Royal Government of Bhutan

THE MULTISECTORAL NATIONAL ACTION PLAN FOR THE PREVENTION AND CONTROL OF NONCOMMUNICABLE DISEASES

[2015-2020]

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"Attainment of the highest standard of physical, mental and social wellbeing for all Bhutanese by adopting healthy lifestyles and reducing exposures to risk factors that contributes to NCDs"

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- Bhutan Agriculture and Food Regulatory Authority
- Bhutan Broadcasting Service
- Bhutan Narcotic Control Agency
- Bhutan Olympic Committee
- Department of Youth and Sports, Ministry of Education
- Drastang Lhengtshog
- Druk Fitness Center, Thimphu
- Gewog Administrations of Chang and Mewang, Thimphu Dzongkhag
- Gross National Happiness Commission
- Khesar Gyalpo University of Medical Sciences of Bhutan
- Ministry of Economic Affairs
- Ministry of Finance
- Ministry of Health
- Ministry of Works and Human Settlements
- Road Safety And Transport Authority
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PRIME MINISTER

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Royal Government of Bhutan

Foreword

Heart diseases, diabetes, cancers, and respiratory diseases commonly known as noncommunicable disease (NCDs) are posing a huge burden among the Bhutanese. NCDs contribute to almost 70% of mortality and morbidity among the population, surpassing the infectious diseases burden. On a brighter side, most NCDs are preventable by modifying risk factors addressing harmful use of alcohol, tobacco use, unhealthy diet, physical inactivity, and indoor air pollution. While public health knowledge on NCD risk factors is a necessity, knowledge alone is inadequate without addressing the public's needs for physical activity or accessibility to healthy food. Underlying determinants for NCDs are mostly beyond the scope of health sector intervention. Therefore, effective control of NCDs requires a cross-sectoral and multipronged approach.

The Royal Government of Bhutan is deeply convinced that NCD prevention is the best investment. The Government will provide greater national priority to achieve NCD voluntary targets by 2025. The multi-year action plan provides a time bound blue print to strategically implement NCD control through a broad multisectoral mechanism towards realizing our commitment. Every agency must exercise their leadership, responsibility and ownership of the Action Plan and play their part. In particular, local governments have the greatest opportunity to demonstrate their ability to ensure that coverage of NCD interventions are expanded at the grass root level.

Personally, I have a great expectation that through implementation of the action plan, our work places, schools, institutions and communities will become healthier. I am highly optimistic that the action plan will be successfully implemented and as a result save many lives, improve health and enhance happiness of our citizens. In closing, I would like to commend the World Health Organization for assisting us in developing the action plan.

Tashi Delek!

(Tshering Tobgay)

ABBREVIATIONS

BAFRA	Bhutan Agriculture and Food Regulatory Authority
BHU	Basic Health Unit
BMED	Biomedical Engineering Division
BMI	Body-Mass-Index
BNCA	Bhutan Narcotics Control Agency
CVD	Cardiovascular Disease
DYS	Department of Youth and Sports
FYP	Five Year Plan
FCTC	Framework Convention for Tobacco Control (WHO)
GNHC	Gross National Happiness Commission
HPD	Health Promotion Division
HR	Human Resources
KGUMS	Khesar Gyalpo University of Medical Sciences
LSRDP	Lifestyle Related Disease Program
MoE	Ministry of Education
MoAF	Ministry of Agriculture and Forests
MoH	Ministry of Health
MoWHS	Ministry of Works and Human Settlement
MHP	Mental Health Programme
MSPD	Medical Supplies Procurement Division
NCD	Noncommunicable Disease
NSC	National Steering Committee
PEN	Package of essential non communicable disease interventions
PMSG	Performance Monitoring System of Government
SEARO	South East Asian Regional Office
WHA	World Health Assembly
WHO	World Health Organization

SECTION I
BACKGROUND SITUATION

1.1 Introduction

Noncommunicable diseases (NCDs), also known as chronic diseases, are not passed from person to person. They are of long duration and generally slow progression. NCDs – mainly cardiovascular diseases, diabetes, cancers and chronic respiratory diseases (Asthma and obstructive pulmonary diseases (COPDs) – are the world's biggest killers. More than 36 million people die annually from NCDs (63% of global deaths), including 14 million people between the ages of 30 and 70 who die young. Approximately three quarters of NCD deaths - 28 million - occur in low- and middle-income countries. [1]

All age groups are affected by NCDs. NCDs are often associated with older age groups, however, WHO evidence shows that 16 million of all deaths globally attributed to NCDs occur before the age of 70. Of these "premature" deaths, 82% occurred in low- and middle-income countries. Children, adults and the elderly are all vulnerable to the risk factors that contribute to noncommunicable diseases, whether from unhealthy diets (high salt, high fat and low consumption of fruits and vegetables), physical inactivity, tobacco use or harmful use of alcohol.

These behaviors lead to four key metabolic/physiological changes that increase the risk of NCDs: raised blood pressure, overweight/obesity, hyperglycemia (high blood glucose levels) and hyperlipidemia (high levels of fat in the blood). In terms of attributable deaths, the leading metabolic risk factor globally is elevated blood pressure (to which 18% of global deaths are attributed) followed by overweight and obesity and raised blood glucose. Low- and middle-income countries are witnessing the fastest rise in overweight and obesity young children.

To lessen the impact of NCDs on individuals and society, a comprehensive approach is needed that requires all sectors, including health, finance, education, agriculture, planning, media and many others, to work together to reduce the risks associated with NCDs, as well as to promote the interventions to prevent and control them.

1.2 NCD Prevention and Control- Approaches

An important way to reduce NCDs is to focus on lessening the risk factors associated with these diseases. Low-cost solutions exist to reduce the common modifiable risk factors (mainly tobacco use, unhealthy diet, physical inactivity, and harmful use of alcohol). This is called primary prevention that can be carried out at population level and individual level. Other ways to reduce NCDs are high impact essential NCD interventions that can be delivered through a primary health-care approach to strengthen early detection and timely treatment (secondary prevention). Evidence shows that such interventions are excellent economic investments because, if applied early, can reduce the need for more expensive treatment. One of the effective approaches to primary prevention of NCDs is promotion of heath in places and social contexts known as 'Healthy Settings' [2].

Healthy Setting interventions can be targeted at schools, work sites, hospitals, cities and villages. Action to promote hea lth through different settings can take many forms. Actions often involve some level of organizational development, including changes to the physical environment or to the organizational structure, administration and management. These settings can also be used to promote health as vehicles to reach individuals and gain access to services. Healthy Settings is a useful, dynamic method to integrate risk factors and address NCD prevention with active involvement of all sectors, not only health. For example, promotion of physical activity in population would require not only raising awareness of the benefits of physical activity but also creating the environment and conditions that will enable people to be physically active. Creating an enabling environment in this case will include urban planning and solutions for facilitating practicing sports, running, jogging, safe pedestrian walking, recreational areas, public transport, school facilities, local administrations and private sector role in organizing sports events, competitions, and others. Underlying determinants, such as social determinants of health (economic situation, poverty, environment factors, etc.), as well as ageing of population, globalization and urbanization, should be taken into consideration in finding the appropriate solutions. (Figure 1)

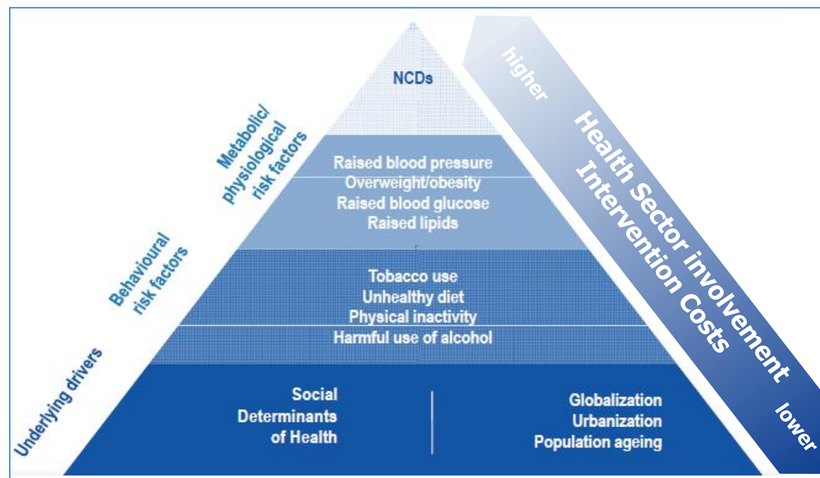


Figure 1: Determinants of NCDs, related cost of interventions and respective health sector involvement (Modified from SEA Regional NCD Action Plan)

Interventions and actions with the highest population impact are those tackling issues at the bottom of the pyramid; they are in general also more cost-effective and involve a broad range of sectors and stakeholders. Interventions and actions at the higher areas of the pyramid that focus more on the health sector become more costly and are more directed towards high-risk populations or individuals, rather than whole populations.

The main focus of this action plan is on four types of NCDs — cardiovascular diseases, cancer, chronic respiratory diseases and diabetes - which make the largely contributes to morbidity and mortality due to NCDs, and in addition to shared behavioral risk factors — tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol and indoor air pollution. Recognizing that the conditions in which people live and work influence their health and quality of life.

1.3 NCD Burden and Risk Factors in Bhutan

Considerable gains have been made in Bhutan in maternal and child health, immunization, and prevention and control of communicable diseases, however, the prevalence of non-communicable diseases (NCDs) has risen considerably, and now account for about 70% of the reported burden of disease according to the WHO estimates. This rising trend is due largely to changes in lifestyle, dietary habits, global marketing of unhealthy products, and aging population. NCDs cause the highest proportion of deaths for all age groups and account for 53% of all deaths. Among deaths caused by NCDs, cardiovascular diseases are responsible for the majority of cases (28%), followed by cancer (9%), respiratory diseases (6%) and diabetes (2%). Rapid urbanization and modernization have increased deaths from road accidents and in addition the incidence of mental disorders, substance abuse, suicides and violence are increasing.

Bhutan is in the early stages of a demographic transition with a growing elderly population resulting in a steady increase in NCDs. The population projection estimates, that there will be a rise in the population 65 years and above from 4.4% to 7.3% by 2025.[3] This requires a renewed and focused approach in risk factor reduction, prevention, control and management of NCDs, both within and outside of the health sector.

Based on the available health data, NCDs cause the highest proportion of deaths for all age groups (Figure 1). This makes NCDs Bhutan's biggest health challenge.

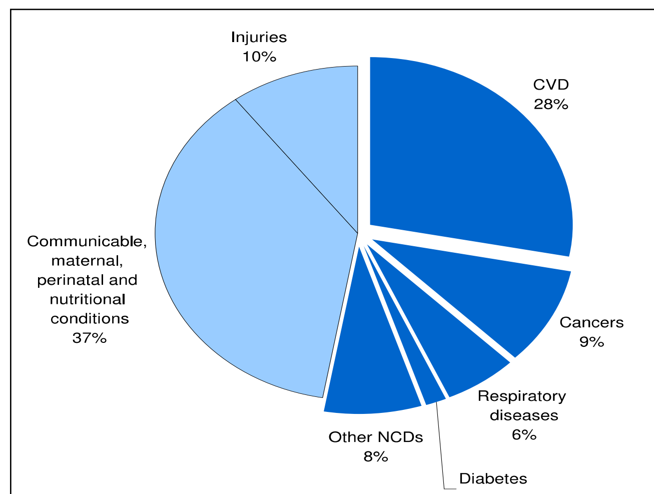


Figure 2: Proportional structure of mortality/all ages (Source: WHO NCD Country Profile 2011)

With the low capacity of the current health system to provide sophisticated tertiary care in Bhutan, patients with advanced or complicated conditions requiring specialist care such as complications of diabetes, kidney diseases, heart diseases, organ transplantation or cancer treatment are referred to India by the state. The numbers of referral cases and costs have increased significantly from 529 patients and a cost Nu 81 million in 2006-2007 to 1047 patients and Nu 180 million in 2012-2013. [4] The majority of these referrals are due to advanced NCDs.

Risk Factors

a) **Harmful use of alcohol: Alcohol use is causally linked to 60 different types of diseases.** It can cause harm to the well-being and health of people associated or living with the drinker through intentional and unintentonal injuries and adverse socio-economic consequences. Alcohol is widely consumed in Bhutan. The per capita consumption of alcohol is 8 liters as compared to the global consumption of 6.2 liters of pure alcohol per person 15 years and older. The Bhutan's National Health Survey 2012 found that 28.5% of the population aged 10-75 years were current drinkers and drinking was more common in males (31% in males versus 18% in females). Current drinkers spent, Nu. 594 a month on the average, and spending was higher among urban residents compared to rural counterparts. Ara and bangchang/singchang (locally brewed alcohol) were the most widely used drinks for rural residents, while beer and liquor such as whiskey/rum were the main drinks for urban residents.[3] Given the ease of access, low prices, home brewing and cultural acceptability of the use of alcohol, innovative alcohol control policy implementation is necessary for Bhutan.

b) **Unhealthy diet:** Adequate consumption of fruit and vegetables reduces the risk for cardiovascular diseases, stomach cancer and colorectal cancer. An unhealhty diet in Bhutan comprises all three main components resulting in– low consumption of fruits and vegetables, high intake of salt/ sodium, and high consumption of saturated fats and trans fats. At least 67% of Bhutanese do not consume sufficient fruits and vegetables. [5] Consumption of high levels of high-energy foods, such as processed foods high in fats and sugars, promotes obesity compared to low-energy foods such as fruits and vegetables.

