

# **Making the Tobacco and Poverty Link: Results from Research for Advocacy Projects in Africa, Asia, and Latin America**



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We also wish to thank all those people whose earlier work, both published and unpublished, provided the foundation upon which many of the literature reviews mentioned here were undertaken.



# 1 Introduction

## 1.1 Purpose of this book

This book is intended as a companion to *Tobacco and Poverty: Research for Advocacy Guidelines*. It provides concrete examples of how the guidelines were used in projects implemented in several Asian, African, and Latin American countries between 2009 and 2011. Together, the two books are aimed at tobacco control advocates who wish to address tobacco and poverty issues and researchers who wish to get involved in tobacco control by exploring tobacco and poverty.

The various studies highlighted in this book demonstrate how the research for advocacy guidelines can be, and have been, adapted to local needs and local circumstances. In addition to presenting the ways in which the research was designed and implemented, the book illustrates how key issues in tobacco and poverty were identified and addressed through research for advocacy, and the results achieved.

## 1.2 Tobacco and poverty as a development issue

While significant advances have been made and continue to be made in tobacco control internationally, including in low-income countries, significant gaps remain. Particularly lacking is an understanding of tobacco control as an important development issue and its links to poverty reduction. Several previous international studies have demonstrated that there are a number of ways that tobacco and poverty are linked; for example:

- Tobacco consumption increases health costs and reduces productivity as a result of illness. This negatively impacts income-earning potential and the overall wellbeing of families.
- The poor have higher smoking rates than the rest of the

population, but can least afford tobacco. Expenditures on tobacco represent lost funds that could have been spent on basic needs.

- Rather than making a decent living, many tobacco farmers fall into debt while being exposed to hazardous work environments. High labour requirements of tobacco cultivation can also mean that children do not go to school, thereby virtually ensuring the generational continuation of poverty.

Recognizing that in many countries tobacco control continues to be seen solely as a “health” issue, beginning in the early 2000s HealthBridge and others conducted preliminary studies on tobacco and poverty.<sup>1</sup> The study by Efroymsen et al estimated that tobacco expenditures by the poor could instead be used to purchase enough healthy food to spare 10.5 million Bangladeshi children from malnutrition<sup>2</sup>. Related research was undertaken on the economics of tobacco in Vietnam<sup>3</sup>, as well as on tobacco and poverty related to production and use in India and Bangladesh<sup>4</sup>. These research studies laid the groundwork for WHO’s 2004 World No Tobacco Day theme of “tobacco and poverty,” and provided the impetus for the design and implementation of ten new studies between 2009 and 2011, funded by the Bloomberg Initiative to Reduce Tobacco Use (BI) through a grant from The International Union Against Tuberculosis and Lung Disease (The Union). While they each

<sup>1</sup> WHO. *Tobacco and Poverty: A Vicious Circle*. Geneva: WHO, 2004. [www.who.int/tobacco/communications/events/wntd/2004/en/wntd2004\\_brochure\\_en.pdf](http://www.who.int/tobacco/communications/events/wntd/2004/en/wntd2004_brochure_en.pdf).

<sup>2</sup> Efroymsen D, Ahmed S, Townsend J, et al. “Hungry for Tobacco: An Analysis of the Economic Impact of Tobacco on the Poor in Bangladesh.” *Tobacco Control* (2001) 10: 212-217.

<sup>3</sup> Hoang MA, Le TT, Tran T, Kinh HV, Efroymsen D, FitzGerald S. *Tobacco over Education: An Examination of the Opportunity Losses for Smoking Households*. Hanoi: HealthBridge Vietnam 2005.

<sup>4</sup> Efroymsen D, ed. *Tobacco and Poverty: Observations from India and Bangladesh*. Dhaka: HealthBridge 2002.

addressed a different issue or aspect of tobacco and poverty, or approached the same issue from a different angle, these studies sought to reframe tobacco control as a poverty issue to highlight the potential impact of tobacco manufacture and use on child malnutrition, education, and family economic well-being.

Ultimately, raising awareness of the tobacco-poverty links could help both to incorporate tobacco control into global and national development agendas and to make non-health players aware of the importance of an examination of tobacco control as a poverty alleviation measure. By presenting this recent country-specific evidence from three continents, we hope to influence development agencies with poverty reduction objectives to prioritize tobacco control and motivate governments around the world to address tobacco control through national poverty alleviation schemes.

### 1.3 Research for advocacy

**T**he *Tobacco and Poverty: Research for Advocacy Guidelines* provide a detailed explanation of what distinguishes research for advocacy from other types of research and that explanation will not be repeated here. In summary, research for advocacy seeks to provide specific evidence of the need for a certain policy or program, or to demonstrate public opinion around a certain government action or planned action. It is, in other words, designed to provide evidence to influence policy. Research on how tobacco use can exacerbate poverty is important to:

- generate interest and action within the development sector in tobacco control;
- increase government commitment to take proven, effective action on tobacco control; and
- contribute to international understanding of the tobacco-poverty nexus, as a catalyst for change.

Each of the ten studies highlighted in this book were based on rapid and targeted research directly related to government policy, as shown in Table 1.

**Table 1: Summary of tobacco and poverty research studies**

Country and Organisation	Research and Policy Focus
<b>Argentina -</b> Unión Antitabáquica Argentina	Researchers examined the relationship between household spending on tobacco products in low-income families and the resources available for basic needs such as food, health, education and utility services. The role that tobacco control policies could play in improving the health and quality of life of impoverished populations was the primary emphasis of advocacy activities.
<b>Bangladesh –</b> WBB Trust (Work for a Better Bangladesh)	Researchers assessed the socio-economic impacts of tobacco farming, the working conditions of tobacco industry labourers, and the impact of tobacco purchasing on consumers to demonstrate that tobacco control policies must address and reflect more than health and environmental concerns, but also the living conditions of the poorest of the poor. The production and use of tobacco was examined as a root cause of poverty that must be addressed if policy makers are to improve the lives of the poor.
<b>Brazil -</b> Aliança de Controle do Tabagismo (ACTbr)	The researchers addressed the lack of information available to key stakeholders involved in the development and enforcement of tobacco control policies as they relate to tobacco production in Brazil, notably the National Program to Support Production Diversification in Tobacco Growing Areas for integrated sustainable rural development. In particular, the study addressed the beliefs and experiences of, obstacles faced by, and strategies implemented by small-scale farmers to reduce their economic dependence on tobacco through crop diversification and alternative livelihood schemes; it then explored how this information could best be used to inform decision-making related to tobacco control.
<b>Cameroon</b> (individual researchers), Mali –	Researchers in each country sought to examine how expenditures on tobacco represented opportunity costs related to basic needs, particularly among the poor. Even though smoking rates in Sub-Saharan Africa are



<b>Association de Lutte contre le Tabac, l'Alcool, et les Stupéfiants (ALUTAS) and Senegal - Mouvement Anti-Tabac du Sénégal (MAT)<sup>5</sup></b>	still lower than they are in other regions of the world, the significantly high rates of poverty in these countries, and the reality that more than half of the households are not able to afford their basic daily expenses, makes any tobacco expenditure an important contributor to poverty. Advocacy activities addressed not only the impact of tobacco expenditures on the current lives of the poor, but also on their future.
<b>Honduras - Acción para la Promoción de Ambientes Libres de Tabaco (APALTA)</b>	Researchers explored the conditions under which tobacco farmers work, in particular the risks and harms to which they are exposed, their perceptions of those risks, and the biological effects of pesticides on their health and the environment. Advocacy focused on the need to integrate tobacco control into poverty reduction policies to improve the living conditions of tobacco workers, who are primarily poor, illiterate, and have few other skills.
<b>India – Voluntary Health Association of India (VHAI)</b>	Researchers investigated the working conditions and socio-economic and health issues associated with tobacco farming, bidi production, and tendu leaf plucking <sup>6</sup> to expose tobacco industry myths promoting the safety and viability of tobacco employment. As short-term policy measures will not bring these workers out of poverty, the researchers explored the inclusion of alternative income-generating activities within an all-inclusive programme of safer, sustainable alternative livelihoods for tobacco workers.
<b>Indonesia - Center for Health</b>	Researchers examined the relationship between household tobacco use and child health status among the poor to provide evidence to support tobacco

<sup>5</sup> The three francophone African studies were implemented as part of a single study coordinated by the Association pour la Défense des Droits des Consommateurs, itself based in Chad. They are presented together throughout this report.

<sup>6</sup> The tendu leaf is used in India to wrap handmade but packaged tiny cigarettes known as bidis.

<b>Research, Universitas Indonesia</b>	control policy. A focus on the negative child health impact of tobacco consumption was used to counter the government's reluctance to commit to tobacco control because of its belief in the profitable commercial aspects of tobacco production and sale.
<b>Mexico - Instituto Nacional de Salud Pública (INSP)</b>	Researchers analyzed the financial effects of tobacco consumption on the ability of low-income households to afford basic needs. A focus of the advocacy efforts was the ways in which tobacco control policies could complement poverty reduction policies and strategies.
<b>Peru - Comisión Nacional Permanente de Lucha Antitabaquica</b>	Researchers examined household expenditures on tobacco and their effect on families' ability to afford basic needs; in particular they examined the negative impact of tobacco spending on households with children. In a country where one-third of the population is poor, and where the poorest households have the most children, fiscal policies that favour effective tobacco control would contribute to the achievement of the Millennium Development Goals, a central government policy objective.
<b>Vietnam – HealthBridge Vietnam</b>	Researchers sought to understand what Vietnam-specific evidence already existed on the relationship between tobacco and poverty, and subsequently to identify the current research gaps, in order to assess the real impact of tobacco control policies on overall national employment. The implementation and enforcement of a range of tobacco control measures was explored as a means not only to improve public health but also to alleviate poverty.

## 1.4 Overview of Results Achieved

In all cases, the researchers generated new evidence to substantiate the link between tobacco and poverty. In Argentina, Bangladesh, Indonesia, Mexico, Peru, Vietnam, and Cameroon, Mali, and Senegal, researchers demonstrated the significant opportunity cost of tobacco use – that is, the basic necessities that a household forgoes when scarce income is diverted to tobacco use. The

implications of such opportunity costs are tremendous: families living in food poverty that could otherwise afford to better feed themselves, children denied educational prospects, and increased health care expenditures. The extremely poor quality of tobacco-related employment was highlighted by researchers in Bangladesh, Brazil, Honduras, India, and Vietnam. In spite of the tobacco industry's claims that it contributes significantly to employment generation and poverty reduction in tobacco-producing countries, the reality of entrenched poverty, hazardous and exploitative working conditions, and child labour belies the industry's propaganda. While politicians in many of these countries also use employment-related arguments to stymie tobacco control efforts, researchers were able to demonstrate the possibility of generating higher paid jobs with better working conditions if spending on tobacco were shifted to other goods and services. In fact, as the Vietnam study demonstrated, tobacco control could actually increase overall national employment.

The Indonesian study also explored the issue of tobacco and poverty from a different angle, by examining the impact of household tobacco use on child health status. The researchers demonstrated a potential causal link between parents' smoking status and the prevalence of children's infections, children born with low birth weight, and childhood wasting. These results contribute to broader studies of the health impacts of smoking and second-hand smoke, particularly among the poor.

Research results have been shared in a number of ways, including through national and international conference presentations, through workshops, seminars, and meetings with politicians, and through publication in international peer-reviewed journals. The researchers also used their study results to develop a variety of advocacy materials that centred on five key messages: (i) higher tobacco taxes and prices help to reduce poverty; (ii) tobacco control will not

have a negative effect on overall employment; (iii) tobacco employment is not sustainable employment; (iv) household tobacco use negatively affects child health status; and (v) poverty reduction strategies must address tobacco production and use.

Already, demonstrable impacts are evident from the researchers' advocacy activities. In several countries, politicians (and would-be politicians) have embraced specific tobacco control measures, such as increasing tobacco taxes and prices, after their awareness of the tobacco and poverty link was increased. Research results have been incorporated into school programs in Argentina and into summer courses for political representatives in Mexico. In Vietnam, the research results informed the drafting of the country's first national tobacco control law, while in Peru the results were used to defend the constitutionality of the country's tobacco control law.

Tobacco and poverty research is an important mechanism to support advocacy campaigns for stronger tobacco control laws and policies. Research results, especially when presented in a way that generates media attention, can do much to gain the attention of policymakers, and thus motivate them towards positive tobacco control action that can also play a significant role in reducing poverty.



## 2 Conducting Tobacco and Poverty Advocacy Research

### 2.1 Overview

Each of the ten tobacco and poverty research for advocacy studies used a variety of approaches and methodologies to meet their objectives, including literature reviews, secondary data analysis, and quantitative and qualitative research. The following provides an outline of the various approaches and methodologies, followed by details of how the various teams approached their work.

#### LITERATURE REVIEWS

Prior to designing a research study, it is useful to understand what information already exists relative to the theme of tobacco and poverty in the country being studied. Examining the existing literature – both published and unpublished – thus became the first step in most of the projects, and indeed the primary piece of work in Vietnam.

#### SECONDARY DATA ANALYSIS

Rather than designing and conducting new research studies, it is often advantageous in terms of time and expense to re-analyze existing data in a new way. Such existing data may be found in national or sub-national surveys which provide the researcher with a large sample size and usually a wide range of information. Other existing data sources include previous research studies.

#### QUANTITATIVE AND QUALITATIVE RESEARCH

Quantitative research – based as it is on numbers – can be a powerful tool to demonstrate how tobacco and poverty are linked. Surveys can collect information about the number and type of tobacco workers in a particular region and their incomes, basic costs of living, daily incomes and tobacco expenditures of tobacco users, tobacco consumption, etc.

Qualitative research can be used to better explain the results of quantitative research: it can generate quotes and case studies with which to illustrate the conclusions of the quantitative research. It can also address issues that cannot adequately be measured through numbers. For instance, simply discussing the number of tobacco workers living in extreme poverty does little to convey the actual misery of their lives. Similarly, the benefits of alternative crop policies may be best expressed through the stories of former tobacco farmers who have an easier life and higher income now that they grow vegetables.

### 2.2 Approaches and methodologies

The following provides an overview of the approaches and methodologies used by the research teams in each of the ten studies.

#### ARGENTINA

##### *Quantitative and qualitative research*

The Argentinean study examined the relationship between household spending on tobacco products and basic needs such as food, health, education and services (such as water and electricity) in the provinces of Tucumán and Jujuy, which are among the poorest in the country. The researchers conducted personal interviews with a random sample of 3,246 adults aged 18-59 years in the cities of San Miguel de Tucuman and San Salvador de Jujuy. The questionnaire that they used included the WHO's International Diagnostic Interview, which is useful for surveys assessing substance abuse and dependence among peoples of different cultural groups and educational levels. The questionnaire included questions on socio-demographic variables (such as sex, age, marital status, and income), and expenditures on tobacco and alcohol, foods, and services.



Household income was estimated by totalling the reported individual income from all household members. Households

*The Argentinean study highlighted the value of collaboration between those dedicated to tobacco control and those involved in developing social development policies if poverty reduction is to be effective.*

were then classified by income quintile, with the first quintile representing the poverty line. Tobacco and alcohol expenditures were categorized as no expense, expenditures by households in the first to fourth quintile, and expenditures by households in the fifth quintile. Weekly expenditures on food and monthly expenditures on

water, electricity, schooling, and health costs (including insurance) were categorized by three income groups (first quintile, 2<sup>nd</sup> to 4<sup>th</sup> quintiles, and 5<sup>th</sup> quintile, respectively).

To evaluate the level of cigarette consumption, the researchers asked respondents “Are you now a smoker, an ex-smoker, or a never-smoker?” To evaluate the respondents’ perception of difficulty meeting household costs, they were asked: “With your current income, you reach the end of the month with...” followed by a five-point scale of answers, from “much difficulty” to “very easily”.

The researchers then constructed double-entry tables of socio-demographic variables, smoker/non/ex, and expenditures on tobacco products, by sex, and applied a chi squared test. They calculated average expenditures on tobacco, alcohol, food and household services by income level, as well as the percentage of food and household services expenditures that could have been covered by actual spending on tobacco and alcohol. They further calculated the quantity of food (proteins in the form of eggs and milk) that could be obtained with redirected tobacco expenditures.

## BANGLADESH

### *Literature review*

To inform their qualitative and quantitative primary research study, the Bangladeshi researchers first undertook a literature review of the socio-economic impacts of tobacco farming, tobacco labourers’ working conditions, and the impact of tobacco spending on consumers. The term “tobacco” was used in combination with the terms poverty, employment, farming, bidi, beedi, smoking, smoker, and Bangladesh in Google Scholar to identify relevant online literature. This produced five online peer-reviewed journal articles specific to Bangladesh. Electronic articles and reports published by national and international organizations working on tobacco in the country were downloaded from their websites.

The researchers visited the libraries of local and international organizations and consulted with independent scholars working on tobacco control in Bangladesh to acquire documents not available electronically. They also reviewed legislative documents to assess the extent to which the issue of tobacco and poverty had been addressed by the Bangladeshi government. Of the collected documents, sixteen articles and books were particularly relevant to the Bangladeshi context; many others provided regional and international contexts.

### *Quantitative and qualitative research*

Between August and December 2009, Bangladeshi researchers conducted a combination quantitative/qualitative research study in six districts (Rangpur, Kushtia, Meherpur, Natore, Cox’s Bazar, and Bandarban). Three groups of informants were addressed: bidi workers and bidi users, the former in the first two districts and the latter in the following four, and tobacco farmers in all six districts. The research sites were selected to ensure geographical

variation and to incorporate both old and new tobacco growing areas and the main bidi factories. Bidi workers included men, women, and children working both on factory premises and from home. Bidi users included those who were observed smoking at local roadside tea stalls. Tobacco farmers included past, current, and future farmers. The researchers approached potential informants while they were alone, explained the study's purpose, and asked them to participate.

In-depth interviews were conducted with four bidi factory supervisors while semi-structured interviews were held with twenty bidi workers, all using an ethnographic approach and interview guides prepared by the research team. The interviews explored the informants' perceived costs and benefits of bidi production. Two informal focus group discussions of six persons each were then held with representatives of the bidi workers to clarify issues arising from the interviews. All data obtained were thematically organized and analyzed. Direct observation by the researchers supplemented the interviews and discussions.

*The Bangladeshi study demonstrates that tobacco control is not simply about health and the environment, but also about the living conditions of the poorest of the poor. If the lives of the poor are to be improved, the production and use of tobacco must be addressed as a root cause of poverty.*

The research team also administered a short closed-ended quantitative survey of ten questions among 2,590 bidi users to assess their daily earnings, bidi smoking expenses, and expenditure on daily household goods. Only male bidi users were interviewed, as previous studies showed negligible smoking rates among Bangladeshi women.

## **BRAZIL**

### *Literature review*

To inform and complement their research results, the Brazilian researchers reviewed government brochures, books, and reports on public policies related to the Diversification Program. Information was collected from the documents and reports of local associations, civil organizations, networks, and social movements, as well as tobacco industry publications, such as annual reports. Scientific journals, specialized publications, research reports, and academic theses and dissertations addressing the diversification program were likewise reviewed.

The information collected on the Diversification Program included its theoretical bases, objectives, methodology for project selection, and specific project information (such as numbers and nature of supported projects, families and municipalities reached by the Program, specific project goals and socio-economic models of productive systems). The scope of productive activities developed within the projects supported by the Diversification Program were verified by examining the details of different public policies, such as *Bolsa Família*, *Programa para Aceleração do Crescimento* (PAC), *Programa Nacional para Fortalecimento da Agricultura Familiar* (PRONAF), *Programa de Aquisição de Alimentos* (PAA), and *Programa de Desenvolvimento Territorial Rural Sustentável* (PDTRS), among others.

### *Quantitative and qualitative research*

To assess whether the Diversification Program results in fragmented efforts and initiatives with low-level impact, or whether it contributes more substantially to improving the socio-environmental, cultural, and economic dynamics of traditional small scale agriculture, data analysis focused on comparing public policies regarding small farming to policies targeting larger agricultural activities. The researchers

sought to measure the efficiency and commitment of public power as well as consistency within the objectives and principles of the Diversification Program itself.

The study focused on tobacco growing diversification initiatives in Southern Brazil. The key stakeholders identified for in depth interviews were from the Rio Pardo Valley Region in the state of Rio Grande do Sul, where the industrial plants of the largest tobacco companies are located and where the tobacco industry exercises significant influence in the political and public sectors, on local communities, and on tobacco growers.

