national or regional specific needs and available best practice. The Protocol builds on and complements Article 15 of the WHO FCTC and will be submitted for consideration and adoption to the Conference of the Parties to the WHO FCTC in Seoul, Republic of Korea, in November 2012.

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- Ontario Institute for Cancer Research
- World Lung Foundation

# The International Tobacco Control Policy Evaluation Project

# The ITC Project

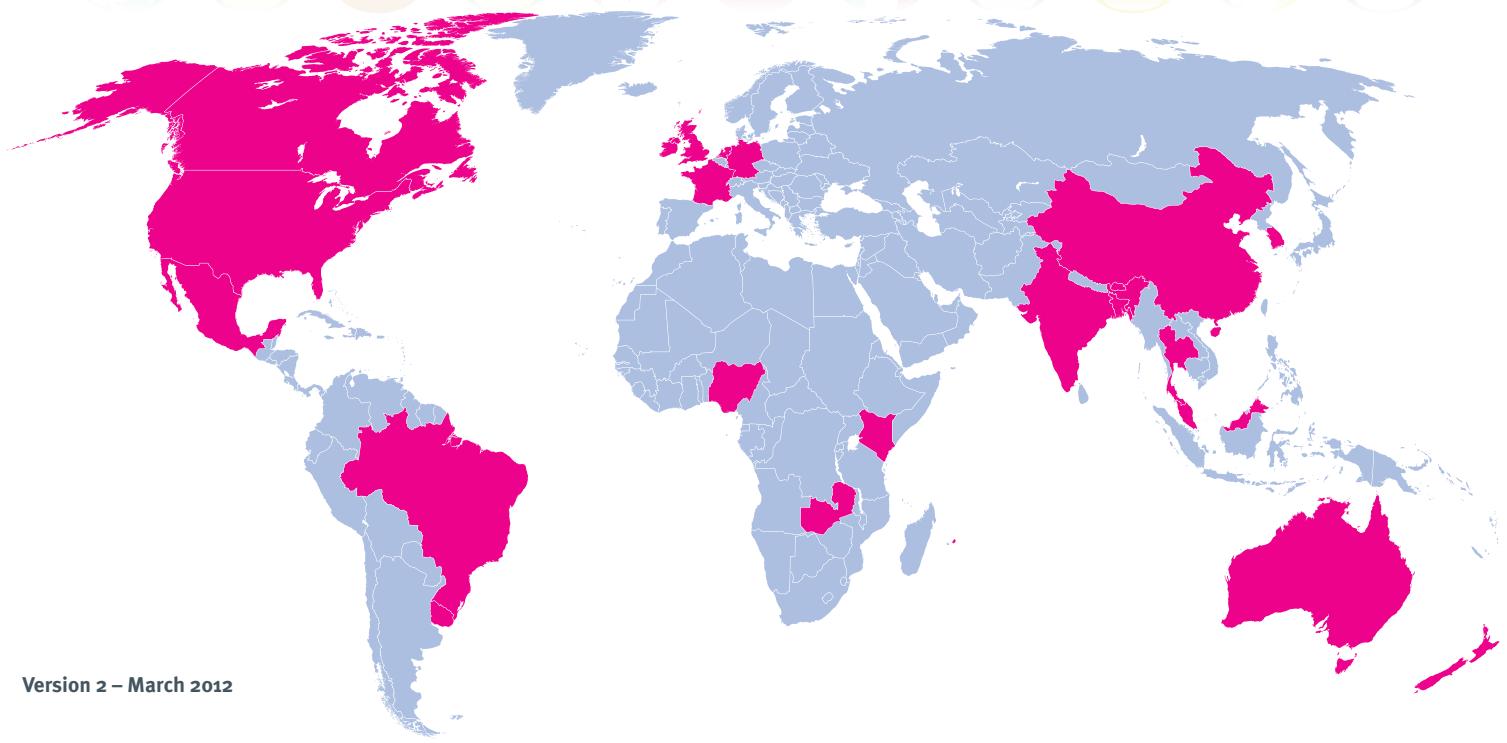
## Evaluating the Impact of FCTC Policies in...

23 countries • 50% of the world's population  
60% of the world's smokers • 70% of the world's tobacco users

Australia  
Bangladesh  
Bhutan  
Brazil  
Canada  
**China (Mainland)**  
France

Germany  
India  
Ireland  
Kenya  
Malaysia  
Mauritius  
Mexico  
Netherlands

New Zealand  
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