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Addressing Tobacco Burdens in Gujarat, India

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Addressing Tobacco Burdens in Gujarat: Executive Summary

The Situation

It is a hot, smoggy day in Ahmadabad in the state of Gujarat in India. Urged to action by Gujarat's Chief Minister Narendra Modi, the state's Legislative Assembly has decided to address the burden of tobacco in Gujarat. The Legislative Assembly currently has enough support to sustain a quorum and definitive vote during the 2010 session to be able to implement a directive beginning in the next fiscal year. Therefore, the Chief Minister aims to propose an outstanding tobacco control strategy for the state to the Legislative Assembly in March, 2010.

Your team will serve as the advisory committee to the Chief Minister, and your objective is to determine the best strategy for reducing the health and socio-economic burdens of tobacco in Gujarat, and determining the costs and tradeoffs involved. You will need to justify all of the decisions that you make towards reaching this goal, and you must be prepared to explain all of the aspects involved in your choices. You will also need to take into account the different groups and stakeholders affected by your decisions. Your target time frame is to demonstrate the success of your strategy over a period of 10 years. The maximum amount you are permitted to request is 0.5% of Gujarat's Gross State Domestic Product (either up front or in annual installments – e.g. 0.1% annually for 5 years) to accomplish your goals; this is not obligatory, and you may choose to propose a set of recommendations that require lower or no costs. Gujarat's GSDP in 2007 was USD 55.6 billion or Rs. 2.54 trillion.[1] Based on the information provided in this case and that which you uncover, you will present your recommendations to the Chief Minister's Cabinet on Saturday, March 20, 2010. This group will determine which of the strategies proposed will be most suitable for the state.

[1] All financial amounts will be provided is US Dollars and Indian Rupees. The exchange rate as of March 4, 2010 was 1USD= Rs. 45.77.

Tobacco Use as a Global and Developing World Problem
Tobacco use is the leading cause of preventable illness and premature death worldwide. Approximately 5.4 million people die every year from tobacco-related illnesses. This figure is expected to increase to 8 million by 2030 with the majority of deaths occurring in the developing world[i].

Tobacco Consumption in India
Recent estimates suggest that about 230 million men and 11.9 million women in India consume tobacco in some form[ii]. The National Family Health Survey estimated that the prevalence of any tobacco use is about 57% among men aged 15-54 years and 10.8% among women aged 15-49 years[iii]. New research shows that by the year 2010 and beyond, around 1 million deaths per year in India will be attributable to smoking, and the majority of these will occur in middle-aged adults**.** This will represent 10% of all deaths in the country—one in five deaths in men and one in 20 in women[iv]. Tobacco use is highest among those with less formal education, of low socioeconomic status (SES), and those who live in rural settings; and these groups also bear a disproportionate burden of tobacco-related morbidity and mortality[v].

Tobacco Use and Youth
"First time" tobacco use in India is usually during adolescence. Youths are at high risk: 15% of children between 13 and 15 years reported current use of tobacco in 2009[vi]. Among India's approximately 10 million street children, over a quarter between ages 5 and 19 consume tobacco in various forms[vii.] Many street children use tobacco as an alternative to food because it helps curb hunger and is inexpensive[viii]. Smokeless tobacco is more popular than smoked forms among youth, and tobacco use among youth almost doubled between 2001 and 2004[ix.]

Tobacco Use and Women
Global consumption of tobacco products is increasing among women as a result of factors such as economic growth, changes in social norms, increased female autonomy, stress, social networking, and advertising that directly targets women (linking smoking to weight loss or a symbol of "modernity") [x,xi]. Women in India use smokeless tobacco more frequently than smoked tobacco[xii].

Common Tobacco Products in India
Smoked Tobacco:

- Cigarettes
- Cigars
- Beedi: a cigarette wrapped in a tendu leaf; generally the most popular form of tobacco in India; delivers more nicotine, carbon monoxide, and tar; increases risk for oral cancers.
- Chillum: a type of pipe used to smoke tobacco that originated in India.
- Hookah: a single or multi-stemmed pipe that uses water to cool down and filter the smoke; also known as "water pipe."

