

# Affordability of Cigarettes and the Impact of Raising Tobacco Excise Taxes in Southeast Asia :

**Cambodia, Indonesia, Lao PDR,  
Philippines, Thailand and Vietnam**

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This policy paper is written by Ms. Sophapan Ratanachena and Dr. Ulysses Dorotheo based on the research paper developed by Dr. Chonlathan Visaruthvong.

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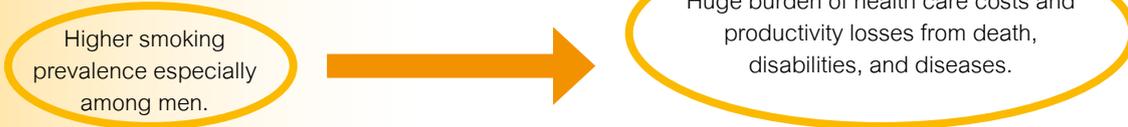
Southeast Asia Initiative on Tobacco Tax

# 1. Introduction

Governments can avail of several evidence-based interventions to reduce tobacco use, among which increasing tobacco taxes and prices is considered the most effective. Higher tobacco excise taxes can reduce tobacco consumption and save lives as well as generate more revenue for the government. In this paper we compare the affordability of cigarettes and the impact of raising tobacco excise taxes in six Southeast Asian countries (Cambodia, Indonesia, Philippines, Lao PDR, Thailand, and Vietnam) in the light of each country's current tobacco control situation as the region moves towards full regional economic integration as the ASEAN Economic Community (AEC) in 2015<sup>1</sup>. The data for this comparative study was drawn from individual country reports under the Southeast Asia Tobacco Control Alliance (SEATCA) Initiative on Tobacco Tax (SITT) in 2010-2011.