The amount of dietary salt and sodium consumed is an important determinant of blood pressure levels and overall cardiovascular risks. The average daily intake of salt in Bhutan is 9 gms signficantly higher than the WHO recommended daily intake of less than 5 gms. This practice can have a major impact on blood pressure and cardiovascular disease. High consumption of saturated fats and trans-fatty acids is linked to heart disease; replacement with polyunsaturated vegetable oils lowers coronary heart disease risk. Higher unsaturated fatty acids from vegetable sources and polyunsaturated fatty acids have also been shown to reduce the risk of type 2 diabetes.

c) **Physical inactivity:** is one of the major risk factors for NCDs and a fourth leading cause of global mortality. The National health Survey in Bhutan found that 25.5% of the population aged 10-75 years do sports/fitness or recreational activities on the average of 3 days per week and 1.6 hours per day.[3] Physical inactivity levels are likely to be higher in urban settings than rural population because rural lifestyle can coincidentally contribute to the required level of physical activity during the daily farm work.

d) **Tobacco use:** Globally, tobacco is the greatest cause of preventable death. It is a major risk factor for non-communicable diseases such as strokes, heart attacks, chronic obstructive pulmonary disease, cancer, hypertension and peripheral vascular disease. The STEPS survey conducted in

Bhutan demonstrated that, 7.4% smoked tobacco (11% of men and 3% of women), lower than the smoking rates in the neighboring countries. However, 19.7% use smokeless tobacco. [5] The survey also reported high exposure to second hand smoke at home and the work place despite strong tobacco laws.[6] The 2013 Global Youth Tobacco Survey (GYTS) conducted in Bhutan among 13-15 year old school children, documented a current user rate of 30.3% for tobacco product, of which 14% reported smoking cigarettes. [7]

e) **Doma use:** Chewing of doma (betel nut and leaf) is a widespread tradition among Bhutanese. Approximately 250,000 Bhutanese (60% of the adult population) chew doma and a practice equally prevalent among males and females (51% of women as compared to 47% men).[8] The International Agency for Research on Cancer (IARC) concluded that the betel nut is carcinogenic. [9] Various compounds present in the nut, most importantly arecoline (the primary psychoactive ingredient), contribute to histologic changes in the oral mucosa. Doma is a powerful risk factor for oral cancer. The new evaluation of betel nut without tobacco was made possible by recent epidemiologic studies from parts of the world where tobacco generally is not added to the betel quid. In addition, recent epidemiologic studies in South Asia have been able to separate the effects of betel quid use with and without tobacco. Oral cancers are more common in parts of the world where betel nut is chewed. Of the 390,000 oral and oropharyngeal cancers estimated to occur annually in the world, 228,000 (58%) occur in South and South-East Asia.[9] In addition, doma is directly associated with NCDs. A large meta-analysis confirms that doma use is associated with an increased risk of metabolic disease, cardiovascular disease, and all-cause mortality: studies from Asia covering 388,134 subjects were selected. A significant dose-response relationship was shown between doma consumption and the risk of events – obesity, metabolic syndrome, diabetes, hypertension and all-cause mortality. Recent studies in Asia have shown that doma chewing is significantly increasing the risk of coronary heart disease and atrial fibrillation. Doma use have also been shown to affect most organs of the human body including the brain, heart, lungs, gastrointestinal tract and reproductive organs.[9]

f) **Indoor air pollution:** Indoor cooking and heating with biomass fuels (agricultural residues, dung, straw, wood) or coal produces high levels of indoor smoke containing a variety of health-damaging pollutants. There is consistent evidence that exposure to indoor air pollution can lead to acute lower respiratory infections in children under five, and chronic obstructive pulmonary disease and lung cancer (where coal is used) in adults.

g) **Raised blood pressure, raised blood sugar, overweight and obesity:**
In combination with other components of an unhealthy diet (high salt and fats consumption), 36% of Bhutanese people have raised blood pressure, and 27% men and 40% women are overweight or obese.[5]

1.4 Policy Rationale

In 2013, the 66th World Health Assembly adopted the Global Action Plan for Prevention and Control of NCDs 2013–2020, containing a comprehensive monitoring framework with 25 indicators and 9 voluntary global targets for NCDs. [1]The document was adopted during the 66th meeting of the WHO SEA Regional Committee in New Delhi with slight modification by adding a tenth target on indoor air pollution to the global targets.[10] On the same occasion the SEA Regional Committee adopted the New Delhi Declaration on High Blood Pressure. In addition to these policies, the first-ever SEA Regional Oral Health Strategy has been developed to address the increasing burden of oral diseases such as tooth decay and oral cancer, and also contribute to reducing the burden of other NCDs.

The Royal Government of Bhutan's concern for health in general and NCDs in particular is deeply anchored in a number of important national policies The Government's commitment in the provision of free and quality universal health care is guided by the Section 21 and 22 under Article 9 of the Constitution of the Kingdom of Bhutan guaranteeing its citizens "free access to basic public health services in both modern and traditional medicines" and "security in the event of sickness and disability". The National Health Policy recognizes NCDs as a public health problem for the country and outlines key broad policy statements. The country's Five Year Plan (FYP) provides and inclusive NCD prevention and control by "creating awareness on noncommunicable diseases and initiating programmes to promote healthy lifestyles". Even before the regional movement, Bhutan was one of the few countries in the region to adopt the National Policy and Strategic Framework for the Prevention and Control of Noncommunicable Diseases in 2009 led by the Ministry of Health.[11]

1.5 Achievements and Opportunities

Leadership, Advocacy, Partnerships

Bhutan has adopted a number of policies and regulations that address the prevention and control of NCDs, particularly the National Policy and Strategy Framework on Prevention and Control of NCDs in 2009. The National Steering Committee for Lifestyle Promotion and Prevention of NCDs was formed at the same time at the Ministry of Health for leading, coordinating and reviewing policy implementation. The National Steering Committee has not yet exercised its mandate as envisioned in the NCD Policy.

A signing of the commitment to NCD prevention and control was conducted among parliamentarians and policy makers in 2010. A nationwide "Move for Health Campaign" is conducted routinely led by the Prime Minister, to educate the population on prevention on NCDs. The Central Monastic Body and Ministry of Health started collaborative projects for health programs in the religious sector since 1989, addresses NCDs and lifestyle promotion by advocating among high ranking Lams, Lopens and Uzins including training of monk health representatives. The district health services conducts outreach visits to the monastic institutions to provide a monthly check up and screening for hypertension and other NCD risks. The Ministry of Education implements health education and prohibits alcohol and tobacco use in schools through policies of "zero tolerance to alcohol and drugs" in school campuses. [12] Physical activity promotion programs are implemented in schools and have dedicated physical

activity classes. School Health Programs are designed to be comprehensive, but trainings of school health coordinators could enhance competency of the school teachers on lifestyle promotion. Measures to control licenses to reduce number of alcohol outlets have been adopted by the Ministry of Economic Affairs and compliance enforcement checks for tobacco and alcohol are conducted by Department of Trade, Revenue and Customs, BICMA and Royal Bhutan Police. The Bhutan Narcotic Control Agency as a nodal agency for tobacco control conducts series of advocacy, inspection and control activities. Adequate enforcement of these rules is more effective in reducing access to alcohol and tobacco. BAFRA is a regulatory authority mandated to ensure general food safety and regulate the contents of the food to ensure that the food is safe for consumption.

The Bhutan Olympic Committee advocates for physical activity and organizes national events such as annual marathon and promotion of sports and sporting facilities. BOC's role would be crucial in developing sports infrastructure, training cadres of fitness experts, and enhancing health promotion at the population while promoting excellence in key areas. In general more investment is needed to train physical activity trainers, and dieticians to provide services in the population.

Improving urban built environment is a key measure to promote healthy settings in a rapidly increasing urbanization. National standards and designs for urban structures strive for continuous improvement and innovation through incorporation of improved walkability, connectivity and provision of parks and public spaces in urban settlements by the Ministry of Works and Human Settlements.

Health promotion and risk reduction

Information on NCD prevention is disseminated through mass media managed by the MoH and by health workers through health talks at the community level. However, more targeted and rigorous behavior change campaigns (BCC) to promote healthy lifestyle and to minimize exposure to NCD risk factors to bring about a positive behavioral change at the population level. The National Health Promotion Strategy 2013-2023 recognizes NCDs as a top priority and will provide a multisectoral umbrella for other sectors to include "health in all policies".[13]

There are a number of legislations related to addressing tobacco and alcohol control. Additional framework to reduce harmful use of alcohol is already submitted to the Cabinet and once approved it will serve as a powerful tool for reducing harmful alcohol use. Enforcement of these policies is patchy and the potential impact of related legislation thus limited.

The promotion of physical activity remains a challenge. The National Recommendations for physical activity and diet remains unimplemented despite the documents endorsed in 2011.[14][15] Of note are the huge unreached urban communities with sedentary lifestyle living within the vicinity of health facilities. Community-based programs for health promotion have to be intensified and focused on such communities. In the absence of active community based groups, the health sector with the collaboration of the local governments should take a lead role in establishing active community social mobilization for health promotion. Such activities could motivate community members to undertake physical activity, conduct community events for health promotion, improve urban built environment and promote use of physical fitness centers.

Similarly, children and young people should be educated and provided with opportunities for adoption of healthy habits early in life. Schools and families will play the most important role in providing learning opportunities for them. Mass drills and aerobics should be included in school activities to ensure mass physical activity promotion. Families should include healthy lifestyle models as a part of their living. A concept of healthy schools should be piloted and eventually promoted in all schools.

A number of pilot programs such as Community Action for reducing alcohol use in Mongar, Lhuentse dzongkhags have been implemented.[16] These experiences are being scaled up in other districts of Pemagatsel, Zhemgang and Trongsa that have traditional high use of alcohol. Rigorous evaluation and assessment of these projects should be conducted to facilitate learning and scaling-up.

Health system strengthening

The health system should aim at improving prevention, early detection, risk factor and disease management of people with or at high risk of NCDs. The current free health services provide equal access including provision of essential NCD medicines. However, with the anticipated rise in the NCD burden, the number of health professionals, as well as the level of trainings will be inadequate to address the health system response. Of the 20 district, only 11 districts have at least 3 doctors each, 5 districts have 2 doctors and the remaining 4 district has only one doctor for the whole district in 2013. [17]Greater priority needs to be given to human capacity building on NCD prevention, control and management in terms of the number and depths of training for health care providers. Medical specialists are scarce and establishments of the Khesar Gyalpo University of Medical Sciences (KGUMS) provides opportunity for systematic professional development activities specifically related to NCDs. Links with the deeply rooted traditional medicine facilities have not been optimally used for synergistic activities in health promotion and disease screening.

Current in-service and pre-service NCD curriculum in Bachelors of Public Health (BPH), and Health Assistant Courses at the Faculty of Nursing and Public Health (FNPH) is a sustainable institutional approach for mainstreaming NCD education. Health workers training on PEN interventions conducted by the MoH provides skills enhancing opportunity of in-service health workforce. Refreshers courses and trainings will be required for maintenance of health workforce skills in the future. Healthy diet and lifestyle are partially covered through ANC education in MCH clinics but have not been subjected to sound evaluation to assess the benefits of the programs. Diabetic services set up with the grant support of the World Diabetic Foundation have been integrated as a routine service. Also pilot NCD and elderly care programs have been expanded across the country. Hospital systems will not only need to be adequately equipped to provide high quality, equal services to prevent premature deaths, NCD palliative care services, such as oncology, cardiac and nephrology services will need to be strengthened to provide advanced care for people living with NCDs.

Surveillance, monitoring and evaluation and research

The Ministry of Health's Health Management Information System (HMIS) collects and publishes annual disease morbidity and mortality. The MoH relies on periodic STEPS Survey and other surveys for risk factor surveillance. Existing STEPS data sets should be further analyzed to understand

the determinants and risk exposures to behavioral and metabolic risk factors. Strengthening and expanding vital registration to report cause-specific deaths outside of hospitals or health facilities will be crucial for information on all deaths including NCDs. The MoH and the Department of Civil Registration System should initiate verbal autopsies and capacity building to collect valid birth and death information.

Surveillance on policy implementation on alcohol and tobacco is necessary to assess progress on policy compliance and pilot projects. Policy enforcement and compliance monitoring should be adopted as broader systems response for NCD prevention.

A robust NCD surveillance system should be established by setting up disease registries to monitor premature NCD deaths. If such a routine system is not set up, periodic surveys should be conducted to document the burden of NCD deaths and premature mortality. To begin with, cancer registry, which is still in a pilot stage in JDWNRH should be fully operationalized and expanded to other regional hospitals.

Furthermore, NCD innovations in healthy lifestyle promotion and other interventions should be explored through implementation of pilot programs. Priority programs include community based NCD outreach programs for unreached urban communities, healthy work place and healthy school projects. Such pilot programs should be rigorously implemented and evaluated, before proceeding for a national scale up.

SECTION II
GOAL, OBJECTIVES, AND ACTION AREAS

2.1 Goal

To reduce the preventable and avoidable burden of morbidity, mortality and disability due to non-communicable diseases through multisectroal collaboration and cooperation at the national, dzongkhags, gewogs and community levels.

2.2 Objectives

- To raise awareness of NCDs and advocate for their prevention and control;
- To promote implementation of efficient measures and interventions to reduce major risk factors for NCDs specifically: harmful use of alcohol, tobacco use, unhealthy diet and physical inactivity and their determinants among the population;
- To promote effective partnerships for the prevention and control of NCDs including injury control and safety promotion;
- To ensure equitable access to health facilities that provide quality, evidence-based preventive, treatment and rehabilitative services; and
- To strengthen research for prevention and control of NCDs and their risk factors.

2.3 Guiding Principles

The prevention and control of NCDs and their risk factors will be guided by the following principles:

- A focus on major modifiable risk factors and their determinants;
- Application of a life course approach addressing changing needs of different age groups as they move through subsequent stages of life;
- An integrated approach combining population-based and high-risk strategies;
- Shared responsibility by relevant sectors and stakeholders;
- Prioritization of cost-effective and evidence-based intervention;
- Application of a stepwise approach in the implementation of the NCD program taking into consideration the status of development of the health system and availability of resources; and
- Provision of the equitable access to health care to all, based on health needs and not on the ability to pay.

Furthermore, the National Policy and Strategic Framework for the Prevention and Control of Non-communicable Diseases also explicitly lay out four key broad measures for control and prevention of NCD. [11]

- Integration of NCD prevention activities into plans and program of relevant sectors;
- Reinforce existing policies and regulation for NCD;
- Promote health life style initiative through strategic health promotion;
- Strengthen health services to provide timely treatment and a continuum of care.

The Action Plan proposes time bound priority activities which are guided by the National Policy and Strategic Framework for the Prevention and Control of Non-communicable Diseases. Several other

policies and regulations support and complement the action plan not limited to but include:

- Tobacco Control Act (2010) and Tobacco Control Rules and Regulations (2013)
- Bhutan National Health Promotion Strategic Plan 2013-2023
- Domestic violence prevention Act (2012)
- Health Promotion Policy
- National Health Policy
- National Policy and Strategic Framework to Reduce the Harmful Use of Alcohol
- National Drug Policy (2007) and Bhutan Essential Drug List (2013)
- Village Health Worker Program: Policy and Strategic Plan 2013-2018
- Package of Essential NCD (PEN) Protocol for BHUs (2013)
- Bhutan Food Based Dietary Guidelines (2011)
- National Physical Activity Recommendations for Bhutan
- Guidebook for School Health Coordinators (MoH & MoE, 2007)
- National Occupational Health and Safety Policy (2012)
- Food and Nutrition security policy (2012)

2.4 Action Areas

The Bhutan National Action Plan for NCD Prevention and Control 2015-2020, recognizes the recommendations and principles outlined in the SEA Regional Action Plan for the Prevention and Control of NCDs and Bhutan National Health Promotion Strategic Plan 2013-2023, and endorses the four areas of priority action:

Action area 1: Advocacy, partnerships and leadership. Actions under this area aim to increase advocacy, promote multisectoral partnerships and strengthen capacity for effective leadership to accelerate and scale-up the national response to the NCD epidemic. Effective implementation of these actions should result in increased political commitment, availability of sustainable resources, and setting functional mechanisms for multisectoral actions and effective coordination by ministry of health.

Action area 2: Health promotion and risk reduction. Actions under this area aim to promote population wide programs for effective implementation of NCD risk factors which should lead to reduction in tobacco use, increased intake of fruits and vegetables, reduced consumption of saturated fat, salt and sugar, reduction in harmful use of alcohol, increase in physical activity, reduction in household air pollution and discourage doma (betel quid consumption.