The in depth interviews included the mapping of stakeholders and governmental agents to identify key

*The Brazilian project focused on vulnerable small farmers (in general) and women & children (in particular) who live in poverty. The study results will be used to influence decision-makers to implement sustainable tobacco crop diversification policies to improve the living conditions and quality of life for small farmers*

players in the Diversification Program; the mapping exercise informed an “interest, importance, and influence” analysis of the results of the Program’s interventions. Five key stakeholders were identified for in depth interviews, four from social movements which accessed the Program, and one researcher from the Federal University of Rio Grande do Sul who had contributed to the conceptual development of the Diversification Program.

The research also included discussions with managers of the Ministries for Agrarian Development, Agriculture, Health, Integration, and Environment and Industry, as well as with other key stakeholders associated with the Diversification Program and its integration with other public policies.

## CAMEROON, MALI, AND SENEGAL

### *Literature review*

The Malian researchers attempted a preliminary literature review, but quickly realized that very little information exists about tobacco use in the country, let alone information linking tobacco to poverty. Although a few surveys were identified that addressed tobacco use among selected population groups (such as youth, students, teachers, hospital patients, and office workers), no information exists on the national prevalence of tobacco use, on tobacco expenditures, or on the impacts of tobacco use.

In Senegal, the researchers reviewed tobacco and/or poverty-related publications and met with representatives from various institutions, research agencies, the Ministries of Health, Commerce, Economics and Finances, the World Bank, WHO, Consortium pour la recherche économique et sociale (CRES), the University of Dakar, and anti-tobacco organizations to obtain current information about tobacco use in the country.

### *Secondary data analysis*

In Cameroon, the researchers drew data about smoking prevalence and poverty levels from business statistics and from the 2007 ECAM3 (*Troisième Enquête Camerounaise auprès des Ménages* – the Third Cameroonian Household Survey) carried out by the National Institute of Statistics of Cameroon. ECAM3 involved a nationwide sample of households and provides reliable data on poverty, household living conditions, household spending, and household tobacco consumption and expenditure.

### *Quantitative and qualitative research*

In Cameroon, data collected from the literature review was supplemented by a survey of 1,000 people (both smokers and non-smokers) in each of the cities of Yaoundé and Douala, respectively the political and economic capitals of

the country. For comparison purposes with the ECAM3 data, the assumption was made that the population characteristics were similar in both 2007 and 2010. A minimum sample was taken in each city of 30 surveys for each age group by sex; the final proportional sampling by sex and age group in each city was made to approximate the total population structure. The surveyors randomly selected ten roads intersecting the main road in each of the cities, assigned sample quotas proportionally to each of the ten roads, and then identified and surveyed individuals until the desired number of interviews was completed. The surveys were undertaken over a ten day period by 2 teams, each containing one supervisor and four data collectors. The collected data was inputted into the program CSPRO, while analysis was done with SPSS.

In Mali, a total of 1,000 people were surveyed in Bamako and in the communes of Koulikoro which surround the capital city (700 in Bamako and 300 in Koulikoro). The researchers used a cross sample of the population based on what was known about the population in 2008 (it was assumed that there had been no major changes in population structure between 2008 and 2010). As such, the interviewees were selected by age and sex proportionally to the structure of the entire population. Several roads were selected randomly in each commune proportionally to the number of persons that were to be surveyed there. The surveys were conducted over a ten day period by five teams of surveyors (two people each) accompanied by three supervisors. The collected data was inputted into the program CSPRO, while analysis was done with SPSS.

In Senegal, the research component included the use of two qualitative questionnaires. The questionnaires were implemented in eleven quarters of the department of Dakar (Pikine, Guédiawaye; Sica-liberté, HLM, Parcelles Assainies, Fass, Médina, Yoff, Keur Massar, Castor and Plateau). This allowed the survey to cover not only the downtown area

but also the suburbs in and around Dakar.

The researchers found that there was no reliable population base information available, and so focused on 100 smoking youth and 250 smoking heads of households. Heads of household were selected as they make decisions about household expenses, while youth were selected to discern how much they spend on cigarettes as well as their knowledge about the harmful effects of tobacco use.

*Africa represents a market of 700 million potential tobacco consumers, of whom half are youth aged less than 20 years. These studies were the first to begin addressing the potential economic impact of tobacco use in these three countries.*

The main questions asked addressed issues such as:

- ✚ Basic household expenses
- ✚ Household expenditures spend on cigarettes
- ✚ Impact of tobacco spending on the purchase of household necessities
- ✚ Tobacco expenditures by socio-economic groups
- ✚ Circumstances leading youth to smoke
- ✚ Knowledge of the health effects of smoking

## HONDURAS

### *Quantitative and qualitative research*

The Honduran researchers conducted a study of the working and health conditions experienced by tobacco growers on a tobacco farm in the Valley of Jamastrán, El Paraíso, to inform recommendations on ways to improve the living conditions of people living in the valley. The researchers conducted semi-structured interviews with 80 hired tobacco workers, male and female (55% and 45%, respectively); randomly selected, they constituted 27% of the total farmers at the farm. Through the interviews, the researchers collected information about the farmers'



educational levels, the characteristics of their dwellings, public services available to them and their utilization of such services, their incomes, perceived illnesses, and perceived risks involved in tobacco-related work.

*By examining the working conditions of Honduran tobacco farmers, the study counters the tobacco industry's claim that tobacco-related jobs reduce poverty.*

## INDIA

### *Literature review*

The team began its study with a literature review of published reports and other documents related to the tobacco industry and tobacco workers in India to identify what information currently existed and where there were gaps. The reviewed documents included state-specific information collected through VHAI's state partners, official statistics, Ministry of Labour reports, technical reports and monographs, research studies, articles, books, and news clippings that were collected during personal visits to senior government officials as well as through the internet and media monitoring.

### *Quantitative and qualitative research*

The Indian researchers conducted a qualitative and quantitative study of three components of the bidi manufacturing sector in that country: tobacco growing, tendu leaf collection, and bidi rolling. The study addressed these three categories in seven districts of four states:

- ☀ Jharkhand – bidi rollers and tendu leaf pluckers
- ☀ Bihar – bidi rollers and tobacco farmers
- ☀ Uttar Pradesh — bidi rollers and tobacco farmers
- ☀ Madhya Pradesh – tendu leaf pluckers

Study locations were selected with large populations of bidi workers, tobacco farmers, and/or tendu leaf pluckers, and in which very little primary tobacco research had been

undertaken previously. The principal researcher visited each study site prior to starting the study to establish an initial rapport with the local population. Field investigators from each study site then helped to collect the information at the state, district, and block levels.

For the bidi roller component, information was collected in five districts across three states through 17 focus group discussions, 17 case studies, structured interviews with 40 bidi workers and 6 middlemen or bidi factory agents, and a household survey of 100 randomly selected bidi rollers. Socio-economic and demographic data was also recorded via observations and community-level surveys of village residents. As women and children dominate bidi rolling, only women respondents were included in the structured interviews and FGDs.

The team also interviewed nearly 200 randomly selected tobacco farmers using both structured and non-structured interviews, held 10 FGDs with 112 tobacco farmers, and prepared 20 case studies in three districts across two states.

The team then conducted on-the-spot observations of 180 tendu pluckers, led 25 non-structured interviews and 4 focus group discussions with tendu pluckers and 10 non-structured interviews with agents/local contractors and forestry department officials, and wrote 21 case studies. In Madhya Pradesh, the researchers accompanied tendu pluckers to observe them collecting, bundle-making, and depositing the leaves at the collection site. In Jharkhand, the team met with tendu pluckers who were mostly sitting idle with no alternative occupation during the monsoon season.

*The Indian study demonstrated that three different groups of tobacco workers are economically exploited, enjoy no rights or privileges as workers, and live in the most miserable conditions of acute poverty*



## INDONESIA

### *Secondary data analysis*

The University of Indonesia's Center for Health Research has conducted many studies on child nutrition. Although these studies did not specifically examine the relationship between child health status and household tobacco consumption, data about both factors was collected during the original studies. Researchers at the Center selected three studies that contained sufficient data to inform a secondary analysis of the relationship between cigarette use, poverty, and child health.

The first study selected was a cross-sectional household survey using a WHO rapid survey approach in Sukabumi

*The Indonesian study provided an alternative perspective on the effect of tobacco consumption in a country where the government believes that tobacco is one of the most profitable commodities contributing to its national revenue.*

District, Indonesia. A total of 720 households were randomly selected in seven districts. The original study questions addressed issues related to both the household as a whole and its individual members. The study data was then re-examined from the perspective of household expenditures on tobacco versus on basic commodities to assess the economic impact of tobacco use. In particular, the secondary

data analysis looked at the proportion of household income spent on tobacco versus other basic needs such as food, health, and education, as well as how this spending comparison varied between low- and higher-income groups.

The second study selected was a 2007 baseline study on the health status of children under the age of five that had been conducted for a project funded by the Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ). A total of 6,168 households were surveyed in the provinces of Nusa

Tenggara Timur (NTT) and West Nusa Tenggara (NTB). The data initially collected focused on the children's weight and height for age, weight for height, low birth weight status, and frequency of acute respiratory infection (ARI). It also included data on household smoking. Using PATH analysis, the researchers re-analyzed the data to assess the direct and indirect relationships between parental smoking, child nutrition, low birth weight, and respiratory infection; statistical significance was calculated as  $<0.05$ .

The third set of data was collected from the Comparative Survey of Community Attitudes and Perceptions of the Provision of Health Services by Pilot and other Puskesmas in SCHS Project in Jambi, South Sumatra and Papua Provinces, Indonesia, 2007. The original cross-sectional study had a sample of 5,986 households in 3 provinces, and included questions about children's health issues, parental smoking, and household economic status. Focusing on the 2,378 households with children aged 1 -10 years, the re-analysis examined the increased risk of ARI in poor children with fathers who smoke compared to non-poor families. The re-analysis also sought to determine if smoking impacts the health of poor children to a higher degree than those from more well-off families. The crude and adjusted odds ratio was calculated using a multiple logistic regression. The odds ratio was adjusted by age of the children and stratified by household welfare quintile. Households in the first and second quintiles were considered poor. A separate odds ratio was calculated for the poor and non-poor household groups. The impact of smoking fathers on their children's ARI was calculated using an attributable fraction calculation.

## LATIN AMERICA

### *General literature reviews*

Prospective Latin American researchers interested in addressing tobacco and poverty were invited to attend a

capacity building workshop organized by HealthBridge at the 40th World Lung Conference in Cancun, Mexico. Before attending the workshop, the researchers, who represented eight countries, were asked to identify and review existing literature to determine what work had already been done relative to tobacco and poverty in their respective countries, as well as what gaps remained. The key themes investigated were tobacco consumption (and its impacts on household economics, nutrition, and basic needs) and production (particularly tobacco worker livelihoods).

While most of the researchers found secondary sources from which they could extrapolate data – such as national or provincial surveys that included information on smoking prevalence rates, socio-economic conditions, quality of life, poverty, agricultural work, etc. – studies that directly addressed the tobacco and poverty relationship existed only in Brazil (and that one produced with funding from the Bloomberg Initiative). There was thus a clear and large information gap.

## MEXICO

### *Secondary data analysis*

To assess the economic impact of tobacco consumption on poor households, researchers in Mexico conducted a secondary data analysis of three representative household surveys: the National Household Survey on Income and Spending 1994-2008 (*Encuesta Nacional de Ingresos y Gastos de los Hogares*) carried out by the National Institute of Statistics and Geography, the National Survey on Health and Nutrition 2006 (*Encuesta Nacional de Salud y Nutrición*) carried out by the National Institute of Public Health, and the Global Adult Tobacco Survey Mexico (GATS) 2009, also conducted by the National Institute of Public Health. Additional information on prices of goods was collected from surveys conducted by the Bank of Mexico, the Federal

Consumer Procurement Agency, and Diconsa.<sup>7</sup>

The researchers focused their re-analysis on a number of variables that were used in the earlier surveys, including:

- ❖ Socio-economic status
- ❖ Household size
- ❖ Prevalence of tobacco use
- ❖ Household spending on tobacco
- ❖ Household spending on basic needs (food, health care, education)
- ❖ Cost of selected basic items (for example, milk) to calculate the opportunity cost of tobacco spending

Not all of the variables were used in each of the previous surveys; where the same variable was used in more than one survey, the questions asked were not always identical. The researchers therefore had to exercise care in how they used the data. For example, although the National Household Survey on Income and Spending contained very detailed information on total income, the researchers found that they could not use information on income from the other surveys because they either did not directly collect this type of data or the data that they did contain was too limited. Instead, they used socio-economic indicators such as house construction materials to construct substitute variables. A publication outlining how to construct socio-economic indicators using the GATS served as a foundation, and only data that was comparable across surveys was included in the re-analysis.

*The Mexican study focused on the important connection between tobacco use and well-being, and the ways in which tobacco control policies could and should complement policies designed to reduce poverty.*

<sup>7</sup> Diconsa is a mainly state-owned company which supplies basic products for free to highly and very highly marginalized communities.

The researchers also carried out a descriptive analysis and used statistical tests to test their hypotheses.

## PERU

### *Literature review*

The Peruvian literature review was undertaken in three steps. First, the researchers examined the social indicators of poverty. They searched the websites of various organizations<sup>8</sup> and also visited libraries for documents. The key words and phrases used for the search were: quality of life, unmet needs, household allowance, basic needs, cost of products, poverty, and determinants of poverty. This search produced official government technical reports, as well as articles in economic magazines and newspapers, and

*The Peruvian study highlighted the significant opportunity cost of tobacco expenditures among the poor, particularly in a country where one-third of the population is poor and where the poorest households have the most children.*

Powerpoint presentations and technical reports published by private organizations.

The second phase of the literature review focused on various aspects of tobacco production and consumption in Peru. The researchers looked for Information related to (i) the prevalence of tobacco use within the general public and in specific

populations (such as youth, professionals, and high school students), (ii) per capita consumption of tobacco, (iii) price of tobacco, (iv) national tobacco control legislation, and (v) tobacco farming and marketing. Websites were searched and documents collected from the Ministries of Health, Industry, and Finance, the National Commission for Development and Life without Drugs, and the Central Reserve Bank of Peru. The key words and phrases used for the search were: tobacco use, tobacco production, tobacco farming, tobacco spending, tobacco taxes, tobacco marketing, tobacco sales, and repercussions of tobacco use. While much information was found related to tobacco consumption and its effects/consequences and tobacco control, very little was found that addressed the economic impact of tobacco use in the country.

The third phase of the literature review addressed tobacco and poverty. Key words and phrases used for the website searches were: tobacco and poverty, impact of tobacco use on the poor, relationship between tobacco and poverty, tobacco consumption in low income/poor households, tobacco spending by the poor, the economic consequences of tobacco use, tobacco econometrics, and economy of tobacco. Between 20 and 30 international documents were found. The main international websites used were those of HealthBridge, the World Bank, WHO, PAHO, and The Union. Information provided directly by HealthBridge was also consulted. No Peru-specific information was found.

The researchers supplemented the literature review by interviewing Dr. Carlos Farias (COLAT Peru), Alejandro Ramos (CIET, Uruguay), and Martin Rosada (Argentina); the former is an expert on Peruvian tobacco control issues while the latter two are international tobacco control experts. The purpose of the interviews was to guide the literature review and to help define the subsequent research design.

While various statistical reports provided information about

<sup>8</sup> Websites of the following organizations were searched: La Encuesta Nacional de Hogares (National household survey); Instituto Nacional de Estadística e Informática (National Institute of Statistics and Information); Ministerio de Economía y Finanzas, (Ministry of Economy and Finance); Consorcio de Investigación Económica y Social, (Economic and Social Research Consortium) ; Instituto Cuánto; Instituto Grade; Instituto Maximize; Universidad del Pacífico, (Pacific University); Ministerio de la Mujer (Ministry of Women); Presidencia del Consejo de Ministros (Presidency of the Cabinet).

the prevalence of tobacco use and of poverty, and others addressed the consequences of tobacco use, the literature review revealed that there had been no studies undertaken specifically on the relationship between tobacco and poverty in Peru. For example, the National Institute of Statistics of Peru has carried out household surveys on the composition and structure of expenses among Peruvian households which included tobacco spending by heads of households. However, such surveys have not taken the further step to show the relationship between tobacco expenditures and the household budget within poor households, nor have they explored the opportunity costs associated with tobacco expenditures in terms of nutrition, health, and education.

### *Quantitative and qualitative research*

Between August and September 2010, the Peruvian researchers conducted a combination quantitative/qualitative study to assess household expenditures on tobacco, the impact of such expenditures on resources that could otherwise have been spent on basic needs, and the negative effect of that tobacco spending on households with children. The quantitative portion of the study consisted of a survey of 200 heads of household (both smoking and non-smoking) in suburban locations defined as marginal urban zones in three regions where there are sizeable pockets of poverty: the district of Villa El Salvador in the Department of Lima (100 respondents), the city of Ayacucho in Huamanga Province, and the city of Tarapoto in San Martín Province (50 respondents each). In all three cities, the researchers included the same number of households with smokers and those without, to ensure that differences in the relationship between the study's variables could be identified.

Smoking households were classified as those in which the head of family (father or mother) or another household

member actively contributed to family income and consumed at least two cigarettes daily; non-smoking households were likewise classified as those in which no members consumed tobacco. The survey consisted of 40 questions about socio-demographic variables, the structure and composition of household expenditures, and tobacco consumption. The survey was first pilot tested in each city, and then revised.

The qualitative component of the study consisted of in-depth interviews with 24 heads of family to complement the information obtained through the surveys. The interviews were tape-recorded and notes were taken to improve comprehension. Twelve of the interviews were conducted in Lima, and six each in the other two cities. In addition to following up on the questions from the quantitative survey, the interviews focused on opinions and attitudes related to tobacco production, use, and control.

## **VIETNAM**

### *Literature review*

The Vietnamese study centred on a detailed literature review using the Medline, PubMed, and Google Scholar databases. The search terms tobacco and Vietnam were used in combination with the words economics, tax, burden, health cost, control policies, or poverty. The researchers screened all retrieved articles to ensure that they addressed either (i) the relationship between tobacco consumption, expenditure, or production AND health or health care costs, family or national economics, basic or necessary household expenditures, environmental degradation, standards of living, or standards of employment OR (ii) the potential impact of tobacco control policies on tobacco consumption, expenditure, or production and related employment, economics, or health. The references of all collected articles were reviewed to identify further articles. Twenty-two



articles were included in the final review.

The online search was supplemented with a manual library search and direct contact with researchers and advocates. This provided legislative and government publications

*The Vietnamese study highlights the fact that the implementation and enforcement of a range of tobacco control measures could prove beneficial not only to improve public health but to alleviate poverty.*

related to tobacco control, Government of Vietnam national survey publications, Vietnamese monographs, project reports, and articles, books, and online publications that did not specifically address Vietnam but which provided contextual information about tobacco and poverty more broadly.

The collected publications were categorized thematically for advocacy purposes: (1) smoking prevalence and health burden; (2) economic burden of tobacco use and production; (3) environmental impact of tobacco production; (4) impact of tobacco control policies on tobacco consumption; (5) general publications; and (6) Vietnamese policy and statistical documents.



### 3 Results from Tobacco and Poverty Research for Advocacy Studies

A number of key issues related to tobacco and poverty were addressed through the various studies. Many of these issues are inter-related and overlapping, particularly as they impact on poverty, but nevertheless can be grouped into several major themes. Summarized results obtained from the ten studies are presented below. Further details from each study can be found in their individual reports, which have been uploaded to [www.healthbridge.ca](http://www.healthbridge.ca). Research results from Bangladesh and Vietnam have also been published in the journal *Tobacco Control*.<sup>9</sup>

#### 3.1 Tobacco expenditures, opportunity costs, and financial impacts on low-income families

Tobacco is mostly consumed by the poor, who can least afford it and who potentially would be significantly better off if they spent their money instead on food or other basic needs. While spending less money on tobacco is no guarantee that smokers will spend more on basic needs, it is nevertheless true that money spent on tobacco inherently means that less money is available for other needs. While it is ideal to demonstrate that those spending less on tobacco do in fact spend more on basic needs, it is also meaningful to demonstrate the *potential* for doing so.

Several of the key links between tobacco and poverty – expenditure, opportunity costs, and the financial impacts on

<sup>9</sup> Roy A, Efroymson D, Jones L, et al. "Gainfully Employed? An Inquiry into Bidi-Dependent Livelihoods in Bangladesh." *Tobacco Control* (2011). Published Online First 20 July 2011 doi:10.1136/tc.2011.043000; Efroymson D, Pham THA, Jones L, et al. "Tobacco and Poverty: Evidence from Vietnam." *Tobacco Control* 20, no. 4 (2011): 296-301. doi:10.1136/tc.2010.039735. Published Online First 31 March 2011.



low-income families – are useful for influencing policy debate and development in any country:

- Actual monthly expenditures on tobacco versus expenditures on food, housing, education, and health care relative to total expenditure or income.
- Opportunity costs of purchasing tobacco for individuals/families.
- Opportunity costs of purchasing tobacco at the national level.