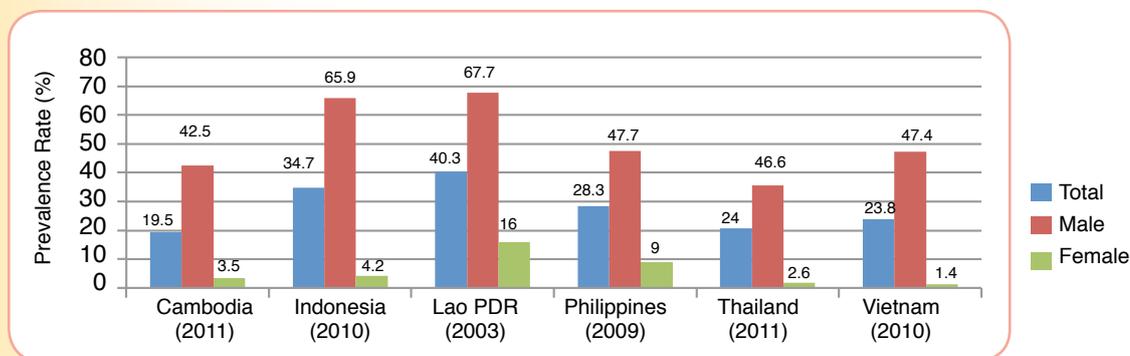
## 2. Background

### 2.1 Smoking prevalence



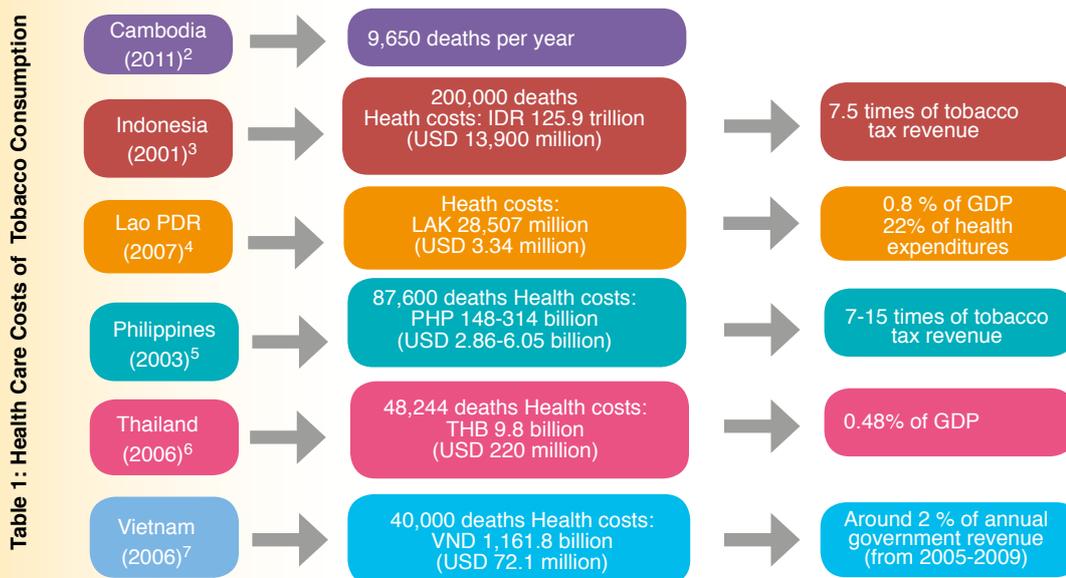
*"Lao PDR and Indonesia facing very high male prevalence rates (above 65%), while Cambodia, Philippines, Thailand, and Vietnam have male prevalence rates almost 50%."*

**Figure1: Smoking prevalence rate of six countries in Southeast Asia**



### 2.2 Health care costs of tobacco use

Thousands of premature deaths and high health care costs due to smoking-related illness in all six countries.



<sup>1</sup> ASEAN has set a goal to integrate into a single market known as ASEAN Economic Community (AEC) by year 2015. Goods and services, labor, capital and other inputs/outputs will flow freer among ASEAN member countries. The integration of tax systems, including excise tax, should be discussed in the lead up to the AEC.

<sup>2</sup> World Health Organization, August 2011, 'Estimated death rates (per 100,000) and proportion attributable to tobacco, 2004', Geneva, World Health Organization.(2011).

<sup>3</sup> Kosen, S. (2004).An Economic Analysis of Tobacco Use in Indonesia.National Institute of Health Research & Development

<sup>4</sup> Vang. C., Ross. H., Senchanthixay. M., Southammavong. T. (2009). Tobacco-Related Socio-Economic Cost of Stroke, Lung Cancer and COPD in Laos

<sup>5</sup> World Health Organization and the University of Philippines. (2006)

<sup>6</sup> Leartsakulpanich J, Nganthavee W., and Salole E. (2007), the Economic Burden of Smoking-Related Disease in Thailand

<sup>7</sup> A Prevalence-Based Analysis; Vietnam Steering Committee on Smoking and Health. (2010). An update estimated of treatment costs for three tobacco-related diseases in Vietnam. (2007)