Action area 3: Health systems strengthening for early detection and management of NCDs and their risk factors. Actions under this area aim to strengthen health systems, particularly the primary health care system. Full implementation of actions in this area should lead to improved access to health-care services, increased competence of primary health care workers to address NCDs, and empowerment of communities and individuals for self-care.

Action area 4: Surveillance, monitoring and evaluation, and research. This area includes key actions for strengthening surveillance, monitoring and research. The desired outcome is to improve availability and use of data for evidence-based policy and program development

2.5. National NCD Targets for Bhutan

The Action Plan endorses the SEA Regional NCD Action Plan's ten voluntary targets to be achieved by 2025 and sets medium term targets to be achieved by 2020 as shown in the table below:

Table 1: NCD Targets for 2020 and 2025

Target areas	2020	2025
Relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases	.....	25%
Relative reduction in the harmful use of alcohol	5%	10%
Relative reduction in prevalence of current tobacco use in persons aged over 15 years	15%	30%
Relative reduction in prevalence of insufficient physical activity *(in urban population)*	5%*	10%
Relative reduction in mean population intake of salt/sodium	15%	30%
Relative reduction in prevalence of raised blood pressure	10%	25%
Halt the rise in obesity and diabetes	.....	0 % rise
Eligible people receive drug therapy and counseling (including glycemic control) to prevent heart attacks and strokes	20%	50%
Availability of affordable basic technologies and essential medicines, including generics, required to treat major NCDs in public facilities	80%	80%
Relative reduction in the proportion of households using solid fuels (wood, crop residue, dried dung, coal and charcoal) as the primary source of cooking	30%	50%

**in urban population*

2.6. Priority Action Areas

Strategic action area 1: Advocacy, partnerships, and leadership
Action area: 1.1. Advocacy
Raise awareness on NCDs by informing politicians and policy makers on NCD and the major risk factors
Action area: 1.2. Partnerships
Strengthen the National NCD Steering Committee and develop multisectoral procedures and structures between key partners, beginning with the most relevant and motivated ministries
Action area: 1.3. Leadership
Ensure highest political leadership and commitment for NCDs (Head of state, Ministers etc) by identifying existing and creating new opportunities to speak publicly, participate in national and international conferences, showcase achievements and host NCD related events
Strategic action area 2: Health promotion and risk reduction
Action area: 2.1. Reduce tobacco use
Improve enforcement of all aspects outlined in the updated Tobacco Control Rules and Regulations (2013) through effective partnerships with police, border police, customs and other enforcement entities
Action area: 2.2. Reduce harmful use of alcohol

Accelerate the implementation of strategies to reduce the harmful use of alcohol by strengthening the enforcement of existing alcohol legislation including a ban on alcohol advertising and promotions and public education on harmful effects of alcohol
Stepwise increase of taxation on all alcohol products for the next 5 years
Action area: 2.3. Promote a healthy diet
Develop and implement a national salt reduction strategy
Obligate appropriate industries, importers and retailers to reduce amount of salt and sugar in their products through appropriate policies and legislation (based on the national salt reduction strategy)
Action area: 2.4. Promote physical activity
Advocate the importance of physical activity for health among legislators, decision-makers, urban planners, parents, teachers, health workers, employers, religious leaders and support built environment and services for health promoting physical activities
Action area: 2.5. Promote healthy behaviors and reduce exposure to risk factors in key settings
Regulate foods high in saturated fat, sugar and salt from school premises and workplace facilities through advocacy, appropriate regulations and enforcement; and introduce healthy workplace and Health Promoting Schools, and Healthy hospitals
Action area: 2.6. Reduce household air pollution
Scale up programs aimed at encouraging the use of improved cook-stoves, good cooking practices, reducing exposure to fumes, and improving ventilation in households among high priority communities
Strategic action area 3: Health system strengthening for early detection and management of NCDs and their risk factors
Action area: 3.1. Access to Health Services
Develop a scale-up plan for general introduction of the Package of Essential Non-communicable (PEN) Disease Interventions in all Basic Health Units (BHU)
Action area: 3.2. Health workforce
Integrate NCDs in the training curricula for future primary health care workers and allied personnel
Action area: 3.3. Community-based approaches
Work with existing community organizations to pilot programmes targeting tobacco, alcohol, diet and physical activity to strengthen community engagement with NCD programmes
Strategic action area 4: Surveillance, monitoring and evaluation and research
Action area: 4.1. Strengthen surveillance
Strengthen collection of demographic data as well as age- and cause of death data using verbal autopsy tools through improvement of civil registration and vital statistics
Action area: 4.2. Improve monitoring and evaluation
Develop and establish simple and effective mechanisms to monitor progress in all priority areas of the National NCD Action Plan

SECTION III
ACTION PLAN 2015-2020

3.1 Strategic action area 1: Advocacy, partnerships and leadership

Partners: parliamentarians, government agencies including ministries of health, finance, trade, education, agriculture and forests and local government; UN agencies, developmental partners, civil society, NGOs, media, private sectors.

Table 2: Action area 1, advocacy, Partnerships & leadership

Action area: 1.1 Advocacy.		**Activities**		**Lead agency**	**Implementing partners**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
1.1.1	Raise political awareness on NCDs by informing politicians and policy makers on NCDs and the major risk factors.	1.1.1.1	Provide periodic update on the progress of NCD action plan implementation to parliamentarians	LSRDP-MoH							
		1.1.1.2	Organize annual LG and Thromde advocacy meetings among dzongdags, thrompons, gups to promote healthy lifestyle	LSRDP-MoH / District Health Services (LGs)							
		1.1.1.3	Conduct periodic advocacy meetings on NCDs for urban planners, policy makers and leaders of education, institutions, religious bodies, and other stakeholders	LSRDP-MoH							
1.1.2	Advocate for adequate and sustained resources for NCD prevention and treatment by increasing the NCD allocation within the national health budget by the Ministry of Finance and other appropriate financing mechanisms (e.g. earmarked taxes)	1.1.2.1	Conduct economic burden assessment of NCDs and estimations for cost of non-action	LSRDP-MoH	MoF/GNHC						
		1.1.2.2	Develop targeted fact sheet for finance decision makers	LSRDP-MoH	MoF						
		1.1.2.3	Prepare different options of a financing model with earmarked taxes based on existing revenues of current taxing of alcohol and tobacco products (with technical support)	LSRDP-MoH	MoF						

Action area: 1.1 Advocacy.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
1.1.3	Raise public awareness and understanding about NCDs by strategic mass media campaigns and social marketing.	1.1.3.1	Develop mass media and BCC campaign materials (TV, radio, print and social media)	HPD/LSRD – MoH							
		1.1.3.2	Develop and implement yearly planned mass media campaigns including use of social media	HPD-MoH							
		1.1.3.3	Create Social Media forum on healthy life style information	LSRDP / HPD –MoH							
Action area: 1.2. Partnerships.											
1.2.1	Strengthen the National NCD Steering Committee to establish and develop multi-sectorial procedures and structures between key partners, beginning with the most relevant and motivated ministries.	1.2.1.1	Redefine ToRs, governance and budget for steering committee and create technical sub-committee(s) for four key risk factors	LSRDP-MoH							
		1.2.1.2	Organize NCD Steering committee and implementation subcommittee meetings, at least two times a year	LSDRP-MoH							
		1.2.1.3	Review and endorse stakeholder biannual/ annual work plan for stakeholder NCD plan by the Steering Committee	NCD Steering Committee							

Action area: 1.2 Partnership.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
1.2.2	Engage media agencies and other key agencies including NGO/CBOs to partner for NCD prevention and health promotion	1.2.2.1	Develop a joint health promotion proposal for TV programs and Public Service Announcements focusing on key NCD risk factors	HPD/LSRDP-MoH	BBS/Radio stations						
		1.2.2.2	Integrate NCD and other related health issues on common public discussions such as Drungtso BBS	BBS/MoH							
		1.2.2.3	Develop an aerobic TV demonstration program and provide a routine airing	BBS/HPD/ LSRDP-MoH	MoH						
		1.2.2.4	Mobilize new community groups and NGOs to work in the prevention and control of NCDs.	MoH							
		1.2.2.5	Facilitate at least one NGO proposal per year for submission to donor agencies for NCD intervention.	MoH							
1.2.3	Engaged with key donor agencies and other supporting organizations to mobilize and commit technical, financial and human resources to strengthen prevention and control of NCDs.	1.2.3.1	Conduct NCD resource mobilization meetings with the development partners.	LSRDP-MoH							

Action area: 1.3 Leadership.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
1.3.1	Ensure highest political leadership and commitment for NCDs (head of state, Ministers, etc.) by identifying existing and creating new opportunities to speak publicly, participate in national and international conferences, showcase achievements and host NCD related events.	1.3.1.1	Endorse and launch of the NCD Action Plan by the Hon'ble Prime Minister	LSRDP-MoH							
		1.3.1.2	Participation of high-level delegations in international meetings/workshops on NCD prevention and control	LSRDP-MoH							
		1.3.1.3	Conduct joint annual leadership workshops of urban planners, media organizations, academia, LG leaders, and other implementers on NCD prevention	MoH							
		1.3.1.4	Integrate the activities in the NCD Action Plan in the yearly work plans of the Local Governments (Dzongkhag, Thromde and Gewog) and other stakeholders	LSRDP-MoH							

3.2 Strategic action area 2: Health Promotion and Risk Reduction

Partners: parliamentarians, government agencies including ministries of health, finance, trade, education, legal, sports, agriculture and forests and local government; UN agencies, developmental partners, civil society, NGOs, media

Table 3. Action area 2.1 Reduce tobacco use

Action area 2.1 Reduce tobacco use		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.1.1	Improve enforcement of all aspects outlined in the updated Tobacco Control Rules and Regulations through effective partnerships with police, border police, customs and other agencies	2.1.1.1	Increase border control & in-country spot-checks in collaboration with the Customs, and RBP	BNCA/	Custom/ RBP						
		2.1.1.2	Develop training materials and conduct Training of Trainers of RBP, Customs, Trade BAFRA on tobacco enforcement	BNCA	MoH						
		2.1.1.3	Conduct advocacy to private institutions, employers, employees, law club coordinator in schools and institutions including observation of World No Tobacco Day	BNCA	MoH/ MoE						
		2.1.1.4	Review and amend the existing Tobacco Control Act and related regulation to include chewed tobacco with doma	BNCA							
		2.1.1.5	Develop a standard operating procedure (SOP) for imposition of penalties in tobacco rule violation among RBP, Revenue and Customs and other bodies to facilitate better enforcement of tobacco rules	BNCA	RBP/ Customs						
2.1.2	Develop media campaigns to increased public awareness of the dangers from tobacco & doma use.	2.1.2.1	Develop and produce captions and signs for non-smoking areas: install stand in 4 major thromde in consultation with the BNCA	BNCA	Thromde/ dzongkhags						
		2.1.2.2	Develop and implement mass media (TV, radio, print and social media) and BCC campaigns	HPD-MoH	BNCA						

Action area 2.1 Reduce tobacco use		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.1.3	Strengthen human resources for tobacco control and cessation support by training and allocating teams using a simplified ABC approach by health workers.	2.1.3.1	Train tobacco cessation counselors	BNCA/ MoH							
		2.1.3.2	Develop capacity development material for trainings	BNCA/ MoH							
2.1.4	Establish guidelines and support services for tobacco cessation at primary health care centers and hospitals.	2.1.4.1	Develop tobacco cessation guidelines	BNCA/ MoH							
		2.1.4.2	Establish tobacco cessation services including Quit Line Services at pilot PHC	BNCA/ MoH							
2.1.5	Strengthen tobacco monitoring and surveillance	2.1.5.1	Conduct smoke free compliance monitoring in key urban settings and workplaces	BNCA/LG/ Thromde							
		2.1.5.2	Conduct compliance check on non-smoking areas by increasing minimum spot-checks every three months in 4 major urban cities	BNCA/LG/ Thromde							
		2.1.5.3	Publish data on tobacco importation and other relevant aspects in regular health and economic data collection	BNCA	MoEA						
2.1.6	Establish effective partnership with local governments (dzongkhags, thromde, and gewogs) for tobacco control in line with the Local Government Act of Bhutan	2.1.6.1	Develop a SOP for local governments to coordinate advocacy and enforcement of tobacco in their jurisdiction and implement the SOP	BNCA	Thromde/ Dzongkhags						
		2.1.6.2	Conduct regular coordination meetings for effective tobacco control at the dzongkhag and geog levels	LG/ Thromde							

Table 4: Action area 2.2, Reduce harmful use of alcohol

Action area: 2.2. Reduce harmful use of alcohol.		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.2.1	Accelerate the implementation of the WHO Global and SEA Regional Strategies to reduce the harmful use of alcohol by strengthening the enforcement of existing alcohol legislation including a ban on alcohol advertising and promotion.	2.2.1.1	Develop and implement a national alcohol control strategy *(Note: Major activities are reflected in the National Strategy)*	MHP-MoH	MoEA/ Customs						
		2.2.1.2	Implement alcohol detoxification services as reflected in the Bhutan Suicide Prevention Plan	MHP-MoH							
		2.2.1.3	Conduct advocacy and awareness on ill effect of alcohol	MHP / HPD-MoH							
		2.2.1.4	Strengthen and replicate Community Action Projects for control of harmful use of alcohol in the east and central dzongkhags	MHP-MoH							
		2.2.1.5	Review and introduce increase steps in alcohol taxation	MoEA	MoF						
2.2.2	Improve road safety through measures to reduce drink driving by implementing the Bhutan Decade of Action for Road Safety for 2020	2.2.2.1	Publish and disseminate annual report on Road Safety including alcohol related crashes	RSTA							
		2.2.2.2	Scale up inspection and highway patrol for drink driving by using breathalyzers	RSTA/ RBP							
		2.2.2.3	Institute additional policy/regulation to increase penalties and legal consequences of drink-driving	RSTA							
		2.2.2.4	Institute a national RSTA 24 hour toll free line and advocate its use by general public for registering road safety complaints	RSTA							
		2.2.2.5	Enforce mandatory display of sign for no alcohol and tobacco along with the penalty and a toll free number for compliant calls in public transports (taxis, buses, and tourist transports)	RSTA							

Action area: 2.2. Reduce harmful use of alcohol.		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.2.3	Curb alcohol use by limiting the number of outlets supplying alcohol; trading hours, and alcohol licensing.	2.2.3.1	Introduce liquor outlet licensing based on outlet density and zoning particularly in Thimphu, Gelephu, Samdrupjongkhar and Phuntsholing followed by other bigger urban settings	MoEA	MoF/LGs	■	■				
		2.2.3.2	Develop and introduce mandatory education curriculum for new license holders and renewal applicants	MoEA	MoH		■				
		2.2.3.3	Institute policy to regulate and limit alcohol outlets on the national highways to strengthen road safety	RSTA	Trade/ Customs/RBP				■		