Each of these points is explored in more detail below, with the results from the research projects used as illustrations. In the case of Argentina and Peru in particular, these studies are the first of their kind and therefore set the stage for much future research on this topic.

### 3.1.1 Per capita expenditures

At the most basic level, comparing per capita tobacco expenditures against expenditures on food, education, and health care provides a picture of how household income is distributed and how much of it goes to tobacco rather than to basic needs that would benefit the entire family.

Another way to examine expenditures is to compare male and female expenditure patterns related to tobacco (and types of tobacco purchased) against per capita expenditures on food, housing, health, and education. This would be particularly illustrative when examined in terms of household expenditure decision-making roles and responsibilities. For example, can significant differences be seen in the percentage of household income spent on basic needs where women have more responsibility for overall household spending?

#### ARGENTINA

Households with total spending below the poverty level (first quintile) were far more likely than those in the fifth

quintile to report difficulty meeting their monthly needs (33.4% vs. 11.8%). Female-headed households were more likely to be in the lowest income quintile (25.5%) than male-headed households (19.0%). Thirty percent of the surveyed households reported spending money on tobacco products. The researchers found that the ratio of tobacco expenditures did not vary by sex, although men spent a higher additional amount on alcohol than did women.

Although total per capita monthly spending on tobacco and alcohol was found to be quite similar (AR\$40-51) across each income level, spending on tobacco and alcohol represented a much larger *percentage* of average income for the lowest income group as compared to the highest one (8% versus <2%). The average total annual spending per household on tobacco products across all income groups was calculated as AR\$588, and on tobacco and alcohol combined, about AR\$1,140.

**Table 2: Comparison of spending on tobacco and food/household services, Argentina**

Type of Expense	Average monthly tobacco expenditures, as a % of other household expenditures		
	Low income	Middle income	High income
Food purchases	30%	31%	27%
Electricity costs	66%	80%	68%
School fees	149%	145%	80%
Water costs	193%	232%	191%
Pre-paid health insurance	297%	206%	135%

As shown above in Table 2, tobacco expenditures in low-income households with smokers represented, on average, almost one-third of weekly food purchases and two-thirds of electricity costs. The amount spent on tobacco was more

than double the amount spent on school fees, water, and pre-paid health insurance. Medium and high income families could also increase their spending on food and services if they did not spend money on tobacco.

## BANGLADESH

With a population of 162.2 million, Bangladesh is one of the poorest countries in the world. According to data from the Bangladesh Bureau of Statistics (BBS), almost half of the population lives below the poverty line. When the poor spend their scanty income on something other than food and other basic necessities, their lives are adversely affected. Yet tobacco consumption is so widespread that a significant portion of people's income is spent on tobacco. Bangladesh ranks number eight of the ten countries that have more than 60% of all smokers worldwide.<sup>10</sup> According to the Global Adult Tobacco Survey in Bangladesh, 43.3% of adults (41.3 million people) currently use tobacco. Consumption is higher by males (58%) than females (28.7%). Tobacco use is more prevalent in rural areas than urban areas, and among persons of lower socio-economical status who have no formal education.<sup>11</sup>

Most Bangladeshi smokers consume bidis, a hand-rolled<sup>12</sup> unfiltered cigarette: manufactured cigarettes account for 75% of the value but only 25% of the volume of tobacco, while bidis account for the rest.<sup>13</sup> Given the high poverty

level and the popularity of bidis among low-income earners, bidi smoking merits special attention. However, bidi consumption remains poorly addressed in both tobacco research and tobacco control strategies.

Several previous studies have included initial explorations of the socio-economic implication of tobacco consumption in



Bangladesh. In 2001, Efroymson et al. cited national statistics which highlighted the fact that the poorest households in Bangladesh (income less than \$24/month) have smoking rates twice those of the wealthiest households

(income more than \$118/month). Analyzing the data collected from national statistics, they suggested that tobacco expenditures exacerbate the effects of poverty and divert household income away from food, clothing, housing, health, and education. They estimated that a poor smoker could add more than 500 calories to the diet of one or two children with his or her daily tobacco expenditure. They also estimated that if money spent on tobacco were redirected toward food purchases, this would provide enough calories to prevent 127,750 deaths from malnutrition in children under age 5 per year and that 10.5 million malnourished people could have an adequate diet.<sup>14</sup>

In their later studies on the relationships between tobacco prices and parental tobacco use and child health status, Nonnemaker and Sur and Best et al. also demonstrated that tobacco use negatively affected the distribution of

<sup>10</sup> Jha, P., Analysis: Avoidable Global Cancer Deaths and Total Deaths from Smoking. *Nature Reviews Cancer*, 2009. 9(September 2009).

<sup>11</sup> World Health Organization, *Global Adult Tobacco Survey: Bangladesh Report 2009*. 2009: Dhaka.

<sup>12</sup> Bidis are sold already rolled; hand-rolled means they are made by hand, not by machine, but they are not rolled by the consumer. In Bangladesh, bidis are rolled in paper and sold in packs of 25 at a price far lower than cigarettes.

<sup>13</sup> Ali, Z., A. Rahman, and T. Rahman, *Appetite for Nicotine: An Economic Analysis of Tobacco Control in Bangladesh*. 2003.

<sup>14</sup> Efroymson, D., et al., Hungry for Tobacco: An Analysis of the Economic Impact of Tobacco on the poor in Bangladesh. *Tobacco Control*, 2001. 10: p. 212-217.

household expenditures.<sup>15</sup> Likewise, Howlader et al.'s study found that the lowest income groups spend as much as one-fourth of their monthly incomes on tobacco.<sup>16</sup>

The current study reflects the earlier results. The survey data showed that bidi users are primarily low-income earners. Among those participating in the study, 29% were farmers, 29% rickshaw pedalers or bicycle cart drivers, 14% daily laborers, and 10% hawkers. As shown in Table 3, respondents in the lowest income group spent the highest proportion of both their daily income and total household expenditures on tobacco – 9.9% and 10.7%, respectively.

**Table 3: Daily expenditure on bidis according to the reported level of daily income, Bangladesh**

Daily Income (Taka)	Mean daily expenditure on bidis	% of daily income spent on bidis	Bidis as % of daily household expenditure	% of participants
51-100	7.4	9.9	10.7	13.5
101-150	7.9	6.4	8.9	26.6
151-200	8.6	4.9	8.0	25.1
201-250	7.7	3.4	5.5	16.2
251-300	7.6	2.8	4.0	12.4
300+	7.1	2.3	3.4	6.2
Weighted average	7.9	5.3%	7.4%	100%

<sup>15</sup> Nonnemaker, J. and M. Sur, Tobacco expenditures and child health and nutritional outcomes in rural Bangladesh. *Social Science & Medicine*, 2007. 65: p. 2517-2526; Best, C.M., et al., Parental tobacco use is associated with increased risk of child malnutrition in Bangladesh. *Nutrition*, 2007. 27: p. 731-738.

<sup>16</sup> Howlader, S.R., et al., *Prevalence and Economic Impact of Tobacco Consumption in Bangladesh: A Household Survey in Selected Rural and Urban Areas*. 2003, Institute of Health Economics: Dhaka.

The average proportion of daily income and total household expenditures spent on bidis decreased as income increased. The low-middle income group spent the highest amount on bidis. Most respondents spent \$0.11-\$0.12 (7.9-8.6 taka) per day or \$3.45-\$3.75 (237-258 taka) per month on bidis.

## INDONESIA

In 2008, nearly 35 million people in Indonesia lived below the poverty line and more than 4 million children under the age of five years were undernourished. Among the poor, meeting basic needs is often difficult, if not impossible. Previous research on the household expenditures of poor families in North Jakarta's slum area demonstrated that monthly cigarette expenditures within poor families is very high; in fact, at average of Rp. 210,000 (\$US 23.3) per month, it exceeded expenditures on food. The current study corroborated those findings, revealing that household monthly expenditure on cigarettes – on average the poor in Sukabumi spent Rp. 78,800 (\$US 8.6) on cigarettes – constituted the greatest proportion of total spending (13.4% of total household expenditure). This was higher than spending on other basic household needs. Smokers spent more than seven times as much on cigarettes as per capita expenditure on health care. Poor households spent a significantly higher proportion on tobacco than on either health or education. Among those who lived below poverty line, the ratio of expenditure on tobacco to health reached 19.2, while the ratio of expenditure on tobacco to education reached 7.1 ( $p < 0.05$ ).

The researchers explored whether this pattern was significantly different among different socio-economic groups. They found that the ratios of cigarette expenditure to healthcare and education expenditures among the poorest group were higher than they were among the richest group (19% to 16%, and 10% to 6%, respectively).

## MEXICO

In Mexico, smoking prevalence within the lowest socio-economic groups is lower than it is among the higher income groups.<sup>17</sup> The 2006 National Health and Nutrition Survey and the 2009 Global Adult Tobacco Survey suggest that the smoking rate among the lowest two income quintiles is between 11.5% and 15.8%, while in the highest quintile it is 19.2-23.1%. Although this runs counter to the case in many other countries, spending on tobacco in low-income households nevertheless represents a significant portion of their total spending.

Table 4 shows the distribution of household expenses by income quintiles, calculated using data from the 2008 National Household Survey on Income and Spending. Quintiles one and five each represent the 20% of households with the lowest and highest current per capita income (monetary and non-monetary), while quintile three represents the middle income group. Smoking households are not distinguished from non-smoking households.

<sup>17</sup> Sáenz de Miera-Juárez B, Jiménez-Ruíz JA, Reynales-Shigematsu LM, Lazcano-Ponce E, Hernández-Ávila M. El consumo de tabaco en los hogares mexicanos, 1994-2005, *Salud Pub Mex* 2007; vol. 49, supl. 2: S263-S269. Sáenz de Miera B, Jiménez-Ruíz JA, Reynales-Shigematsu LM. *The Economics of Tobacco in Mexico*, Cuernavaca: Instituto Nacional de Salud Pública, 2007. Vázquez LA, Sesma S, Hernández-Ávila M. El consumo de tabaco en los hogares en México: resultados de la Encuesta de Ingresos y Gasto de los Hogares, 1984-2000. *Salud Publica Mex* 2002, Supl. 1(44): S76-S81. Vázquez LA, Valdés R, Hernández-Ávila M. Consumo de tabaco en hogares: Encuesta Nacional de Ingreso Gasto de los Hogares, México, 2002. En: Valdés R, Lazcano-Ponce EC, Hernández-Ávila M, eds. *Primer informe sobre combate al tabaquismo. México ante el Convenio Marco para el Control del Tabaco*, Cuernavaca: Instituto Nacional de Salud Pública, 2005: 115-123.

**Table 4: Distribution of household expenses by quintile, Mexico**

Type of Expense	Per capita income quintiles		
	1: Poorest	3: Middle	5: Richest
Cigarettes	4.6%	3.7%	3.6%
Food and Drink	47.4%	38.5%	28.3%
Clothing and Shoes	5.0%	5.0%	4.9%
Housing	11.1%	10.7%	10.7%
Cleaning	5.6%	5.0%	6.3%
Health	1.7%	1.8%	3.3%
Transport	11.2%	16.7%	19.0%
Education	4.7%	6.4%	5.3%
Recreation	0.9%	2.7%	5.9%
Personal care	6.5%	7.6	6.8%
Transfers	1.3%	1.8%	5.9%

The researchers calculated from the survey data that the poorest smokers spend an average of 175 pesos per month (in 2010 prices) on tobacco. This amount is equivalent to about three days of a minimum wage salary, and represents about 4.6% of their total monthly expenditures.

The researchers also found that smoking households spent relatively less money on food (35.9% vs. 40.8%) and education (5.3% vs. 6.7%) than did non-smoking households.

## PERU

In Peru, 34.8% of the population – or 10.3 million people – live in poverty. The latest national epidemiological study found that 18.4% of the population aged 12 to 64 years smoked in the previous 30 days. National studies carried out by the National Commission for Development and a Drug-Free Life and the Centre for Information and Education for the Prevention of Drug Abuse found that smoking is more



common in lower socio-economic groups. Similarly to other low-income countries, in Peru it is men who are most likely to smoke. Since men are also typically the head of the household, when they smoke these men often spend an important part of the family's monthly income on tobacco, to the detriment of the whole family, especially the children.

In the study areas, 60.5% of the surveyed households reported having monthly incomes between S/. 551 and S/. 1,100 Nuevos Soles (US\$ 200 – US\$ 400). The poverty line is established at S/. 257 per person per month, this being the minimum amount required to enable a person to satisfy his or her basic food and other needs (clothing/ shoes, house rent, fuel, furniture, health care, transport, education etc.). With an average of 5 members, the minimum household income required to meet basic needs is approximately S/. 1285; many of these households engaged in tobacco production thus fall below the minimum.

There were few notable differences in the distribution of expenses between smoking and non-smoking households, with food being the first priority in 97.5% of both types of household. Other expenses, such as rent, services, education, recreation, health, and transport were deemed important but not as high a priority. Despite this, in cases where money was short, it was made available in smoking households for tobacco but not for food.



The study found that within the smoking households, 91% of the smokers consumed up to 5 cigarettes per day, with the lower income families consuming towards the top of the range. This was in line with the finding that those who earn the least smoke the most, with rates of smoking being

directly inverse to income.<sup>18</sup> Low-income smokers are drawn to tobacco in part by the perceived low price<sup>19</sup> and the sale of small packets (less than 20 sticks). Although these sales were banned in November 2010, they continue due to poor monitoring and enforcement. In Peru, smuggled cigarettes are also available at a low price, which has a direct impact in terms of accessibility, especially among the poor.

Interviews revealed that low-income smokers felt that by purchasing single sticks, they were avoiding any real expense on cigarettes: *“when you buy them one at a time, you don’t feel the cost”*. Approximately one-third of smokers said that they buy single sticks and the other two-thirds buy packs of 20 sticks or less.

Almost half (48%) of the smokers interviewed spend up to one sol each day on cigarettes, while 47% spend an average of 2 sol each day. This equals about S/. 60 average monthly expenditure on cigarettes, or 6.2% of monthly income. The results are similar to those found by the 2008 National Household Survey, which found that the two poorest groups of households spend 4.6% and 7.3% of their total expenditures on tobacco, respectively. Tellingly, only 6% of those interviewed felt that their spending on tobacco is significant; 62% consider it “regular spending” and 32% said that they spend only a little money on tobacco.

## VIETNAM

National surveys in Vietnam show that socio-economic characteristics appear to be a predictor of tobacco use, with the lowest income groups having the highest smoking

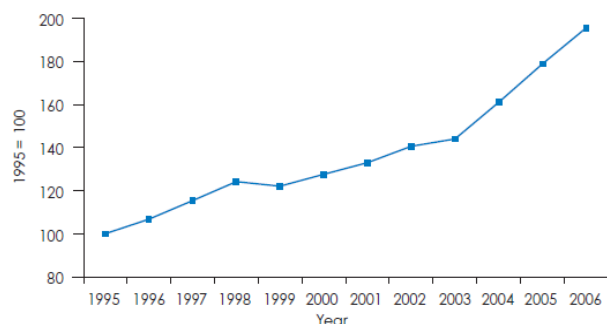
<sup>18</sup> For example, those who earn from S/. 250 to S/. 550 smoke on average 4.3 cigarettes a day, while those who earn from S/. 551 to S/. 1,100 smoke 3.5 cigarettes a day, and those who earn more than S/. 1,101 smoke on average 3.2 cigarettes a day.

<sup>19</sup> A pack of 20 cigarettes of the most common brand costs about US\$1.50, while single sticks are sold for S/. 0.02, or about US\$0.07.



rates.<sup>20</sup> This is due, in part, to the fact that tobacco prices have actually *decreased* over the period 1995-2006 while incomes have increased. The overall affordability of tobacco has thus increased considerably, particularly for the poor. Figure 1 shows just how significant the increase in tobacco affordability has been: a rising affordability index indicates that tobacco products are becoming more affordable.

**Figure 1: Affordability of tobacco products, Vietnam, 1995-2005**



### 3.1.2 Opportunity costs of tobacco

**B**eyond looking at the actual expenditures on tobacco versus other household basic needs, including food, housing, and education, it is even more powerful to extrapolate this comparison to demonstrate what is not being purchased. In other words, what amount of food, housing, or education *could have been purchased* with the amount that was spent on tobacco, if it were so redirected? This might be calculated in calories of rice or fish or other

<sup>20</sup> Nguyen TM, Hoang VK, Nguyen TL, et al. Financial burden of smoking on households in Vietnam. *Med Prac Jour* 2006;533:94e107. (Monograph of Research on Tobacco Control for the period 1999e2005); Nguyen TL, Chapman S, Taylor R. The economic impact of tobacco expenditure on poor households in Vietnam. *Med Prac Jour* 2006;533:88e93. (Monograph of Research on Tobacco Control for the period 1999e2005).

high nutrient-value foodstuffs. One could calculate, for example, the quantity of rice, tortillas or other staple food that could be purchased with the same amount of money spent on tobacco, multiplied by the caloric value of the food. Presenting calories rather than servings allows a comparison of the potential impact of tobacco expenditure on poverty-related malnutrition.

Similarly, one might make comparisons between tobacco expenditures and children's education (e.g., school fees, books and other materials, school uniforms, transportation, etc.) or housing (rent, price to add a toilet, etc.).

### ARGENTINA

The 2007 National Survey on Nutrition and Health shows that in the northeast region of Argentina, which includes the project's study sites, 75.7% of children aged 6 months to 5 years live in poor<sup>21</sup> households (40% in destitute and 35.7% in non-destitute households), and that 45% of the households containing children had unmet basic needs (UBN), including



housing, sanitation, schooling, or head of household without primary education. Among children aged 6 to 72 months, 10.6% exhibited some symptom of nutritional deficit according to the measures of the

Argentinean Paediatric Society (low weight in 5.2%, stunting in 4.0% and emaciation in 1.4%). More than twice as many children living in poor households (7.7%) than in non-poor households (3.1%) were of low weight, and the proportion of

<sup>21</sup> Poverty is defined in terms of the cost of a basic basket of foods and the number of household members.

stunting was 7 times higher (1.1% vs. 7.1%). In children aged 6 to 23 months, 38.6% had anaemia.

Of the two sites selected by the researchers, Tucumán is one of the 11 poorest provinces in the country: in the departmental capital, San Miguel de Tucumán, more than 25% of the population has unmet basic needs. Similarly, large numbers of people in the province of Jujuy are unable to meet their basic needs. In the surveyed households, 26.3% had received at least one food intervention in the previous 90 days, and the prevalence of anaemia among women aged 10 to 49 was 19.3%. With smoking rates estimated at 38% for men and 26.8% for women in 2004<sup>22</sup>, tobacco expenditures represent a significant opportunity cost.

As shown in Table 5, a calculation of opportunity costs shows that the annual average per capita spending on tobacco products (AR\$588) is enough to purchase enough eggs to improve the nutritional status of four children or to fuel a home for seven months.

**Table 5: Opportunity cost of monthly cigarette expenditures (AR\$588) within the poorest households, Argentina**

Basic Need Item	Average Price (AR\$)	Quantity purchasable with AR\$588	Opportunity Provided by Redirected Spending
Eggs	\$0.40	1,470	4 eggs per day for one year: prevention of malnutrition in 4 children
1 litre of milk	\$3.50	11	2 glasses of milk per day for one year
10 litre canister of gasoline	\$22	19	7 months of fuel for the home

<sup>22</sup> Secretariat of Planning for the Prevention of Drug Addiction and Fight Against Narco-trafficking (SEDRONAR), 2004.

Spending on tobacco thus affects all family members, especially women and children. The study's results show that spending on tobacco products within low-income households are sufficient to instead pay for a significant percentage of the household's needed basic goods and services (education, health, electricity, fuel) and to prevent nutritional deficit. In addition, the researchers found that spending on alcoholic drinks contributed to a doubling of the spending that was being used to purchase items that did nothing to improve family well-being, as opposed to spending on basic needs.