## 2.3 Tobacco taxes and prices

### 2.3.1 Tobacco Excise Tax Structure, 2011

Country	Basis for Tax Classification	Type of Excise Tax	
		Ad Valorem Rate	Specific Rate
<b>Cambodia</b>	<ul style="list-style-type: none"> <li>Uniform rate for all manufactured tobacco products</li> </ul>	<ul style="list-style-type: none"> <li>Domestic: 10% of 65% of invoice price issued to wholesalers<sup>8</sup></li> <li>Imported: 10% of (CIF price + Customs Duty)<sup>9</sup></li> </ul>	None
<b>Indonesia<sup>10</sup></b>	<ul style="list-style-type: none"> <li>Domestic/Imported</li> <li>Type of tobacco, production scale, capacity of production, range of retail price per stick or gram</li> </ul>	None	<ul style="list-style-type: none"> <li>19 tiered rates, per stick (domestic)</li> <li>Imported cigarettes are applied the highest rate (IDR 310 per stick).</li> </ul>
<b>Lao PDR</b>	<ul style="list-style-type: none"> <li>Domestic/Imported</li> <li>Production cost</li> </ul>	15% (if production cost < LAK 1,500 per pack of 20 sticks), 30% (if production cost ≥ LAK 1,500 per pack of 20 sticks)  (Ceiling rate 55% of factory price) <sup>11</sup>	LAK 100/pack in 2010 and LAK 500/pack in 2011 (additional excise tax on domestic products only)
<b>Philippines</b>	<ul style="list-style-type: none"> <li>Type of cigarettes (packed by hand with 30 sticks or packed by machine with 20 sticks)</li> <li>Range of net retail prices (NRP) of products</li> </ul>	None	Four-tier specific tax increases <sup>12</sup> are scheduled every two years by law from 2005-2011. The NRPs of cigarettes used to classify brands into the tax tiers have been fixed since 1996 (known as the "Price Classification Freeze").
<b>Thailand</b>	<ul style="list-style-type: none"> <li>Uniform rate for all manufactured tobacco products since 1992</li> </ul>	85% of ex-factory price (inclusive rate*)  Recently Thai government increased tax rate from 85% to 87% in August 2012.  (The ceiling rate is 90%) <sup>13</sup>	Four-tier specific tax increases are scheduled every two years by law from 2005-2011. The NRPs of cigarettes used to classify brands into the tax tiers have been fixed since 1996 (known as the "Price Classification Freeze").
<b>Vietnam</b>	<ul style="list-style-type: none"> <li>Uniform rate for all manufactured tobacco products since 2006</li> </ul>	65% of factory price (exclusive rate) <sup>14</sup>	None

<sup>8</sup> Using the ex-factory price as tax base is problematic because it is difficult to determine the cost components and is open to dispute. As of May 2007, the GDT has sanctioned a fixed rate of 65% of invoice prices to be the excise tax base used to calculate tobacco excise tax on domestic products. This reform has increased tobacco excise tax revenue by up to 45%.

<sup>9</sup> The excise tax rate for cigars is 25% higher than that of cigarettes.

<sup>10</sup> Since 2009, a specific tax (IDR/stick) is applied to all tobacco products (Finance Minister's Decree PMK No. 203/PMK 001/2008). Prior to this time, during 2007-2008 excise tobacco taxes were combination rates (ad valorem rates mixed with specific rates) and before 2007 only ad valorem excise tobacco taxes were applied. Imported cigarettes are applied the highest rate.

<sup>11</sup> Lao PDR's Tax Law of 2005 stipulates that the tobacco excise tax should be 55% of the product's factory price

<sup>12</sup> Republic Act 9334 or the Sin Tax Law of 2004 states a four-tier excise tax system on cigarettes. The four-tier tax rates are PHP 2.72 (NRP < PHP 5 per pack), 7.56 (NRP of PHP 5-6.50 per pack), 12.00 (NRP above PHP 6.50 to 10 per pack), and 28.30 NRP above PHP 10 per pack).

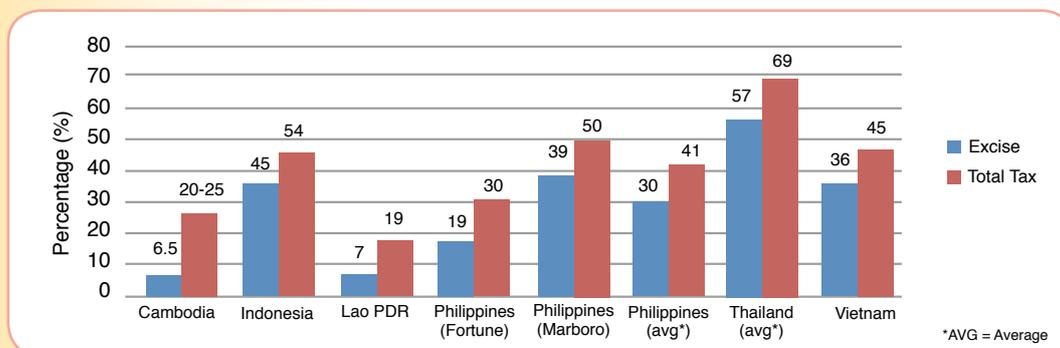
<sup>13</sup> A tax-inclusive rate refers to the amount of tax paid as a proportion of the after-tax value.

