

PLEDGE

I am convinced that tobacco
is injurious to health
Brings about death, disease and disability
Shatters the economy of the family,
the community and the State and
Destroys the ecology

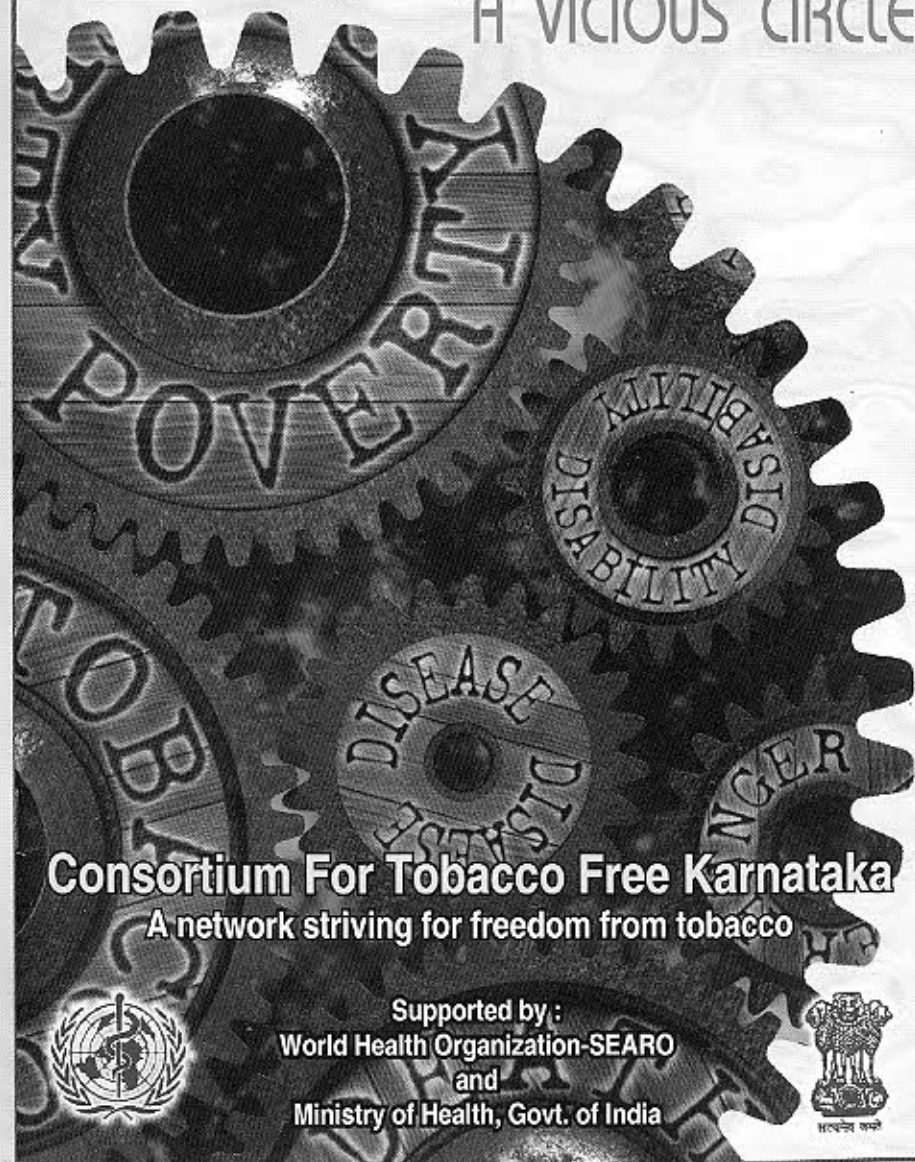
To prevent premature death and suffering,
due to the ill-effects of tobacco,
I shall do my best to bring about awareness
among the people to lead a healthy life, avoiding tobacco
use in any form. I shall strive hard to build
a prosperous tobacco free Karnataka

World No Tobacco Day

31st May 2004

tobacco and poverty

A VICIOUS CIRCLE



Consortium For Tobacco Free Karnataka

A network striving for freedom from tobacco



Supported by:
World Health Organization-SEARO
and
Ministry of Health, Govt. of India





GONE UP IN SMOKE!

It began in style when he was young a boy,
Twirling it in his fingers he derived so much joy.
He thought it 'grown up' and as the 'in thing',
Ignored all the consequences it would finally bring.

When it all began, t'was just a small part
Of the whole with friends, all at the start
On a one way track, to a dark abyss,
Death a certainty at the end of their 'bliss'.

The part now a whole at the end of each day,
He savoured it completely, contentment all the way
Idly watched the smoke to the ceiling rise,
'Blind' to see light he never got wise.

Now a family man, working with others,
Staying ahead, the increase in pressures,
Forced him ever deeper with his dark desire,
He reached out more often before he retired.

The deceitful 'peace' as the smoke permeated
Into his body, while it only desecrated
That temple of life, brought forth so pure,
Now an empty shell and nothing more.

As he grew older his body began yearning,
For one and another he felt a deep burning,
And when the threshold was pushed even higher,
He couldn't last without it even a little longer.

And then the strained gasping and choking for breath,
Staying up all night, the sleeplessness.
The report revealed why the cancer had spread,
To his entire body, now a burnt out wreck.

Looking back on life now a thorough mess,
Was never really worth it, this craze, senseless.
It would end in death, it made him regret,
If only he'd thrown away that first cigarette!

How many smokers won't end up this way?
How many others will they drag to the gates
Of death, with them being blatantly uncaring,
They should realize, others' lives are worth sparing.

Here is a call to down your cigarettes
For your good health and the good of the rest
Of your family and friends with whom you interact,
That you'll save many lives is an undisputable fact