## BANGLADESH

In Bangladesh, out of a population of 162.2 million, 56 million people consume less than the required 2,122 calories per day. Of those, 27 million live under the "hard core" poverty line; that is, they consume less than 1,805 calories per day.<sup>23</sup> For these two groups, about 400 additional calories are needed to bring their present daily food consumption to a sufficient



level. UNICEF estimates that in Bangladesh, 7.2 million children under age 5 are malnourished.<sup>24</sup> Moreover, lower income groups spend more of their food budget on cheaper, less nutritious foods such as rice rather than on the micronutrient-rich foods, which are considered unaffordable "luxury items." For example, according to national statistics, the lowest income groups never eat eggs. Shifting tobacco expenditures to expenditures on food could significantly

<sup>23</sup> Bangladesh Bureau of Statistics, *Report of The Household Income & Expenditure Survey 2005*. 2007: Dhaka.

<sup>24</sup> Bangladesh Bureau of Statistics, *Bangladesh's 7.2 million under-5 children malnourished*. 2009.

improve the nutritional status of the household by making such high-nutrient foods affordable even to the very poor. If the amount of money used to consume bidis everyday were spent instead on food, then:

- ✚ Each of the 7.2 million malnourished children under age five could have one glass of milk daily; OR
- ✚ 5.3 million severely malnourished children could each have one egg and one glass of milk daily; OR
- ✚ 14.5 million underfed people could consume more than 400 additional calories and thus reach the minimum level of calorie intake; OR
- ✚ 13.3 million people could eat an egg every day.

While spending 7.9 taka per day or about 240 taka per month on bidis seems like a small sum, it is significant when one considers its opportunity cost. By reallocating daily bidi expenditures to food, a bidi smoker could easily serve 654 additional calories to one of his family members, perhaps distributed as shown in Table 6. Table 7 illustrates how much food could be bought by shifting monthly bidi expenditures to food and what amount of energy individuals could obtain from each type of food. In the former table, all of the items could be purchased with a single day's bidi expenditure; in the latter table, alternatives are provided.

**Table 6: Alternative items purchasable with daily bidi expenditure (7.9 taka), Bangladesh**

<i>Food item</i>	<i>Cost</i>
346.5 k.cal of rice	2.5 taka
34.3 k.cal of lentils	1.2 taka
135 k.cal of oil	1.2 taka
30.2 k.cal of leafy greens	0.50 taka
109 k.cal of banana (small)	2.5 taka
<i>Total cost (equivalent to one day's bidi expense)</i>	<i>7.9 taka</i>

**Table 7: Caloric value of monthly tobacco expenditures, Bangladesh**

<i>Food equivalents of monthly tobacco expenditure</i>	<i>Total caloric value</i>
40 eggs	3,460K.cal
2 kilograms pulses	6,860K.cal
26 glasses of milk	4,355K.cal
9.5 kilograms rice	32,900K.cal
9.5 kilograms potato	8,455K.cal
2.5 kilograms chicken	2,725K.cal
3 litres soybean oil	27,000K.cal

Poor households spend most of their income on food. Other household expenditures such as housing and education mean that they have no reserves. Any loss or diversion of income simply means going without what they need to survive. Money spent on tobacco can thus make the difference between the ability to meet one's basic needs, particularly for food, and chronic hunger and malnutrition.

### **CAMEROON, MALI, AND SENEGAL**

In Cameroon, where the poverty rate is 40%, smoking is less common among the very poor as they have so few resources available. However, in households with smokers, people spend more on cigarettes than on some important food products such as fruits or cooking oil.

The situation is direr in Mali, one of the world's poorest countries. Here, 63% of the population has no access to potable water and 69% has no access to sanitation. Thirty-three percent of the population is malnourished. More than two-thirds of the population lives below the poverty rate, which is represented by one's ability to afford a basic needs basket costing 400 FCFA per capita per day.

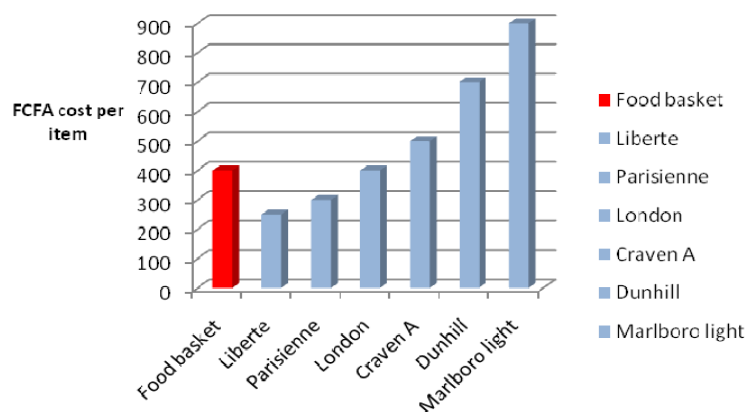
Although the price of a pack of cigarettes in Mali is between 250 and 900 FCFA – or between more than half to more than

double the daily amount needed to keep an individual out of poverty – smoking rates are highest among the poor (63% of smokers are poor). The rate of tobacco use among school students is 30%.

Household tobacco spending in Mali is 10% greater than spending on wheat, 23% more than for manioc, 70% more than for sorghum, and 20 times more than for eggs (all basic parts of the Malian diet). Potentially, money being spent on tobacco could instead be used to buy food, thus reducing rates of malnutrition, infant mortality, and child mortality.

Likewise, the poor spend half on tobacco what they spend on education and one-third what they spend on health; such expenditures affect both their daily lives and their futures.

**Figure 2: Comparison of price of daily food basket versus cigarette pack, Mali**



The situation in Senegal is comparable. In the capital city of Dakar, the poverty rate is 25% for households and 32% for individuals. Among the study population, 46% of the heads of household indicated that they could meet their household expenses only “somewhat regularly,” while 28% were unable to afford their daily expenses. Yet the majority of the respondents smoked.

One-third of the smokers reported spending between 15,000 and 30,000 FCFA per month on cigarettes. If this expenditure were directed to basic household needs, it could instead purchase:

- ✳ four 6kg bottles of gas or 7 kg of meat or 21 kg of sugar or 15 litres of cooking oil OR
- ✳ a medical consultation at a health post, along with medication OR
- ✳ notebooks, pens and a bag for a school student for the entire school year

## INDONESIA

In poor families, lack of money is often used as an excuse for failing to provide children with a good education, accessing healthcare services, or indeed providing nutritious food for family members. At the same time, smokers tend not to consider cigarette expenditures as a burden at all, despite their negative effect on the entire household.

The researchers found that cigarette expenditures in poor households are greater than expenditures on other basic needs. As a result, poor families with smokers decrease the right of their children to health. Recent interviews conducted by the Research and Development Center for Food and Nutrition (Bogor) showed that in most families in which the husband was a smoker, additional earnings obtained by the husband were used to buy cigarettes instead of improving the family’s overall standard of living through the purchase of household needs (such as food, shelter, health care, or education).

As an illustration, consider the case of one father who earns a small income selling bean curd, and gains additional income as a sand-lifter. He earns Rp 3,000 for each bag. Each day, this father consumes a pack of cigarettes, which costs Rp 3,500, a price he considers cheap. How much food could he have purchased instead? He could have bought an egg

for Rp 1,000 (\$US 0.11) and a soybean cake for Rp 250. For every two soybean cakes, his child could have 80 additional calories to help improve her nutritional status. This is a common situation in many families which do not see that cigarette expenditures impact their families' well-being.

Likewise, in Nusa Tenggara Barat (one of the poorest provinces in Indonesia), the average monthly tobacco expenditure was Rp. 57,000 – which was equal to 10 kg of rice or 7 kg of eggs. Money spent on tobacco could have been used instead to buy nutritious food for children. Analysis of household expenditures indicated that money spent on tobacco by poor households was equal to between one and three months' worth of calories and protein for children less than three years of age.

To improve social welfare, the Indonesian government subsidizes poor families with cash transfers (*Program Keluarga Harapan*). Unfortunately, such programs seeking to reduce poverty have not included non-smoking status as a condition to receiving funds. During a spot check, the researchers found that 73% of the households that receive cash aid have at least one smoker, with average monthly tobacco expenditure of Rp. 114,700 (\$US 12.7). With the average monthly cash subsidy being Rp. 180,000 (\$ US20), and with the Indonesian government rejecting any increases to tobacco taxes until at least 2020 due to “political and economical concerns,” the “poverty alleviation program” has in effect turned into a tobacco support program.

## MEXICO

Official estimates put the food poverty level in Mexico at 18.2% (19.5 million people) and general poverty levels at 47.4% (50.6 million people).<sup>25</sup> After calculating the amount of money spent by the poor on tobacco, the Mexican

researchers examined what might have been purchased instead with the money thus spent. As noted above, on average, poor smokers in Mexico spend at least 175 pesos per month on tobacco products. Using the average lowest cost for a number of food items as per the Federal Consumer Procurement Agency (as the poor buy the lowest-priced foods), Table 8 below shows the different food items that a smoking household might have been able to purchase instead of tobacco, for the same expenditure.<sup>26</sup>

**Table 8: Opportunity cost of monthly cigarette expenditures (175 pesos) within the poorest households, Mexico**

<i>Packaged foods</i>	<i>Average Price (pesos)</i>	<i>Quantity of items purchasable with 175 pesos</i>
1 litre of pasteurized milk	10.70	16
1 kg of white eggs	16.00	11
1 kg package of corn flour	9.35	19
1 kg bag of pinto beans	15.65	11
500 gram bag of lentils	12.99	13
170 gram tin of tuna	9.40	19
425 gram tin of sardines	15.95	11

While the poorest households spend less on cigarettes than do wealthier households in absolute terms, tobacco expenditures represent more than 4% of their total spending. Given that these poor households already lack the resources needed to satisfy their basic needs, it is clear that taking away even a relatively small portion of money could represent a significant burden. In essence, the limited resources spent on tobacco compete with basic needs such

<sup>25</sup> Consejo Nacional de Evaluación de la Política de Desarrollo Social. *Evolución de la pobreza en México*, México, DF: Coneval, 2009.

<sup>26</sup> In some cases, special outlets exist to sell subsidized food at even lower prices for the poor.



as food and health care. Significant quantities of various nutritious foods could be purchased with the money otherwise spent on cigarettes.

## PERU

The impact of tobacco expenditures on basic needs among the poor is particularly dramatic because more than one-third of the population is poor; the poorest households also have the most children. Tobacco expenditures thus have a particularly great effect on children, contributing to malnutrition and a lack of education, among other things. For example, 30% of households with smokers received milk rations, which are reserved for children and the elderly.



The 6.2% of monthly income spent by smokers on tobacco is the equivalent of 41.6% of a basic food basket for one family member. With the average monthly expense on tobacco (S/.60), a family could instead purchase hundreds of calories, for example, in the form of eggs, rice, and vegetable stew. The money spent on tobacco per month would be enough to purchase a number of healthy foodstuffs instead, such as:

- 30 kilos of rice
- 30 litres of milk
- 12 kilos of chicken
- 225 eggs
- 13 kilos of different types of vegetable stew
- 7.5 kilos of the most common fish consumed by the poor
- 3.5 kilos of meat OR
- 30 kilos of potatoes

Ten percent of the interviewed households reported the existence of a health problem related to smoking, with half of the problems occurring in the previous year, 30% in the previous month, and 20% more than a year previously. Those illnesses caused an additional spending up to S/.100. This is a clear example of lost opportunities. That spending, usually on self-medication, represents almost 70% of the basic basket of food for one family member.

Despite this, 54% of smokers said they had never considered what they could buy if they stopped smoking, while 10% said that they regularly found themselves with no money for other expenses, although they always have money available for cigarettes. Furthermore, 4% of interviewees said that there had been occasions when they did not have money to take a child to the doctor or buy her/him medicine, but had money for cigarettes. Meanwhile, 18% of daily smokers indicated that they sometimes have no money for food for their children, although they could buy tobacco.

## VIETNAM

Several of the studies reviewed by the Vietnamese researchers highlighted the opportunity costs of tobacco use, particularly among poorer households. One study found that tobacco use contributed to inequality: as the prevalence of tobacco use is higher among the poor, the poor ultimately spend a larger portion of their daily expenditures on tobacco. However, because all expenditures, including those on tobacco, are used to calculate poverty levels, tobacco use actually leads to an underestimation of the real levels of poverty. After separating tobacco spending from total household expenditures,<sup>27</sup> 1.5% of the households whose living

<sup>27</sup> Poverty in Vietnam is measured by total household spending, in which tobacco is included. However, since tobacco is not welfare-enhancing, it should not be included; when it is removed the number of poor increase.

standards were above the food poverty line<sup>28</sup> fell into the category of food-poor (that is, whose income is insufficient to meet minimum caloric requirements). If the amount spent on tobacco was used to purchase food, 11.2% of current food-poor households could emerge from poverty.<sup>29</sup>

Several studies evaluated the economic impact of tobacco expenditure on poor households using data from the Vietnam Living Standard Survey (VLSS). In one, households were classified into five groups based on per capita household expenditure, with quintile 1 having the lowest expenditure. Households falling into quintiles 1 and 2 were defined as poor, with those in quintile 1 also representing the food-poor population. Tobacco expenditure was calculated by type of tobacco (cigarettes, waterpipe, and chewing tobacco) and compared with total and basic household expenditures (food, education, health and rent). Households using pipe and chewing tobacco spent about 1.2% of their total household expenditure on tobacco, while cigarette-using households spent as much as 5.3% of their total expenditure on tobacco.<sup>30</sup> While richer households spent more money on tobacco than did the poorer households, the proportion of income spent on tobacco was highest among the poorest households. Further analysis showed that the average poor cigarette smoker spent between one-fifth and one-quarter of his total per capita average expenditure on tobacco – which could instead have purchased about 850 calories worth of rice or similar food each day. This redirected spending would have been

<sup>28</sup> The food poverty level in Vietnam is calculated as amount of household expenditure required to ensure that the household can buy a 'basket' of food to provide 2100 kcal per person per day.

<sup>29</sup> Nguyen TM, Hoang VK, Nguyen TL, et al. Financial burden of smoking on households in Vietnam. *Med Prac Jour* 2006;533:94-107.

<sup>30</sup> Nguyen TL, Chapman S, Taylor R. The economic impact of tobacco expenditure on poor households in Vietnam. *Med Prac Jour* 2006;533:88-93.

sufficient to raise one (in quintile 1) or two (in quintile 2) members of poor smoking households into food sufficiency.

Among the cigarette-smoking households in quintiles 1 to 4, higher per capita tobacco expenditure correlated with lower expenditures on basic goods and services when compared with non-smoking households in the same quintile. Thus, the poorest tobacco-using households spent 2.2 times more on cigarettes than on education and 1.6 times more than on healthcare. These ratios are presented in Table 9. Another study showed similar results.<sup>31</sup>

**Table 9: The ratio of cigarette expenditure versus expenditure on health and education by income groups, Vietnam**

Quintiles	Ratio of expenditure on cigarettes vs education	Ratio of expenditure on cigarettes vs health care
Overall	0.9	1.6
Quintile 1	2.2	1.6
Quintile 2	1.1	1.4
Quintile 3	1.1	1.5
Quintile 4	0.8	1.4
Quintile 5	0.6	2.0

A further study compared tobacco spending with expenditures on basic needs such as education, healthcare, shelter and food between rural and urban households. As shown in Table 10, rural households had a higher ratio of tobacco spending to all other types of spending than did urban households.<sup>32</sup>

<sup>31</sup> Bales S, Hoang VK. *An Empirical Analysis of Smoking Using the Vietnam Living Standard Surveys*. Hanoi: World Bank, 2003.

<sup>32</sup> Hoang VK, Ross H, Levy D, et al. The effect of imposing a higher, uniform tobaccotax in Vietnam. *Health Res Policy Syst* 2006;4. <http://www.health-policy-systems.com/content/4/1/6>

**Table 10: Spending comparisons, by quintile, Vietnam**

	Tobacco/ education	Tobacco/ health care	Tobacco/ food	Tobacco/ total expenditure
<b>Total</b>	<b>62.5</b>	<b>56.2</b>	<b>6.4</b>	<b>3.5</b>
<b>Urban-rural</b>				
Rural	71.4	56.9	6.4	3.7
Urban	42.3	53.8	6.1	2.9
<b>Income</b>				
Very low				
Income	150.7	97.1	7.8	5.3
Low	108.2	87.0	7.3	4.6
Middle	94.2	67	7.4	4.3
Mid-High	68.1	72.7	7.7	4.1
High	46.4	68.9	8.8	3.6

A cross-sectional survey in five provinces investigated the opportunity costs of tobacco use by examining household expenditure patterns of a representative sample of 478 smoking and 680 non-smoking households on tobacco, nutrition, shelter, healthcare, education and access to basic household amenities.<sup>33</sup> Consistent with the other studies, households without smokers spent more on education per student than did households with smokers. Smoking households classified as very poor spent 2.3 times more on tobacco than on education per pupil. Reallocation of tobacco expenditures to food expenditures could potentially raise 11.3% of all smoking households above the food poverty line.

<sup>33</sup> Hoang M, Thu L, Efroymson D, et al. *Tobacco over Education: An Examination of Opportunity Losses for Smoking Households*. Hanoi: PATH Canada, 2004.

### 3.1.3 National-level opportunity costs

The opportunity cost of tobacco expenditure extends beyond the individual smoker and his/her family; it affects entire countries and directly contributes to national-level poverty. The total amount of money spent by all smokers could be used instead to raise millions of people out of food poverty, send children to school, provide low-cost transport by bicycle, or build better homes. At the same time, a significant national-level opportunity cost arises from the tobacco-related cost to governments, particularly for health care for tobacco-related illness as opposed to the “benefits” derived from tobacco industry contributions to national budgets (through taxes and other means).

In **ARGENTINA**, extrapolating from the opportunity cost results, approximately 90,000 households in the study area could prevent malnutrition in 360,000 children each year, simply by redirecting the money currently spent on tobacco products. Current spending on tobacco products would thus be sufficient to bring about a major improvement in quality of life and human capital if it were directed instead to basic needs within these households.

In **BANGLADESH**, nationwide bidi expenditure was estimated using the quantitative survey results. The average daily bidi expenditure – \$0.11 (7.9 taka) – was multiplied by the 10.1 million male bidi smokers estimated by the Global Adults Tobacco Survey, giving a total national bidi expenditure of approximately \$1.1 million per day. Extrapolated to \$401.5 million annually, this figure represents 0.4% of Bangladesh’s 2010 GDP of \$105.4 billion; it is also 2.25 times the expenditure on social welfare, 36.2% of the expenditure on health and family welfare, 39.3% of the expenditure on education, 9.96% of the national budget deficit, and 9.55% of the annual development program(ADP). The amount spent

annually on bidis is equivalent to the price of 4.85 billion eggs or 291 million chickens or 1.46 million tons of rice or 2.91 million cows or 2.33 million cycle rickshaws. Redirecting tobacco spending could generate jobs for millions of currently unemployed people, allowing millions of families to escape from poverty.

- In **INDONESIA**, cigarette users are 21 times more willing to pay for cigarettes than for outpatient healthcare service and 15 times more than for inpatient healthcare services. This means that smokers are willing to pay for cigarettes yet reluctant to pay for healthcare services. Willingness to pay shows the “value” of a commodity; in other words, looking at the fact that smokers are more willing to spend money on cigarettes than on healthcare and education services shows the lack of importance given to those services by smokers. However, tobacco-related illness means an increase in the number of cases requiring treatment. As a consequence, the government has to allocate more money for free healthcare services for the poor.
- Each year households in **MALI** spend 11 billion FCFA on tobacco vs. 3 billion on rice and 0.5 billion on eggs. Redirecting tobacco expenditures to food would not only help to reduce malnutrition, it would also increase demand for food products and could thereby generate increased employment for farmers.
- In **MEXICO**, all smokers together spend 5,647 million pesos on cigarettes annually, equivalent to about 10% of the 2010 Program on Development of Human Opportunities budget (the government poverty reduction program).
- In **PERU**, a significant percentage of the population makes use of social subsidy programs such as “Glass of milk” and “Popular diners” (food support for the poor) in order to “get through the month”. According to

information provided by the tobacco industry, Peruvian smokers spend 400 million sol annually on tobacco products, an extremely large amount given that one-third of the population is poor. That amount could instead purchase:

- ✿ about 1.5 million basic consumption baskets (calculated at S/. 257 per person, at the national level).
- ✿ more than 2.8 million basic food baskets (calculated at S/. 144 per person, at the national level).
- ✿ enough to meet the basic spending needs of 61 million Peruvians living in poverty (S/.550 per month).

- In **VIETNAM**, the estimated total number of cigarettes consumed in 1998 – 2.34 billion packs – was calculated by totalling the number of locally produced cigarettes with the estimated number of smuggled cigarettes. At an average retail price of US\$0.16 per pack, the estimated total expenditure was US\$435.6 million; these funds could have instead purchased 1.6 million tonnes of rice, enough to feed 10.6 million people for one year,<sup>34</sup> or funded 20,000 commune health centres.