Smokeless Tobacco:

- Pan Masala: a stimulant made by wrapping areca nut Betel leaf along with lime and spices; this mixture has a similar effect to a cup of coffee; when tobacco is added to the mixture, it becomes more addictive and increases the risk for oral cancers. Betel Nut is more popular in urban areas and among those with higher SES.
- Tobacco Water: Water products that have had tobacco smoke passed through them; often given to visiting houseguests.
- Snus: A moist powder tobacco that is kept between the lip and gum; similar to chewing

tobacco but does not require the user to spit.
- Other forms of smokeless tobacco include gutkha, mainpuri, Mishri, bajjar, Gadhaku, red tooth powder, and creamy snuff.

India at a Glance[xiii]

- Federal republic governance structure (28 states and 7 union territories)
- Population of 1,156,897,766 (July 2009 est.) - second largest in the world
- Area of 3,287,263 square km
- Hindu 80.5%, Muslim 13.4%, Christian 2.3%, Sikh 1.9%, other 1.8%, unspecified 0.1%

India's Economy

India's GDP in 2007 was USD 3.113 trillion or Rs. 142.48 trillion (by purchasing power parity), which ranks fifth in the world[xiv]. India's real growth rate was estimated to be 6.1% in 2009, which ranks thirteenth in the world[xv]. While services play a large role in driving the country's GDP (62.6%), agriculture still contributes strongly to the nation's GDP (17.5%), though this share is declining. The country's labor market consists of 467 million people, of which 52% are employed in the agricultural sector[xvi]. Though the country's overall wealth has been climbing in recent years, 25% of the population still lives below the poverty line[xvii]. The country's imports and exports have both been rising in recent years, with over USD 146 million or Rs. 668 million in exports (freight on board) in 2007 and over USD 238 million or Rs. 10.9 billion in total imports (cost, insurance, and freight)[xviii].

Gujarat at a Glance [xix]

- The state has 26 districts (231 talukas, 18,618 villages and 242 towns)
- Population of 50,671,017 (5% of India)
- Area of 196,024 square km (6% of India)
- 89% of the population is Hindu
- Population Density is 258 per square km
- Rural population: 62.64%
- Decadal Growth Rate: 22.6% (1991-2001)
- Birth Rate: 23.5 (2006), Death Rate: 7.3 (2006), Growth Rate 16.2 (2005) (per 1,000)
- Sex Ratio: 920 females per 1,000 males
- Effective Literacy Rate 69.14 %

Economics of Gujarat

Gujarat's gross state domestic product (GSDP) grew at an average of 10.86% from 2002-2007 and was 12.8% in 2007-2008, the second highest rate in the country[xx, xxi]. Over the past five years, Gujarat has ranked first in employment generation; in 2008, Gujarat employed more than 226,000 youths alone[xxii]. Gujarat's recent success has largely been due to its industrial sector, but as a result of governmental support for agriculture, the state has experienced an annual growth rate of 14% in its agricultural sector[xxiii]. Budget estimates for the year 2009-2010 show:

- Total revenue of Rs. 4,20,73.68 (USD 9.19 billion)
- Expenditures of Rs. 4,20,16.42 (USD 9.18 billion)
- Anticipated surplus of Rs. 1.53 billion (USD 33.48 million)[xxiv].

Tobacco Use in Gujarat, India

Studies found that in 2006, prevalence of tobacco use in Gujarat was 47.6%: 61.9% among men and 26.5% among women. Gujaratis who were illiterate or had fewer than 7 years formal education, agricultural laborers, and those from subordinated social castes were found to be statistically significantly more likely to use tobacco products[xxv].

About 40% of male and 16% of female tobacco users in Gujarat took up the habit before the age of 20. Smoking is the preferred method of tobacco use for Gujaratis of any age, education,

or out-of-household occupation. Gujarati men are more likely to *smoke* tobacco with 81.1% of male tobacco users being smokers, while women are more likely to partake in *snuffing* (inhaling) or *chewing* tobacco (most popular type of smokeless tobacco in Gujarat) (see Appendix IV).