<sup>14</sup> A tax-exclusive rate refers to the amount of tax paid as a proportion of the pre-tax value.

### 2.3.2 Tax burden as a percentage of retail prices

- The World Bank (WB) recommends that the total tax burden should account for 2/3 to 4/5 of the retail price in order to discourage consumption while also raising needed revenues.
- Most of the six countries' cigarette tax burdens are still much lower than the WB's yardstick, except Thailand (69%).

**Figure 2: Percentage of excise and total tax burden relative to retail prices, 2010**

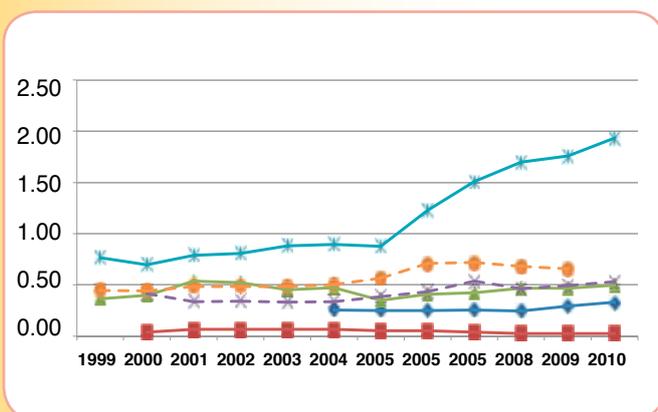


- Indonesian Law No. 39/2007 article 5, states the maximum excise tax rate allowed for tobacco products is 57% of the basic price. In practice, the average total tax share of cigarettes is only 54% including a 8.4% value-added tax (VAT).
- In Cambodia and Vietnam, the tax shares to retail price of imported cigarettes are higher than domestic cigarettes due to the import tariff on cost-insurance-freight (CIF) price.

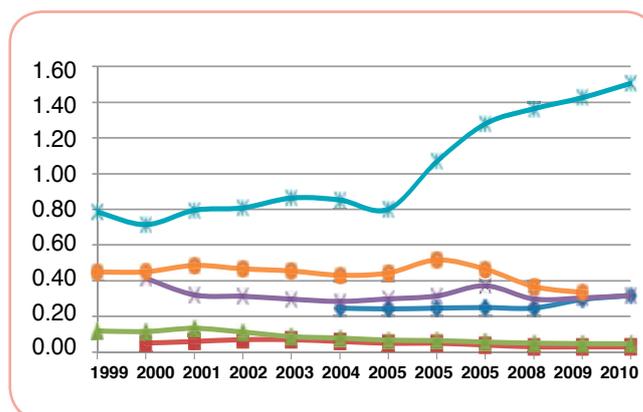
### 2.3.3 Cigarette price trends

- Nominal price trends of cigarette of six countries are gradually rising at rates lower than inflation rate.
- Real prices are lower than nominal prices and mostly declining except in Thailand.
- Cigarettes have become relatively cheaper and more affordable comparing to the rise of gross domestic product (GDP).