### 3.2 Tobacco agriculture and production

The tobacco industry often claims that large numbers of people – mostly tobacco farmers and their families, but also those employed as producers and sellers of tobacco products – rely on tobacco for their livelihood. At the same time, some governments – particularly in lower-income countries – use tobacco-related employment to justify their unwillingness to take stronger steps against tobacco.

<sup>34</sup> Nguyen TM, Hoang VK, Nguyen TL, et al. Financial burden of smoking on households in Vietnam. *Med Prac Jour* 2006; 533:94-107.



But what is the truth about the quality of highly labour-intensive tobacco-related employment? Do tobacco workers really make a liveable wage, with which they can support their families? Under what conditions do they work? Exploring these sorts of questions sheds a very different light on the economic benefits that the tobacco industry claims to provide.

A range of issues related to tobacco production are worthy of exploration. Some of the key links between tobacco and poverty that are related particularly to tobacco production and are useful for influencing policy include:

- ▣ Tobacco industry contracting conditions.
- ▣ Working conditions.
- ▣ Child employment and opportunity costs for family labour in tobacco cultivation and production.
- ▣ Physical harms caused by handling green tobacco or agricultural chemicals.
- ▣ Extent of profitability of tobacco growing.

Each of these points is explored in more detail below, with the results from the research projects used as illustrations.

### 3.2.1 Contracting and employment

Two main groups of tobacco farmers have been identified in various countries: those contracted directly by the industry and those without contracts. While larger-scale farmers normally work under contract and are able to command a reasonable price for their crop, smaller-scale farmers often find themselves forced to accept whatever price the industry offers for the leaf, even if they have a direct contract with the industry. For those without a contract, the situation is usually worse, with farmers sometimes forced to sell their leaf at a loss to contracted farmers, as they have no direct link to other buyers. Unfortunately, in its marketing campaigns, the tobacco industry is likely to cite the success of a sub-set of

contracted larger-scale farmers and extrapolate their profits across all tobacco farmers, contracted or not.

The tobacco industry is also often ready to provide loans to farmers to make it easier to grow tobacco, on the provision that the farmers sell the leaf to that company. Such a deal, however, means that the company itself will determine the grade and thus price of the leaf, sometimes to the farmer's economic loss. Many farmers find themselves forced to continue supplying tobacco to the company until the loan is repaid, in "an endless cycle of debt."

Workers in other aspects of tobacco production – bidi makers and tendu leaf pluckers, for example – are much less likely to work under formal contracts and therefore face an even greater risk of exploitation.

## BANGLADESH

Bidi-related employment in Bangladesh includes tobacco farmers, bidi makers, and those involved in distribution and sales. As the tobacco powder used in bidis is prepared from plant roots and low quality leaves, a negligible number of farmers grow tobacco solely for bidis, while people engaged in distributing and selling bidis work with many goods. Bidi makers thus comprise the majority of bidi-related employment. The Bangladesh Bureau of Statistics estimates the number of bidi workers at 266,818,<sup>35</sup> while the tobacco industry claims to employ 2.5 million in bidi making. Even if it were to include the entire family of each worker, the industry's figure – 10 times larger than the official estimate – appears significantly exaggerated: total employment in *all* manufacturing industries, including the large textiles and ready-made garments industry, is only 6.9 million.<sup>36</sup>

<sup>35</sup> Bangladesh Bureau of Statistics. *Statistical pocketbook of Bangladesh 2008*. Dhaka: BBS 2009.

<sup>36</sup> Bangladesh Bureau of Statistics. *Report on monitoring of employment survey 2009*. Dhaka: BBS 2010.

In Bangladesh, bidi factories are located in rural and peri-urban areas. The researchers identified three important aspects relating to the location of these factories. First, government regulations such as environmental law, human rights law, and labour law are poorly adhered to by authorities in rural locations. This allows the factory owners to hide illegal activities such as extreme exploitation in terms of contracting and wages, poor working environments, and child employment. Second, factory owners prefer to present their businesses as “remote” or “cottage” – the connotation of “cottage industry” being of small and particularly rural family or community-based businesses. This labelling of “cottage” or “remote”, due to laws requiring government to support cottage industries,



has allowed the factory owners to pay lower taxes, enjoy various perks, and continue to make tremendous profit. Third, locating factories in rural areas allow factory owners to employ extraordinarily low-cost

labour without fear of labour regulations – such as contracts and minimum wages – being applied. In rural areas, limited work opportunities drive people to work for extremely minimal wages, and the factory owners take advantage of this fact.

An earlier study<sup>37</sup> found that religious leaders in some villages located near bidi factories were telling parents not to send their children to school, as they would learn English, the language of the devil. The best way to keep these children out of trouble when out of school, the leaders explained, was to send them to work in the bidi factory. The

factory was thus considered a sort of baby-sitter rather than an employment opportunity, and so even extremely low wages were considered acceptable. Similarly, the researchers found that as women’s time is undervalued, the men were happy to accept very low wages for their wives’ work, on the assumption that even a few taka a day is a gain despite the difficulty such women then have completing their housework.

Two major categories of workers are involved in the bidi making process, all employed with oral contracts. First are those who collect tobacco plant roots and other materials, slice them into small pieces, and prepare the *masala* (tobacco mixture). Bidi rollers, on the other hand, are paid based on the number of bidis made, which in turn is dependent on assigned ‘serial numbers’ - official factory permission to make bidis. For example, if a worker receives 10,000 serial numbers, he must produce 10,000 bidis per day. The minimum and maximum daily serial numbers allocated are 10,000 and 14,000, respectively, for each of the four days per week that the factories are open.

The role of the serial numbers in bidi production is multidimensional. By controlling the numbers, the factories control the production of bidis. In each factory, the number of bidis to be made daily is pre-determined through the distribution of serial numbers. Many workers receive ownership of serial numbers from their parents, who had worked for the factory and purchased the numbers. It is difficult for any poor worker to change profession, as he must first sell his serial numbers to regain his initial investment, and most people in bidi-manufacturing areas cannot afford to purchase the numbers.

Factories and middlemen tightly regulate the distribution of the serial numbers. Middlemen sell serial numbers to the workers. Obtaining serial numbers from the bidi factories in Rangpur for example requires a \$145.70 (10,000 taka)

<sup>37</sup> Blanchet T. *Child Work in the Bidi Industry*. Dhaka: UNICEF 2000.

deposit, a sum out of reach for most people. This regulation inevitably puts pressure on the workers by constraining their work opportunities. In addition, any single worker in one factory in Rangpur cannot have more than 10,000 serial numbers per day. As the factory is in operation for four days a week, the bidi worker is not permitted to make more than 40,000 bidis weekly. The involvement of the middlemen – who must be paid first – increases the workers’ vulnerability.

The regulation of serial numbers does not take the same form everywhere; for instance in some factories in Kushtia district no middlemen were observed. Instead, the factories charge 10,000 taka as a “non-refundable deposit” for every 10,000 serial numbers. The worker could theoretically sell the serial numbers to someone else and get back the 10,000 taka; in fact, any worker wishing to leave the profession is expected to find someone to buy his serial numbers, no easy matter given the acute poverty among the workers and in the area in general. As a result, this deposit – and the “contract” it represents – virtually enslaves the workers.

### **BRAZIL**

In Brazil – the second largest producer and the largest exporter of tobacco leaves – tobacco production is structured through unfair contract arrangements, bonded labour, and child labour, all of which push vulnerable populations deeper into economic hardship. The exercise of power by tobacco agribusiness bears remarkable similarity to despotism. One of its forms is the downgrading in the classification of tobacco leaves, which regularly occurs when it comes time for the industry to buy the leaf.



It is common practice for tobacco companies to provide credit to farmers for planting and harvesting, as well as to bear the cost of growers’ living expenses between harvests. This provides a misleading incentive for farmers to switch to tobacco and keeps existing farmers under contract, thereby allowing the companies to make relatively accurate production (and profit) forecasts. In 2004-2005, the total amount of farmer debt linked to tobacco sales was estimated to be 48% of their projected income. Some farmers faced much higher debt levels, ultimately receiving insufficient income to pay their annual debts. “Tobacco debts are paid with tobacco” is a current expression among Brazilian tobacco farmers. This strategy keeps the indebted as a supplier and, possibly, under an exclusive – and ultimately abusive – contract.

### **HONDURAS**

As in many other tobacco-producing countries, the cultivation of tobacco in Honduras is widely seen as a profitable enterprise. Tobacco cultivation is concentrated in the western departments of the country (Ocotepeque, Copán and Santa Bárbara) where 70% of the national producers are located; tobacco is also grown in smaller quantities in the Valley of Jamastrán, El Paraíso.

In Honduras, tobacco cultivation is supervised by large companies and there are no small-scale farmers involved in



the growing of tobacco. Workers are hired by the day and receive very low wages. Tobacco cultivation is actually a relatively small-scale industry with few employees given the high rate of technology/mechanization, and

represents less than 1% of the active working population. That said, more than half of those those employed as tobacco workers are women or single mothers who are receive lower wages than the male workers.

Daily tobacco workers are part of the informal economy, and represent a very vulnerable population with low pay, long days, difficult and dangerous working conditions, and poor living conditions. Few of the study participants were affiliated with any social security system or similar program. All study participants received their daily wages as cash. Their working week is eight hours per day, 6 days per week. Only one-third had received formal training on their first day of work, and only 1.35% had received any type of instruction about the risks associated with their work. There is little organization of labour and no unions; only one research participant belonged to a cooperative. There is no oversight of the conditions under which these labourers work.

## INDIA

Tobacco workers in India include bidi workers, farmers, and tendu leaf pluckers. Although a labour-intensive industry, the wages to tobacco workers are among the lowest in the country. A large part of the industry is considered to be part of the “unorganized sector” – meaning that labour is hired informally and without contract, that wages are often fixed arbitrarily, and that an unending flow of unskilled labour keeps wages low. The majority of the profits, therefore, remain with the large manufacturers. The home-based system of bidi production also enables factory owners to evade labour laws that define conditions of work, minimum wages, and other employment benefits.

Employers or middlemen (also referred as *munshis*, agents, *sattedars* or contractors) are known to exploit non-contracted home-based workers by supplying sub-standard or less than required raw materials to the rollers. When collecting the rolled bidis, these middlemen do not make

any allowances for the shortfall and the bidi workers are not able to bargain out of fear that they may not be given future jobs. Instead, they try to make up for the shortfall by buying additional raw materials either from the employer, the middlemen, or the market and rolling additional bidis.

Another closely related method of exploitation occurs when middlemen reject bidis on the grounds of poor quality. While poor quality may result from the inferior quality of the raw materials originally supplied, middlemen nevertheless reject bidis if they are not up to standard. No wage is paid for the rejected bidis. In a survey conducted by the Labour Bureau, 50% of home-based workers recruited by contractors reported such rejections. However, the middlemen or employers do not destroy the rejected bidis but either sell them in the market at lower rates or return them to the rollers in raw form. Such exploitation sometimes leads to shortfalls in workers’ production (and thus wages) to the extent of 30-40%.

Apart from the deductions due to rejections, middlemen are also reported to take commissions from workers. Women workers are the worst victims of such exploitation because they constitute the bulk of the home-based bidi rollers. Exploitation is more intense in a system based on informal production rules and relations, and in which all negotiation takes place through contractors or any other type of middlemen.<sup>38</sup>

Information collected by the researchers in Haidarganj Karah Village, Nalanda District, in the state of Bihar demonstrated that about 81% of the 2,200 village families are occupied in bidi rolling as their primary occupation. Bidi rolling is exclusively a home-based activity in this area. Bidi manufacturing units operate in a completely unorganized

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<sup>38</sup> International Labour Office (2003): *Making ends meet: Bidi workers in India Today: A study of four states*, ILO. Geneva.



manner and their control is completely in the hands of the owners of bidi factories. There were times, according to the research participants, when factory owners suddenly and without notice stopped providing raw materials to the workers at their homes, thus cutting off their income-earning opportunity. In such critical times, the respondents recalled that the women of some families were forced to go out of their houses wearing *burkhas* (a full covering to maintain *purdah*) and had to trade their dignity to earn a livelihood through prostitution to sustain their families. The Government exerts virtually no control over the owners of the bidi factories in this area.

As in Bihar, in the state of Jharkhand bidi factories operate in an unorganized manner and out-source bidi rolling work through contractors/middlemen who distribute raw materials to and collect rolled bidis from workers at their doorstep. Very few bidi workers know about the company or employer for whom they work, as no bidi factories exist near their villages. The rollers are also paid weekly.

The Government of India has provided social security coverage to most of the workers in the organized sector through the Employees Provident Fund Organization (EPFO) and Employees State Insurance Corporation. However, by and large, no such social security coverage has been provided to the workers in the unorganized sector, including those working in the tobacco industry. The concept of a Labour Welfare Fund was, therefore, developed to extend a measure of social assistance to these workers. However, to access such social assistance, the workers must be registered with the bidi factories. The field research demonstrated that these welfare measures were not being implemented since none of the workers in any of the study sites had identify cards or were officially registered as bidi workers; they not even aware that such benefits existed.

Tobacco farmers in Basti and Gonda Districts (Uttar Pradesh) regularly face harassment, cheating, and exploitation during the marketing process of their tobacco leaves. In discussions with the local farmer and the *adatiya*



(local agents), it emerged that tobacco companies have monopolized certain areas by appointing local agents and big farmers to procure tobacco from small farmers, leaving the latter with no recourse to an open market and bargaining. The agents

determine the quality of the leaf as well as the price, leaving the farmer powerless.

While in Bangladesh bidis are rolled in paper, in India the tendu leaf is considered most suitable as it is easy to roll and is widely available. Tendu leaf was the first item to be nationalized in 1964 in view of its importance as an income source for tribal communities and revenue potential to state government. It is now collected through three-tiered cooperatives in the state: the Primary Cooperative Society at the village level, the District Union at the district level, and Madhya Pradesh Minor Forest Production (MP MFP) Federation at the state level. A *fad munshi* is responsible for the management of tendu leaf collection at the village level. The *fad munshi* completes a household survey of the village and maintains an inspection and comments book, as well as a daily and weekly record book. A target of tendu patta collection is fixed for each village.

In spite of this apparent organization, however, in reality illegal traders and middlemen from the bidi factory in Jharkhand sometimes force the tribal communities to collect tendu leaves for them in the forests - a trade which

involves much drudgery and carries great risk but brings very little economic benefits for the tribes themselves. The traders and contractors make huge profits from this while the collectors continue to live in poverty. There is also corruption at all levels, starting from the selection of the agents (munshis) and handling at the purchasing centres.

**Case study:** Ramfal Singh is 55 years old and landless. He cultivates 0.65 acres of land which he leases, using 0.3 acres to cultivate tobacco and the rest for paddy and wheat. He grows tobacco at the insistence of the landholder. As per the prevailing terms of his lease, the landholder is entitled to receive 50% of the crop, including all by-products. Singh must bear the entire risk of tobacco cultivation, while the landlord only experiences profit. Narrating the experience of his last five years of tobacco cultivation, Ramfal maintained that tobacco farming is profitable only for elite farmers who grow tobacco with the help of labourers and landlords who are not physically involved in tobacco cultivation.

### 3.2.2 Working conditions and the harmful effects of tobacco growing and processing

Tobacco cultivation exposes workers to a range of dangerous chemicals and to the toxins in green tobacco. Documented negative health effects include incidences of Green Tobacco Sickness<sup>39</sup>, symptoms of which include nausea, vomiting, dizziness, and severe weakness. These symptoms may be accompanied by fluctuations in blood pressure or heart rate. Abdominal cramping, headaches, chills, increased sweating, salivation and difficulty breathing are also common.

Working in tobacco factories likewise subjects workers to extremely difficult conditions. For example, workers in bidi

<sup>39</sup> McKnight RH, Spiller HA. "Green Tobacco Sickness in Children and Adolescents." *Public Health Rep* (Nov-Dec 2005) 120(6):602-5.

factories in Bangladesh and India spend many hours sitting in cramped positions performing repetitive tasks, breathing air thick with tobacco dust. Such conditions result in a number of respiratory and other physical health impacts.

### BANGLADESH

The researchers visited and observed bidi factory ventilation systems; true to the workers' complaints, these systems were seen to be extremely poor. For the researchers, the most significant impression came from the dark and toxic surroundings. During interviews conducted outside the factory premises, workers said that the factory maintained a scant ventilation system designed not to protect the workers but to reduce neighborhood complaints about the smell. The bidi rolling



rooms contained only one or two windows – which always faced the inside of the factory, not the outdoors – to help suppress the dust and strong smell that arose especially from the tobacco powder. In addition to improper ventilation, another strong first impression upon entering the factories was the harsh, irritating smell that came from the *masala* room. Less than a few minutes in the *masala* room left one researcher vomiting and another with a headache that lasted for hours. The *masala* room was, ironically, one of the few well-lit rooms. However, the workers did not have adequate respiratory protection, only covering their faces with a thin cloth.

Those rolling bidis at home fare little better, sitting for long periods in the same position. Their continuous exposure to tobacco dust causes various health complications, including respiratory and skin diseases, loss of appetite, lethargy, backache, headache, and general pain. The researchers did

not find any studies that have investigated the type and health effects of chemicals used in the bidi-making process.

**Case study:** Rubel, a 32-year-old bidi worker in Sawria, Kushtia has been making bidis for eight years. The hard work in a toxic environment, sitting for long periods in the same position, and being continually exposed to tobacco dust have resulted in Rubel developing various health complications. For years he has had a cough; he is feverish every night and feels very weak. Although he was not a smoker during the time he started working for the bidi factory, now he is a chain smoker.

## BRAZIL

Experiences in Brazil reflect international research. Many pesticides used on tobacco leaves are highly toxic and harm tobacco workers. The direct victims of pesticide poisoning



are mostly children, pregnant women, and the elderly, who all participate in tobacco production. Pesticides either cause or exacerbate a number of illnesses, since workers and their families are constantly exposed to a large amount of pesticides. Some health risks are exclusively associated with tobacco growing due to transdermal nicotine absorption from tobacco leaves. Symptoms of Green Tobacco Sickness (GTS)

include dizziness or headache, nausea or vomiting, abdominal cramps, difficulty breathing, and fluctuations in blood pressure or heart rate.

## HONDURAS

The tobacco workers regularly use, and are thus regularly exposed to, a whole package of chemicals including

pesticides and other agro-chemicals. Even though 10% of the workers acknowledged that they worked directly with pesticides and herbicides such as Mustang, Fusilade and Permetrina, none were provided with or used any protective clothing or devices as they worked and less than half changed their clothing.

In addition to regularly being exposed to toxic chemicals, the most common risks associated with the cultivation of tobacco include repetitive movements, sudden temperature changes, uncomfortable positions, carrying heavy weights, and humidity. About 14% of respondents reported having had an accident at work or having acquired an illness directly related to the work. In almost all cases, they were obliged to pay for their own treatment. In addition to Green Leaf Sickness, the respondents complained of a range of ailments such as muscle aches, headaches, skin irritations, fever, diarrhoea, vertigo, respiratory and gastro-intestinal disorders, and constant fatigue.



## INDIA

In spite of the health risks of working with tobacco leaves and dust identified in various research studies, bidi workers in all of the Indian study sites remain largely unaware of the health hazards of their occupation. Even so, their self-reported and observed health status is quite poor. Most of the respondents complained of ailments such as backache, headache, and localized or general pain, and reported incidences of tuberculosis, liver problems, and respiratory and skin diseases. More than fifty-percent of the bidi rollers in Jharkhand had recently suffered from illness; the majority



of respondents suffer from multiple diseases. Few are able to access or afford medical treatment. The tobacco industry provides no health care facilities for its workers. Bidi rolling takes place inside small, poorly-ventilated houses. The tobacco fumes and dust remain in the houses, affecting all family members. Food and water stored inside becomes contaminated in this toxic environment. Accustomed to working in this environment, bidi rollers do not make the association between tobacco and their illnesses.

Tobacco farmers likewise are unaware of the direct links between their work and their health. They reported not using any protective measures or devices during the production and processing of tobacco leaves. In the absence of storage facilities, most use their homes to store the leaves, thus exposing their families to the chemicals in tobacco leaves. The farmers inhale significant quantities of tobacco dust while cleaning and beating the tobacco



bundles. Asthma, throat cancer, green tobacco sickness, tuberculosis, and spondylitis<sup>40</sup> are common, as are more minor ailments such as backache, nausea, and headache.