Health Consequences of Tobacco

Smoking-related illnesses include cancer, lung diseases (chronic obstructive pulmonary disease, COPD), heart attacks, strokes, as well as flu, colds, pneumonia, and bronchitis[xxvi]. Smokeless tobacco has been directly linked to oral cancer, cancers of the pharynx, larynx and esophagus, as well as gum disease and tooth loss[xxvii]. Oral cancer is one of the most common cancers in India, with an estimated 80,000 new cases and 46,000 oral cancer-related deaths every year[xxviii]. Over 80% of COPD in India, which accounts for nearly 12 million people, is attributable to smoking[xxix]. By 2020, 42% of total deaths in India are projected to be due to cardiovascular disease (CVD)[xxx]. Women who stop smoking before becoming pregnant or during the first 3 to 4 months of pregnancy reduce their risk of giving birth to a low birth-weight infant[xxxi].

According to a hospital-based cancer registry in Ahmadabad, Gujarat, 39% (55% male and 17% female) of all diagnosed cancer cases in 1996 were tobacco users [xxxii]. In a city-wide cancer registry, 30% of all cancers were attributable to tobacco (38% male, 16% female)[xxxiii]. In addition, many beedi workers (laborers that roll beedi products) are exposed to toxic chemicals, and many tobacco harvesters suffer from an occupational illness known as green tobacco sickness (GTS), which results from absorption of nicotine through the skin during tobacco harvesting, and can cause weakness, giddiness, and abdominal pain among non-smoking agricultural workers [xxxiv, xxxv, xxxvi] (see Appendix I).

Tobacco and Health Care Costs

Management of complex diseases such as cancer, CVD, and COPD are costly. India's economic burden from tobacco use amounted to USD 1.7 billion or Rs.77.8 billion in 2004, of which smoked tobacco accounted for 77% and smokeless tobacco 23%[xxxvii].

Increased mortality and morbidity will not only result in increased direct healthcare costs, but also impose loss of productivity of India's labor force. In 2004, approximately USD 400,000 or Rs. 18.3 million was lost in income due to tobacco-related absenteeism[xxxviii] and the indirect costs of tobacco–related morbidity. The additional cost of caregivers and loss of productivity due to illness is estimated to be well over USD 500 million or Rs. 22.9 billion[xxxix].

Economics of Tobacco in India

Historically, the Tobacco Board Act of 1975 promoted the growth and production of Virginia tobacco, established incentives and disseminated information to registered growers, provided licensure to growers, exporters, packers, and dealers and promoted cultivation[xl]. In 2006, world tobacco production was approximately 7 billion kilograms (kg), and India produced approximately 555 million kgs, making it the world's third highest producer, and the sixth largest exporter[xli]. Nationwide over 400,000 hectares of land are cultivated for tobacco production[xlii]. Several kinds of tobacco are grown in India, including 254 million kgs of flue-cured Virginia tobacco[xliii]. Approximately 50% of the flue-cured Virginia tobacco produced is consumed domestically, while the rest is exported to more than 100 countries. According to 2006-2007 data, tobacco and tobacco products earned an annual sum of about Rs. 10271 crores or USD 2.24 billion by way of excise revenue, and Rs. 2022 crores or USD 441.8 million by way of foreign exchange[xliv].

In 2007, India manufactured 98 billion cigarettes, and from 2002-2007, India exported 2.24 billion cigarettes[xlv]. In addition, from 2004-2007, India imported 683 million cigarettes[xlvi]. Only

beedi tobacco is solely consumed within the country[xlvii]. Beedi tobacco is cultivated in an area of 140,000 hectares, mostly in Gujarat and Karnataka[xlviii].

Accessing Tobacco

In 2009, the average price per pack of leading international brands (e.g. Marlboro or equivalent), was USD1.97 or Rs. 90 and USD1.57 or Rs. 72 for a local brand—more than 69% of the cost of a pack of cigarettes is due to taxes (compared to 37% in the United States)[xlix]. Cheaper varieties of locally-manufactured cigarettes are also commonly available. As a comparison of purchasing parity, 1 kg of rice costs USD1.66 or Rs. 76 in India[l]. Almost 19% of all cigarettes in India are contraband, whereas that number in the U.S. is only 6%[li].