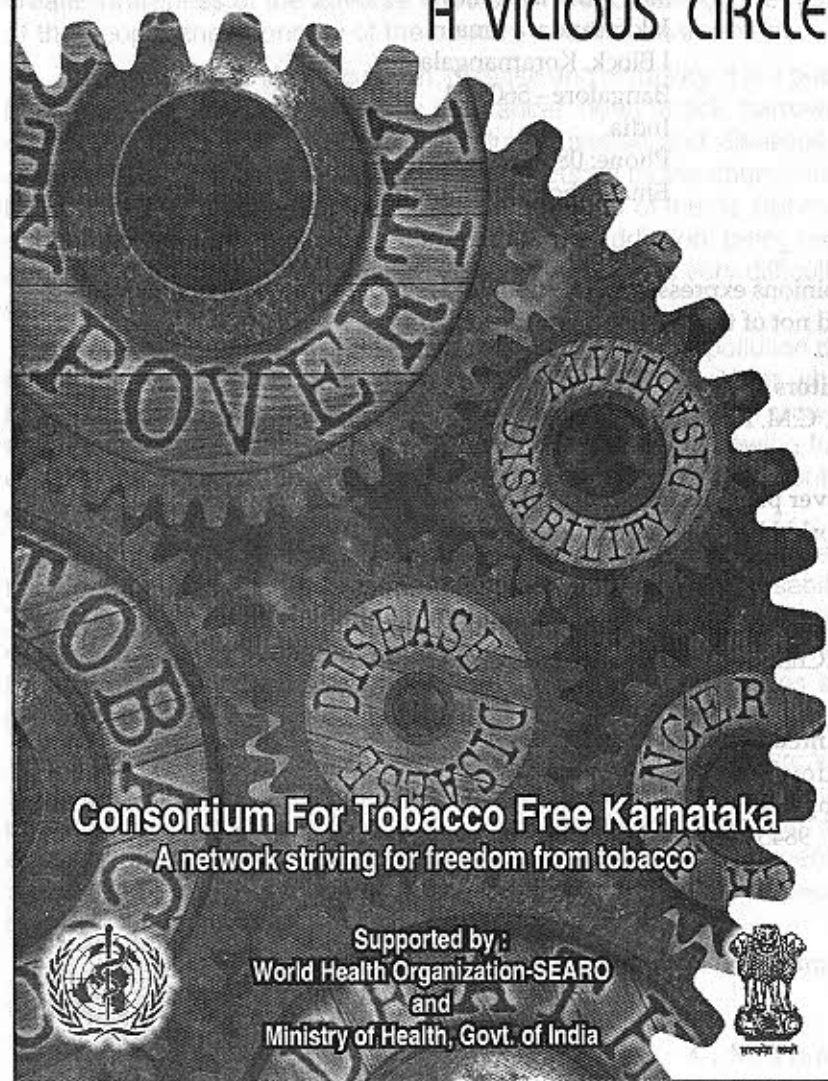
By Neil D'Costa

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The consortium For Tobacco Free Karnataka (CFTFK) was formed in the year 2000. The mandate for CFTFK to recognize the serious social, economic, health and environment implications of tobacco cultivation and consumption. CFTFK has also been involved in Policy and Advocacy for tobacco control in the state.

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EDITORIAL

All over the world, there is an awakening to the dangers of tobacco use. This happened first in the developed countries but the information and knowledge have now become worldwide. The World Health Organisation has taken up the issue at the global level. The Consortium for Tobacco Free Karnataka has taken up the challenge at the State level. This booklet is part of the efforts the consortium to create awareness of the adverse effects of tobacco use on the health of the people, the economy of the country and the environment.

Tobacco use leads to death, disease and disability. It is a public health disaster. The known effects are cancer, heart attack, narrowing of blood vessels, Chronic obstructive lung disease and diseases of other organs. These adverse effects are produced by the chemicals in tobacco and its smoke (there are more than 4,000 of them). But most dangerous among them is nicotine. It produces addiction, being more addictive than heroin and cocaine. Once addicted, it is very difficult to give up the habit.

Tobacco affects the environment, not only by the pollution due to the smoke. To cure tobacco, there is need for firewood for which huge numbers of trees are cut down, denuding forests. Tobacco growing uses good quality soil, which could have been used for growing food or other cash crops. Tobacco also uses up considerable amount of ground and subsoil water.

The economy of the country is affected adversely because of the need to care for the persons affected by disease and disability. The expenditure incurred by the individual, the family and the State is enormous. It is far more than the amount received by the Government by way of taxes. The laborers involved are subject to diseases and premature death, reducing productivity.

The articles included here are intended to create awareness leading to action to reduce the use of tobacco in any form - smoking, chewing or otherwise. We can do so by advocacy, lobbying and ensuring that the recently passed Act and Rules are implemented meticulously. Importantly we have to reduce the production of tobacco, because what is produced will be used.

Let us all join the campaign to reduce the supply of and demand for tobacco and its use.

C. M. Francis

TOBACCO!

A cash crop or crash crop?

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HISTORY OF TOBACCO USE

We have been taught in schools that tobacco is cash crop and many of us believe it. It is worth finding the truth of the matter, if tobacco is really a cash crop, if so who does it benefit? Today tobacco is grown in over 125 countries. Many believe that tobacco is part of our ancient civilization but the fact is that the Portuguese introduced tobacco in India some time in early 16th century. Tobacco plant is a native of Mexico, Central and South America. There are about sixty-five known varieties of tobacco of which only two varieties (*nicotiana tabaccum* and *nicotiana rustica*) are extensively cultivated. The popular varieties being cultivated in India were introduced by USA and Canada; particularly the Virginia tobacco was introduced by the state of Virginia in USA. (1)



The royal physician in the court of Akbar was apprehensive of the ill effects smoking and suggested it be smoked only after passing the smoke through water. This gave rise to the use of hukkah, which later became the prevalent form of smoking in the country. Since hukkah is cumbersome to smoke, *bidi* became the convenient form of smoking later(2) *Bidi* was first manufactured in Bihar; later it spread to the other parts. Chewing tobacco with various brands have become the popular form of tobacco used in the country today. First cigarette machine factory was set up in Havana, Cuba in 1853. Later cigarette manufacturing spread to England and America. After the First World War cigarette smoking increased rapidly in the country. India ranks third in the world in tobacco production.

FORMS OF TOBACCO USE

Tobacco products are available in the modern world in many forms. While the primitive forms are still used in many parts of the world by a small percentage of people, Cigarette smoking has become the popular form of tobacco used internationally. In India Cigarette smoking accounts for about 16% and chewing tobacco for 30%; the remaining percentage of people consume the other forms like *bidis*, moist snuff, dry snuff etc. Here are some of the other forms of tobacco used around the world.

Kreteks are clove-flavored cigarettes. They contain a wide range of exotic flavoring and eugenol, which has an anesthetizing effect, allowing for deeper smoke inhalation.

Pipes are made of briar, slate, clay or other substances; Tobacco is placed in the bowl and inhaled through the stem, sometimes through water.

Sticks are made from sun-cured tobacco known as burs and wrapped in cigarette paper.

Chewing tobacco is known as plug, loose, leaf, and twist; *pan masala*, or *betel* leaf quid consists of tobacco, areca nut and slaked lime wrapped in a *betel* leaf.

Moist snuff is taken orally. A small amount of ground tobacco is held in the mouth between the cheek and gum.

Dry snuff is powdered tobacco that is inhaled through the nose or taken by mouth.

Cigars are made of air-cured and fermented tobacco with a tobacco wrapper, and come in many shapes and size. (3)

CULTURAL USE TO COMMERCIALIZATION

Photo source The HINDU



Over the years the cultural use of tobacco has been converted into commercial purposes. The following quote by an investor adds to the evidence; *"I tell you why I like the cigarette business. It cost a penny to make. Sell it for a dollar. It is addictive. And there is fantastic*

brand loyalty." (Warren Buffet, investor, 1990s) (4) Mr. David Swenor, Senior legal counsel, Smoking and Health Action Foundation, Canada, argues that Tobacco MNCs like other public companies exist to make money for shareholders. These companies make huge returns on investment in excess of 100% per year. The financial success is due to its ability to sell by creating demand particularly through advertisement of various forms (5). Often the tobacco company brings an argument that the industry plays a vital role of providing means of livelihood for tobacco growers and others involved in manufacturing tobacco products. The fact is that it is the tobacco company that gets the lion's share.