Tendu leaf pluckers cover a distance of 20 to 25 km

daily into the deep forest to collect the leaves. It takes about 5 hours daily to cover the distance and 6 hours to collect enough leaves to make 100 to 120 bundles. To make these bundles, it takes 3 additional hours and one member has to spend yet another hour to deposit the bundles made. Therefore, a total of 15 hours of rigorous work is involved. Sunstroke, snakebite, bear attacks, and falling out of trees

are hazards regularly faced by tendu leaf pluckers. They also have no proper footwear or clothing, as stipulated by the government, while walking long distances to the jungles. A group insurance scheme launched in 1991 to address these hazards rarely provides the promised benefits. Tobacco production is unregulated, and it is difficult for tobacco workers to demand more appropriate working conditions or welfare benefits. They generally have little or no access to education given their long hours of work and the need for the entire family, including children, to participate. Lacking access to health facilities, benefits, and rights to which they are otherwise legally entitled, tobacco workers remain trapped in poverty. Women constitute 76-95% of the persons employed in bidi manufacturing, and report discrimination based on gender as well as caste.

**Case Study:** Radhabai, 52 years old, has been plucking tendu leaves since her early childhood. This year has been unlucky for Radhabai. One morning she set out for the jungle alone before 4 a.m. thinking that she would get a head start on collecting leaves and it was still dark when she reached the hilly jungle. She suddenly lost her balance and fell into a deep gorge. When she regained consciousness, she found herself tangled in a bed of thorny bushes. Her screams for help were finally heard by some villagers collecting firewood, and they carried her back home. Radhabai's serious back injury required treatment but medical facilities are not easily accessible from her village, so she had to go to a distant hospital for treatment and medicines. Although she had an insurance policy (like all tendu pluckers) provided by the forest department, it was of no use. Her family tried to get reimbursed for her medical expenses, but they did not receive a single rupee. Radhabai is still suffering and cannot walk properly. She is unable to go the jungle to collect tendu and so is now unemployed.

<sup>40</sup> Inflammation of the vertebra.



### 3.2.3 Child employment and opportunity cost for family labour

Children are often used in the production of tobacco products, such as bidis, because their small fingers are efficient in bidi production and because they can give time at little or no perceived cost during the more intense labour periods. The same is true of children helping on family tobacco farms, when extra hands are needed during intense farming periods. There are intensive periods of work in tobacco cultivation and production, and it is widely perceived to be easier and less costly for families to take their children out of school to do this work than to hire casual help (as members of the family, children do not represent a direct labour cost).

When opportunity costs for the family labour used in tobacco cultivation and production are taken into account, it is often not profitable to farm tobacco.<sup>41</sup> The apparent profitability for the family is in fact a deception, because the family members work for free – although only if the value of their time is ignored.

#### BANGLADESH

Although males are typically the only registered factory workers who receive contracts to make bidis, in many cases, an individual is unable to fulfill his contract and must recruit family members to help. Wives and other family members thus ‘assist’ the men to meet their contractual deadlines. As a result, while some men were observed working in the factories, the majority of bidi workers were women and children working as unpaid “assistants.” The observed involvement of women and children bidi rollers working for

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<sup>41</sup> Naher, F and Chowdhury AMR. *To Produce or Not to Produce: Tackling the Tobacco Dilemma*. Research Monograph Series No. 23. Dhaka: Research and Evaluation Division, BRAC, 2002.

little or no pay is supported by earlier studies.<sup>42</sup> Sometimes neighbours are also subcontracted. Wives of contracted bidi workers complained about having to neglect household tasks to make *thosh*, in order to pay less to non-family hired workers. While the neighbour or other hired workers are paid for their work, however, the labour of the wife, being a family member, is taken for granted.



Children are typically expected to ‘help’ as well and often accompany their fathers to the factories. A previous study highlighted the exploitation of child labor in Bangladesh’s bidi industry, wherein parents’ socio-economic problems were imposed on their children, who were forced to drop their schooling to work.<sup>43</sup> During this study, the researchers noted that many bidi factories displayed signs declaring ‘Stop child labour: No under-eighteen workers are employed here’ even as large numbers of young children were observed working inside. The signs may have been installed because government laws prohibit children employment. During interviews, factory supervisors stated that these children were only ‘helpers’ to their employed parents. These unpaid child ‘helpers’ are forced to drop their schooling and be exposed to a toxic environment.

#### BRAZIL

Child workers in Brazilian tobacco fields face health hazards through exposure to tobacco, nicotine, and pesticides used

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<sup>42</sup> Blanchet T. *Child work in the bidi industry*. Dhaka: UNICEF 2000; Roy A. A walk on the dark side: shedding light on tobacco-related employment. In: Efroymson D, Jones L, and FitzGerald S, eds. *Sometimes we win: tobacco control success stories from Asia*. Ottawa ON: HealthBridge 2010:103-110.

<sup>43</sup> Blanchet, 2000.

during cultivation. These children are involved in constructing nursery beds, applying agrochemicals (pesticides and fertilizers) to seedlings, transferring seedlings to land plots, weeding, suckering (removing the tobacco flowers from the top of the plants to ensure growth of large leaves), harvesting, stringing, sorting, and baling. These activities harm children's health, physical development and educational achievement, thereby affecting the community's economic development.

## INDIA

Women and children constitute the majority of tobacco workers. The use of child labourers in tobacco work is widespread. Most children in the bidi rolling households started working at the age of six. Among tobacco farming families, children play an important role in caring for tobacco saplings and helping with harvesting and curing; they work approximately 12-13 hours each day. Although there are no statistics on children engaged in tendu plucking, most children were seen accompanying their



parents as they worked. Although the government officially prohibits child labour, children continue to work as “invisible” labourers. They receive no wages as they “help” their families. They typically do not go to school and have little leisure time. The home-based and unorganized nature of the bidi industry prevents the enforcement of child labour laws. Children who do attend school were observed rolling bidis before and after school hours. Workers are illiterate and vulnerable, with no power to better their situation.

Thus while, for example, male villagers directed bidi manufacturing in Haiderganj Karah village, Bihar, it was mostly women and children who were involved in the hands-on process and played a crucial role in bidi making. All age categories of women were engaged in bidi rolling. However, most of the workers were young, with 35% in the 19 to 25 years age group and 30% in the 26 to 45 years age group. Some women above 65 years also work as bidi rollers. Almost all children in each of the households are involved in rolling bidis, starting from age 6.

Likewise, most of the bidi workers in Faizabad, Uttar Pradesh are Muslim women and children. The reason given by the respondents for being involved in bidi rolling is that the “Purdah” system in Muslim communities confines women to their homes; when husbands are not able to earn enough to meet their family's needs, women take up bidi rolling as there are no other income-earning options. Similar to other bidi rolling areas in India, most of the families involve their children in the occupation from a very young age. Initially they were reluctant to admit that they involve their young ones in the work. But gradually during discussions about their health, economic conditions, job satisfactions and concerns about their children's education, it was revealed that the children are contributing to their parent's earnings by making bidis, though they are unhappy about involving their children in this drudgery.

Caring for the young tobacco saplings involves a sizeable responsibility, as it is an intensive process. The entire tobacco farming family, normally consisting of 6-8 members, works approximately 12-13 hours per day in the field to ensure a good yield. Long hours of child labour in the tobacco fields create barriers to education, thus worsening future prospects for better income and living conditions; yet child labour is very common among the tobacco growing families, not only for caring for saplings but also during the harvesting and curing periods.

In rural Bihar, especially for small and marginal tobacco farmers, farming decisions are still largely governed by the culture of the prevailing feudal system. As a result, farmers generally fail to take the cost of cultivation into account: farmers who worked in their own fields consider their own labour and that of family members as free of cost.

Meanwhile, most of the tendu leaf collectors are women and children, and the collection is done in the extreme hot season from April-June. The tendu pluckers start for the forests at 4.00 am. They travel 20-25 km for one or two bagfuls of leaves. They return home at about 1 pm. The entire family (especially women and children) start making the bundles, working up to 6 p.m. and then go to the *fadi*<sup>44</sup> to deposit their daily collection to the *fad munshi*<sup>45</sup>. So the pluckers put in 14-15 hours of labour every day. Generally a family makes 100 to 150 bundles in a day.

**Case Study:** Rukshana Praveen is an 11-year-old girl in Haiderganj Karah village. Her appearance indicates that she is undernourished. At the time of the interview, she was busy rolling bidis with her peers in a neighbouring house. Her voice was too feeble to be heard properly and when asked the reason for her faint tone of speech, she said that she has been suffering from high fever for the last couple of days: “My mother could afford only two biscuits since morning. Despite starvation, I have to fulfil my quota of rolling 500 bidis. I cannot say no to this job because that would curtail my family’s earning”. In response to further enquiry, she said that including her brothers and sisters, there are nine members in

<sup>44</sup> *Fadi* is the collection centre, like an open evening market or depot which takes place every evening during the tendu leaf collection season, where the pluckers have to deposit the bundles of leaves collected during the day and spread them evenly on the ground. The contractor, the *fad munshi*, keeps the record of the number of bundles deposited by each collector.

<sup>45</sup> Contractor or agent

her family. The family has no source of income other than bidi rolling. All family members, except the youngest brother, together roll 1,800 bidis per day, thereby earning Rs. 85, or approximately Rs. 9 per person per day. She further described that her family quite frequently fails to manage two proper meals a day. The children never have free time to play and often suffer from various illnesses. She feels that her studies are going to be discontinued like those of her elder sisters due to bidi rolling, but she has no choice.

## VIETNAM

One argument used frequently by the tobacco industry against tobacco control is that tobacco production generates jobs and is therefore ‘poverty eradicating.’ To evaluate the validity of this argument, some studies investigated the impact of tobacco growing on Vietnamese farmers. None of the studies found that tobacco farming was beneficial.

Research demonstrated that tobacco cultivation in one northern and one southern commune brought little benefit to farmers compared to control communes in the same areas.<sup>46</sup> To minimise labour costs, family members undertook most of the work themselves. When the labour opportunity cost was taken into consideration, meaning the amount of income not earned by family members and using US\$2 per day as an average manual labour rate of pay, the tobacco-industry ‘advertised’ net annual income of US\$275 was significantly reduced to US\$32 in southern communes, while in northern communes a net loss was realised. In half of the participating areas, 17-30% of the participating households reported that engaging in tobacco cultivation

<sup>46</sup> Hoang VM, Kim BG, Nguyen NB, et al. Tobacco farming in rural Vietnam: questionable economic gain but evident health risks. *BMC Public Health* 2009;9. <http://www.biomedcentral.com/1471-2458/9/24>

had resulted in them becoming indebted rather than providing them with a sustainable livelihood.

The study also found that 51% of tobacco farmers in the North and 39% in the South reported not being satisfied with tobacco growing. Although tobacco cultivation brought some income to their households and made use of their land, the instability of tobacco prices, little capacity to select and negotiate with buyers, the labour intensive nature of this crop, the negative health effects resulting from tobacco cultivation, and the low real benefits if personnel costs are included in growing costs were listed as significant causes of low satisfaction.

The practice of using children in tobacco production was common and more intensive in tobacco farming than for other crops. Most children started to work at the age of 10, although some began as early as 6 years of age. The



majority of children in tobacco farming families were not paid for their work; they worked before or after school, on weekends, and during school breaks. Children were engaged mostly in sticking tobacco leaves onto bamboo sticks for sun drying. Women performed 60-70% of the total work

involved in tobacco production. Tobacco farming burdens were further exacerbated where husbands worked outside the home and village.<sup>47</sup> In this case, women are solely responsible for managing tobacco cultivation.

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<sup>47</sup> Ibid.

### 3.2.4 Lack of profitability

Many of those employed, formally or informally, in cultivating and making tobacco products are extremely poor. Most tobacco farmers fail to earn a decent living, due to high cost of requisite agricultural inputs to grow tobacco, high labour demands, and the low sales price due to the monopolistic controlling of prices by the industry.<sup>48</sup> In some cases, tobacco employment actually serves not to lift people from poverty but rather to keep them entrenched in it.

#### BANGLADESH

Tobacco industry propaganda about the profitability of tobacco makes it seem quite lucrative to farmers. While farmers get only 800 taka for 1 mon (40 kg) of paddy, they see or hear of other farmers receiving 5,300 taka for the same amount. It is no wonder that they believe that tobacco cultivation is a short road to riches. What low-income farmers fail to notice is how few tobacco farmers actually receive that high price. One finding from this research is that only some rich farmers with a strong political background get the full 5,300 taka. Others are paid only 2,000 taka or less for the same quantity of tobacco. Only the highest price for tobacco is publicized, while the truth is lost in industry propaganda. At the same time, tobacco companies provide well-trained agents to help the farmers throughout the process, from making the seed bed to curing the tobacco leaf. This provision of technical assistance, very different from the case with other crops, can be a further incentive for poor farmers, who are not aware until it is too late the

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<sup>48</sup> For an excellent source on this, see Campaign for Tobacco Free Kids, *Barren Leaf, Golden Harvest: The Costs of Tobacco Farming*. 2001. <http://www.tobaccofreekids.org/campaign/global/FCTCreport1.pdf>. See also "Informative Document: Economically Sustainable Options for Tobacco Growing." *Second Session of the WHO FCTC Conference of the Parties*. Bangkok, Thailand. June 30 – July 6, 2007.



true cost of this technical assistance. As with the chemical inputs that they directly supply on credit, tobacco companies provide technical assistance and simply subtract their cost from the payments they make to farmers when the tobacco leaf is purchased.

As noted in section 3.2.1 above, there are two main categories of bidi workers. The workers who make the *masala* are paid about US\$1.17<sup>49</sup> (80 taka) per day. Usually, the *masala* preparation takes place five days a week and the worker is paid the equivalent of \$5.83 (400 taka) weekly or \$23.31 (1600 taka) monthly. The level of remuneration paid to bidi rollers depends, in part, on the district in which they work. Payment for each one thousand bidis produced ranges from \$0.16 (11 taka) to \$0.24 (17 taka); this includes preparing the *thosh*,<sup>50</sup> filling them with *masala*, and packaging the bidis. The bidi roller thus earns \$6.40 (440 taka) to \$13.44 (952 taka) per week,<sup>51</sup> or a maximum of \$53.76 per month.



Although the factories are open only four days per week, to meet their quota the contracted worker's entire family is often involved in bidi making at home, working up to 15 hours per day, seven days per week. Thus, the maximum

<sup>49</sup> The October 24, 2009 exchange rate, used during this research was: 1 USD=68.64 taka.[38]

<sup>50</sup> *Thosh* are cylindrical papers that are rolled and filled with tobacco powder.

<sup>51</sup> The minimum amount calculated as \$0.16 x 10 packages of 1,000 bidis (10,000 serial numbers) x 4 days; the maximum amount is calculated as \$0.24 x 14 packages of 1,000 bidis x (14,000 serial numbers) x 4 days.

\$53.76 earned per month is the *entire family's* income. Most families earn no more than \$25.60, getting paid at the lower end of the scale and receiving daily quotas of 10,000. The impact of this, in terms of financial return, is significant: most bidi workers are included in the 40% of the Bangladeshi population living below the international poverty line of \$1.25 per day.

The situation is even worse given that many workers do not receive serial numbers directly from the factory. Thus in Rangpur, although factory owners pay \$0.30 (21 taka) for each one thousand bidis produced, middlemen take \$0.14 (10 taka), leaving the remaining \$0.16 (11 taka) to be divided among the bidi rollers. Meanwhile, the selling price of a pack of 25 bidis is \$0.08 (6 taka); of the \$3.49 (240 taka) the company receives for each 1,000 bidis rolled, the workers retain only 4.6%, often split among several workers.<sup>52</sup>

**Case study:** Now in his late seventies, Iman Ali has made bidis for forty years. He and his wife live in a small hut and survive on the pittance that he receives from bidi making. Since losing his previous job after the 1971 liberation war, he has worked for a bidi factory. The company wanted him to make more and more bidis and he was not able to keep up, as his eyesight was failing. For the last ten years he has worked as a “helping hand” for another registered worker. Every day, he needs to package 10,000 bidis, for which he earns 60 taka (<\$1).

That tiny daily amount is hardly enough to maintain him and his wife. His wife has been bedridden for the last twenty years and is unable to work. Iman Ali, because of his age, does not feel physically fit for other work. Although he has spent more than half of his life working for the bidi factory, the factory

<sup>52</sup> For each 1,000 bidis, 40 packs of 25 are sold at 6 taka each, netting the company 240 taka. For each 1,000 bidis produced, the worker receives 11 taka. Eleven taka (worker remuneration) / 240 taka (company revenue) = 4.6%.

owner refuses to provide any support. On days when he is unable to go to work, he has no option but to beg or go to bed hungry. He finds himself thinking if he had been in another line of work he would have been able to save money to make his old age more secure.

## HONDURAS

Tobacco workers earn approximately 135 lempiras a day, equivalent to US\$7. Their monthly income is approximately 3600 lempiras (US\$187), although some earn more by working additional hours. The minimum legal salary in Honduras is 5,500 lempiras. The study participants reported that they had no other form of income. Yet, according to a National Institute of Statistics of Honduras survey, a basket of basic goods – which includes food, lodging, and education – costs the 12,000 lempiras monthly. Tobacco workers toiling for daily wages for large companies can thus only cover one-fourth of the basket of basic needs.<sup>53</sup> The inadequacy of their wages is reflected in the poor quality of their rented homes, in their diet which is based almost exclusively on carbohydrates, which causes overweight despite likely under-nutrition.

## INDIA

The bidi rollers, tobacco farmers, and tendu pluckers who participated in the study noted that the tobacco industry does not contribute to their development (e.g., in terms of skills training or educational or economic advancement), nor does it share the benefits of production. Profits from tobacco remain with the employers while the workers continue to live in abject poverty, earning minimal wages. Only 25% of the bidi rolling families reported earning more

<sup>53</sup> Other workers making only minimum wages also cannot afford the basket of basic goods, although they are closer to acquiring it than are tobacco workers.

than US\$1 per twelve hour working day, even with the work of all family members. This rate is far below Labour Department's specified wage for bidi workers and is insufficient to support an average family of five to eight people. Although wages are paid on a weekly basis, middlemen often undercut the wages by rejecting a portion of the bidis rolled. The wages earned for plucking tendu leaves are similarly meagre, barely enough for basic minimum survival. Observation showed that families typically spend more than 15 hours collecting 100 bundles of tendu, for which they are paid about US\$1.20. Even so, payments are often delayed and many pluckers, who frequently migrate in search of work, lose their wages as the agents make no effort to find them. Tobacco farmers sell their crops directly from the fields to middlemen; lack of open competition or direct contact with buyers often means that the farmers do not receive fair prices for their product.



In Haidarganj Karah Village, Nalanda District (Bihar state), a bidi roller's earnings depend on the number of bidis he or she can roll in a day. As per the prevailing remuneration rates in this region, men earn Rs. 50.00 (US\$1) per 1,000 bidis while women are paid Rs. 45.00 for the same quantity. The reason commonly given for this discrimination is that men are more skilful and their finishing work is superior compared to their female counterparts. Ironically, of course, few men are actually involved in bidi rolling, thus allowing the tobacco companies to pay the lowest wages most of the time. The research team found that only 25% of the families interviewed could earn more than Rs. 50 (US\$1) per day by

rolling bidis, even with all family members working. Therefore, for these families, total income did not exceed Rs.1,500 (US \$30) per month, or Rs. 18,000 (US \$360) per annum. This amounts to an average daily income per family member (given an average family size of 5 people) of only Rs. 10 (less than twenty-five US cents) and a monthly income of only Rs. 300 (US \$6). The majority of the families earned much less than even this amount, after spending more than 8 hours a day, 7 days a week, rolling bidis.

Although the agents (middlemen) are normally punctual in making payments to the workers, they harass the bidi rollers in more ways than one - by supplying a smaller quantity of tendu leaves and tobacco than what was required to roll 1,000 bidis, and rejecting some of the rolled bidis at the time of delivery. In these ways the poorly-paid agents earn extra income for themselves by selling the rejected bidis.

In Jharkhand, the bidi rollers are paid Rs.23/- for every 1,000 bidis; these wages are probably the lowest across the entire country and much lower than the minimum wage stipulated by the Jharkhand Government. Since bidi workers are mostly women who work at home and contribute to household work while making bidis, most are unable to roll more than 800 bidis in a day, barely earning Rs.500/ in a month. About 79% have monthly earnings of less than Rs 500 while 21% earn somewhere between Rs 500 to 1,000 per month. None earn more than Rs 1,000 per month.