Point of Purchase of Tobacco

The Cigarettes and Other Tobacco Products Act of 2003 ("COTPA") has banned all forms of advertising for cigarettes, except at the point of purchase[lii]. This has resulted in increased sales of cigarettes on the street (i.e., tobacconists, newsagents, kiosks, or "paan shops"), while restaurant and bar retailers have lost market-share due to the indoor smoking ban[liii].

Employment and Tobacco in India

Tobacco directly and indirectly provides employment to 36 million people in India; of these, approximately 3.5 million are tobacco farmers[liv]. Traditionally, tobacco has been a lucrative crop for farmers, as it provides a higher net income yield per unit of land than most cash crops and substantially more than food crops. For example, the net return per acre for beedi tobacco cultivation is nearly Rs. 3500 or USD 76 and only Rs. 649 or USD 14.2 for cotton and Rs. 125 or USD 2.8 for groundnut[lv]. Tobacco is also attractive because its price is relatively stable, allowing farmers to accurately speculate on profits and obtain credit for supplies and equipment. Also, tobacco is less perishable than many crops, and the industry may assist with its delivery or collection[lvi].

Beedi manufacturing is very labor intensive. There were an estimated 4.2 million beedi workers in India in 2002[lvii]. Minimum wage for employment in beedi rolling are determined by each state's government, though study findings indicate that in Gujarat, the fixed wage for rolling 1000 beedis is Rs. 64.8 or USD 1.41, well below minimum wage[lviii]. Majority of the labor force in the tobacco-related cottage industry are women and children from rural areas[lix].

Agricultural and Environmental Impact of Tobacco

Deforestation related to tobacco farming is a huge concern, as approximately 200,000 hectares of land globally and 44,000 hectares in India are cleared by tobacco cultivation each year[lx]. In addition, the high demand for fuel wood for curing tobacco further accelerates deforestation in tobacco growing regions. Curing tobacco is a costly and energy-inefficient process: an average of 7.8 kg of wood is needed to cure 1 kg of tobacco, which roughly translates into one whole hectare of trees required to cure 1 ton of tobacco[lxi]. Wood shortage is an imminent threat to the tobacco industry itself and also the livelihoods of farmers.

Tobacco cultivation also depletes nutrition from the soil at a faster rate than many cash crops like coffee, tea, and cotton, reducing long-term agricultural productivity and increasing the likelihood of soil erosion in surrounding areas. Single-crop agricultural practices disrupt indigenous biodiversity and make crops susceptible to pest infections. Consequent use of chemical fertilizers and pesticides may lead to destabilizing the soil and contaminating nearby water sources[lxii].

Federalism and Human Rights Concerns

In India, the Constitution establishes a federal government much as that in the United Kingdom, with a strong executive, a powerful bicameral Parliament, and a three-tiered Judiciary[lxiii]. The Constitution governs a spectrum of positive and negative rights of citizens of all states, and

tobacco control proponents often refer to Articles 14 and 21 as the basis for rights to health and health care[lxiv].

The federal government also has responsibilities to citizens arising out of public international law. India has signed multiple United Nations treaties conferring binding obligations over civil, political, economic, social, and cultural rights[lxv]. Although economic and political factors have impeded the enforcement of many treaty provisions, India has notably ratified the Framework Convention on Tobacco Control.[lxvi] Treaties have been influential in Indian courts deciding human rights cases[lxvii]. Most recently, the Supreme Court interpreted national law within the framework of international obligations in "public interest litigation" cases (e.g. protecting the right to life, right to health care, and freedoms from unhealthy environments and hazardous labor conditions)[lxviii]. Tobacco has come under the Court's scrutiny in cases alleging a breach of duty by the Ministry of Health, highlighting the ministry's failure to develop a tobacco control policy and protect against false advertising and inadequate health warnings[lxix].