There are over 260 million tobacco users in the country today. The situation in the west has changed due to increased health awareness and high cost of treatment of illness due to tobacco use. Dwindling sales in the west forced the multinational companies look to the east for marketing. These MNCs mainly target the adolescent population. Each day 68,000 to 82,000 adolescents from low and middle-income countries enter the pool of tobacco users every day against 14,000 to 15,000 in high-income countries. The production of tobacco leaves has more than doubled since 1960; 7 million metric tons of tobacco has been produced since then.

The performance of ITC (formerly Indian Tobacco Company) during the quarter ending March 2003 has clocked 10 per cent increase in net sales at Rs 1,580 crore, and the net profit was up 13 per cent at Rs 323 crore. The British American Tobacco Company, which has a 31 per cent stake in ITC, recorded a net profit of Rs13.71bn (\$292m) for the year to March 2003, up 15.3 per cent on Rs11.9bn in the previous year. ITC continues to anticipate good results. Consumption of Cigarettes accounts for only 20 percent of the tobacco usage in the country, with the remaining being made up by users of beedies and chewing tobacco. Chewing tobacco and beedi industry continue to thrive in the name of providing employment.

A CROP THAT CURTAILS LIFE

How can we call a crop that kills as cash crop? Every ten seconds, another person dies as a result of tobacco use. This translates to nearly 10,000 deaths every day and 5 million deaths annually (WHO). The tobacco related death in the country has been estimated as 8-9 lakhs

a year. About half of all smokers who are killed by tobacco die in middle age. On an average, these smokers who die in middle age lose about 20-25 years of life expectancy.

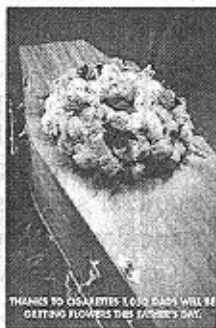
Tobacco use is linked to over 25 diseases, which include heart and lung diseases, cancer and thromboangitis (gangrene of feet). Low birth weight, respiratory distress syndrome and infant death syndrome have been found to be of higher incidence among babies of women smokers. Tobacco use contributes to 75-80% of all heart attack deaths in young smokers under the age of 50. The cost of cancer cure estimated in 1990 was 1,34,499 and the cost borne by the patient was Rs. 17, 965, the loss to institution for treating the person was Rs. 4,009, and loss to GNP due to premature death was 1,12,475. In 1999 alone 1.63 lakhs people developed cancer due to tobacco use (Indian Council of Medical Research).

While the net profit of tobacco per annum is estimated as 24,000 crore, the cost of treating tobacco related disease is estimated as 27,700 crore. Though the loss is more than the gain the government continues to promote tobacco in the name of job opportunities. With political will we can replace jobs, can we replace lives?

Over two million children below fourteen years of age are engaged as laborers in the highly hazardous tobacco industry, most them as bonded laborers. The children, mostly girls, who roll *bidi* have stunted growth and suffer from respiratory diseases like tuberculosis and asthma, besides menstrual disorders. They also suffer from tuberculosis, gastrointestinal problems and bowel disorders. According to Dr. Sinha, assistant professor at Department of Preventive Oncology, Patna Medical College, 93.3 per cent of the sufferers did not receive any treatment simply because they could not afford; the finding is based on a study conducted by them.

A CROP THAT ENDANGERS ENVIRONMENT

Curing tobacco consumes an estimated 200,000 hectares of woodland each year. "By the government's own estimates in Karnataka, 1,20,000 tonnes of wood is used just for curing." This is in addition to



packaging and the forest cleared for nurseries. It was reported that to get a cartload of wood from the forest a farmer bribes the forest department staff 100-200 rupees. Mr. Naveen Thomas, Fellow, Community health Cell, who has done an assessment on tobacco cultivation in Karnataka says, in one of the villages in Karnataka about 80 per cent of the forest has been cleared just because they need the wood for curing. WHO estimates that 7 billion tonnes of paper are used every year worldwide for wrapping cigarettes. It is estimated that every kg of tobacco curing requires 20 kgs of wood. Dr. Dhanpal who has done a study on 'quality of life, energy use pattern and environment in rural areas' for his PhD thesis has estimated that in dry areas the wood required per person for fuel for cooking purposes is 0.9 kg and in cold areas is about 1 kg per person. The energy that every Kg of tobacco curing consumes can be used for four days for a family of five. Greater use of fertilizers and pesticides and increased mechanization are responsible for higher yields but its impact on environment is immeasurable.

A CROP FOE TO FARMERS

It has been observed that tobacco industry exploits the millions of tobacco farmers worldwide by increasing their debt burden (WHO). Karnataka has about 18,000 registered and over 16,000 unregistered tobacco cultivators. Without looking at the serious implications the government has actively been promoting cultivation of tobacco over the last 50 years along with the tobacco companies. Tobacco cultivation involves a labour-intensive process that rapidly depletes soil nutrients and requires heavy use of pesticides and fertilizers. The net returns from tobacco are estimated less when compared to many other crops and the farmers get very little of the profits; the tobacco companies enjoy the maximum. Dr. Satvinder Kaul of Punjab Agricultural University argues that most farmers cultivate tobacco not because it is profitable but because their



Photo Ravi Sharma



families have traditionally done for years. It has been observed that when the prices are good, they earn about 6000 to 8000 rupees per acre. There are other crops that are equally or more profitable than tobacco; unfortunately due to lack of financial support the farmers are unable to switch over. The landless laborers, particularly the women and children who work in tobacco fields earn about 40 rupees and men earn about 50 rupees. While they are compelled to earn this meager amount for their survival, they are exposed to serious health hazards. A woman in Shimoga district in Karnataka who worked in the tobacco field spent more than 15000 rupees for her treatment for corrosion of the internal organs due to exposure to tobacco dust. She says now "even if they pay 100 rupees a day I will not work in the tobacco field."(1)

ENSURE ITS ELIMINATION

Political backing that the tobacco industry receives in the name of sympathy towards tobacco cultivators is the biggest hurdle for tobacco control in the country. Both the Acts recently passed by the state and the center do not adequately address strategic measures that would ensure elimination of tobacco; it emphasize more on demand reduction measures. It is more than six months since the Acts were passed and the government has come out only with banning of advertisements. There is need to come out with rules for enforcing effectively the other measures suggested by Frame Work Convention on Tobacco Control (FCTC) to control tobacco use. Unless the government takes measures to bring down the cultivation in a phased manner we will never be able to prevent millions of death and unnecessary suffering due to tobacco use. While these Acts were being passed, Karnataka has grown 40,000 tonnes of tobacco as against the ceiling of 25,000 tones for the year. No action is yet taken. Public awareness concerning tobacco related issue is still low (6). While eighty



percent of tobacco users in this country belong to the rural areas most of them cannot read and write and do not know the ill effects of tobacco. The only health warning the educated tobacco users and masses know is "cigarette smoking is

injurious to health" which is printed in small letters on the packets and beneath the glamorous advertisements displayed in prime localities. I wonder if any one pauses to ask; in what way it is injurious to health? And what connection the pictures displayed in the advertisement has with tobacco. If one critically analyzes, you would come to know that the captions and picture convey a lie, to lure the innocent children and adolescents. We have to stop this menace of tobacco. Together we can overcome. Let us all responsible citizen of this country join the campaign to **educate, enforce and eliminate** a crop that kills, endangers environment and is enemy to farmers and laborers.