Action area: 2.2. Reduce harmful use of alcohol.		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.2.4	Strengthen enforcement and policy monitoring mechanisms at the local government bodies	2.2.4.1	Develop a SOP for local governments (thromde, dzongkhag and gewogs) for enforcing alcohol control policies	MoEA/	MoF/MoH/ LG/RBP						
		2.2.4.2	Advocate thromde, dzongkhag and geog tshogdues (committees) to develop local ordinances to reduce outlets, limit licenses within their jurisdiction and reduce use of local brews with a priority in eastern and central Bhutan	District Health Offices/LGs	MHP-MoH						
		2.2.4.3	Publish annual Dzongkhag report on enforcement and education initiatives of alcohol	LGs	MHP-MoH						
		2.2.4.4	Conduct policy practice surveys in sampled outlets through mystery shopping once in every two years in major thromde to monitor practices in licensed premises (hotels, restaurants, bars, drayangs, discotheques and whole sale dealers)	BNCA/ MHP-MoH/ MoEA	LGs						

Action area: 2.2. Reduce harmful use of alcohol.		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.2.5	Advocate and enforce alcohol and tobacco programs in key locations such as hotels, lodges, bars and key locations for policy compliance (Underage sales, dry days, no smoking zones, etc)	2.2.5.1	Implement alcohol licensing procedures and site clearance as per the Boards Recommendations	Thromdes	MoEA/ Customs						
		2.2.5.2	Form joint inspection committee comprising members from RBP, Trade, Revenue and Customs and conduct routine adhoc inspections of alcohol and tobacco rules in key thromdes	Thimphu/ Phuntsholing/ Gelephu/SJ Thromdes/	RBP/Trade/ RRCO						

Table 5: Action 2.3, Promote a healthy diet

Action area: 2.3 Promote a healthy diet.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.3.1	Develop and implement a national salt reduction strategy by adapting WHO templates	2.3.1.1	Develop national salt reduction strategy and advocate recommended salt consumption	LSRDP/MoH	BAFRA						
2.3.2	Obligate appropriate industries/food processors to reduce amount of salt and sugar in their products through appropriate guidelines (based on the national salt reduction strategy)	2.3.2.1	Conduct salt content analysis and identify a list of top 10 priority imported products with high salt and trans fat content	BAFRA/ PHL							
		2.3.2.2	Promote the industries/food processors to reduce salt, saturated fat and sugars in processed products through awareness activities	BAFRA	HPD-DoPH						
		2.3.2.3	Restrict import/retail of identified top unhealthy products with high salt and trans fats	Department of Trade	BAFRA						
2.3.3	Develop regulations and fiscal policies such as taxes and subsidies to promote consumption of fruits and vegetables and discourage consumption of unhealthy food options.	2.3.3.1	Encourage growth of fruits in local farms and increase the supply of fruits for year round through agricultural policy reforms.	MoAF							
		2.3.3.2	Develop incentive measures to influence local community groups to produce more fruits and vegetables.	MoAF							
		2.3.3.3	Monitoring of local vegetable and fruit consumption by Department of agricultural marketing division	MoAF							

Action area: 2.3 Promote a healthy diet.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.3.4	Carry out public campaigns through mass media and social media to inform consumers about a healthy diet high in fruit and vegetables and low in saturated fat, sugar and salt	2.3.4.1	Advocacy and awareness on nutrition including promotion of healthy diet	HPD/LSRDP-MoH							
2.3.5	Establish and promote guidelines that support exclusive breastfeeding for the first six months of life, continued breast feeding until two years and beyond, and timely complementary feeding.	2.3.5.1	Liaise with relevant MoH departments and other stakeholders (women's groups) to ensure that breast feeding guidelines are promoted.	Nutrition Program – MoH							
		2.3.5.2	Breast feeding promotion inter-sectorial forums.	Nutrition Program – MoH							
		2.3.5.3	Growth monitoring for children under 5 years of age	RH and NP/MoH							
2.3.6	Establish guidelines for nutritional labeling for all pre-packaged foods with the input from relevant stakeholders.	2.3.6.1	Develop nutritional labeling guidelines and include requirement for trans fats and other unhealthy ingredients in the food products	BAFRA							
		2.3.6.2	Strengthen monitoring and enforcement of mandatory food labeling, contents and safety practices through registration and licensing of food business	BAFRA	Office of Consumer Protection						
2.3.7	Strengthen collaboration between BAFRA and Public Health Laboratory of the MoH in food safety promotion and evidence building	2.3.7.1	Institute a coordination team of PHL and BAFRA and identify priority areas of collaboration for strengthening food safety	BAFRA/PHL							
		2.3.7.2	Publish joint food safety reports for public dissemination *(Refer to 4.3.2.4)*	BAFRA	PHL						

Action area: 2.3 Promote a healthy diet.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.3.8	Develop national guidelines for school feeding based on the Bhutan 2011 Food Based Dietary Guidelines aimed at improving the diet of school-aged children.	2.3.8.1	Develop recommendations and guidelines for school feeding.	DYS-MoE	CSHP-MoH						
		2.3.8.2	Promote school based organic farming in schools	MoE	MoAF						
		2.3.8.3	BMI monitoring in school and equipment for measuring BMI in schools	DYS-MoE	CSHP-MoH						

Table 6: Action area 2.4, Promote physical activity

2.4	Action area: 2.4. Promote physical activity.	Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.4.1	Promote the Bhutan National Recommendation 2011 for Physical Activity Guideline	2.4.1.1	Develop and disseminate advocacy materials including video clips for national recommendations on physical activity	LSRD/HPD-MoH							
2.4.2	Create enabling environment for promoting physical activity through creation of additional publics spaces and walking trials within the Thromde and urban settings	2.4.2.1	Make joint advocacy on promoting Healthy City Plans by Urban Planning and Health Sector to Thromde Administrations during Thromde Coordination Meetings or any other such meetings	MoWHS	LSRDP-MoH						
		2.4.2.2	Conduct an assessment of the of adequacy of built environment in selective major towns and urban settings and propose remedial measures to improve walkability, accessibility and connectivity of the residents	MoWHS	Thromdes/LGs						
		2.4.2.3	Include a health sector representative in the National Consultative Committee on Human Settlement (NHCCHS) to represent health and building healthy urban environment issues	MoWHS	MoH						
		2.4.2.4	Include a health representative to conduct joint advocacy programs for a mandating -friendly built environment during the public consultative meetings for urban planning and development	MoWHS/ Thromde	MoH/District Health Services						

2.4	Action area: 2.4. Promote physical activity.	Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
		2.4.2.5	Construct a Thimpchu Riverside trail from below Taba through Centenary Park to Babesa	Thimphu Thromde							
		2.4.2.6	Construct Thimphu Community Eco-park above the YDF Complex connecting with a trail to Changangkha Lhakhang	Thimphu Thromde							
		2.4.2.7	Open three additional children park	Thimphu Thromde							
		2.4.2.8	Open River Crossing Projects for Children	Thimphu Thromde							
		2.4.2.9	Construct community park at Kabreytar	Phuntsholing Thromde							
		2.4.2.10	Construct a recreational park	SJ Thromde							
2.4.3	Create pedestrian and biking friendly sidepaths and crossing	2.4.3.1	Pedestrianize Norzin Lam, and renovate/ construct additional 5 km of pedestrian friendly footpaths	Thimphu Thromde							
		2.4.3.2	Construct 3 km footpath within the Thromde	Phuntsholing Thromde							
		2.4.3.3	Identify roads that can accommodate cyclying lane	Thimphu Thromde							

2.4	Action area: 2.4. Promote physical activity.	Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
		2.4.3.4	Explore the possibilities of cycling in Throme	Phuntsholing Thromde							
		2.4.3.5	Construct/improve the existing foothpaths in the town (as per the 11 FYP)	SJ Thromde							
		2.4.3.6	Create a cylcing track along Dungsam Drive (Included in the 11 FYP)	SJ Thromde							
		2.4.3.7	Construct foot path within core town and extended area and develop pedestrain plaza in the core town area	Gelephu Thromde							
		2.4.3.8	Conduct Walkability Survey in Thimphu in partnership with KGUMS.MoH	Thimphu Thromde							
		2.4.3.9	Construct 500 m footpath along Omchhu Embankment, footpaths connecting to Pepsi Factory, AWP MD's residence etc	Phuntsholing Thromde							
		2.4.3.10	Construct pedestrain bridges at DPNB junction, dratsang and Pemaling area (Included in 11 FYP)	Phuntsholing Thromde							

2.4	Action area: 2.4. Promote physical activity.	Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.4.4	Implement service facilities with Neighborhood Nodes	2.4.4.1	Explore the possibility ofd creating public services facilities including sporting complex in atleast two neighborhoods through projects/Public-Private Partnership	Thimphu / Phuntsholing Thromdes							
		2.4.4.2	Retrofit Gelephu Sports Association Hall and introduce indoor badminton and other sports	Gelephu Thromde							
2.4.5	Promote healthy and safe urban transport within the Thromde to reduce congestion and improve walkability	2.4.5.1	Improve city and taxi stands with proper sheds and adequate lighting	Thimphu Thromde							
		2.4.5.2	Maintainenergy efficient street lighting	SJ Thromde							
2.4.6	Diversify and reinforce sports and physical activity in schools to facilitate lifelong healthy lifstyle in children.	2.4.6.1	Carryout planned sports and physical activities in schools through intramural & interscholastic and introduce aerobics and mass drill as a routine in all schools	DYS-MoE							
		2.4.6.2	Pursue to have minimum one trained School Sports Instructors & HPE teachers in every school.	DYS-MoE							
2.4.7	Improve the capacity for diverse physical instruction programs in urban communities	2.4.7.1	Facilitate training courses in physical fitness instructors including aerobics and yoga through public private partnership programs	MoH/BoC							
		2.4.7.2	Facilitate commissioning of physical fitness centers in urban settings by NGOs, CBOs and individuals in the communities	LGs	NGOs/CBOs						

2.4	**Action area: 2.4. Promote physical activity.**	**Activities**		**Lead Agency**	**Implementing partners**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
		2.4.7.3	Pilot open air gyms in Thimphu and expand to other key urban settings	Thimphu Thromde							
		2.4.7.4	Introduce three open-air gyms in Kabretar, RIGSS and Zangdopelri Park	Phuntsholing Thromde							
		2.4.7.5	Open a gym in the Youth Center	SJ Thromde							
		2.4.7.6	Open air gym at 3 locations	Gelephu Thromde							
2.4.8	Mobilize and train community groups to campaign and promote physical activity and create enabling environment	2.4.8.1	Organize community and neighborhood associations to organize Fun Walks and Family Runs	LGs/ District Health Sector							
		2.4.8.2	Identify and develop nature walk trails and cycling routes in nearby urban settlements	LGs							

Table 7: Action area 2.5, Healthy key settings

Action area: 2.5. Promote healthy behaviors and reduce exposure to risk factors in key setting		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.5.1	Strengthen and broaden the collaboration between MoH and MoE for the implementation of the NCD Action Plan by integrating in the School Health Committee through clear Terms of References	2.5.1.1	Include NCD Action Plan discussion in the School Health Committee agenda	MoE/ CSHP-MoH							
		2.5.1.2	Conduct joint monitoring and field visits for school health program and school physical activity program (SPA)	DYS-MoE	CSHP-MoH						
		2.5.1.3	Conduct advocacy for promoting model for Health Promoting Schools among principals, head teachers and DEOs	MoE	CSHP-MoH						
2.5.2	Establish Model for Health Promoting Schools focusing on physical activity, healthy diet, ban of alcohol and tobacco use by integrating with the ongoing program of Educating for GNH in schools	2.5.2.1	Develop a healthy lifestyle package for rolling out the model	MoE	MoH						
		2.5.2.2	Implement the first phase of healthy lifestyle package in 30 schools	MoE	MoH						
		2.5.2.3	Conduct assessments in targeted schools to adjust the program for further roll out	MoE	MoH						
		2.5.2.4	Implement the next phase of healthy lifestyle package in identified schools	DYS							
		2.5.2.5	Continue training of school health coordinators & SSIs on promotion of healthy lifestyle and routine health examinations in all schools	DYS-MoE	CSHP/ LSRDP-MoH						
2.5.3	Finalize the National Strategic Framework for School Sports Program (NSFSSP)	2.5.3.1	Implement the NSFSSP	DYS-MoE							
2.5.4	Implement the National Youth Policy	2.5.4.1	Stakeholder Coordination	DYS-MoE							

Action area: 2.5. Promote healthy behaviors and reduce exposure to risk factors in key setting		Activities		Lead Agency	Implementing partners	2015	2016	2017	2018	2019	2020
2.5.5	Establish pilot programs for Health Promoting Workplaces and consider scale up	2.5.5.1	Develop a Healthy Work Place proposal for each pilot sites at the MoH and two other sites in Thimphu	LSRDP-MoH							
		2.5.5.2	Evaluate the pilot sites for Healthy Workplace	LSRDP-MoH/ Thomde							
		2.5.5.3	Expand Healthy Work Place Projects in other sites in the towns/districts	LGs	MoH						
2.5.6	Strengthen healthy lifestyle promotion in large *ka-nying* monastic institutions (Shedras, lopdras, and rabdeys)	2.5.6.1	Conduct high level NCD advocacy among monastic institutions heads and administrators	Religion and Health Project	LSRDP/HPD-MoH						
		2.5.6.2	Advocate for indoor and outdoor physical activity facilities for all age groups of monks	Religion and Health Project	District Health Sectors						
		2.5.6.3	Develop healthy lifestyle promotion monastic curriculum	Religion and Health Program, Dratsang	LSRDP/HPD-MoH						
		2.5.6.4	Training of monastic health coordinators (through religion and health and VHW program)	Religion and Health Program, Dratsang	VHW Program						
		2.5.6.5	Annual advocacy health screening visits to large monastic institutions	Health Facilities	District Health Sector						

Table 8: Action area: 2.6, Reduce household air pollution

2.6	Action area: 2.6. Reduce household air pollution.	Activities		Lead agency	Partners	2015	2016	2017	2018	2019	2020
2.6.1	Establish standards for indoor air quality promotion, monitoring, and identify communities with exposure to poor indoor air quality educate communities	2.6.1.1	Adapt the national guideline and standards for indoor air quality control	EH/MoH &							
		2.6.1.2	Mapping exercise of communities with potential high exposure to indoor air pollution	EH/MoH & Department of Renewable Energy							
		2.6.1.3	Conduct study of indoor air quality in identified high risk communities	EH/MoH & Department of Renewable Energy							
		2.6.1.4	Set up services and equipments for monitoring indoor quality in selected areas	EH/MoH							
2.6.2	Expand community based programs aimed at encouraging the use of improved cook-stoves, good cooking practices, use of alternative energy sources for households to improve indoor air quality	2.6.2.1	Introduce electrical bulk cookers for the common dining program in the monastic institution	Dratshang							
		2.6.2.2	Deliver additional 5000 improved cook stoves for high risk communities	Department of Renewable Energy, MoEA							
		2.6.2.3	Expand additional domestic 2000 biogas plants	Department of Renewable Energy, MoEA							
		2.6.2.4	Explore the program options for providing subsidies for improved cooking appliance and stove in high risk poor communities	MoEA							
		2.6.2.5	Design and conduct community targeted awareness programs in priority high risk communities	EH/MoH	Department of Renewable Energy, MoEA						

3.3 Strategic action area 3: Health system strengthening for early detection and management of NCDs and their risk factors