Enacted in response to these cases, COPTA imposes a ban on smoking in public places, prohibits certain advertising, promotion, and sponsorship of products by tobacco companies, prohibits sales to and by minors, and requires health warnings on all tobacco products[lxx]. States and local governments, however, are free to regulate products, sales, and access to vulnerable populations in India beyond what federal law mandates[lxxi]. For example, Gujarat's public railways have banned the sale of tobacco products at and near bus stops in favor of the sale of "other products"[lxxii]. Similarly, special purpose groups, including schools and religious centers, play a significant role in advocating for restrictions, promoting regulation, enforcing the laws enacted, and coaxing private industry to voluntarily curtail tobacco production and sale.

Tax Strategies and Structure

Higher taxes on tobacco products generally lead to fewer people consuming these products. A 10% increase in cigarette prices is estimated to lead to a reduction in demand of 2.5-5% in high income countries or 6-12% in low- and middle-income countries[lxxiii]. Evidence suggests that the poor, the less educated, and the young are most responsive to higher taxes on tobacco[lxxiv]. It has been estimated by the WHO and the World Bank that raising taxes can prevent 10 million deaths due to tobacco use globally, 9 million of them in developing countries[lxxv].

Taxation occurs at both the state and federal level in India, and revenues may be appropriated by the federal government to the states as grants-in-aid[lxxvi]. Tobacco corporations are subject to income and capital gains taxes, while Indian manufacturers are subject to excise taxes, and foreign importers are subject to customs taxes. Currently, the Central Sales Tax of 4% is levied on goods in interstate commerce, but no state taxes may be imposed on goods or imported into India[lxxvii]. The excise revenues from tobacco amounts to approximately 12% of the total excise collection; this share has remained stable –from 10-13%– since 1961[lxxviii] (see Appendix VI).

Cigarettes account for 85% of excise revenues collected from all tobacco products, although they only account for 14% of the nation's tobacco consumption; beedis are by far the more commonly consumed tobacco product[lxxix]. While manufacturers of beedis and cigarettes are taxed per 1,000 sticks, manufacturers that produce fewer than 2 million sticks of beedis per year without machines are exempt from excise taxes[lxxx]. It is difficult for excise officers to monitor each beedi facility, as the manufacturing of these products is highly fragmented, unlike with cigarette production[lxxxi]. Excise rates for beedis have increased in recent years since taxation has not kept pace with inflation in years prior[lxxxii] (see Appendix VI).

Effects of Cigarette Taxes on Smuggling

Cigarette manufacturers argue that cigarettes are unfairly taxed in India in relation to beedis[lxxxiii]. Some argue that overwhelmingly high tax rates on cigarettes contribute to the market being flooded with contraband cigarettes from China and Bangladesh[lxxxiv]. Studies have suggested

that India's annual revenue loss totals Rs. 6.55 billion or USD 143 million per year from smuggled cigarettes[lxxxv].

Increased availability of black market cigarettes not only leads to more smokers, but it puts legitimate retailers at a competitive disadvantage, leading some retailers to skirt tobacco control strategies in order to compete better with the black market[lxxxvi]. Though higher prices and increased taxes play a part in cigarette smuggling –especially large-scale smuggling– other factors may contribute more importantly to the smuggling market. In several Central and Eastern European countries, for example, with relatively low cigarette prices and taxes, the more likely factors contributing to cigarette smuggling include corruption, public tolerance, informal distribution networks, widespread street selling, and organized crime[lxxxvii]. Large-scale smuggling also takes advantage of the inadequate controls over exported goods (increasing likelihood that cigarettes will be 'lost' while en route and end up on the black market)[lxxxviii]. Sweden and Canada are examples of countries that significantly reduced cigarette taxes in the 1990s due to perceived cigarette smuggling and the emergence of a black market[lxxxix].

Increasing Awareness & Promoting Tobacco Cessation

Tobacco awareness initiatives have been implemented in Uttar Pradesh, Bihar, Orissa, Madhya Pradesh and Rajasthan by the Indian Ministry of Health and Family Welfare's Central Health Education Bureau. Additionally, as part of the national CVD control program, the ministry of health is committed to building public awareness of smoking and other CVD risk factors[xc].