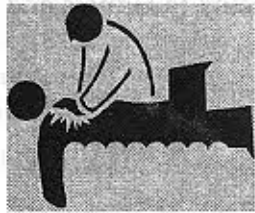
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TOBACCO USE : A MAN MADE PUBLIC HEALTH DISASTER

Dr. C.M. Francis
Consultant
Community Health Cell

Tobacco kills. It kills more than 4 million people each year. It is the leading cause of death and disease. It can be prevented by simply avoiding its use. There is increasing awareness of the harm done by tobacco in the affluent countries and action is being taken individually and collectively to reduce its consumption. The tobacco industry is now directing its advertisements promoting the use of tobacco to the developing countries and particularly to countries like India with large 'markets'. If the current trends continue, the death toll from tobacco use will rise to **8.4 millions per year** in two decades. 70% of the deaths due to tobacco will be in the 'third world'. Tobacco will claim more lives than HIV/AIDS, tuberculosis, maternal mortality, motor vehicle accidents, suicides and homicides combined.



The dangers of tobacco use are clearly proved by more than 50,000 scientific studies from all parts of the world, including India. The evidence of this preventable public health hazard is overwhelming. The tobacco companies knew of the dangers but they played down the dangers and continued to promote the use of this hazardous substance.

There are about 4000 chemicals in tobacco smoke with different biological activities. There are carcinogens, irritants, asphyxiants, enzyme inhibitors, neurotoxins and other pharmacologically active compounds.

Tobacco : a major risk factor

Tobacco is a major risk factor for about 25 diseases. It is projected that the share of tobacco in the causation of death and disease will rise to **8.9% of the total** by the year 2020. **Smoking shortens life**

span. It is expected that tobacco users will lose, on an average, 22 years of normal life expectancy. While the majority of the studies have been done on people, who smoke cigarettes, studies on use of bidis, cigars, pipes and chewing tobacco show that all forms of tobacco are harmful.

Pattern of smoking in India

The rural population and lower socio-economic group in the urban areas smoke bidis; the middle and upper urban classes smoke cigarettes. Less commonly, the rural population uses hookah, chillum and chutta; the urban groups may use cigar and pipe.

The average Indian bidi contains 330 mg of tobacco while the average cigarette has 1 g of tobacco but the contents of nicotine may be higher in the bidi (1.0-1.8 mg per cigarette and 1.7-2.9 mg per bidi)

Cancer

30% of all cancers can be attributed to tobacco. Smoking is a known cause of death from cancers of lung, oral cavity, larynx, oesophagus, stomach, kidney, bladder, pancreas and uterine cervix. Polyaromatic hydrocarbons contained in cigarette and bidi smoke are known carcinogens.

Lung Cancer

Of all the diseases associated with smoking tobacco, the best known is cancer of the lung. Smokers increase the risk of lung cancer by 5-10 fold. Roughly, two-thirds of all patients with lung cancer were smokers of cigarettes or bidis. The prognosis for lung cancer patients is poor. The five year survival rate has remained at 14%.

Cancer of other organs

Smoking increases the risk of other cancers, eg., smoking doubles the risk of colon cancer.

Cardiovascular disease

25% of deaths due to coronary heart disease are due to tobacco. Studies in U.K. have shown that smokers in their 30s and 40s are 5 times more likely to have a heart attack than non-smokers. 40 years

follow-up of British Physicians showed that excess mortality from cardiovascular diseases was twice among smokers compared to non-smokers. Cigarette smoking acts synergistically with other risk factors (high blood pressure, elevated serum cholesterol) on the mortality from the cardiovascular diseases.

Smoking is a cause of peripheral vascular diseases, causing narrowing of the blood vessels and reducing blood flow. It leads to risk of amputation of the limbs and infections.

Stroke

Tobacco smoking reduces the blood flow to the brain; it may lead to stroke. This may be fatal or cause disability.

Chronic Obstructive Pulmonary Disease

More than 80% of chronic obstructive lung disease are due to tobacco. Among them are chronic bronchitis and emphysema. Once the disease is established, with structural changes, quitting smoking does not produce substantial reversal of COPD.

Reproductive system

Smoking is a probable cause of many unsuccessful pregnancies. The new born may have low birth weight (about 200 g lighter). There may be increased foetal loss and stillbirths. There is also increased perinatal mortality.

Other diseases

Tobacco use increases the risk of diabetes and osteoporosis. There is higher risk of fractures, particularly of the hip bones and vertebrae. One in eight hip fractures is attributed to cigarette smoking.

Working with Tobacco

Nicotine is absorbed rapidly through the skin. It occurs during harvesting tobacco, leading to a condition known as 'green tobacco sickness'. Bidi rollers exposed to tobacco show high concentrations of nicotine in their bodies. Younger workers (children) are at greater risk.

Smokeless tobacco

Chewing tobacco, in various forms, is common in India. It is a socially and culturally accepted form. Oral use of tobacco causes increased risk of oral cancer and upper digestive and respiratory tract.

When pregnant women chew tobacco, it can affect the child in the womb and lead to intra-uterine growth retardation and low birth weight.

Oral use of tobacco can cause periodontal diseases.

A form of tobacco, which was popular earlier, is 'snuff'. Its use is getting reduced.

Environmental tobacco smoke

This is also known as second hand smoke or passive smoking. Apart from causing indoor air pollution, it affects all those who inhale the smoke. The adverse effects are the same as smoking tobacco.

Addiction

Nicotine in tobacco is highly addictive. It is as addictive as heroin or cocaine. All tobacco products contain substantial amounts of nicotine. The earlier a person starts using tobacco, the more likely that he/she will not be able to quit the habit. Tobacco industry targets children, adolescents and youth in their advertisements (promoting sports and games and entertainments). Young people are not fully conscious of the process of addiction.

Two factors influence the decision whether the tobacco user will quit its use:

1. **Addiction to tobacco:** once addicted, it is difficult to give up. Addiction may be physical or psychological.
2. **Motivation to quit:** the drive, intention or desire. These are influenced by awareness of smoking related health risks, financial cost, social pressure and smokers' perception of benefits and disadvantages of smoking.

Tobacco dependence is a serious public health problem. There is need for strong action, if the epidemic of tobacco related mortality and morbidity is to be countered.

Tobacco lobby

The tobacco lobby is extremely powerful. It is so, whether it is in growing tobacco or in the manufacture and sale of the tobacco products.