Partners: Ministry of health, local government authorities, civil society, Khesar Gyalpo University of Medical Sciences, private health providers, NGOs, media

Table 9: Action area 3.1, Access to health services

Action area: 3.1. Access to Health Services.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
3.1.1	Develop a scale-up plan for general introduction of the Package of Essential Non communicable (PEN) Disease Interventions in all health facilities.	3.1.1.1	Provide refresher training and capacity building on PEN intervention for health workers	LSRDP-MoH							
		3.1.1.2	Conduct clinical audits to monitor the implementation of PEN programs in health facilities	LSRDP-MoH							
		3.1.1.3	Develop protocol for oral diseases management and active screening for precancerous and cancerous oral mucous lesions as part of PEN	Oral Health Program-MoH							
		3.1.2.4	Evaluate and publish result of the PEN implementation	LSRDP/PPD-MoH							
3.1.2	Ensure sustained supply of drugs and equipment defined for PEN services	3.1.2.1	Provide annual supply of basic NCD medicines as per the NEML, glucometer with strips, BP apparatus, height and weight measuring scale, measuring tape for all health facilities and pulse oxymeter and peak flow meter in hospitals	MSPD/ DMSHI-MoH							
		3.1.2.2	Develop calibration protocol and validate equipment, including BP, weighing scale	BMED/DOMSH							

Action area: 3.1. Access to Health Services.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
3.1.3	Increase capacity of health-care services to deliver prevention and treatment interventions for hazardous drinking and alcohol and tobacco use at primary care	3.1.3.1	Develop training modules and provide training for health workers on Brief Intervention for alcohol use disorders, tobacco use	MHP/MOH							
3.1.4	Strengthen health care facilities for the prevention, screening and early diagnosis of common cancers breast and oral cancers.	3.1.4.1	Develop protocol and provide training for screening of oral and breast cancers at hospitals	Oral Health Program, RH/MoH							
3.1.5	Strengthen NCD services in hospitals with integration of diabetic services	3.1.5.1	Institute special weekly NCD clinic days in all hospitals by sending an executive instruction from Secretary MoH	LSRDP-MoH							
		3.1.5.2	Revisit management of hypertension and develop a protocol, explore opportunities for cardiac rehabilitation and pulmonary rehabilitation multidisciplinary approach for secondary prevention	LSRDP							
		3.1.5.3	Continue operating special diabetic clinic days in the referral hospitals and high volume district hospitals	Diabetes Care Services Program/ DMS							
		3.1.5.4	Train existing diabetic focal persons on PEN	LSRDP/Diabetes Care Services Program							
		3.1.5.5	Introduce protocols for gestational diabetic screening in reproductive health services	Diabetes Program/ RH							

Action area: 3.1. Access to Health Services.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
3.1.6	Improve health workforce knowledge and skills on NCDs including addressing risk factors by integrating in the training curricula for pre-service, in-service and other trainings	3.1.6.1	Introduce NCD PEN modules in pre and in service curriculum at the FNPH	KGUMS	LSRDP-MoH						
		3.1.6.2	Orient NCD PEN module in the in-service post graduate medical program at the University of Medical Sciences.	KGUMBS/LSRD							
		3.1.6.3	Integrate and link NCD risk factor components in all nutrition training programs for all categories of health workforces (eg, nurses, HA, physiotherapy technicians)	KGUMS	Nutrition Program/						
3.1.7	Improve cancer services and strengthen cancer surveillance	3.1.7.1	Recruit two program officers for cancer prevention program	DMS							
		3.1.7.2	Review the current cancer registry of the JDWNRH and expand cancer registries to two regional referral hospitals	DMS/LSRDP							
3.1.8	Improve palliative and terminal care for NCD through a multi disciplinary team approach	3.1.8.1	Develop terminal and palliative care protocols for diabetes, cancers, CVDs, COPDs, and conduct trainings of multidisciplinary health care providers	DMS							

Action area: 3.1. Access to Health Services.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
3.1.9	Develop a National Oral Health Plan using the SEAR Oral Health Strategy 2013 as a template, fully integrated in national NCD planning contexts	3.1.9.1	Disseminate findings of the assessment of oral health needs based on the oral health assessment to the government agencies to garner policy support for oral health services	Oral health program –MoH							
		3.1.9.2	Develop and agree a National Oral Health Plan	Oral health program-MoH							
		3.1.9.3	Prepare a literature review of harmful effects of doma and conduct strategic advocacy for discouraging use of doma	Oral health program –MoH							

Table 10: Action area 3.2, Community-based approaches

Action area: 3.2. Community-based approaches.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
3.2.1	Empower people living with NCDs for improving quality and longevity	3.2.1.1	Develop patient self-care guidelines for prevention and control of NCDs	DMS/ LSRDP							
		3.2.1.2	Integrate self-care education and counseling in the health care services	Health Services							
3.2.2	Improve capacity of VHWs and monastic focal persons to advocate on NCD and their risk factors	3.2.2.1	Make an addendum to the VHW Training Module to include clear skills and competency on physical activity, unhealthy diet (excessive fat, high salt, low intake of vegetables and fruits), tobacco and alcohol	VHW Program							
3.2.3	Strengthen community outreach and healthy city concepts for NCD prevention and control focusing on urban communities through leadership of health facility managers	3.2.3.1	Develop a Community Social Mobilization Module (CSSM) for social mobilization for NCD prevention and control	LSRDP/HPD-MoH	District health sector						
		3.2.3.2	Train district health sector teams on the CSSM and identify CSSM projects among urban communities living within the vicinity of health facilities	LSRDP/HPD-MoH	District heath sector						
		3.2.3.3	Establish Thromde Health Offices in Thimphu, Phuntsholing, SamdrupJongkhkar and Gelephu with minimum of two health officers	MoH/LG/ Thromdes							
		3.2.3.4	Adopt three community based projects for healthy lifestyle promotion in residential clusters as a part of Thimphu Healthy City Initiative	Thimphu Thromde (LGs)	Community Health Department / JDWNRH						

3.4 Strategic action area 4: Surveillance, monitoring and evaluation and research

Partners: Ministries of health, education, Bhutan Narcotic Control Agency, and BAFRA

Table 11: Action area 4, surveillance, monitoring and evaluation and research

Action area: 4.1. Strengthen surveillance.		Activities		Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
4.1.1	Strengthen civil registration and vital statistics through improved collection of demographic data as well as age-and cause of death data using verbal autopsy tools.	4.1.1.1	Review and endorse SOPs for strengthening civil registration system based on cause of deaths including NCD deaths	HMIS-MoH							
		4.1.1.2	Conduct training courses for health workers on registration and reporting on deaths including verbal autopsy	HMIS-MoH							
		4.1.1.3	Orient community members of the local government on reporting deaths to the health facilities	HMIS-MoH							
		4.1.1.4	Train Medical Record Officers (MROs) to improve ICD Coding for diseases	HMIS-MoH							
		4.1.1.5	Conduct a study of deaths in a nationally representative sample of Bhutanese population to establish baseline for NCD premature mortality	LSRDP-MoH	HRU-MoH						
4.1.2	Conduct a population surveys to inform the progress on NCD Actions	4.1.2.1	Conduct WHOSTEP survey of NCD Risk factors following 2014 survey	LSRDP-MoH							
		4.1.2.2	Conduct five yearly Global School Health Survey	DYS/ MoE							
4.1.3	Improve fluoride content of drinking water in Bhutan	4.1.3.1	Conduct a small scale feasibility study of fluoridation of water source	Oral Health Program							

Action area: 4.2. Improve monitoring and evaluation.			Activities	Lead agency	Implementing partners	2015	2016	2017	2018	2019	2020
4.2.1	Monitor and evaluate the progress of multi-sectorial efforts to implement priority interventions.	4.2.2.1	Develop stakeholder reporting format through a stakeholder workshop	LSRDPP-MoH /	All stakeholders						
		4.2.2.2	Organize annual stakeholder meetings to share the progress and yearly work planning	LSRDP-MoH	All stakeholders						
		4.2.2.3	Conduct mid-term and end line evaluation of the action plan in 2017 and 2019 and publish evaluation reports	LSRDP-MoH	All stakeholders						
		4.2.2.4	Compile Annual National NCD Implementation Report	DoPH (LSRDP)							
		4.2.2.5	Conduct Brief External Review (BER)	DoPH	NSC						
		4.2.2.6	Conduct Global Adult Tobacco Survey (GATS)	BNCA	HPD-MoH						
Action area: 4.3. Strengthen research											
4.3.2	Strengthen collaboration between national, regional and international research centers and develop reliable long-term research partnerships based on MoUs	4.3.2.1	Define a national NCD research agenda through a stakeholder workshop	HRU/ LSRDP-MoH							
		4.3.2.2	Facilitate submission of annual grant proposals to conduct NCD prioritized research	HRU-MoH/ LSRDP							
		4.3.2.3	Publish NCD related interventions of Bhutan in international journals	LSRDP-MoH / HRU-MoH							
		4.3.2.4	Conduct joint survey/ surveillance of food contents of pesticides, heavy metals, mycotoxins and other harmful adulterants/ contaminants	BAFRA	PHL						

SECTION IV
IMPLEMENTATION MECHANISMS

4.1 Multisectoral Response

This is a Multisectoral Action Plan requiring ownership of each stakeholder. The key to sustaining and increasing coverage of the NCD interventions at the population level is by embedding the plan within all levels of local governments (Dzongkhag, Thromde, and Gewog) and other implementing partners. Effective mechanisms are required to coordinate stakeholders to ensure successful implementation. Result based plans should be integrated in the Government Performance Management System (GPMS) and the NCD outputs/outcomes should be included as necessary indicators of the local governments and implementing partners.

The local governments are empowered with the duty to protect the health and safety of the public by the Local Government Act of Bhutan 2009; and therefore lead in advocating and initiating enforcement measures. Implementation of legal provisions in food safety, control of alcohol and tobacco enforcement is an integral part of NCD action plan. The local governments and the regulatory agencies should partner in advocating and enforcing the control of alcohol, tobacco, and improving food safety measures. The regulatory agencies such as the Bhutan Information Communication and Media Authority, Department of Trade and Industry, Department of Revenue and Customs, and BAFRA should provide support to the LGs in building capacity building, improving leadership and ownership of the NCD activities within local governments.

4.2 National Steering Committee for NCDs -hosted by the Ministry of Health

The National Steering Committee (NSC) for NCDs was established in 2010 at the Ministry of Health, however the NSC has remained inactive.The committee will be reinforced to provide thrust to the multisectoral national response. A twelve member multisectoral team chaired by the Health Minister will be instituted considering sectoral relevance to the NCD Action Plan.

Members of NSC:

1. Lyonpo, MoH-Chairperson
2. Secretary General, Dratsang
3. Thrompon , Thimphu City Corporation
4. Managing Director, BBS
5. Head of the Department, BNCA
6. Head of the Agency, BAFRA
7. Head of the Agency, RSTA
8. Head of the Department, Department of Youth and Sport, MoE
9. Head of the Department, Department of Trade
10. Head of the Department, Department of Revenue and Customs
11. Representative of RBP
12. Representative of CBO

Member Secretary- Secretary, MoH

Terms of reference for the NSC:
In addition to key tasks referred to Figure 4, the TOR are:

1. Providing political leadership and guidance to relevant sectors for the prevention and control of NCDs
2. Guiding stakeholder implementation of multi-year work plans
3. Informing the government on the national policy and legal issues related to NCD prevention and control including ways to allocate greater financial resource for NCD response
4. Maintaining the momentum and national spirit for NCD response among implementing bodies
5. Facilitating development and resourcing of the multisectoral action plan on NCDs
6. Providing a dynamic platform for dialogue, stocktaking and agenda-setting and development of public policies for NCD prevention and control
7. Monitoring implementation of the action plan and review progress at national and dzongkhag levels
8. Reporting on intergovernmental commitments pertaining to NCDs

4.3 Implementation Subcommittees

When the Action Plan is implemented, risk mitigation measures must be in place to ensure effective problem solving and support to maintain the momentum. The National Steering Committee should be supported by stakeholder members who are technically competent to provide advice to the committee. This mechanism will be provided through the formation of the Implementation Submcommittes (ISs) whose function will be to identify implementation challenges and propose solutions to the NSC for effective implementation of the plan. Three permanent ISs will be instituted to address the key thematic areas. (Refer to Table 12) The permanant ISs provides opportunity for constant technical support to the NSC and the Secretariat. The NSC can create additional subcommittees based on need. The functions and the composition of the three permanent Iss are described below:

1. Alcohol and Tobacco subcommittee: This committee will address all actions related to alcohol and tobacco including advocacy, enforcement, trade and licensing, zoning, and smoke free public places.
2. Healthy Settings subcommittee: The committee will address interventions related to physical acitivity, diet, infrastructure and built environment, healthy schools and institutions, work places, health facilities, and community based programs.
3. Health Services subcommittee: The commitee will compose of members from health sector and will address programs pertaining to health service delivery.

NCD Division and the LSRDP as a coordinating agency will be a member to all the Iss.

Table 12: Members for Implementation Subcommittees

Subcommittee	Members
Tobacco and Alcohol Subcommittee	1. BNCA 2.Thimphu Thromde 3. Mental Health (MoH) 4.Revenue and Customs 5. Trade 6.Tobacco Control (HPD-MoH) 7. RSTA 8. Royal Bhutan Police
Healthy Settings Committee	1. DYS (MoE), 2.Urban Planning, MoWHS 3.HPD (MoH) 4.Dratsang (Religion and Health Project) 5.BBS 6.BAFRA 7.Comprehensive School Health Program (MoH) 8.Nutrition Program (MoH) 9.BOC
Health Services Committee	1.District Health Services (DMS), 2.HMIS (MoH) 3.Diabetes Program 4.Oral Health Program 5.Cancer Program 6. Disability Prevention Program 6.HRU 7. KGUMS 8. JDWNRH

Terms of reference for ISs are:

1. The ISs will be represented by the members of the stakeholders
2. The chair of the IS committee will be selected by the ISs members by majority consensus for a fixed period or on a rotation duty as determined by the ISs members.
3. The key function of the ISs are to identify implementation and programmatic gaps in the NCD response through a consultative dialogue among the other members of the IS committee and participate in agenda-setting for NSC
4. The ISs members will attend mandatory meetings every six months. The meetings will be organized by the NSC Secretariat one month prior to the NSC meetings in order to allow adequate time to prepare and circulate agenda to the NSC members
5. ISs can be invited for additional adhoc meetings by the NSC Secretariat as necessary
6. The IS Chair and other relevant members will attend the NSC Meetings when required to observe or to make presentations to the NSC
7. The NSC Secretariat be responsible for coordinating, documenting all ISS meetings in addition to circulating necessary documents
8. For each meeting the Secretariat will identify the agency with a major interest for that agenda and choose the meeting venue in consultation with the agency.

4.4 Ministry of Health – The National Coordinating Body and the Secretariat

In launching a broadbased multi sectoral response, an agency is required to lead and coordinate the efforts of the stakeholders. The Ministry of Health has the broadest mandate with the primary role of promoting and protecting population health, the responsibility of a national coordination should best suit the Ministry. The MoH should be best prepared in terms of the capacity, motivation and leadership, and inadequacy in all or any of the three competencies would setback the progressive implementation of the Action Plan.