Encouraging cessation of tobacco use can involve nicotine replacement therapy which comes in multiple forms including gums, patches, sprays, inhalers, and lozenges. Bupropion (Zyban®) and Varenicline (Chantix™) are prescription drugs used to modify cravings for tobacco. Critical to treatment is psychosocial support, including family and social support and individual or group quit programs[xci]. A trial investigating health counseling and pharmacotherapy for tobacco cessation in India showed that those who received counseling alone (15% abstinence rate) didn't fare as well as those who received counseling plus pharmacologic therapy (53% abstinence rate) at one year post-intervention[xcii]. There is a plethora of information emerging regarding tobacco cessation treatments[xciii].

Health infrastructure in India and Gujarat

There are vast differences in availability of health care throughout India. Urban residents with adequate resources can access tertiary and teaching hospitals with the best possible evidence-based care, but the majority of the population living in rural areas often have little to no access to medical services[xciv]. Health infrastructure in Gujarat is similar to the patterns seen on the national scale. A qualitative study on women in rural Gujarat reveals high financial burdens of healthcare costs and geographic inaccessibility of hospitals[xcv]. According to the updated information from the Ministry of Health, the state of Gujarat is significantly lacking resources in terms of numbers of health centers and healthcare personnel (see Appendix VII)[xcvi].

SUMMARY

The objective of each team is to provide a clear and justifiable tobacco control strategy to the cabinet of Gujarat's Chief Minister. You are permitted to request a maximum of 0.5% of Gujarat's GSDP (either up front or in annual installments – e.g. 0.05% annually for 10 years) to accomplish your goals. The strategy should be sustainable, financially justifiable, and acceptable. The objective of your strategy should be to decrease the health and socioeconomic burdens associated with tobacco in Gujarat. You may propose any combination of tobacco prevention, protection and/or cessation strategies. You should define and justify your choice of target population and other specific target choices (e.g. smoked tobacco, smokeless tobacco, both) as well as your choice of interventions. On Saturday, you will present your recommendations to the Chief Minister's Cabinet and you should expect questions regarding the various tradeoffs involved in your decisions.

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[lxvi] Hazarika, 2009.
[lxvii] The Supreme Court particularly engages in judicial activism where cases involve fundamental rights, issues of federalism, and determinations of constitutionality. Hazarika, 2009.

[lxviii] *Compare* Vishaka v. Rajasthan, A.I.R. 1997 S.C. 3011; *with* M.C. Mehta v. Union of India, (1991) 1 S.C.R. 866; *and* Kirloskar Bros. Ltd. v. Employees' State Ins. Corp., 1996 S.C.A.L.E. (2)1 (India).
[lxix] The Supreme Court in both cases itself mandated that the executive promulgate a ban on smoking in public places and a directed police commissioners of major cities to report enforcement proceedings from the advertising problems. Murli S. Deora v. Union of India, 8 S.C.C. 765 (2001); Ramakrishnan v. State of Kerala, 1999 A.I.R. 86 (Ker) 385 (India); *accord* R.K. Abichandani, Health as a Human Right, *available at* http://gujarathighcourt.nic.in/Articles/health.htm.
[lxx] COTPA, 2003. A later amendment passed in 2007 specifies regulatory actions that could be imposed for pictorial warning requirements. The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Amendment Act, No. 38 of 2007 (Sept. 24, 2007), *available at* http://indiacode.nic.in/.
[lxxi] COTPA, 2003.
[lxxii] The Hindu Business Line. (Dec. 11, 2009). ‘‘Gujarat Roadways bans sale of tobacco goods.” http://www.blonnet.com/2009/12/12/stories/2009121252461700.htm.
[lxxiii] Reddy, 2004.
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[lxxvi] Constitution of India, pt. 270 et seq.
[lxxvii] *See, e.g.,* The Tobacco Cess Act, No. 26 of 1975 (May 12, 1975) (imposing excise and customs taxes on tobacco and the tobacco industry), *available at* http://indiacode.nic.in/.
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