The cultivation of tobacco is supposed to be controlled by the Tobacco Board. But the area under cultivation and the quantity that is grown are always exceeded. There is then pressure to accept the excess grown and the same is processed and sold in various forms. Tobacco that is grown will be used.

The governments of countries producing tobacco products force other countries to open up their markets. In the 1980s, the U.S Trade Representative forced Japan, South Korea, Taiwan and Thailand to open their markets to US tobacco corporations. These tobacco corporations marketed their products, using sophisticated promotional methods to increase tobacco consumption. Not only that, Japan, Korea and Taiwan were forced to repeal restrictions on cigarette advertising, under U.S. trade threats.

Benefits of quitting tobacco use

Cessation of tobacco use has substantial health benefits. It reduces the adverse effects. One year after quitting smoking, the risk of coronary heart diseases decreases by 50%. Risks of developing other diseases also decrease but more slowly. Ceasing smoking before the age of 35 years is of greater benefit but there are benefits of quitting at any age.

Most smokers want to give up smoking at some stage or other; but; it is extremely difficult because of dependence.

Management of dependence

Effective management of tobacco dependence can significantly improve public health. There is need to train all the people: the users of tobacco, especially the young, teachers, social workers, civil society and the health professionals. The health professionals (doctors, dentists, nurses, pharmacists and others) provide advice and treatment for tobacco dependence. Others can be supportive.

Action needed

The Government has enacted the law "Cigarettes and Other Tobacco Products (Prohibition of advertisements and Regulation of Trade and Commerce, Production, Supply and Distribution) Act. This is one step in the right direction. Much more has to be done, if this disaster is to be averted. We need an effective, sustained public health campaign against tobacco use. Our efforts must be directed to reduce substantially, if not to complete eliminate, the **demand and supply** of tobacco and its products. We owe it to the nation and the world.





TOBACCO AND CANCER

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The major ill effect of tobacco was reported first by the director General of Health of USA, way back in 1945. Ever since there are more than 100 scientific proven articles co-relating the causation of cancer and tobacco. World bodies like WHO have endorsed these findings as also the National bodies such as the Indian Council of Medical Research (ICMR), Tata Institute of Fundamental Research and various other scientific bodies related to health, environment & social issues. Tobacco is responsible directly or indirectly for an estimated 9 lakhs death annually in India.

Tobacco is regularly consumed in India either in smoking form or in smokeless form such as chewing. In either case, 4000 odds harmful chemicals enter the body and cause devastating health hazards. Prominent among these chemicals are nitrasamine, benzpyrine, ammonia, tar etc. The notable cancers which are caused by tobacco consumption are mouth, throat, voice box, lung, pancreas, urinary bladder, kidney and uterine cervix.

Caner of mouth and throat

Smoking cigarettes, bidis and cigars is risk factor for all cancers of larynx, oral cavity and esophagus. Over 90% of patients with oral cancer use tobacco by either smoking or chewing it. "Oral cancer" includes cancer of the lip, tongue and mouth. These cancer-inducing effects of cigarette smoking have been studied extensively but those who smoke pipes or cigars experience a risk similar to that of cigarette smokers.



Lung cancer



Lung Cancer kills more people than any other type of cancers and smoking causes 80% of these deaths. In 1999 in USA, 22% of all cancer death related to lung cancer, making it the most common form of cancer. One in two smokers die prematurely: of these nearly one in four will die of lung cancer. The risk of dying from lung cancer increased with the number of cigarette smoked per day. Smokers who started when they are young are at an increased risk of developing lung cancer. Results of a study of ex smokers with lung cancer found that those who started smoking before age 15 had twice as many cell mutation as those who started after age 20. The smokers have 20-25 times risk of developing lung cancer.

Breast Cancer

There is growing evidence of a link between both active and passive smoking and breast cancer. Seven of eight published studies examining passive smoking and breast cancer suggest an increased risk of breast cancer associated with long term passive smoke exposure among women who have never smoked.



Cervical Cancer

A study in Sweden investigated whether behaviour/lifestyle factors such as smoking, nutrition and oral contraceptive use were independent risk factors for cervical cancer and found that smoking was the second most significant behavioural/life style factor.

Prevention of Cancer

35-45% of the cancers are preventable if only the consumption of tobacco is stopped. Cancer is a dreaded disease to treat and sufferings of the patients are enormous. To treat these caners it takes heavy financial burden to the patient's family and to the ex-chequer. It has been found that treatment of tobacco related diseases and the loss of productivity caused, cost the country almost 13,500 crores annually.

The only wise way to mitigate this problem is by prevention. Prevention is possible when the tobacco usage is stopped.

ECONOMIC IMPACT OF SMOKING & CARDIOVASCULAR DISEASE

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INTRODUCTION

Tobacco is neither human friendly nor environment friendly. In fact it is the chief avoidable cause of premature death and illness. According to WHO estimation, about 10 million people die of tobacco related diseases every year all over the world. The impact of human tragedy on family in particular and society in general is unimaginable. The ecological and economic impact is unfathomable and mind boggling. It is high time the public and politician woke up to this burning problem.

ECONOMIC IMPACT

The tobacco industry which is made to appear as a good source of revenue by the successive governments is in fact responsible for more financial burden. 25% of health expenditure in USA is on tobacco related diseases and it stands at staggering 6.5 billion dollars/year. Financial burden on government in treating tobacco related diseases in India is not clearly known. A smoker smoking 20 cigarettes a day spends about Rs. 10,950/year. That means for 30 years of smoking he spends Rs. 3,28,500 which otherwise could have been used to build a house or educate the children and get them married. Economic impact of disease and death due to tobacco is enormous.



HUMAN TRAGEDY

Tobacco a prime killer in prime of life, kills more than 8,00,000 people every year in India, whereas death toll due to road accidents is around 60,000 per year. 25% of fatal heart attacks are due to tobacco



consumption. Over 20,000 people undergo amputation (cutting limbs) annually. More than the medical expenditure, for treatment & cost of artificial limb, it is the crippled man with no job being burden on the hapless family is unbearable. About 50% of cancers in man and 25% of all cancers in women are directly due to tobacco. It is estimated that 60% of all the

lung diseases like bronchitis and emphysema are due to smoking. The paralysis (stroke) is 3 times more common in smokers than in non-smokers. The paralyzed man is like a living dead or a vegetable, neither useful to his family nor the society. The human tragedy and the consequences in the family of the dead or paralyzed or crippled with amputation are incalculable.