**Figure 3: Nominal retail price of average-priced cigarettes, per pack in USD (1999-2010)**



**Figure 4: Real retail price of average-priced cigarettes, per pack in USD (1999-2010)**

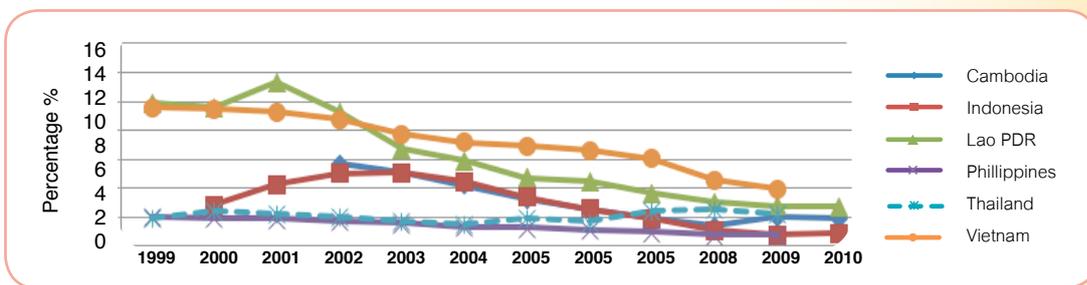


—\* Thailand  
—o Vietnam  
—x Philippines  
— Cambodia  
—▲ Lao PDR  
—■ Indonesia

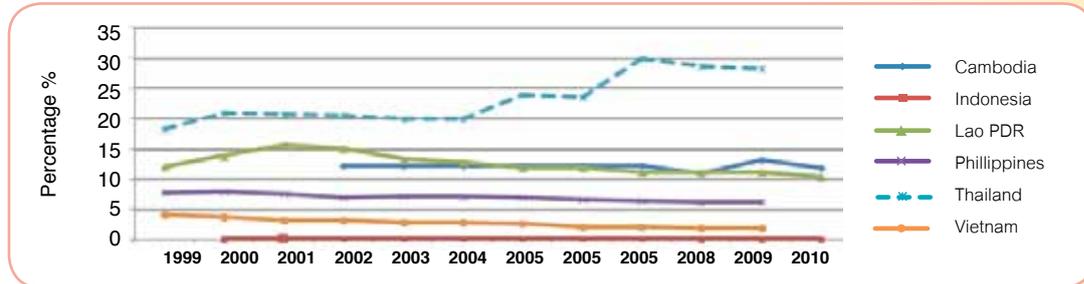
### 3. Affordability of Cigarettes<sup>15</sup>

- If incomes of smokers increase at a faster rate than that of prices, cigarettes will become more affordable, and tobacco consumption will remain high.
- All six countries are fast-growing developing countries, with high growth rates for GDP and population income.
- Cigarettes have become relatively cheaper and more affordable comparing to the rise of gross domestic product (GDP).
- The RIPs of cigarettes in these countries (Figure 5) have steadily decreased over the past decade, except in Thailand, where it has been relatively stable. Still, RIPs in all countries, including Thailand, are very low (6% or less of per capita GDP), with the Philippines having the lowest RIPs and Vietnam having the highest.
- By comparing cigarette prices per pack as a percentage of daily minimum wages (Figure 6), all countries, except Thailand, show stable or declining trends (below 15%), with extremely low percentages in Indonesia. Only Thailand had an increasing trend, reaching up to 30% in 2007 but decreasing slightly since then.

**Figure 5: Relative Income Prices (RIP), 1999-2010**



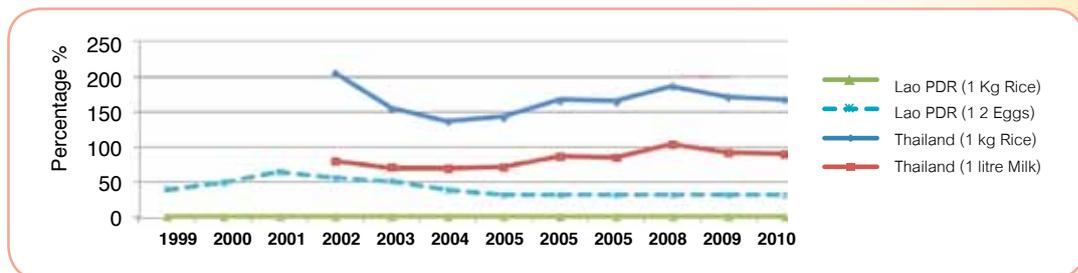
**Figure 6: Prices of cigarettes per pack relative to Daily Minimum Wage, 1999-2010\***



\*Indonesian cigarette prices vary from 0.14% to 0.22% relative to daily minimum wage.