The MoH's Department of Public Health (DoPH) will be the coordinator of the Action Plan and the Secretariat to the NSC. Under the direction of the director, DoPH, the Non communicable Disease Division (NCDD) will lead the NSC Secretariat team. The LSRD Program will be the focal unit to perform the functions of the Secretariat of the NSC. (Refer to Figure 4 for the Secretariat function) The strength of the Secretariat is a crucial factor and driving force in sucessful implmentation of the action plan. If the secretariat is technically weak and overloaded with other responsibilities, this can result in failure of multisectoral cooridnation, monitoring and reporting, assembly of NSC meetings and ultimately acheivement of the national NCD targets. The human resource capacity of the LSRDP requires strengthening with sufficient technical expertise to provide technical backstop, coordination and support of the implementing partners. The current LSRDP mechanism lacks staff providing full time to provide multisectoral coordination; existing two program officers serve under several competing priorities. A full time Secretariat should be instituted by reinforcing the LSRDP by assinging a technically competant additional official and support staff.

Terms of refernce for the Secretariat:

1. Sensitize key stakeholders on NCD concerns
2. Organize NSC and ISs meetings
3. Develop the agenda for the meetings in consultation with the ISs and other sectors
4. Facilitate the development of the multisectoral, costed action plan for NCDs
5. Request six monthly progress reports from stakeholders
6. Follow up on decisions taken by the NSC
7. Support technical assistance to agencies
8. Identify knowledge gaps and advance research priorities to inform policy decisions
9. Facilitate bilateral/ multi lateral meetings to advance work on thematic issues and agreed upon goals
10. Prepare consolidated annual reports and periodic national reports on the implementation of the multisectoral action plan for NCDs.

Functions of the LSRDP

The LSRDP in addition to coordinating the NSC functions will perform other public health programmatic functions. This includes implementing annual work plans, building capacity and competency of health services for NCD care and treatment, NCD surveillance and supporting health promotion activities of the Ministry of Health.

4.5 Agency Focal Points

Each Ministry/Agency will appoint a Focal Official for NCD, with adequate competency and seniority to be able to represent the agency as well as to bring diverse perspectives of the agency on policy and implementation issues. The focal official is the key mechanism responsible to ensure accountability of the agency to NCD action plan; the officials performance should be recognized by the agency by integrating into the thier personal perfomance indicator. The Head of the Agency will notify all sections of the organization of the appointment and functions of the focal officials to ensure greater support and recogniztion by various units of the organization to facilitate better coordination. The agency ownership for the NCD action plan will be formalized by presenting a letter of appointment of the Focal Official by the respective Head of the agency to the Chair of the NSC. In the letter of appointment, the Focal Official's TOR should be clearly stated as under:

1. Coordinate and implement the NCD action plan within the agency,
2. Identify implementation opportunities and challenges, and suggest pertinent solutions to the agency,
3. Inform the NSC Secretariat on the implementation opportunities and challenges and suggest pertinent solutions,
4. Submit half yearly progress report to the NSC Secretariat, and
5. Represent the agency in meetings/workshops of the NCD action plan

4.6 Local Government NCD Responses

At the dzongkhag and thromde levels, leadership and coordination are crucial to ensure prioritization and mainstreaming of NCD activities in the LG plans. Activities from the Action Plan should be integrated into the annual work plan of relevant sectors. The following mechanisms should be implemented to build ownership by local governments-dzongdags and thrompons:

1. The NSC Chair will seek an executive order from the Prime Minister to the LGs and other implementing partners to adopt the NCD action plans in the annual work plans
2. Incorporate LG NCD implmentation as key indicators of the Government's Perfromance Management System
3. Include NCD prevention and control activities such as public health activities, building community based programs, construction of community walk trails, creation of public spaces, enforcment of tobacco and alcohol activities as a routine plan of the districts plans in the annual budget negotiations with MOF

The NCD Action Plan should be implemented within the LGs existing planning coordination mechanisms. The district/thromde planning unit should coordinate and intergrate the implementation of NCD activities in the same fashion as other routine activities. The majority of these activities pertains to the district/thromde Health, Education, Engineering sectors and the Office of the DYT Thrizin. These sectors should be fully engaged in the planning, implmentation and coordination of the NCD action plan maximizing the potential for the LG's administrations for holistic NCD prevention and control response.

4.7 Role of the District Health Sector

Under the direction of Dzongdags /Thrompons, the district/thromde health office in coordination with the Dzongkhag/Thromde Planning Sector should take a leading role in advocating the NCD Action Plan among other sectors. This should be done by including the NCD agenda in the dzongkhag and gewog tshogdues and district sectoral sessions. The district health office should explore supportive linkages within the existing MSTFs and CBSS to implement NCD Action Plan. The district health office should function as the Secretariat of the NCD plan as well as providing technical support for other stakeholders in addition to providing NCD health services.

In coordination with the Dzongkhag Planning Sector, the district health office should submit Six Monthly Dzongkhag NCD Action Plan Implementation Reports to the Secretariat of the NSC. This will entail collection of activity reports primarily from the Education, Thromde, Gewogs, and Monastic bodies in addition to furnishing Health Sector activity information. Prevention and control of NCDs are core competencies required of a district health sector, however thier engagement increases the scope and volume of work. As the plan is implemented, regular review should be conducted to assess the performance and needs of the district health sector to lead the implementation of NCD activities. Most district health services currently have 2 district health officers and if required, additional human resource should be provided for effective performance of broad public health functions.

4.8 Annual National NCD Report

Valid and reliable information is required to track of the progress of the implementation of the multisectoral plans. Stakeholders should be motivated by periodically informing them about their progress and the performance of other stakeholders. Collecting information too frequently can overburden the stakeholders while relying on year-end activity reports can delay problem identification and problem solving. In addition, the government and donors require information on the implementation. Six monthly progress reports from the implementing agencies will be necessary. The focal officals will compile and submit to the Secretariat of the NSC.

The NSC Secretarit will produce an Annual National NCD Report consolidating the national action on NCDs at the end of each financial year. The report will highlight the overall achievements, performance of each implementing agency, document success, identify challenges and recommend solution to overcome the barrier in implementing the NCD action plan. The NCD Steering Committee will review the report and submit the Annual NCD Report to the Prime Minister and Government. The report will also be made available to the other stakeholders and donors.

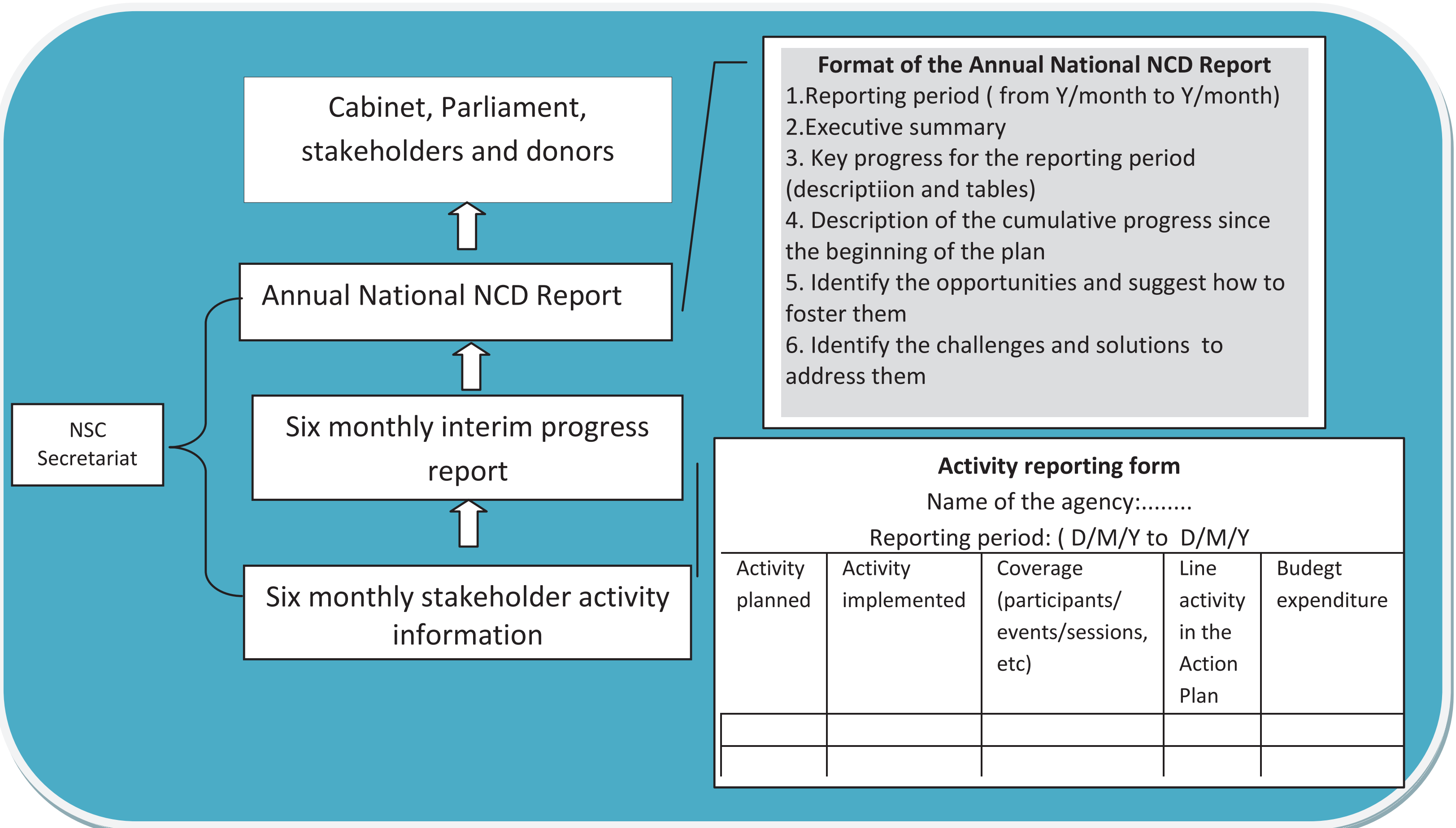
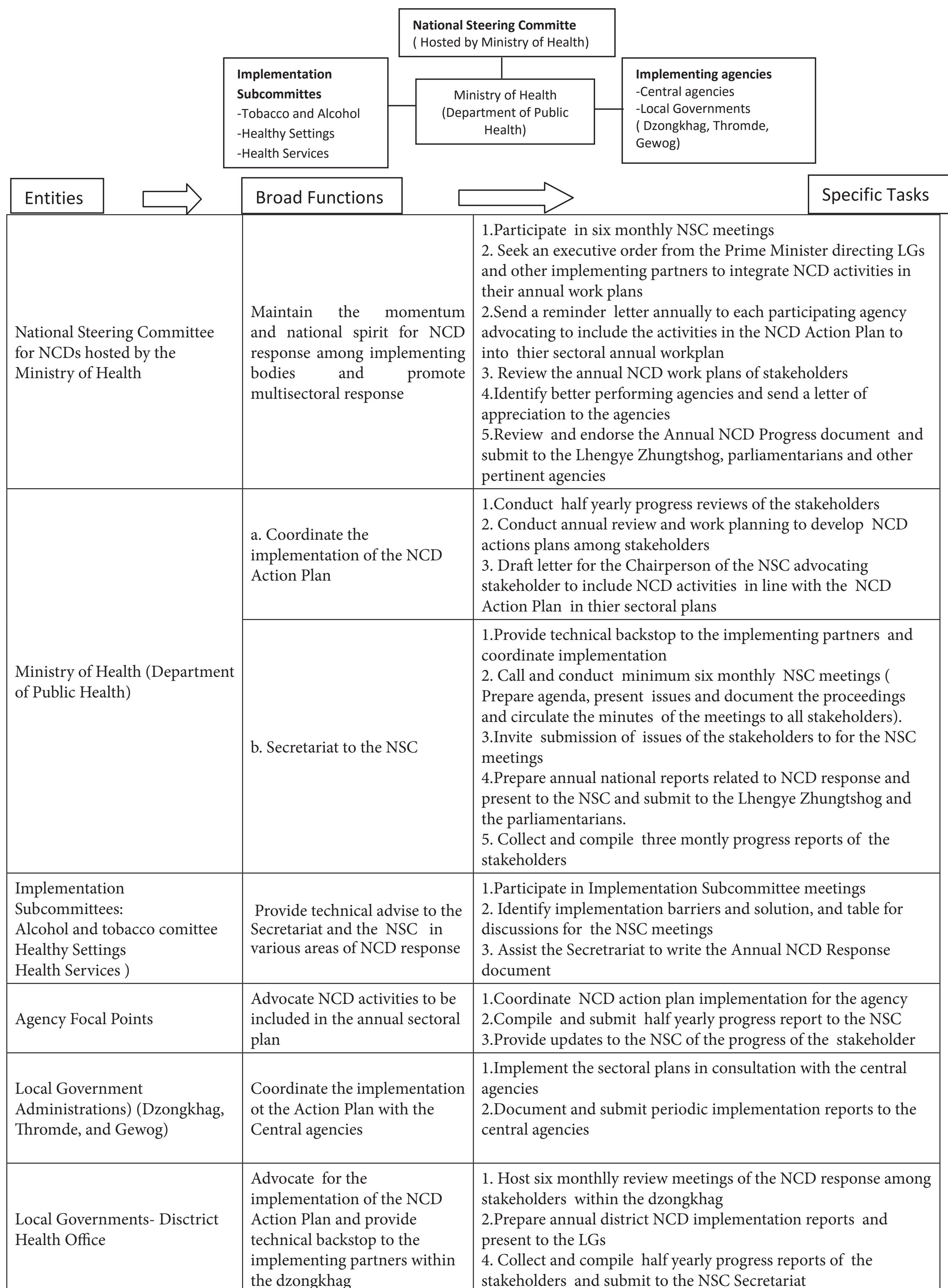