ECOLOGICAL IMPACT

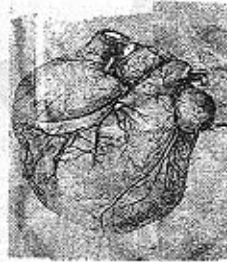
Curing of 1 kg of tobacco for cigarette needs 5.6 to 8 kgs of air dried wood. Curing of 1 tonne of tobacco needs 118 trees sacrificed. What is more distressing is 76.2% cigarette tobacco is cured by cutting indigenous fruit & neem trees. Just imagine, it takes 20-40 years to grow a tree before it is sacrificed within 20 minutes for curing tobacco! Not only the ecologist but every sane person must be disturbed to know that one hectare of tobacco grown needs 2.18 hectares of forest wood. The cultivation of tobacco causes twice the amount of land erosion as compared to food crop. The tobacco needs thrice the amount of fertilizers as compared to food crops. Almost 40% of land used for tobacco cultivation is irrigated land where one can reap 3-4 food crops instead. The cost of irrigation is about Rs. 36,000 per hectare. More than irrigation, large amount of even subsoil water is drained by tobacco. The consequences of depletion of forest and the trees are terrifying especially when everywhere there is scarcity of rains. Though it is called as a "cash crop" in fact it is a 'crash or crush crop' as it crashes the health of human being and has crushing impact on ecology and economy.

Photo source Andrea Kaufman



HEART & TOBACCO

The heart is the most wonderful pump in the world. It starts beating in the mother's womb when the foetus is just 6 weeks old and continues to work without rest till our dying day. Every minute it pumps about 2-5 litres of blood into the blood vessels (tubes carrying blood to every nook and corner of the body) which when stretched in line extends upto 60,000 miles. Every day the heart pumps 2500-5000 gallons of blood. The fuel required to pump 5000 gallons of liquid is equal to the fuel required by the ship, Queen Elizabeth to sail from London to New York and back. Like any other muscle the heart depends on a constant supply of oxygen to sustain activity. Its fitness in turn depends on or is linked with the lungs. Such a powerful heart can be diseased by tobacco. Not only the heart but even the blood vessels carrying blood develop multiple blocks leading to gangrene of limbs, stroke and heart attack.



What are the harmful effects of Tobacco?

Tobacco contains over 4000 chemicals; about 40 of them can cause cancer. The most dangerous substances are three:-

- (i) **Nicotine** - a highly addictive toxic substance, which diffuses very quickly into the blood stream providing a quick fix to the smoker. One cigarette contains 1 mg of Nicotine and when taken as injection intravenously is fatal. But when a person is smoking he takes about 15% of Nicotine in that cigarette; each cigarette reduces the life span of the smoker by 10 minutes. Nicotine causes spasm (or narrowing) of the coronary arteries (blood vessels supplying blood to the heart). It also increases the heart rate and causes blocks in the coronaries leading to heart attack and death.
- (ii) **Carbon Monoxide (CO)** - is the second most dangerous substance in tobacco smoke which damages both heart and lungs. When CO is absorbed into the blood stream it binds to hemoglobin, reduces oxygen, causes heart and arterial disease.

- (iii) **Tar** - is solid irritant that coats the lungs, blocks the airways, causes emphysema and lung cancer.

Smoking and Cardiovascular disease (CVD)

In the western developed countries death rate has come down by more than 28% by public awareness and bringing down the rate of smoking. Death rate for all CVD for smokers is 2-3 times that of non-smoker and 35-40% of the deaths occur before the age of retirement (Royal College of Physicians, 1983); that means the person dies in the prime of life before fulfilling his domestic duties. Smoking is associated with both aspects of atherosclerosis (a) promotes development of lesions thus creating sites susceptible to blockage. (b) promotes the occurrence of triggering events that lead to blockage (US, Department of Health and Human Services 1989).

Recently, evidence shows linking of passive smoking to CVD. One may ask what is passive smoking?

Smoking has (a) **Main stream** - that is inhaled and exhaled by smoker. (b) **Side stream** - smoke from the burning tip of the cigarette. 85% of tobacco smoke in the room is from side stream and this smoke contains higher portion of toxic gases. Passive smoking is breathing other people's tobacco smoke from side stream and is a cause of health hazard in innocent non smokers (US dept. of Health & Human Services, 1986).

What is the treatment for blocked arteries?

We can keep balloon across the blocked artery and inflate it to open the block called angioplasty. To reinforce or strengthen the wall, steel mesh called "stent" can be deployed. If blocks are multiple, then bypass surgery can be done. But the treatment is expensive and carries some morbidity and mortality. Hence it is important not to smoke to prevent the block developing. All the three main components of smoking - physical, chemical addiction and psychological dependence should be tackled in an attempt to quit smoking.

KEY POINTS:

1. Smoking can kill you in many ways – by heart attack or stroke or cancer or gangrene.
2. Smoking not only kills the smoker but also the people around him.
3. Smoking destroys the family, society, ecology and economy of the country.
4. Tobacco is neither human friendly nor environment friendly.
5. STOP THE HANDS THAT MAKE THE CIGARETTE AND ALSO THE HANDS THAT LIGHT THE CIGARETTE.

**SMOKER CAN BE DESCRIBED AS
FIRE AT ONE END AND
FOOL AT ANOTHER END.**

TOBACCO DEADDICTION



Dr. Saddichha Sahoo
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INTRODUCTION

Tobacco is the most addictive drug known to man. In fact it has comprehensively been shown that Nicotine, the active ingredient in tobacco is more addictive than heroin, brown sugar or marijuana. Yet the use of Tobacco shows no sign of abating, as it is also the most culturally acceptable drug known to mankind. The use of Pan Masala, Gutkha and Betel quid is so rampant in our country that it is considered part of a normal lifestyle. And this acceptance soon leads to an Addiction before the man or woman is even aware that he/she is getting hooked to tobacco.

CAUSE OF ADDICTION

Tobacco contains more than 4000 chemicals. Yet it is only one part, Nicotine, which is responsible for the Addictive role of Tobacco. How does this Nicotine act? The answer is very complex but simply put, our brain has an area called the Reward center that is acted upon by a certain chemical and this makes us feel happy, nice or contented. Nicotine duplicates this chemical and acts on the same area to give a feeling of joy and happiness that the smoker or chewer of tobacco often describes as a 'High'. The repeated use of tobacco causes tolerance and increasing amounts of it is required in order to achieve the same 'High'. If the level of Nicotine falls in the brain, then the person experiences withdrawal effects, that are just the opposite of the feel-good effects like irritation, depression, frustration and mood swings. Some patients also develop physical effects like headaches, giddiness, tremors of hands etc. In order to avoid these unpleasant side effects, the patient continues to take Tobacco. And gradually he gets Addicted to the drug.



QUITTING-MYTH OR REALITY:

Nicotine, being the addictive drug that it is, often frustrates people who are wishing to quit. Often these people try for a couple of times and when faced with the withdrawal effects find it very easy to go back to being a Tobacco user. This makes us believe that Quitting Tobacco is a myth and is not possible. On the contrary, one must understand that quitting tobacco while it is very difficult is not impossible. On an average, a person makes at least 4 attempts before he/she finally quits. Hence one should not get frustrated at a couple of failures and should attempt once again, identifying the causes of failure and rectifying these on the next attempt. If required, one must seek Professional help to quit.

Remember that deciding to quit is the most decisive step that a person can take in his battle to Quit!