- A comparison of cigarette prices relative to basic food products (Figure 7), such as one kg of rice, one dozen eggs, and one liter of milk, in Lao PDR and Thailand shows that a pack of cigarettes in Lao PDR costs much less than the compared food products, while also confirming that the price of cigarettes in Lao PDR has become relatively cheaper over time.
- These relative prices of cigarettes in Thailand have not changed significantly despite several cigarette excise tax rate increases over the years, although a pack of cigarettes does cost somewhat more than a kilo of rice in Thailand.

**Figure 7: Cigarette prices per pack relative to other goods, 1999-2010\***



\*Cigarette prices in Lao PDR are 0.7 to 0.8% relative to 1 kg. of rice.

<sup>15</sup> This paper describes the affordability of cigarettes during the period 2000-2010 using their Relative Income Price (RIP) based on Blecher and Van Walbeek's (2009) cigarette affordability model, as well as the price of cigarettes relative to price of selected basic food products (rice/eggs/milk), and the Minutes of Labor or the Minimum Wage measures (percentage of daily minimum wage required to buy a pack of cigarettes). Three cigarette brands were examined in some country reports to each represent the most expensive brand, the most average/medium-priced brand, and the cheapest brand; however, in our analysis we compare only the most popular or average-priced (biggest market share) brands.

## 4. Impact of Raising Tobacco Tax<sup>16</sup>

- Results are consistent with general economic principles :
  - a. If the cigarette excise tax rates were increased, the retail price of cigarettes would increase, as well as revenues from cigarette excise tax, VAT, and other related taxes
  - b. tobacco consumption and smoking prevalence will drop
- The key factors that affect the magnitude of the impact of a tax increase:
  - c. the percentage change in industry (net-of-tax) price\*
  - d. the price elasticity of tobacco demand
- As long as the industry passes on the additional tax to consumers, it is evident that increasing tobacco excise tax will not have a significant negative impact on the industry's profit margin (except in the Philippines where major reforms are needed), while significantly increasing tax revenue and reducing tobacco consumption. In some cases, such as Lao PDR, the industry increased the retail price by more than the additional tax and thus gained even more profit.

\*The former shows how much the tobacco industry is willing to absorb or pass on to consumers through a price increase the additional incremental tax burden .