Figure 3: Procedures for generation of annual NCD Implementation Report



Entities	Broad Functions	Specific Tasks
National Steering Committee for NCDs hosted by the Ministry of Health	Maintain the momentum and national spirit for NCD response among implementing bodies and promote multisectoral response	1.Participate in six monthly NSC meetings 2. Seek an executive order from the Prime Minister directing LGs and other implementing partners to integrate NCD activities in their annual work plans 2.Send a reminder letter annually to each participating agency advocating to include the activities in the NCD Action Plan to into thier sectoral annual workplan 3. Review the annual NCD work plans of stakeholders 4.Identify better performing agencies and send a letter of appreciation to the agencies 5.Review and endorse the Annual NCD Progress document and submit to the Lhengye Zhungtshog, parliamentarians and other pertinent agencies
Ministry of Health (Department of Public Health)	a. Coordinate the implementation of the NCD Action Plan	1.Conduct half yearly progress reviews of the stakeholders 2. Conduct annual review and work planning to develop NCD actions plans among stakeholders 3. Draft letter for the Chairperson of the NSC advocating stakeholder to include NCD activities in line with the NCD Action Plan in thier sectoral plans
	b. Secretariat to the NSC	1.Provide technical backstop to the implementing partners and coordinate implementation 2. Call and conduct minimum six monthly NSC meetings (Prepare agenda, present issues and document the proceedings and circulate the minutes of the meetings to all stakeholders). 3.Invite submission of issues of the stakeholders to for the NSC meetings 4.Prepare annual national reports related to NCD response and present to the NSC and submit to the Lhengye Zhungtshog and the parliamentarians. 5. Collect and compile three montly progress reports of the stakeholders
Implementation Subcommittees: Alcohol and tobacco comittee Healthy Settings Health Services)	Provide technical advise to the Secretariat and the NSC in various areas of NCD response	1.Participate in Implementation Subcommittee meetings 2. Identify implementation barriers and solution, and table for discussions for the NSC meetings 3. Assist the Secretrariat to write the Annual NCD Response document
Agency Focal Points	Advocate NCD activities to be included in the annual sectoral plan	1.Coordinate NCD action plan implementation for the agency 2.Compile and submit half yearly progress report to the NSC 3.Provide updates to the NSC of the progress of the stakeholder
Local Government Administrations) (Dzongkhag, Thromde, and Gewog)	Coordinate the implementation ot the Action Plan with the Central agencies	1.Implement the sectoral plans in consultation with the central agencies 2.Document and submit periodic implementation reports to the central agencies
Local Governments- Disctrict Health Office	Advocate for the implementation of the NCD Action Plan and provide technical backstop to the implementing partners within the dzongkhag	1. Host six monthlly review meetings of the NCD response among stakeholders within the dzongkhag 2.Prepare annual district NCD implementation reports and present to the LGs 4. Collect and compile half yearly progress reports of the stakeholders and submit to the NSC Secretariat

Figure 4: Implementation Mechanisms, Functions and Tasks

4.9 Accountability Indicator for Multisectoral Mechanisms

The coordination mechanism needs to be monitored for successful implementation of the plan. The multisectoral accountability will be monitored through the following indicators:

- Presence of NSC, and ISs at the national level and Dzongkhag Mechanisms as the coordination bodies
- Capable Secretariat team to provide technical backstop to stakeholders as well as to coordinate multisectoral response
- Number and nature of assistance requests received and processed by the Secretariat
- Number of meetings convened with the required quorum in an year by the NSC and Dzongkhag Mechanisms
- Number of IS meeting conducted with full quorum in an year
- Number of agencies attending the meetings at the national and district levels
- Policy decisions taken by the NSC
- The level of officials participating in meetings
- NCD action plan for national and district levels
- Number of completed actions in the action plan
- Sector-wise process indicators for the plan
- Resource allocation and utilization for NCDs by relevant sectors
- Number of Six Monthly Reports received from stakeholders
- Number of Annual NCD Reports published, printed and distributed

4.10 Two Phases of Implementation

The six-year Multi-sectoral Action Plan will be implemented in two phases.

Phase I: The first stage will be implemented from 2015 through 2018. The main focus under this phase will be to initiate pilot interventions, prepare and launch the media campaign, address policy gaps and legal provisions needed to address NCDs, train human resources, and to streamline procurement and supply chain of medicines and equipment. A mid-term evaluation of the action plan will be conducted in 2018. The review will be conducted to measure key output indicators. A team of internal and external experts will be recruited under the direction of the national steering committee to assess the progress of the implementation. The review will take a minimum of one month. The evaluation reports will be presented by the NSC to the Prime Minister and the Cabinet. The report will be dessiminated among the implementers. Post mid-term adjustments will be made to the plan based on the recommendations of the review.

Phase II: This stage will be implemented from 2018 to 2020 taking into account the recommendations of the mid-term review. During this phase, BCC and media campaign will be accelerated, and pilot prevention projects will be scaled up. At the end of 2020, the whole multi-year implementation of the action plan will be evaluated. The final evaluation report will be presented by the NSC to the Prime Minister and the cabinet, and other stakeholders. Following the evaluation, post-2020 actions will be planned gearing towards 2025 goals.

4.11 Key implementing agencies and focus areas

The key implementing bodies for the NCD action plan are: the local government bodies (dzongkhags, thromdes and gewogs), monastic and religious institutions, government regulatory and enforcement bodies (RSTA, Royal Bhutan Police, BAFRA), and other line ministries (Ministry of Economic Affairs, Ministry of Finance, Ministry of Education and Ministry of Health). The Bhutan Olympic Committee, Bhutan Broadcasting Service and other media organizations will play a lead role in media advocacy, public education and social mobilization. CBOs and NGOs will be enouraged to initiate programs for physical activity promotion and addressing other NCD risk factors.

Table 13: Organizations and priority action areas

Organizations	Priority action areas
BNCA	Coordinate tobacco control activities at the national level and enforce tobacco control rules in collaboration with the local governments (dzongkhag, thromde, and gewog) administrations Initiate legal and policy reforms related to tobacco control
Road Safety and Transport Authority	Implement road safety monitoring activities related to drunk driving, review policy and penalties in accordance to the Decade of Action for Road Safety
BAFRA	Implement national salt reduction strategies Establish guidelines for nutritional labeling for all pre-packaged foods. Regulate the identified unhealthy food high in saturated fat, sugar and salt from school and workplace premises
Royal Bhutan Police	Enforce and educate on drunk driving, alcohol and tobacco restrictions
Ministry of Forest and Agriculture	Increase access to fruits and vegetables in the country
Ministry of Economic Affairs/Ministry of Finance	Implement alcohol control rules and policies including taxation
Local governments/ thromde/gewogs	Develop ordinances related to local alcohol control (licensing, zoning) and design local policies to discourage commerce of local brews Advocate health promotion activities in community and neighborhoods
Ministry of Education	Develop national guidelines for school meals based to improve school-based nutrition Develop and implement physical activity promotion policies in schools
Bhutan Olympic Committee	Promote physical activity and train physical activity trainers in key urban settings
Dratsang and religious institutions	Integrate healthy lifestyle promotion in monastic curriculum and promote healthy lifesyles in monastic settings
Ministry of Works and Human Settlements	Review the current urban policies with respect to adequacy of built environment concepts for healthy environment
Ministry of Health	Provide national coordination for NCD respons and technical support and assist implementing partners in building cost effective NCD interventions Strengthen monitoring and surveillance of NCDs, tobacco use, alcohol use, unhealthy diet and physical inactivity and ensure equaitble access to NCD disease management
Khesar Gyalpo University of Medical Sciences	Integrate NCD prevention and control including PEN within the curriculum of nurses, health workers and medical students Participate in NCD intervention research and evaluation
Bhutan Broadcasting Service and Media Organizations	Develop media programs to promote healthy lifestyle and NCD prevention through mass media

4.12 FINANCING

The multisectoral national action plan will be embedded as the annual work plan of the local governments and other agencies to ensure an integrated and sustained financing. Similar to other sectoral developmental plans, NCD action plans should be proposed by government agencies in the annual budget proposal of the Royal Government of Bhutan. Funds will be released directly to the implementing agencies. This will promote greater decentralization of NCD plans and generate ownership and accountability at the grassroot.

While most of the funding will rely on the government grants and budgetary support, stakeholders will also compete for mobilizing from other sources such as UN agencies and other developmental partners.

4.13 MONITORING AND EVALUATION FRAMEWORK

Performance monitoring

A key step for effective implementation of the plan is building ownership and accountability among stakeholders. This will be enhanced by instituting a Brief External Review (BER) which will be conducted by an agent contracted by the NSC for a duration not extending 3 weeks. BER will be conducted at the end of 2016, 2017, and 2019. For the years 2018 and 2020, indepth reviews is scheduled through Midterm and the Whole-plan evaluation. The BER will be important exercise to inform the NSC on the progress and bottleneck in implementation of the action plan. The BER will be presented to the NSC.

The main purpose of the BER is to:

- Assess the overall performance and implementation of the plan;
- Assess performance of the stakeholders and build accountability for the Action Plan; and
- Identify bottlenecks, solutions and recommend adjustments to the implementation modality

The indicators stated in the multisectoral accountability framework discussed in the section 4.9 will be included integral part of BER reports.

Logical Framework

Various inputs and activities are designed in logical approach to produce outputs, outcomes and impacts. (See figure 5). The ultimate goal of the action plan is public health goal of reducing NCD diseases and burden. These goals can only be realized jointly by contribution of various sectors and implementing broad based programs. It is equally important for other sectors and partners to see how they contribute in the ultimate public health goal. The process and output indicators for each agency and sectors will be tracked and transparently reported in the National Annual NCD Report.

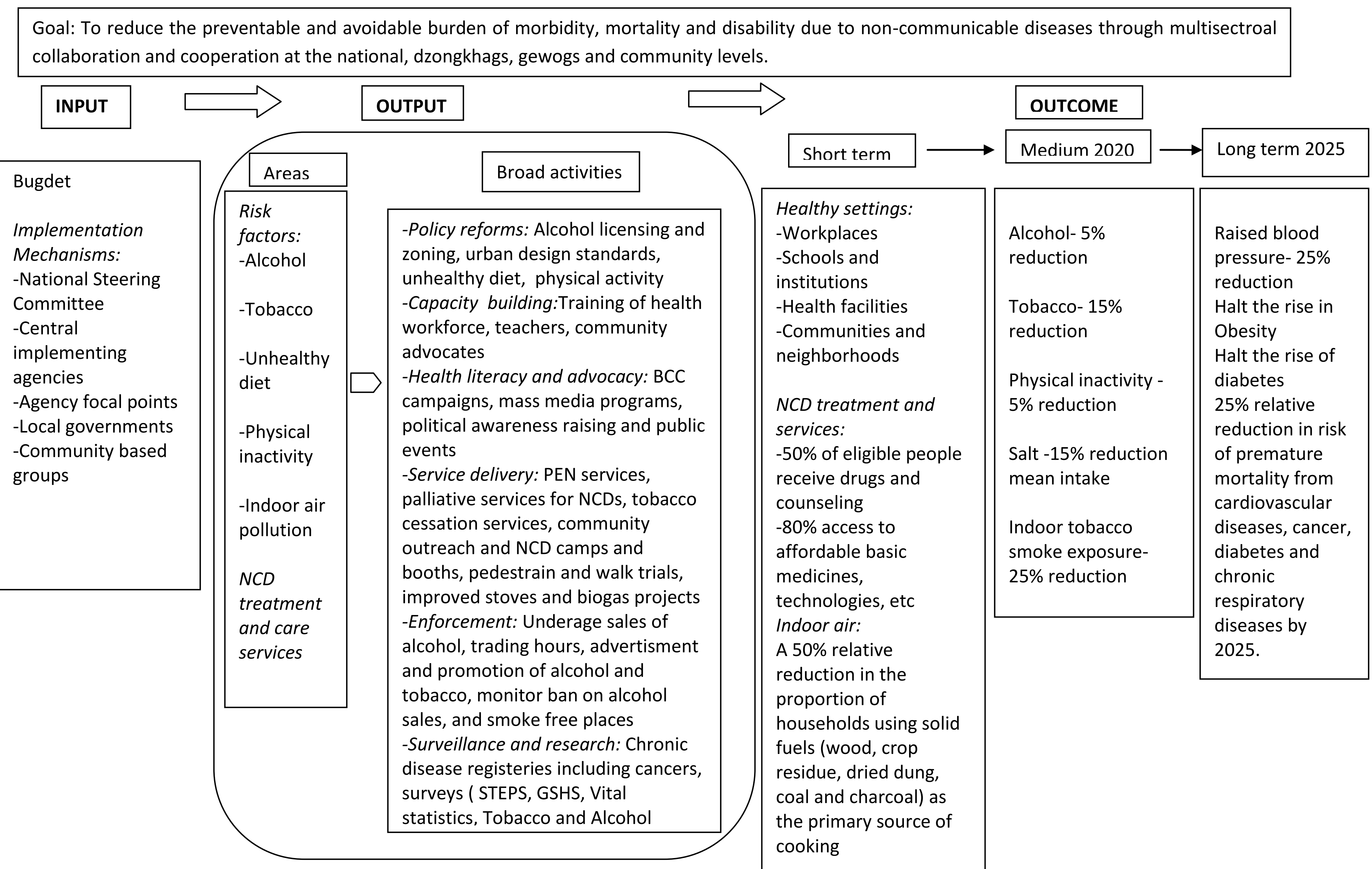


Figure 5: Log Frame for NCD Action Plan

A summary of the key outputs and outcomes to be tracked for the progress of the multisectoral NCD action plan are presented in the following tables.

The overall Expected Outcome is to attain 25% relative reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes and chronic respiratory diseases by 2025.

Table 14: Action area 1-Advocacy, partnerships and leadership		
Outcome: Increased political commitment, leadership capacity, financial resources and existence of a result oriented multisectoral approach for NCD response		
Outputs	**Means of verification**	**Target**
Endorsement of the National Action Plan by the Government/Cabinet	Prime Ministerial endorsement	
Appointment of a focal official for NCD in each stakeholder organization	Appointment letter sent to the chair of NCD Steering Committee	100% of stakeholders present a focal official
Regular meeting of the National Steering Committee (NSC)	Minutes of the meeting	Minimum one meeting in six months
Stakeholders attend annual NCD work planning meeting organized by NCD NSC	Report	Prior to the annual budget call of the Government
LGs(dzongkhags/gewog/thromdes) adopting advocacy and enforcement programs of alcohol and tobacco rules within their local settings	Progress report	Phase 1 (2015-2018): 40% Phase 2 (2018-2020): 60% of the dzongkhags and thromdes
LGs (dzongkhags/gewogs/thromdes) routinely report progress of implementing NCD action plan within the government performance framework	Signed performance framework	20 dzongkhags
Local government funded to implement annual NCD work plans	Fund disbursement report	100%
Amount of financial spending on multisectoral NCD Action plan	Fund disbursement report	Acceptable proportion of Health Sector budget

Table 15: Action area 2-Health promotion and risk reduction (Tobacco use)		
Outcome: 10% reduction of tobacco users among persons over 15 years from 2014 level (STEPS survey 2014)		
Output	**Means of verification**	**Target**
Tobacco laws amended to include smokeless tobacco and betel nut consumption	Amendment of Tobacco Control Act	-
Primary care centers piloting tobacco cessation services	Facility report	# health facilities
BNCA and LGs implementing joint advocacy and enforcement of tobacco control based on new SOPs	BNCA report	20 dzongkhags / thromdes

Key urban settings and workplaces adopting smoke free compliance monitoring program	Activity report	Four major Thromdes and dzongkhags

Table 16: Action Area 2- Health promotion and risk reduction (Alcohol use)		
Outcome: 5 % reduction in harmful use of alcohol in general population from 2014 level		
Output	**Means of verification**	**Targets**
Taxation for alcohol products increased	Policy document	
National policies on alcohol outlet density, licensing, zoning, and product advertisement revised	Policy document	
Local ordinances adopted to reduce outlets, control alcohol licenses, and issues of local brews in thromde, dzongkhag and gewog tshogdues	Local ordinances	All eastern and central dzongkhags
Penalties and legal consequences for drink driving revised to make it more deterrant	Amended RSTA Act/ new regulation/ policy	
Thromde, dzongkhags and gewogs with active enforcement teams for alcohol sales and (tobacco use)	Report/minutes	Minimum one committee for key thromdes, dzongkhag and gewogs
Alcohol licensees (bars, hotels, drayangs, etc) trained on pre-licensing education curriculum	Training reports	All new and renewed licensees