GETTING READY TO QUIT

Deciding to quit is half the battle won! Once a person has made up his mind to quit, he must draw up a chart listing out the reasons why he wishes to quit and the benefits of quitting. Refer to this chart everyday and at times of extreme situations when a person feels he badly needs to take Tobacco. Clear out your desk, drawers, pockets and all your usual hiding places from Tobacco. Speak to your family and friends about your desire to quit and enroll them in your battle plan. Think of yourself as a Non smoker and not as a smoker trying to quit. Next set a Quit date and take an oath that come what may, you will stop using tobacco from that date onwards. Promise rewards to your family or friends if they catch you using tobacco. Choose a method to quit—A slow reduction or suddenly stopping all at once..

QUITTING ON THE D-DAY

Now that you have chosen a date and the method of quitting, embark on the process of quitting. Change your routine by increasing the duration between intakes of tobacco or not taking it at your regular times. Avoid situations that you normally take tobacco in, like after coffee/tea, meals or when taking a break with friends. Break the pattern of your habits, e.g., reading a newspaper before going to the toilet instead of in the toilet so that you can postpone your normal



time of taking tobacco. Take a walk whenever you get a break so that it will help relax you and also take away the urge to smoke/chew tobacco. Reward yourself at the end of the day when you have achieved positive results towards quitting tobacco by listening to music, having your favorite food item or catching a movie on the theatre

HANDLING CRAVING



Craving is that intense desire that the body generates when the body level of Nicotine falls below the usual 'Normal' level. Handling craving initially is very difficult but determination and constant motivation can see you through those trying times. Remember that the peak of craving lasts for only about 4 minutes and if you are able to handle these 4 minutes, then you are off tobacco forever.

Once a craving episode hits you, keep in mind the 4 minute limit and then try to relax by taking deep breaths or catching some fresh air outside. Drink a full glass of water in small sips.

Distract yourself by doing some work that would keep you busy. Delay the urge to take tobacco as long as possible. Speak to your family/friends and tell them of your craving episode. Seek their help in seeing you through it. Wash your face and hands with water but do not wipe them dry. A wet hand would prevent you in holding a cigarette or taking tobacco. Relax and wait for the craving episode to pass. Then reward yourself for your determination by doing something you like.

LIFE AFTER QUITTING

Many a tobacco user is put off by the idea that he/she can no longer take tobacco for the rest of their life. This can be handled by taking each day as one and telling oneself that "I will not smoke/chew tobacco today." Keep small targets like being tobacco free till the end of the week and promise yourself a reward if the target is achieved.

Withdrawal effects like lack of concentration, difficulty in sleeping or increasing tendency to get into arguments can also be handled

with a few simple methods. Remember that tobacco did not help you concentrate but just gave you a reason to take a break so that you could come back fresh and more concentrated. Once you have quit, you will have to devise reasons to take breaks frequently and perform minor tasks during those breaks to keep you busy. Relax and try out meditation techniques to help you fall asleep. Avoid coffee/tea or aerated drinks in the evenings. Similarly, increasing irritability can be handled by taking deep breaths with your eyes closed, taking a hot bath or shower or by trying out any method that relaxes you.

It is also very important that you work out some modality of exercise into your schedule. Exercise not only helps you relax but also helps to clear the brain of nicotine faster as more oxygen is carried to the brain. It also helps to improve your body physiology that may have got damaged due to years of tobacco use.



A few more tips to keep in mind :

- Avoid alcohol as it usually increases the urge to take tobacco.
- Refuse an offer of cigarettes/beedis from other smokers.
- If you have friends who use tobacco, tell them that you are trying to quit and ask them not to use tobacco around you. Better still, hang out with your friends who do not use tobacco.
- Drink lots of water but avoid coffee, tea or other aerated drinks.
- Reward yourself constantly on achieving set targets of quitting tobacco.
- Do not get frustrated if you relapse during your abstinent period. Try once again and tell yourself that this time you would "Quit for Good."

Seek professional help if you are unable to quit on your own.

NICOTINE REPLACEMENT AND OTHER MEDICATIONS

Nicotine replacement therapy is offered to those individuals who have a very high intake of tobacco and having physical withdrawal effects. Nicotine replacement is available as Nicotine chewing gums, Nicotine patches and nasal sprays. Of all the three, only the gums are easily available and economical.



There are also medications available that can help to reduce craving for Tobacco. However it is to be given only by a physician after complete physical and physiological evaluation.

The above treatment modalities can only be delivered by trained professionals on prescription.

ROLE OF VOLUNTARY ORGANISATIONS IN TOBACCO CONTROL

Dr. H.V. Ramprakash
Hon. Secretary VHAK
Ms. T. Neerajakshi
Executive Secretary, VHAK

Voluntarism in Health Care has been an established tradition in Karnataka. Some institutions in the voluntary sector are over a century old. Many of these institutions which started as voluntary service minded organisation, coming to life in times of distress and need, have today become major hospitals, especially in the missionary sector. Voluntary efforts have arisen in each place in response to local needs.



Tobacco abuse is one such need.

Presently these organizations are involved in

1. Networking
2. Training
3. Public Awareness
4. Advocacy
5. Campaign

Voluntary Health Association of India (VHAI), New Delhi is a federation of 27 State Voluntary Health Associations, linking together more than 4000 health care institutions and grassroots level community health programme implementers spread across the country. This is the largest of such voluntary conglomerations that exist in the World today. All the 4000 voluntary organizations of this group are this day actively involved in tobacco control initiatives.

Voluntary Health Association of Karnataka established in the year 1974 with a network of more than 210 organizations, is enabling people to collectively exercise their responsibilities to maintain their health and to demand health as their right.

VHAI was responsible for initiating Legal action against Indian Tobacco Company & Board for control of Cricket in India for the

surrogate Tobacco promotion through advertisements in Cricket matches. It was also responsible for the passage of the Tobacco Bill and further, it has been entrusted with the monitoring of the effective implementation of the PROHIBITION OF ADVERTISEMENT AND REGULATION OF TRADE AND COMMERCE, PRODUCTION, SUPPLY & DISTRIBUTION Act 2003 published in The Gazette of India on Wednesday February 2004, coming into force on the 1st of May 2004.

All the above clearly indicates the role being played by the Voluntary sector. Apart from playing these roles, the day has come when the implementation of the various clauses of the Act need to be overseen. This is the daunting challenge lying in front of the voluntary organizations.

What needs to be done?

1. Represent to the State Governments concerned that Local Legislative enactments be instituted for effective implementation of the Central law in letter & spirit.
2. Spread the awareness of the hazards of Passive smoking & report to authorities persons and establishments breaking this law.
3. Tobacco advertisements in local media to be reported.
4. Discourage the sale of tobacco products near schools & colleges.
5. Create awareness about the bad effects of tobacco use in any form especially amongst the lower socio-economic groups.