Bidi workers in Faizabad, Uttar Pradesh earn only about Rs. 27 to Rs. 35 (approximately 60-75 cents) per 1,000 bidis. Most women are not able to roll more than 600–700 bidis despite working for 8-10 hours per day due to their other household chores or to health problems. The research team filed a Right to Information (RTI) application to the state government labour department concerning the official wage structure for bidi workers. Perhaps not surprising given the informal nature of the work, although the wage

specified by the labour department for bidi workers is Rs. 60 (approximately \$1.40) per 1,000 bidis, the workers earn only about half that.

The majority of small and marginal tobacco farmers in Basti and Gonda Districts (Uttar Pradesh) interviewed during this study grew tobacco on one or two bighas of land (<1 acre). A majority of them, in addition to using their own plots, also grow tobacco on rented land, for which they pay an annual rent of Rs. 2,000-3,000 (US\$43-65). On average, they produce one or two quintals of tobacco per season, which fetches an income of Rs 12,000 (260\$ USD), an amount insufficient to meet their family's basic needs. Although the farmers indicated that tobacco pays faster and better than other crops, they likened tobacco farming to gambling. It requires a lot of labour and is very tedious compared to its returns/profits. The cost of producing tobacco is very high and when loans are deducted from their total sales, the farmers are left with very little earnings. They have no control over the costs of inputs and of the overall output.

Approximately 75% of the bidi rollers in Bihar reported being indebted; rates were similar in other provinces. Most loans were taken for daily/regular sustenance and procured either from private sources or from employers/middlemen. The majority were not able to repay their debts on time, and were caught in a debt trap. Tobacco farmers, rather than gaining a livelihood from the crop, reported regularly finding themselves trapped in debt. Almost half of the farmers interviewed (45%) depended on the village moneylender for loans. This loan taken by the farmers came with a high interest rate of 10% on a monthly basis. Some farmers also became bonded labourers as they had no other assets to be put as security against loans. In cases of non-payment of the loan, the farmer was forced to work as a bonded labourer in the moneylender's house without wages. While wealthier farmers could afford an occasional bad crop, such an event proved a complete catastrophe to marginal farmers who

could not put aside enough money to compensate. Being engaged in tobacco cultivation thus poses the risk not only of increasing poverty but also of landlessness among poor farmers, who are forced to sell their land to pay off loans or to survive during crop failures.

The wages earned for plucking tendu leaves are also extremely low. The rate for tendu patta (leaves) is Rs. 55/- (US\$ 1.20) per 100 bundles and each bundle contains 50 leaves. Thus, a family together spends more than 15 hours to collect about 100 bundles (5,000 leaves) of tendu that ultimately fetches a paltry amount of Rs. 55 per day. In some states like Jharkhand and Bihar, the rates are even lower as there is no organized procedure to deposit the leaves. Here, middlemen come to the houses of the collectors and pay an arbitrary amount to the pluckers. Payments are often delayed and it is not uncommon for the plucker never to recover the money from the agent.

**Case Study:** Jayanti Lal is a 36-year-old tobacco farmer from Sherpur, Basti (Uttar Pradesh). His family consists of two sons and two daughters. The family's sole source of income is tobacco farming. He sells his tobacco in the open market and sometime traders come to his doorstep to procure tobacco. A few years ago he took a US\$1155 loan at 10% interest from a moneylender, but due to a poor crop he faced a loss of US\$333. Now he is significantly in debt, as he has not yet been able to repay either the capital or the interest.

### 3.3 Alternative livelihoods

In addition to the obvious benefit of shifting tobacco spending to basic needs, is the possibility that alternate employment might be generated for tobacco workers from such redirected spending. At the simplest level, new job opportunities could arise to provide the additional products and services that people could afford in greater numbers if

they were not spending money on tobacco. At the same time, in some countries, such as Brazil, crop diversification programmes have already been developed. But are they working as intended?

#### BANGLADESH

Unemployment remains a serious issue in Bangladesh. The tobacco industry claims that tobacco farming and bidi making are significant generators of employment. However, as indicated above, such employment often fails to provide people with a living wage; in the case of bidi work, it may take several family members to eke out a bare subsistence at the cost of the family members' health, children's schooling, and the proper maintenance of the household.

Given industry claims that increased tobacco taxes would cause significant job losses among tobacco workers, the Bangladeshi researchers explored, as a theoretical exercise, the number and type of alternate jobs that could be generated if people were to reduce their expenditures on bidis to other goods. As discussed in sections



3.1.2 and 3.1.3, the amount currently spent annually on bidis in Bangladesh is equivalent to the price of 4.85 billion eggs, 291 million chickens, 1.46 million tons of rice, 2.91 million cows, or 2.33 million cycle rickshaws. The amount is also enough to start more than one million small rural grocery shops, where consumers could afford to shop if they were not spending money on tobacco.

The number of jobs that such alternative spending could generate would depend on the degree to which bidi expenditures were reduced. However, the production of additional food to meet increased demand would either



employ more farmers and farmhands – working with non-toxic crops – or increase the output and income of existing farmers. New grocery shops could create 1 to 2 million additional jobs. Likewise, a rickshaw provides employment for at least two people, so more than 2 million jobs could be created. Each source of employment also has a multiplier effect: new jobs would be generated for those supplying goods and services to the farmers, small grocery shops, or rickshaw pullers.

Also noteworthy is that fact that a rickshaw puller, if he does not own his rickshaw, pays about 30% of his daily earnings to hire the rickshaw, meaning that he keeps 70% of what he generates, as opposed to the 4.6% kept by the bidi worker as noted above. Rickshaw pullers also work fewer hours per day and fewer days per week in less chemically hazardous conditions to earn a far higher salary than do bidi workers. Similarly, produce farmers often choose where to sell their food while chicken farmers operate independently of corporate control. As such, the share of profits going to food producers would be higher – and working conditions likely less harmful – than bidi manufacturing or tobacco cultivation. Reduced tobacco use could thus contribute to a tremendous source of new and higher paid jobs, which in turn could also mean better health and nutrition for those currently engaged in bidi work or tobacco cultivation.

**Case study:** *Bidi workers tend to work 7 days a week, 52 weeks a year. It is difficult for them to state how many hours a day they actually work, as they put in time wherever they can. A fair estimate might be 12-15 hours a day. Rickshaw pullers, meanwhile, work 7-8 hours a day, usually 25 days a month. That is, bidi workers work about 84-105 hours a week compared to about 45 hours a week for rickshaw pullers. The daily income of a rickshaw puller was found to average 275 taka; from his seven hours of physical labour, he gets to keep around 200 taka from his income after paying for the rickshaw*

*rental if he does not own one. A bidi worker, on the other hand, makes only about 63-136 taka for a much longer work day. And, he keeps only 4.6% of the selling price of the bidis that he makes, while a rickshaw puller keeps 72.7% of the fares he makes, or almost 16 times as much. Bad as the situation is, it may be even worse than the numbers show, as it often takes three bidi workers to do the job of one. That means that the already low wages become even lower when considering that it requires three people to earn them, whereas the rickshaw puller actually earns his full wage.*

## **BRAZIL**

Although there is plentiful evidence of the harmful effects of tobacco growing, the adoption of diversification strategies and measures to reduce tobacco production still faces considerable barriers in many countries, including in Brazil. Government concerns about potential reductions in agricultural jobs and decreased tax revenues and export earnings are fuelled by the claims of tobacco industries and representatives of tobacco growers who oppose the adoption of tobacco control and public health policies.

The Brazilian National Program to Support Production Diversification in Tobacco Growing Areas was a political response to such pressure during FCTC ratification negotiations. The Diversification Program, as it is known, is a joint effort of six Brazilian ministries: for Agrarian Development (MDA), Agriculture (MAPA), Health (MS), the State Office, Institutional Relations, and Finance. The MDA's Secretariat for Family Agriculture coordinates the Diversification Program. The objective of the Program is to support the design and implementation of projects related to rural extension, training, and research on strategies for family-based agriculture diversification. The focus is on rural poverty alleviation, food security and sovereignty, sustainable systems of production, income generation, and

added value. Since its launch, the Program has implemented 60 projects in seven tobacco producing states, benefitting 600 municipalities and approximately 30,000 families.

Several other federal programmes also address family agriculture, such as the National Policy for Technical Assistance and Rural Extension (ATER), the National Policy for Food and Nutritional Safety, the Food Acquisition Program (PAA), the National School Feeding Program (PNAE), and the National Program in Support of Family Agriculture (PRONAF).

The Brazilian researchers focused on analyzing the effectiveness of the Diversification Program, particularly in terms of whether it reflects a new rural development strategic approach for tobacco growers. They found that several Brazilian ministries whose work impacts on or is



directly or indirectly related to tobacco production or control have no specific policies, programmes, or activities to address FCTC implementation. There is little real coordination between governmental sectors. The Ministries of

Agriculture, Labor, Science and Technology, Communication, and Development, Industry and Foreign Trade have not developed or instituted policies, programmes, or strategic activities that could work collaboratively with those of the Diversification Program. Only the Ministry of Health has participated in the development of diversification strategies to improve the quality of life for tobacco growers, and/or to respond to tobacco industry arguments that FCTC implementation would have a negative national socio-economic impact.

Because the Diversification Program was developed as a *political* response to Brazilian senators who opposed FCTC ratification, it continues to be seen as a political response to those who oppose FCTC implementation. As long as this view persists, and as long as the Program does not receive sufficient attention within the federal government framework, its actions will continue to be barely felt, barely enough, and barely effective.

Since 1990, the amount of land under tobacco cultivation has increased by 63%. Over the same period, tobacco control measures adopted in Brazil (FCTC ratification, states' smoke-free laws, and advertising restrictions), have apparently reduced tobacco consumption in the country by 33%. Therefore, there is no relation between tobacco production and tobacco consumption in Brazil, as almost 87% of all tobacco produced is exported. Rather, the great expansion of tobacco production in Brazil is tied to high international prices, tobacco industry support, and very small landholdings and a large available (and poor) labour force, particularly in Southern Brazil.

*The Brazilian Agricultural Census reveals that family-based agriculture represents 84.4% of the total number of farms in the country, but only 24.3% of the total land under cultivation. Employing an average of 15.3 people per 100 hectares, family-based agriculture contributes 50% of the production of basic food items, such as beans, cassava, milk, poultry, and pork, among others. It also includes the vast majority of tobacco production, employing almost 200,000 households. However, while the past decade has seen increases in amount of land under tobacco cultivation, the number of families engaged in tobacco production, and the volume of tobacco leaf produced, the economic value of tobacco production to tobacco farmers has decreased. At the same time, social, economic, and environmental degradation in tobacco producing regions continues to grow.*

Although the majority of farmers now producing tobacco used to produce food (for sale and home consumption), they were unable to adjust to a new integrated market system which required more upfront capital than they had available. Such areas with low rural development and low human development indices are susceptible to tobacco growing expansion. Farmers are vulnerable to tobacco industry discourses that it is not possible to survive on such small landholdings without growing tobacco. Small-scale farmers thus become very resistant to the idea of switching to another crop or production system.

To date, while some progress is being made, each of the alternatives being proposed through the Diversification Program has weaknesses, including high start up costs, human resources management, logistical complications, complex tax regulations, certification issues, limited markets, and weak policy back-up and political support. The results of this research showed that the Diversification Program is good conceptually, but concrete action and real results are needed to allow for it to become a model for FCTC implementation. It is also necessary to understand regional differences and to work with local authorities, partners, and institutions to ensure that any strategy developed has buy-in from the beginning. Careful approaches are needed when promoting new livelihoods that may conflict with deep-rooted cultural belief systems.

## INDIA

Most of the bidi workers who participated in the Indian study expressed interest in alternate livelihoods given their meager wages and the exploitative nature of the tobacco industry. However, they have been unable to do so because they have no other skills. The participating farmers believed that tobacco cultivation was much more difficult than other crops, and indicated that tobacco is neither an appropriate nor profitable crop for small farmers, landless farmers, or

labourers. Yet people continue to start growing tobacco, lured by the belief of profitability propagated by tobacco companies and the elite farmers and moneylenders who keep most of the earnings. The participating tendu pluckers were likewise eager to find alternative sources of livelihood. Most of those who work for the tobacco industry do so simply because they have no other choice. Their high level of illiteracy and low skill level precludes their involvement in many other livelihood options.

**Case Study:** *Gulabu is an 8-year-old girl studying in the village madrasa. Her father is a bidi worker. There are 8 members in Gulabu's family and despite being the youngest she has to work for 4 hours a day rolling bidis. She mainly cuts tendu leaves and ties the bidis with cotton threads. In response to how she feels about bidi work, Gulabu said "we are poor, my father is not a service holder, my mother is a bidi worker and now is suffering from severe joint pains in her legs. She has to take regular medicines that require money and this is the only source of income we have. Since my parents alone cannot complete the quota of rolling 1500 bidis per day, I am forced to do this job". At the same time she said that she wants freedom from this job. She wants to continue her studies and take up some job outside her village and help her family to escape from poverty.*

## VIETNAM

The Vietnamese literature review examined existing evidence to investigate the link between tobacco and poverty in Vietnam and to assess the impact of tobacco control policies on employment related to tobacco consumption. This was seen as particularly relevant given that common misconceptions remain among policy-makers about tobacco economics – particularly about the tobacco industry's role in the local economy – which continue to hinder the adoption of a strong tobacco control law.

The review found that higher tobacco taxes would not necessarily lead to employment losses in Vietnam. The reasons for this include: (i) spending shifts from tobacco to other products would generate new employment in other sectors, such as food, clothing, and other consumer products, probably with a net positive impact; (ii) current employment in tobacco cultivation and manufacturing actually accounts for only a very small share of total employment; and (iii) population growth and rising incomes could offset any negative impact that higher taxes might have on overall tobacco employment.<sup>54</sup>

The likely employment consequences of implementing comprehensive tobacco control policies are likewise not significant.<sup>55</sup> Employment in tobacco cultivation,



processing, manufacturing and distribution was studied, and input-output analysis was used to analyse the impact of tobacco control on employment. In 2000, the tobacco industry provided about 122,470 jobs,

accounting for 0.32% of total employment. Of these, 97,600 were in tobacco cultivation, 12,400 in tobacco manufacture and 12,470 in distribution. The effects of adapting a comprehensive set of tobacco control policies (such as an % increase in excise tax, a strong secondhand smoke policy, a moderate-sized media campaign, an advertising ban,

introduction of strong health warnings on tobacco products, and reduction of youth access to tobacco) were estimated using the VNSimsmoke computer model. The implementation of tobacco control policies was determined likely to have two different effects: (i) a decline in tobacco production, consumption, and jobs, assuming no change in technology, and (ii) money formerly spent on tobacco being spent on other goods and services, leading to an increased total output and employment. Tobacco control policies might thus result in a reduction in tobacco employment but would create a larger increase in overall employment. As such, concerns about the negative impacts of tobacco control on employment and economic output are unfounded. Instead, tobacco control could increase opportunities for alternative employment and livelihoods for those now working in the tobacco industry.

**Case study:** Phong Lai, a commune with a long history of tobacco growing – possibly from the late 18<sup>th</sup> or early 19<sup>th</sup> century – has recently switched to other crops.<sup>56</sup> Tobacco had been the main source of income of Phong Lai households but, finding that tobacco was labour-intensive and unprofitable, commune residents replaced tobacco cultivation with higher value products such as peanuts, chili peppers, and fish. Young women formerly employed in tobacco found that they gained time to start lucrative small businesses, while others were able to seek better livelihoods elsewhere as their labour was no longer required for family tobacco cultivation. Thus, even in communities where tobacco is traditionally grown, more remunerative possibilities may exist.

<sup>54</sup> Guindon E, Nguyen TTH, Kinh HV, et al. *Tobacco Taxation in Vietnam*. Paris: International Union Against Tuberculosis and Lung Disease, 2010.

<sup>55</sup> Nguyen TTH, Nguyen TM, Hoang AT, et al. *Impact of Tobacco Control Measures on Output and Employment in Vietnam*. Bangkok: SEATCA, 2008.

<sup>56</sup> Tran DH. Changes in the life of Phong Lai villagers when tobacco products no longer play a crucial role. *Vietnam Soc Sci* 2004:61e70. INIST-CNRS, Cote INIST: 26825, 35400012664877.0050.



### 3.4 Household tobacco use and child health

Taking the opportunity costs of tobacco expenditures analysis further, one could explore the actual impact of household tobacco use on child health and nutritional status. Advocating to policy makers about the relationships between tobacco use and child health remains an important effort to develop awareness about the long term impact of tobacco use.

#### INDONESIA

Almost 70% of Indonesian male heads of household smoke, while the number of women smokers has increased rapidly in recent years. Smoking rates are higher among rural villagers than urbanites (69% and 61%, respectively); higher among people with low levels of education than those with higher education levels (72% and 50%, respectively); and higher among poorer people than those better-off people (68% and 61%, respectively). The vast majority of these smokers smoke inside their homes, exposing their children to the harmful effects of secondhand smoke.

An earlier study by Semba et al.<sup>57</sup> noted that paternal smoking negatively affects a child's nutrition status and is a risk factor for childhood stunting and wasting. The study suggested that malnutrition occurred due to the diversion of household expenditures toward cigarettes, thus reducing the proportion of food expenditure. However, alternative relationships are also likely to exist between parental smoking and childhood malnutrition. Parental smoking is a known risk factor for low birth weight and could influence a child's nutritional status by increasing the frequency, intensity, and duration of infectious diseases, particularly acute upper respiratory tract infection (ARI). Infection, in

turn, is directly related to a child's nutritional status.

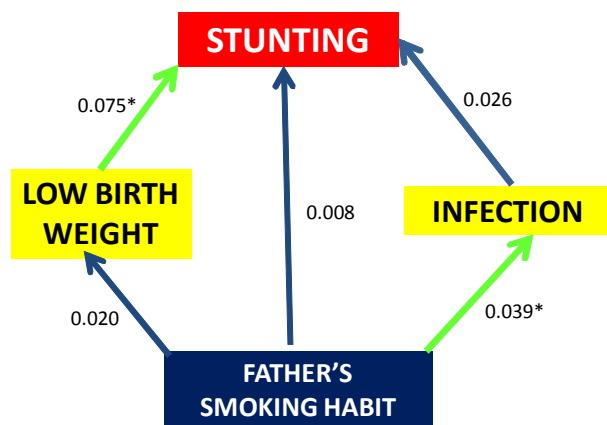
The Indonesian researchers explored the different mechanisms of influence of paternal smoking and children's nutritional status. Advanced analysis of nutrition survey data from the province of Nusa Tenggara Timur found an indirect relationship between parents' smoking habits and undernourished children. Smoking fathers correlated directly with childhood infection, and infection directly correlated with undernourished children. The incidence of Acute Respiratory Tract Infection (ARI) was 1.3 times higher in children with smoking fathers than in those with non-smoking fathers. As shown in Figure 3 and Figure 4, an analysis of population survey data demonstrated that there were statistically significant relationships between parents' smoking status and the prevalence of infections among children, as well as between parents' smoking status and children born with low birth weight.

A similar causal relationship was found between smoking and wasting, where parental smoking was significantly related to infection and infection was significantly related to wasting. Thus while Semba et al. suggested that smoking led to reduced food expenditures and caused chronic long-term inadequate food and nutrient intake, the current study suggested that parental smoking could also influence current nutritional status indicators, such as underweight and wasting, through increased incidence of ARI.

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<sup>57</sup> Semba RD et al. 2006. Paternal smoking is associated with increased risk of child malnutrition among poor urban families in Indonesia. *Public Health Nutrition*: 10(1), 7–15.

**Figure 3: Path analysis of parental smoking and child's stunting in East Nusa Tenggara, Indonesia**

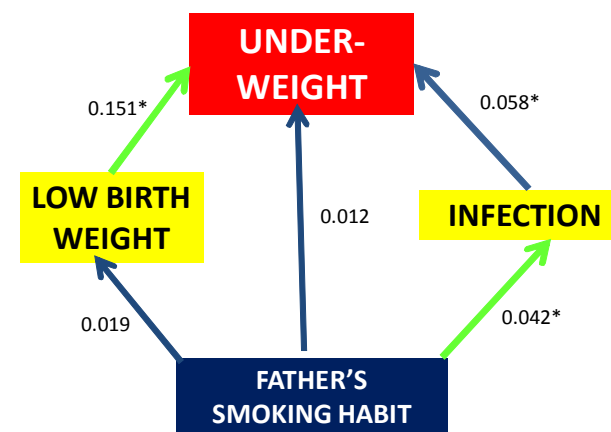


Note:  
\* Significant at p value < 0.05

Forty percent of the total sampled households had children aged 1-10 years and, among those, 65% of the fathers were smokers. The prevalence of ARI in the three months prior to the survey was 38%. In the poor households group, the prevalence of ARI was 37%, with 69% of the fathers being smokers. In the non-poor households group, the prevalence of ARI was 40% and 62% of the fathers were smokers. The chi square test with a significance of 5% showed no difference in either ARI prevalence or proportion of smoking fathers between the poor and non-poor households groups. However, the prevalence of ARI in households with smoking fathers was 42% and without smoking fathers was 33%. A chi square test showed a significant difference with  $p=0.064$  and odds ratio of 1.4 (95% CI: 1.0 – 2.0). The adjusted odds ratio for the relation between smoking fathers and ARI in their children is 1.3 with 95% confidence interval of 1.1-1.6. Thus, children who live with smoking fathers have a 1.3 times higher risk of contracting ARI than do children who live with non smoking fathers.