**Table 2 : Scenarios showing fiscal impacts of cigarette excise tax increase<sup>17</sup>**

Country	Proposed Increase in Excise Taxes	Change in Industry Prices (Pass on Tax Burden to Consumer)	Retail Price Increase	Excise Tax Revenue Increase	Change in Industry Revenue	Smoking Prevalence Reduction	Excise Burden/ Retail Price Increase
Cambodia	10 % (10% to 11%)	No	0.61%	9.60%	-0.36 %	-0.15 %	5.88 %
	100 % (10% to 20%)	No	6.1 %	93.02%	-3.49 %	-1.42 %	10.15 %
	10 % (10% to 11%)	10%	1.62 %	10.04%	0.03 %	-0.38 %	5.90 %
	100 % (10% to 20%)	10%	16.71 %	100.54%	0.27 %	-3.7 %	10.15 %
Indonesia <sup>18</sup>	37 %	5%	18.2 %	30.5%	0.04 %	-1.9 %	38 % to 44 %
	15 %	5%	9.8 %	11.9 %	2.20 %	-1.1 %	44 % to 46 %
	25 %	5%	15.0 %	20.1 %	0.84 %	-1.6 %	46 % to 50 %
	44 %	5%	26.1 %	34.7 %	-1.81 %	-2.7 %	50 % to 57 %
Lao PDR <sup>19</sup>	LAK 100 to 300 + (Health Tax 200 LAK) in year 2011	No change in consumption	4000 to 5000	74.5 % (Total tax revenue)	15 %	n.a.	5.4 % to 8.4 % (only excise tax)
	LAK 300 to 600 + (Health Tax 200 LAK) in year 2012	No change in consumption	5000 to 6000	35 % (Total tax revenue)	16 %	n.a.	8.4 % to 12.1 %
	LAK100 to 500+ (Health Tax 200 kip) in year 2011	Less than 1%	n.a.	106.4 %	10 %	n.a.	n.a.
	LAK 100 to 300+ (Health Tax 200 kip) in year 2011	Consumption changed	n.a.	52 %	0.05 %	n.a.	n.a.
Philippines	215 % (HB 3465 & HB 3489)	100 %	PHP 19.27 to 33.38	117.7 % (Epd = -0.235) 95.9 % (Epd = -0.87)	-11.9 % (Epd = -0.235) -37.8 % (Epd = -0.87)	-5.0 % (Epd = -0.235) -18.7 % (Epd = -0.87)	41.1 % to 66.0 %
	81 % (HB 2687)	100 %	PHP 19.27 to 24.59	71.0 % (Epd = -0.235) 46.5 % (Epd = -0.87)	-5.5 % (Epd = -0.235) -19.1 % (Epd = -0.87)	-2.3 % (Epd = -0.235) -8.4 % (Epd = -0.87)	41.1 % to 53.9 %
Thailand	10 %	10 %	10 %	6 %	6 %	-1.5 %	63.0 %
	10 %	15 %	8.4 %	5.4 %	10.2 %	-1.7 %	62.1 %
	10 %	5 %	11.6 %	6.6 %	1.8 %	-1.3 %	63.9 %
	20 %	20 %	20 %	11.8 %	11.8 %	-2.8 %	63.0 %
	30 %	30 %	30 %	17.4 %	17.4 %	-4.1 %	63.0 %
Vietnam	10% (65% to 75%)	n.a.	6.1 %	10.3 %	-2.9 %	-1.5 %	45 % to 48.1 %
	20% (65% to 85 %)		12.1 %	20.0 %	-5.6 %	-2.9 %	50.9 %
	30% (65% to 95 %)		18.2 %	29.3 %	-8.0 %	-4.2 %	53.4 %
	10% (65% to 75%)		24.3 %	38.2 %	-10.3 %	-5.4 %	55.6 %
	40% (65% to 105%)		30.4 %	46.9 %	-12.4 %	-6.6 %	57.7 %

<sup>16</sup> Country simulations using van Walbeek's model (2010) are based on several input variables for fiscal impact analysis, such as average share of excise tax burden to average cigarette retail price, VAT, estimated price elasticity of demand for cigarettes, smoking prevalence, smoking intensity, and others.

<sup>17</sup> Readers are encouraged to focus more on direction of changes which coincide with the general economic principles than the magnitudes of projected values of the model since the latter are sensitive to assumed variables and limited by data availability.

<sup>18</sup> The simulation model of Indonesia set the targets of simulated scenarios in the terms of excise tax share in retail price. They assumed that the government increases excise tax in retail price gradually from the current 38% to finally reach 57% (the maximum tax rate allowed by the Indonesian Excise Law No.39/2007). Referring to Minister of Finance Decree No. 181/MK.011/2009 that imposes a maximum specific tax IDR 310 on each cigarette stick (for Machine Made Clove Cigarette-MMC, Hand Made Clove Cigarette-HC, Filtered Handmade Clove Cigarette-FHC, White Filtered Handmade Cigarette) will increase the cigarette (pack of 20 sticks) price by IDR 6,200 or USD 0.68

<sup>19</sup> The ad valorem excise tax rate of Lao PDR was kept constant, reflecting the terms of the ILA, while adding a health tax and a specific excise tax. Assuming that the quantity consumed would remain steady alongside with the tax increasing at 158,213,831 packs per year. The tax increases are presumed to be passed on to consumers. The industry would increase the retail prices much higher than the additional tax proposed.