The Voluntary organizations can fight tobacco in a multipronged manner and its role can be categorized as follows:-

1. **Health promotion:** The approach should be centered on encouraging healthful living, adopting healthy lifestyle which has been shown to have an effect on reducing diseases like carcinoma and heart disease.
2. **Show personal concern for the smoker :** This can be done by having more dialogues and to pinpoint the problems reasons which make the smoker continue to smoke.
3. **Voluntary organisation needs to work along with the family members** particularly the wife, mother or father in order to have a better effect.
4. **Helping the person** to develop a more positive attitude towards



- life, self assertiveness and how to handle stress appropriately.
5. **Highlight the ill effects of tobacco:** It is helpful to warn the smokers and people around him on the dangerous effects of smoking which will persuade him/her to give up smoking.
 6. **Mass Education Campaigns:** Where the masses are continuously reminded of smoking being hazardous.
 7. **Health awareness:** Since non smokers are also at danger of ill health due to the bad effect of passive smoking the voluntary organisation should educate people on this aspect.
 8. **Exploring clients' values** related to the use of tobacco and then helping them to understand and change attitude resulting in acceptance of healthier lifestyles.
 9. **No opportunity should be missed** by voluntary organisations to speak or educate at every chance that might spring up to drive home the hazards of tobacco.
 10. **Networking:** with allied institutions and like-minded groups.
 11. **Advocacy and Lobbying:** The voluntary organisations can fight tobacco in a multipronged manner – litigation, education, campaigning and lobbying to change government policies are just some of the avenues to be explored.
 12. **Voluntary organisations** must forge links across national boundaries and initiate a concerted movement.
 13. **Voluntary organisations** need to seek alliances with their respective governments to sensitise farmers to change over from tobacco cultivation to other food or cash crop cultivations.
 14. **Monitoring:** Voluntary organizations should play a watch dog role to see that the Act is effectively implemented and the law breakers are brought to book.
 15. **Hotline or Helplines** should be established by the voluntary organizations for smokers to call up to get de addiction advice.

To make our Health System Tobacco Free, the Government and Voluntary Organisations should work together to mobilize the support of key persons at the national and state levels, Political and Religious leaders, Doctors and other Health Professionals and medical faculty to be roped in to work for the cause.

Members of Consortium For Tobacco Free Karnataka

- Ambedkar Medical College, Bangalore
- Bangalore Institute of Oncology, Bangalore
- Banashankari Charitable Trust, Bangalore
- Cardiological Society of India, Karnataka Chapter
- Community Health Cell, Koramangala, Bangalore
- Cancer Patient Aid Association, Indiranagar Bangalore
- Cardiac Research Academy, Bangalore
- Tobacco Cessation Clinic, NIMHANS
- Indian Medical Association, Bangalore
- Indian Red Cross society, Bangalore.
- Kidwai Memorial Institute of Oncology, Bangalore
- Karnataka State Junior Doctors Association, Bangalore
- Mallige Medical Center, Bangalore
- MICO- Naganathapura, Bangalore
- Rotary Bangalore City Centre, Bangalore
- Voluntary Health Association of Karnataka, Bangalore
- World Vision of India, Bangalore

PLEDGE

I am convinced that tobacco
is injurious to health
Brings about death, disease and disability
Shatters the economy of the family,
the community and the State and
Destroys the ecology

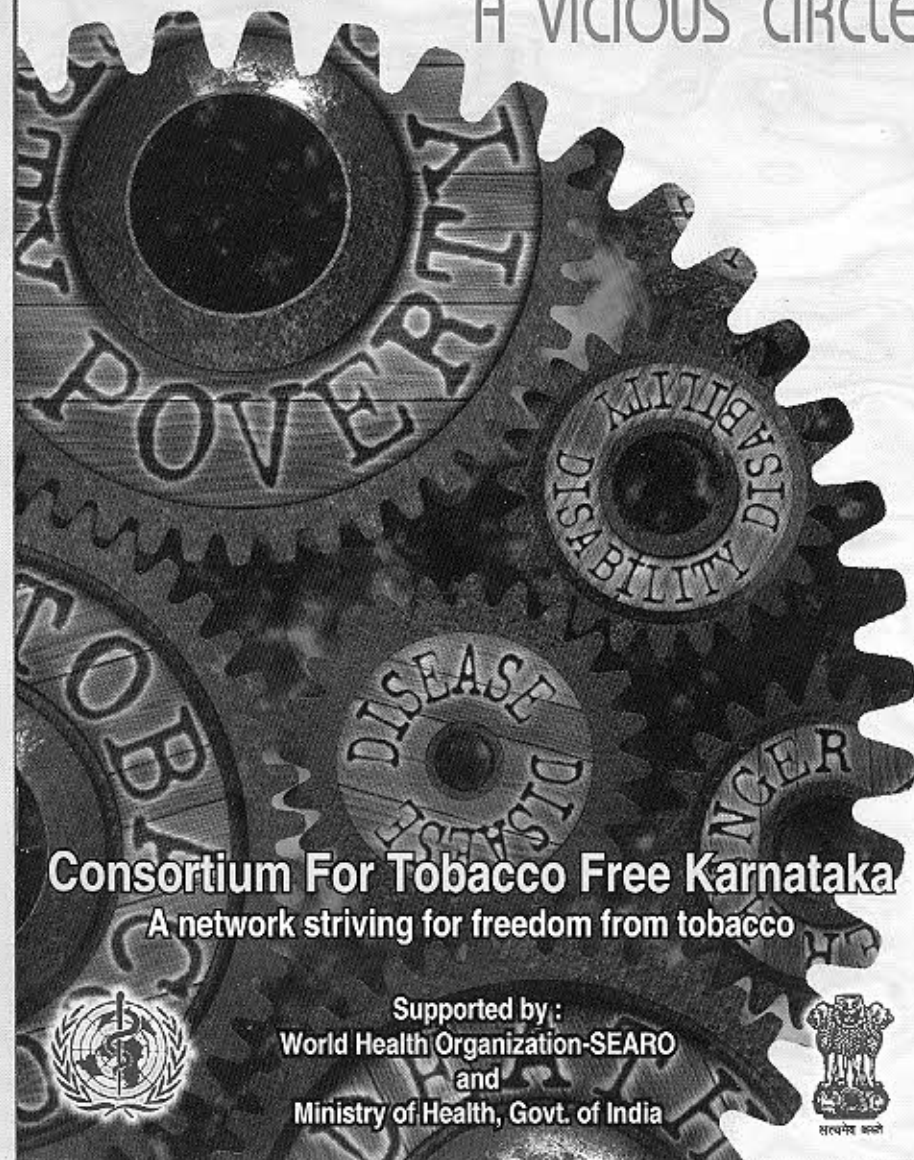
To prevent premature death and suffering,
due to the ill-effects of tobacco,
I shall do my best to bring about awareness
among the people to lead a healthy life, avoiding tobacco
use in any form. I shall strive hard to build
a prosperous tobacco free Karnataka

World No Tobacco Day

31st May 2004

tobacco and poverty

A VICIOUS CIRCLE



Consortium For Tobacco Free Karnataka

A network striving for freedom from tobacco



Supported by:
World Health Organization-SEARO
and
Ministry of Health, Govt. of India