The project team conducted a separate multiple logistic regression analysis to assess the differential impact of smoking fathers to ARI in children living in poor versus non-poor households. In poor households, the adjusted odds ratio of ARI for children with smoking fathers was 1.7 with 95% confidence interval of 1.3-2.3. In the non-poor households, the adjusted odds ratio was 1.2 with 95% confidence interval of 0.9-1.5. Converting the odds ratio to attributable fraction demonstrated that 41% of ARI cases in children in poor households were attributable to smoking fathers, whereas in non poor households, 17% of the ARI cases in children were attributable to smoking fathers. Based on the total number of annual reported ARI cases, the study team estimated that about 9 million ARI cases in children each year are attributable to their smoking fathers.

**Figure 4: Path analysis of parental smoking and child's underweight in East Nusa Tenggara, Indonesia**



Note:  
\* Significant at p-value < 0.05

## 4 Key Advocacy Messages

The objective of research for advocacy is to identify key messages arising from the research results that could influence policy change. Therefore, the key messages being promoted should be closely linked to the specific policy being addressed and to the particular barrier that is being faced with regards to its development or implementation.

Each of the ten research studies was designed with policy goals in mind. The following section outlines the various policy issues that were addressed by the researchers and the advocacy messages that they developed to counter the obstacles being faced. All advocacy messages, regardless of the specific policy issue being addressed, emphasized the fact that tobacco use and production increase poverty.

### 4.1 Higher tobacco taxes and prices help to reduce poverty

The tobacco industry argues – and some governments agree – that tobacco prices and taxes should be kept low because higher prices primarily harm the poor. For example, Bangladeshi legislators recently refused to raise taxes on bidis because of concerns that increased taxes would unduly harm the poor and increase poverty.<sup>58</sup> However, international evidence shows that high prices are a deterrent to tobacco use; low taxes are in fact regressive as they encourage the poor to use tobacco.

*Low tax and price policies increase the affordability of – and thus expenditures on – tobacco among the very poor and thereby contribute to poverty.*

<sup>58</sup> Parvez S. Lobby backs bidi sector: health risks ignored. *The Daily Star* 06 June 2010. <http://www.thedailystar.net/newDesign/news-details.php?nid=141516>.

By calculating the opportunity costs of tobacco expenditures among the poor, researchers from Argentina, Bangladesh, Francophone Africa, Mexico, Peru, and Vietnam demonstrated how the affordability of tobacco products – that is, low taxes and prices – meant that less money was available at the household level for food, housing, health care, and education. In each case, researchers demonstrated the nutritious foods or other necessities that could have been purchased if tobacco spending was shifted to basic needs. By keeping tobacco taxes and prices low, and thereby making tobacco affordable, governments increase the likelihood that poor households struggling to meet their daily expenses will be further hampered by tobacco expenditures which “burn away” valuable resources.

In **ARGENTINA, CAMEROON, INDIA, MALI, MEXICO, and PERU**, advocacy messages focused on the fact that because low taxes and prices make tobacco affordable for the poor, tobacco expenditures divert scarce income away from food, health, and education.

- By switching their tobacco expenditures to food, approximately 90,000 households could help prevent malnutrition in 360,000 children each year.
- Tobacco consumption makes it even more difficult to meet general household expenditures.
- Smokers burn away their family's wellbeing.
- Tobacco expenditures affect not only the daily lives of the poor, but also their future.
- Especially in poor homes, the limited resources spent on tobacco compete with the families' ability to afford their basic needs for nutrition and health.
- 18% of poor homes with smokers spend money on tobacco, even though they do not have enough money to feed their children.

In **BANGLADESH** and **SENEGAL**, advocacy messages were particularly hard-hitting about the relationship that exists between household tobacco expenditures and childhood malnutrition.

- Approximately 900 children under the age of five die from malnutrition each day; shifting tobacco expenditures to expenditures on food could significantly improve children's nutritional status – and save their lives – by making high-nutrient foods affordable even to the very poor.
- In conditions of such extreme poverty, any expenditure on tobacco could mean the difference between basic survival and not quite getting by.

In **FRANCOPHONE AFRICA** and **INDONESIA**, advocacy messages also addressed the fact that among smoking households, tobacco expenditures were among the highest of all household expenditures, thereby severely limiting the ability of these households to meet their basic needs.

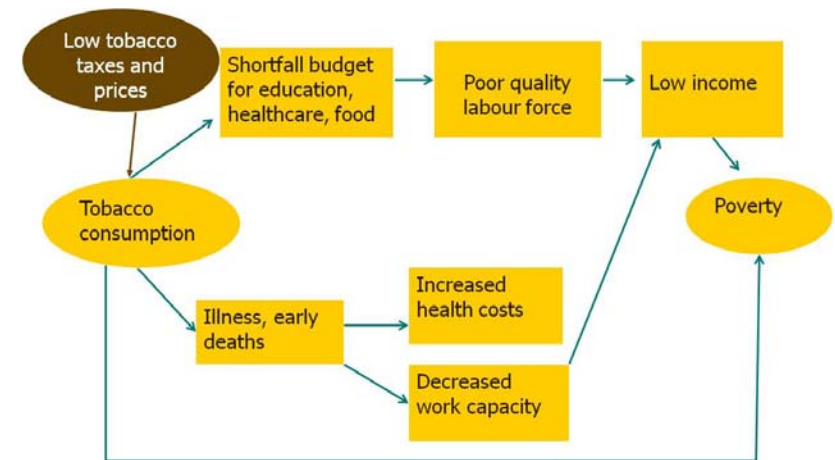
- In the majority of African countries where 60% of the population lives on less than \$1 per day, the cost of a pack of 20 cigarettes is more than typical earnings from a half-day's work.
- High tobacco expenditures impede the right of other family members to have a better life.

As shown in Figure 5, the **VIETNAMESE** researchers also highlighted the multi-faceted relationship between tobacco use and poverty, demonstrating that tobacco expenditures are welfare-reducing and at the same time they reduce welfare-enhancing expenditures. Advocacy messaging in Vietnam highlighted the research finding that households without smokers spend more on their children's education, health, and nutrition than do households with smokers. The

higher prevalence of smoking among the poor than among the economically better off only exacerbates the negative impact of low tobacco taxes and prices and increases the rich-poor gap.

*Reallocating tobacco expenditures to food could potentially raise 11.3% of all smoking households out of food poverty.*

**Figure 5: Tobacco and poverty advocacy messaging, Vietnam**



#### 4.2 Tobacco control will not have a negative effect on overall employment

Although an important aspect of the tobacco and development agenda is the direct impact on poverty of tobacco production, researchers must also address fears of employment losses resulting from tobacco control. In many countries, government officials believe that tobacco production alleviates poverty by providing employment. The tobacco industry often exaggerates the number of people whose livelihood is in some way dependent on tobacco production and use, and the spectre of a large unemployed population does much to frighten politicians out of taking tobacco control seriously. The studies in Bangladesh,



Honduras, and Vietnam, in particular, challenged the industry's propaganda about the negative impact that tobacco control would have on employment, both by challenging the industry's numbers and by demonstrating the potential for new job creation if smokers switched from buying tobacco to buying other goods and services.

In **BANGLADESH**, researchers countered the industry's argument by demonstrating how inaccurate its employment claims actually are. The Bangladesh Bureau of Statistics (BBS) estimates the number of bidi workers at 266,818, while the tobacco industry claims to employ 2.5 million in bidi making. However, total Bangladeshi employment in all manufacturing industries, including the large textiles and ready-made garments industry, is only 6.9 million, and so the industry's figures are clearly overstated. The **HONDURAN** researchers likewise disputed the tobacco industry's employment claims, pointing out that the vast majority of tobacco workers in that country are daily workers whose employment status is tenuous.

- *Even if it was to include the entire family of each worker, the tobacco industry's employment figure in Bangladesh – at 10 times larger than the official estimate – is significantly exaggerated and should be viewed with scepticism.*
- *We have heard that our country lacks employment, and that tobacco is a source of jobs in areas where thousands of poor people live. However, tobacco cultivation in this country is managed by large, highly mechanized companies whose drudgery work is carried out by a relatively small number of expendable daily labourers who receive no more than a pittance for their work.*

The **BANGLADESHI** researchers then took their opportunity cost arguments further, demonstrating that additional higher-value employment could be generated if smokers

redirected their tobacco expenditures to food and other purchases or to transportation.

*The amount of money spent on bidis is enough to start 1.6 million new small grocery shops, generating more sustainable income without disease. Money not spent on bidis could be used by customers to purchase goods at these businesses. The same amount of money could likewise generate 2 to 4 million jobs for rickshaw pullers.*

Similarly, **VIETNAMESE** researchers found that while tobacco control might reduce tobacco-specific employment, it would actually increase overall employment as spending was shifted to other goods and services that then generated additional employment opportunities.

*Industry restructuring – which is resulting in the closure of an increasing number of factories – has probably already had a stronger impact on tobacco employment than any tax increases would in the future.*

#### 4.3 Tobacco employment is not sustainable employment

More important than the number of people employed in the tobacco industry is the quality of that employment. As shown in section 3.2 above, tobacco employment does not provide workers with safe, sustainable, or poverty-reducing livelihoods. Instead, tobacco employment involves meagre wages or financial return, unremitting debt, exposure to dangerous chemicals and other hazardous working conditions, green tobacco sickness, the use of child labour, and other human rights abuses. The industry only speaks about the positive aspects of employment, not the negative aspects of what that employment actually involves. The research studies in **BANGLADESH, BRAZIL, HONDURAS, INDIA, and VIETNAM**

generated a number of advocacy messages to challenge the image of tobacco employment as good employment, and to ask the question, “who really benefits from tobacco production?” These messages addressed the reality of tobacco farming and bidi production, a reality that is far different than the one promoted by the tobacco industry. They highlighted the structural disenfranchisement of



tobacco workers and countered the image of tobacco as an important part of the economy by stressing the fact that tobacco workers are never able to reach an

“acceptable” standard of living. The messages also focused on the fact that although tobacco companies generate significant profits, tobacco cultivation and production brings little benefit to farmers and bidi workers.

- *The realities of tobacco farming and bidi rolling: tension, humiliation, alienation, chronic indebtedness, exploitation, and exposure to disease and poisoning in inhumane working conditions.*
- *Tobacco production is widely structured through unfair contract arrangements and bonded and child labour, all of which push vulnerable populations deeper into economic disenfranchisement.*
- *While it is possible for large-scale tobacco growers to get rich, the majority of tobacco labourers are vulnerable daily workers who toil long days in miserable and unregulated working conditions and who are forced to survive in poor living conditions given the mere pittance that they are paid.*

- *All three groups of tobacco workers in India – bidi workers, tobacco farmers, and tendu pluckers – are economically exploited, enjoy no rights or privileges as workers, and live in the most miserable conditions in abject poverty.*
- *Comparing the income level of tobacco growers and non-growers and considering the labour opportunity cost, the net benefit to tobacco growers is minimal at best and sometimes negative.*

In several countries, the advocacy messages also highlighted the burden of tobacco work on women and children.

- *Tobacco growing is labour intensive work, with a large proportion of the burden falling on women. Children are regularly exploited as unpaid workers.*
- *Although child labour is prohibited in India, children continue to work as “invisible” labourers for the tobacco industry, with lost educational opportunities, no remuneration, no proper nutrition, and no normal growth and development.*
- *Deprived of a normal childhood, not only is the size of child tobacco workers typically stunted: these children become the core of a repetitive cycle of systemic poverty.*

#### 4.4 Household tobacco use negatively affects child health status

**I**n addition to the opportunity costs of tobacco use, in **INDONESIA** many of the advocacy messages focused on the harmful physical effects on children of parental tobacco use. These negative effects are particularly troubling in a country where more than 50% of male heads of households are smokers and where smoking in the home is normal behaviour.

*Fathers' smoking habits increase the risk of Acute Respiratory Infection (ARI) in children. The correlation of smoking to poor nutrition and ARI is even larger in poor families than in non-poor families.*

#### **4.5 Poverty reduction strategies must address tobacco production and use**

In spite of the increased global attention being given to tobacco control, the relationship between tobacco and poverty is not yet being addressed in national poverty alleviation schemes. Instead, it is a common belief in many countries that tobacco production alleviates poverty by providing employment and contributing to national revenues. This belief hinders the willingness of policymakers to support tobacco control policies. However, reframing tobacco control as a poverty issue helps to highlight the serious impact of tobacco use and production on family socio-economic well-being, health, and education. Some of the advocacy messages arising from the ten research studies thus sought to raise awareness of the importance of incorporating tobacco control into global and national development and poverty reduction agendas. Tobacco control is not just a health issue, and non-health players are being encouraged to examine tobacco control as a poverty alleviation issue.

*Tobacco workers are perennially caught in a cycle of poverty, misery and debt at the hands of the tobacco industry.*

The importance of including alternative livelihood programmes in poverty alleviation strategies was highlighted in several of the research studies as, in many cases, the majority of tobacco workers want to shift from tobacco-related occupations, which have kept them in unending poverty, to safer alternative means of livelihood. At present, most of them work for the tobacco industry

simply because they lack skills or other employment opportunities. There is thus a need for government and civil society to work together in a coordinated fashion to help tobacco workers shift towards safer and viable alternative opportunities and livelihoods.

*National poverty eradication programmes must include national initiatives designed to generate safer alternative livelihoods for tobacco workers. Such alternatives must be designed with a long-term vision so that the benefits will extend to the next generations as well, ensuring that they are not compelled to go back to their earlier occupation.*

Finally, the need for coherence across policies was noted: the contradictory policies in many countries of tobacco promotion on one hand and tobacco control on the other need to be discouraged. Governments should take steps to discontinue grants for pro-tobacco-related research and the subsidization of tobacco cultivation.

*Ultimately, comprehensive tobacco control programmes would greatly contribute to poverty reduction and the achievement of the UN Millennium Development Goals.*

## 5 Sharing Research Results

The first step in sharing research results is to document them in a comprehensive research report which includes details about the methodology, analysis, and a complete list of references. Such reports are typically long, however, and while they capture the depth and breadth of the research that was undertaken, they are rarely effective tools for advocacy. More useful will be a shorter report that includes a few charts and graphs that illustrate the study's key findings, accompanied by some quotes and/or case studies. The abbreviated report should focus on what is directly relevant to the policy issue at hand and that would most interest the media and politicians. Publishing these shorter reports in respected national or international journals helps to ensure that they reach a wider audience.

In addition to published or unpublished reports, key advocacy materials that can be used to showcase research results include factsheets, media releases and articles, handouts with key advocacy messages (such as posters, brochures, T-shirts, calendars, or stickers), banners, letters to politicians and the press, and presentations.



Results from each of the ten research studies were disseminated in a variety of ways. Full research reports from each are posted on HealthBridge's website ([www.healthbridge.ca](http://www.healthbridge.ca)) and, in many cases, also on the websites of the respective research organizations. The results from **BANGLADESH** and **VIETNAM** have been published in the journal *Tobacco Control*.<sup>59</sup> The **INDONESIAN**

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<sup>59</sup> Roy A, Efroymson D, Jones L, et al. "Gainfully Employed? An Inquiry into Bidi-Dependent Livelihoods in Bangladesh." *Tobacco*

researchers published a book entitled *Cigarettes, Poverty, and the Lost Generation*.

Most of the research partners developed factsheets, often in both English and local languages. These factsheets were disseminated by the thousands at local and international meetings, workshops, seminars, and conferences.

In addition to presenting their results at dozens of local seminars and conferences, the researchers made presentations at international conferences. Researchers from **BANGLADESH, INDIA, INDONESIA, and VIETNAM** presented their initial findings at the 40<sup>th</sup> World Lung Conference (WLC) in Cancun, Mexico in December 2009. In October 2010, the same researchers presented their final research results at the *Asia Pacific Conference on Tobacco or Health* (APACT) in Sydney, Australia. The research results from **CAMEROON, MALI, and SENEGAL** were presented in September 2010 during the 3<sup>ième</sup> Conférence internationale francophone sur le contrôle du tabac (CIFCOTIII) in Niamey, Niger. Likewise, researchers from **ARGENTINA, BRAZIL, HONDURAS, MEXICO, and PERU** presented their findings during the November 2010 Conference of the Parties – IV in Punta del Este, Uruguay. Plans are being made for follow-up presentations at the 2011 Latin American and Caribbean Conference on Tobacco or Health in Peru and the 2012 World Conference on Tobacco or Health in Singapore.

The **MEXICAN** researchers presented their results at a summer course hosted by the National Public Health Institute. As the course is attended by state representatives from across the country, this form of dissemination helps to inform those who will ultimately be responsible for

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*Control* (2011). Published Online First 20 July 2011  
doi:10.1136/tc.2011.043000; Efroymson D, Pham THA, Jones L, et al.  
"Tobacco and Poverty: Evidence from Vietnam." *Tobacco Control* 20,  
no. 4 (2011): 296-301. doi:10.1136/tc.2010.039735. Published Online  
First 31 March 2011.



implementing tobacco control measures. Researchers from other countries conducted similar dissemination activities.

Some of the researchers, such as those in **INDONESIA**, disseminated their findings through TV and radio shows. Between them, the researchers also wrote or provided information for the writing of more than 100 newspaper articles. Research results were highlighted in the publications of other organizations such as the Framework Convention Alliance.



## 6 Preliminary Impacts

While policy advocacy often seeks long-term change, some key results of the ten research studies were already evident in a short period of time.

In **ARGENTINA**, the research results have been incorporated into a tobacco control awareness/capacity building program that is being carried out among grade eight students in schools throughout the province of Jujuy. This school project has been endorsed by the Ministry of Education for the province, and may be expanded to other provinces.

In **BANGLADESH**, the impact has been two-fold: bidi worker livelihood issues were included in the 2011 national budget debate and tobacco control advocates are using WBB's research results to lobby for higher tobacco taxes. At the same time, some key MPs and the National Board of Revenue Chair have indicated their support for tax increases and have requested that the researchers provide more detailed information, based on their research results, to bolster the stance of those working to ensure that tobacco tax increases are implemented.

The **MEXICAN** research results were used to develop a political briefing note to support the Secretary of Health's advocacy efforts for stronger tobacco control policies. In December 2010, the Secretary of Finance and Public Loans approved a small increase in tobacco taxes, in part as a result of the study's research results that demonstrated the links between tobacco and poverty.

In **PERU**, the research results have prompted political candidates to include tobacco control strategies in their election agendas. In addition, the law schools of some of the most prestigious national universities have used the research results to inform their Amicus Curia; in fact, evidence of the relationship between tobacco and poverty generated through the study were one of the main

arguments used to defend the constitutionality of the country's tobacco control law. The courts have recently thrown out the challenge and upheld the law, quoting one of the research results findings as evidence of the strength of the existing law.

In **VIETNAM**, the researchers have used their literature review results as an evidence base to push for the incorporation of strong measures in the new national tobacco control law that is currently being developed.



## 7 Conclusion

Tobacco and poverty research is an important mechanism to support advocacy campaigns for stronger tobacco control laws and policies. This book has provided concrete examples of the many ways in which tobacco and poverty research can be undertaken and its results used to advocate for improved tobacco control policies and laws. Raising political and public awareness through the provision of such country-specific evidence is an important step in convincing governments and development agencies to prioritize tobacco control as a poverty alleviation issue.

The authors recognize that there is no “one-size-fits-all” approach to designing and conducting research for advocacy. At the same time, research results from one country may be inappropriate or inapplicable to another country's context. However, by providing the details from a range of methodologies and policy targets, we hope that this book – and the accompanying guidelines – will prove to be both useful and inspiring for those interested in further pursuing the topic of tobacco and poverty. While the tobacco industry has the financial resources to conduct ongoing lobbying against tobacco control laws, policies, and regulations, small-scale research for advocacy can be a powerful low-cost tool that provides the evidence needed to counter the industry's claims. Research results, especially when presented in a way that generates media attention, can do much to gain the attention of policymakers, and thus motivate them towards positive tobacco control action that can also play a significant role in reducing poverty.