**Table 3: Tobacco tax revenues**

Country	Tobacco Tax Revenue		Proportion of Tobacco Tax to Government Revenue (%)
Cambodia (2009)	KHR 53.54 Billion	USD 13.1 Million <sup>20</sup>	3.5
Indonesia (2008)	IDR 43.48 Trillion	USD 4,770 Million <sup>21</sup>	5.2
Lao PDR (2008)	LAK 78,111 Million	USD 9.16 Million <sup>22</sup>	2.4
Philippines (2009)	PHP 24.23 Billion	USD 522.6 Million <sup>23</sup>	2.5
Thailand (2009)	THB 43 Billion	USD 1,370 Million <sup>24</sup>	2.6
Vietnam (2009)	VND 9,633 Billion	USD 521.1 Million <sup>25</sup>	2.2

- Increasing steadily in all six countries but the total tax contribution to total government revenue has been relatively small, unchanged or declining in the past ten years.
- The comparative data of the six countries clearly indicates that their governments have lost a relatively high amount of revenue because of the low rates of taxation on tobacco products.

## 5. Conclusions and Policy Recommendations

### Regional Recommendations

- Government should raise tobacco taxes immediately and regularly so as to reduce the affordability of tobacco products, while achieving both the fiscal and public health objectives of excise taxation.
- Strengthening tax administration and tax enforcement should go hand in hand with tax increases in order to effectively control illicit trade and tax non-compliance.
- The tobacco tax systems (tax structures and tax administrations) are quite varied across countries. If the ASEAN Economic Community (AEC) is to be achieved in 2015, the coordination and possible harmonization of a regional tax system should be taken into consideration as soon as possible.

### Cambodia

- In the short term, the government should double the excise tax rate from 10% to 20%.
- In the medium and long term, the tobacco excise tax rate should be raised above the 20% rate in order for Cambodia to comply with the FCTC and international best practice and to have excise tax rates comparable to other countries in the region.
- Government should gradually increase the tax base for calculating the excise tax liability from 65% to 75% to 85%.
- High excise taxes should also be imposed on smokeless tobacco products to make them less affordable.

### Lao PDR

- Additional excise tax in 2012 should be 1,500 LAK in order to benefit from such additional tax revenues and to gradually move toward the World Bank's recommendation.
- Government should establish a health promotion fund, financed from the health tax of LAK 200 per pack of the additional tobacco tax revenue dedicated to health promotion and tobacco control purposes.
- Ministry of Health should work closely with the Ministry of Finance to update the information of health care costs through a nationwide survey.

### Thailand

- A high excise tax should also be imposed on roll-your-own cigarettes, since they are the most consumed type of cigarette in the country.

### Indonesia

- Maximum excise rate allowed by law (57%) should be implemented as soon as possible, with a view to raise or remove this ceiling in the future.
- All tobacco products should be taxed uniformly to discourage users from switching to lower priced products, which would erode both the economic and public health benefits of any tax and price increase.

### Philippines

- While tax administration should continue to be strengthened, appropriate tobacco tax reform laws and regulations should be swiftly enacted to reduce cigarette affordability and effectively curb the growth of tobacco use. Essential tobacco tax reforms needed are indexation of the specific tax to inflation, removal of the price classification freeze, and a shift from the multi-tiered to a unitary tax system.

### Vietnam

- Government should apply a specific excise tax in combination with the ad-valorem tax system, which should be indexed to inflation as both mechanisms are complementary in raising the total excise tax burden.
- Government should progressively increase tobacco excise tax and introduce a dedicated tax on tobacco for health promotion and tobacco control programmes.
- Effective and consistent enforcement of anti-smuggling measures should go hand in hand with tax increases.

<sup>20</sup> Domestic sales only, Exchange rate USD 1 = KHR 4,087.19 (2009)

<sup>21</sup> Exchange rate USD 1 = IDR 9,052.15 (2008)

<sup>22</sup> Exchange rate USD 1 = LAK 8,530 (2008)

<sup>23</sup> Exchange rate USD 1 = PHP 46.356 (2009)

<sup>24</sup> Exchange rate USD 1 = THB 31.39 (2009)

<sup>25</sup> Exchange rate USD 1 = VND 18,478 (2009)

# **Towards a healthy, tobacco-free ASEAN**

**Mission:  
Working together  
to save lives  
by accelerating  
effective implementation  
of the FCTC  
in ASEAN countries**



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