Table 17: Action Area 2- Health promotion and risk reduction (Diet, fat and salt)		
Outcomes: - 15% reduction in mean population intake of salt/sodium from 2014 mean intake level - Halt the rise of obesity and diabetes in the general population at 2014 prevalence level or below (STEPS survey 2014)		
Outputs	**Means of verification**	**Targets**
Salt reduction strategy rolled out	Strategy implementation document	
Labeling of transfat, salt content and other contents for packaged food products guidelines enforced	Revised food labelling guidelines	Top 10 food items identified with high transfat, salt contents banned
Schools implementing the Bhutan 2011 Food Based Dietary Guidelines for their feeding program	Implementation reports	50% of borading schools

Table 18: Action Area 2- Health promotion and risk reduction (Physical inactivity)		
Outcome: 5% reduction of the physical inactivity level in the **urban population** from 2014 physical activity level		
Outputs	**Means of verification**	**Targets**
Advocacy events on health promotion including physical activity promotion for politicians, decision-makers, urban planners, teachers and religious leaders	Event records	All parliamentarians, heads of religious institutions, urban planners
Urban communities reached through on site social mobilization promoting Healthy City Setting initiatives	Project documents	All major towns and district towns
Urban policies assessed for adequacy of built urban environment	Report	Atleast 10 major towns
Health Promting Schools and Institutions	Activity reports	20% of schools and religious institutions

Table 19: Action area 3-Health systems strengthening for early detection and anagement of NCDs and their risk factors		
Outcome: 25% relative reduction in prevalence of raised blood pressure		
Outputs	**Means of verification**	**Target**
Health facilities including BHUs with affordable basic technologies (blood sugar, BMI,) and essential medicines, including generics, required to treat major NCDs	Health facility reports	80% of health facilities
Eligible people receive drug therapy and counselling (including glycaemic control) to prevent heart attacks and strokes through a multi disciplinary team approach		50%
Health facilities including BHUs integrating PEN interventions in NCD management	Training reports of health workers	100%
Health workforce (Health Assistants, Assistant clinical officers nurses and dieticians) trained on providing NCD lifestyle counseling and brief interventions	Health facility reports of lifestyle counseling	100%
Percentage of patients with 30% absolute CVD risk or greater receiving antihypertensive drugs_ and statins	Health facility reports, clinical records	100%
% of eligible patients with known diabetes whose feet and eyes were checked at least once during one year	Health facility reports, clinical records	100%

Table 20: Action area- Indoor pollution		
Outcome: 50% relative reduction in the proportion of households using solid fuels (wood, crop residue, dried dung, coal and charcoal) as the primary source of cooking		
Output	**Means of verification**	**Target**
National guideline for indoor air quality standards adopted	Guideline	
Communities identified with poor indoor air quailty	Activity reports	# households
Households particiapting using improved stoves for cooking	Project reports	5000 households
Households particiapting in use of biogas fuels in communities using biomass fuels	Project reports	2000 households

Table 21: Action area 4-Surveillance, monitoring and evaluation, and research		
Outcome: National NCD monitoring framework for evaluation of progress towards attaining NCD national targets is established and fully operational		
Output	**Means of verification**	**Target**
Improved civil registration and vital statistics for age- and cause specific death data	Protocol for civil registration and vital statiscs	
Survey on baseline for NCD premature mortality	Survey report	One survey
Evaluation of PEN roll out intervention	Evaluation report	One evalaution
Global School Youth Survey conducted	Survey report	Once in five years
Population based NCD STEPS survey conducted	Survey report	Once in five years
National dietary survey conducted	Survey report	One survey
Feasibility of flouridation of water source conducted in multi sites	Survey report	One assessment
Global Adult Tobacco Survey conducted	Survey Report	One survey
Policy compliance surveillance for alcohol and tobacco rules in key locations	Surveillance report	Minimum once in two years

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ANNEXURES

Annexure 1: Indicator Lists (Tentative)

Outcomes (mortality and morbidity)

1. Unconditional probability of dying between ages 30-70 from cardiovascular disease, cancer, diabetes, or chronic respiratory disease.
2. Cancer incidence, by type of cancer, per 100 000 population.

Exposures (risk factors)

Tobacco:

3. Age-standardized prevalence of current tobacco use among persons aged 18+ years
4. Prevalence of current tobacco use among adolescents (13-17 years)

Alcohol:

5. Total (recorded and unrecorded) alcohol per capita (15+ years old) consumption within a calendar year in liters of pure alcohol, as appropriate, within the national context.
6. Age-standardized prevalence of heavy episodic drinking among persons aged 18+ years.

Fruits, vegetables and salt consumption:

7. Age-standardized prevalence of persons (aged 18+ years) consuming less than five total servings (400 grams) of fruits and vegetables.
8. Age-standardized mean population intake of salt (sodium chloride) per day in grams in persons aged 18+ years.

Physical activity:

9. Prevalence of insufficiently physically active (defined as less than 60 minutes of moderate to vigorous intensity activity daily) among adolescents (13-17 years)
10. Age-standardized prevalence of insufficiently physically active persons aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent.

Metabolic :

11. Age-standardized prevalence of raised blood glucose/diabetes among persons aged 18+ years (fasting plasma glucose value ≥7.0 mmol/L (126 mg/dl) or on medication for diabetes
12. Age-standardized prevalence of raised blood pressure among persons aged 18+ years (defined as systolic blood pressure ≥140 mmHg and/or diastolic blood pressure ≥90 mmHg); and mean systolic blood pressure.
13. Prevalence of overweight and obesity in adolescents (defined according to the WHO growth reference for school-aged children and adolescents, overweight – one standard deviation body mass index for age and sex, and obese – 2 SD BMI for age and sex).
14. Age-standardized prevalence of overweight and obesity in persons aged 18+ years (defined as body mass index ≥25 kg/m2 for overweight and body mass index ≥ 30 kg/m2 for obesity).
15. Age-standardized prevalence of raised total cholesterol among persons aged 18+ years (defined as total cholesterol ≥5.0 mmol/L or 190 mg/dl); and mean total cholesterol.

Indoor air:

16. Proportion of households with solid fuel use as their primary source of cooking

System response

17. Proportion of eligible screened for oral cancers at least once.
18. Proportion of eligible persons (defined as aged 40 years and over with a 10-year cardiovascular risk ≥30%, including those with existing cardiovascular disease) receiving drug therapy and counselling(including glycaemic control) to prevent heart attacks and strokes.
19. Availability and affordability of essential noncommunicable disease medicines, including generics, and basic technologies as per the national package in public facilities.
20. Proportion of primary health care workforce trained in integrated NCD prevention and control.
21. National policies that virtually eliminate partially hydrogenated vegetable oils (PHVO) in the food supply and replace with polyunsaturated fatty acids (PUFA).

Annexure 2: Description of Indicators

Cancer incidence

Indicator: Cancer incidence, by type of cancer per 100,000 populations.

Indicator selection: Cancer incidence tracks the number of new cancers of a specific site/type occurring in the population per year, usually expressed as the number of new cancers per 100,000 populations. Data on cancer incidence will come from population based cancer registry. No targets have been set.

Premature mortality from NCDs

Indicator: Unconditional probability of dying between ages 30-70 from cardiovascular disease, cancer, diabetes, or chronic respiratory disease.

Indicator selection: This indicator is calculated from age-specific death rates for the combined four cause categories (typically in terms of 5-year age groups 30-34,…, 65-69). A life table method allows calculation of the risk of death between exact ages 30 and 70 from any of these causes, in the absence of other causes of death.

The lower age limit for the indicator of 30 years represents the point in the life cycle where the mortality risk for the four selected chronic diseases starts to rise in most populations from very low levels at younger ages. The upper limit of 70 years was chosen to identify an age range in which these chronic diseases deaths can be considered premature deaths.

Data for this indicator will come from a national level cause of death ascertainment system in all deaths or a representative sample of all deaths in the country. While the global target is to reduce premature mortality by 25% by 2025, the target for Bhutan has been kept lower at 20% relative reduction.

Alcohol use

Indicators:

1. Age-standardized prevalence of heavy and episodic alcohol drinking among persons aged 18+ years.
2. Total (recorded and unrecorded) alcohol per capita (15+ years old) consumption within a calendar year in litres of pure alcohol.

Indicator selection: Two parameters of alcohol consumption have particular relevance for NCD prevention and control: overall level of alcohol consumption and drinking pattern. For the overall level of alcohol consumption in populations the adult per capita consumption is well-recognized and established indicator for which the data are being collected, analysed and reported by WHO in time-series. Data on total (recorded and unrecorded) per capita (15+) alcohol consumption in litres of pure alcohol for a calendar year is available based on governmental national sales and export/import data,

as well as the estimates of unrecorded alcohol consumption.
The data on prevalence of heavy and episodic drinking will come from the NCD risk factor surveys.

Low fruit and vegetable intake

Indicator: Age-standardized prevalence of adult (aged 18+ years) population consuming less than five total servings (400 grams) of fruit and vegetables per day.

Indicator selection: The consumption of at least 400g of fruit and vegetables per day is recommended as a population intake goal, to prevent diet-related chronic diseases. Data on low fruit and vegetable consumption are collected in NCD STEPs surveys and other health risk behaviour surveys and nutrition surveys.

Obesity and overweight

Indicators:

1. Age-standardized prevalence of overweight and obesity in adults aged 18+ years (defined as body mass index greater than 25 kg/m² for overweight or 30 kg/m² for obesity).
2. Prevalence of overweight and obesity in adolescents (defined as overweight-one standard deviation BMI for age and sex and obese-two standard deviations BMI for age and sex overweight according to the WHO Growth Reference).

Indicator selection: Body mass index (BMI) is a simple index of weight-for-height that is commonly used to classify overweight and obesity in adults. It is defined as a person's weight in kilograms divided by the square of height in meters (kg/m²). BMI provides the most useful population-level measure of overweight and obesity as it is the same for both sexes and for all ages of adults.These indicators use the WHO definition for overweight and obesity, where a BMI greater than or equal to 25 refers to "overweight" and a BMI greater than or equal to 30 refers to "obesity".

Data on prevalence of overweight and obesity in adults are available from STEPS surveys. Data on prevalence of overweight and obesity in adolescents can be available through the Global School-based Student Health Survey.

Physical inactivity

Indicators:

1. Age-standardized prevalence of insufficient physical activity in adults aged 18+ years (defined as less than 150 minutes of moderate-intensity activity per week, or equivalent).
2. Prevalence of insufficient physical activity adolescents (defined as less than 60 minutes per day of physical activity).

Indicator selection: The cut-point off less than 150 minutes of moderate activity per week (or

equivalent) for adults was chosen since a vast and strong body of scientific evidence shows that people meeting this threshold have higher levels of health-related fitness, a lower risk profile for developing a number of disabling medical conditions, and lower rates of various chronic NCDs than people who are inactive.

This indicator is calculated from age-specific prevalence values of insufficient physical activity. Age standardization is done in order to control differences in population age structure over time. The lower age limit of 18 years was selected taking into consideration the nature and availability of the scientific evidence relevant to health outcomes. For adolescents, the minimum requirement for being physically active is defined as getting at least 60 minutes of physical activity per day.

Data on physical activity will come through the NCD risk factor surveys among adults and through GSHS among adolescents.

Raised blood glucose/diabetes
Indicator: Age-standardized prevalence of raised blood glucose/diabetes among adults aged 18+ years (defined as fasting plasma glucose≥126, mg/dl) or on medication for raised blood glucose).

Indicator selection: Fasting plasma glucose values have been selected as the indicator due to ability to capture this in nationally representative surveys using relatively inexpensive rapid diagnostic tests. Data on fasting blood glucose will come from the NCD STEPS surveys. There are two main blood chemistry screening methods- dry and wet chemistry. Dry chemistry uses capillary blood taken from a finger and used in a rapid diagnostic test. Wet chemistry uses a venous blood sample with a laboratory-based test. Most population based surveys used dry chemistry rapid diagnostic tests to gather fasting blood glucose values. Both global and national targets aim to keep the prevalence of raised blood sugar at current levels and halt the increase.

Raised blood pressure
Indicator: Age-standardized prevalence of raised blood pressure (defined as systolic blood pressure ≥140 and/or diastolic blood pressure ≥90) among adults aged 18+ years.

Indicator selection : Stage 1/Grade 1 hypertension is defined in a clinical setting when the mean blood pressure is equal to or above 140/90 and less than 160/100 on two or more measurements on each of two or more visits on separate days. Treating systolic blood pressure and diastolic blood pressure to targets that are less than 140/90 is associated with a decrease in cardiovascular complications.

Data on Blood pressure will come from NCD risk factor surveys. Both global and national targets are for 25% reduction in its prevalence.

Salt/sodium intake
Indicator: Age-standardized mean population intake of salt (sodium chloride) per day in grams in adults aged 18+ years.

Indicator selection: A salt intake of less than 5 grams (approximately 2g sodium) per person per day is recommended by the WHO for prevention of cardiovascular diseases, the leading cause of death globally.

The gold standard for estimating salt intake is through 24-hour urine collection, however other methods such as spot urines and food frequency surveys may be more feasible to administer at the population level. While the global targets are for a 30% reduction is salt intake, this target has not been kept for Timor-Leste as currently there are no means of collecting information on this indicator.

Tobacco use

Indicators:

1. Age-standardized prevalence of current tobacco use (smoking and smokeless) among persons aged 18+ years.
2. Prevalence of current tobacco use (smoking and smokeless) among adolescents.

Indicator selection: The indicator includes both smokeless and smoking tobacco, as these are relevant to the national context, even though globally only smoked tobacco is considered.

Baseline data availability, measurement issues and requirements: Tobacco data will come from various sources, surveys among adults and through GYTS or GSHS among adolescents and STEPS among adults.

Raised total cholesterol

Indicator: Age-standardized prevalence of raised total cholesterol among adults aged 18+ years (defined as total cholesterol ≥5.0 mmol/L or 190mg/dl).

Indicator selection: Raised total cholesterol defined as ≥5.0 mmol/L or 190mg/dl is used by WHO in guidelines for assessment and management of cardiovascular risk.

Cholesterol values must be measured, not self-reported. There are two main blood chemistry screening methods- dry and wet chemistry. Dry chemistry uses capillary blood taken from a finger and used in a rapid diagnostic test. Wet chemistry uses a venous blood sample with a laboratory-based test. Most population based surveys used dry chemistry rapid diagnostic tests to gather cholesterol values. The data on this will come from the STEPS surveys.

National Systems Response Indicator:

Oral cancer screening

Indicator: Proportion of eligible (> 40 years) who have had their mouth examined by a health worker for oral cancer at least once.

Indicator selection: Early diagnosis may lead to higher rates of successful health facility treatment and extended life. Under the oral health program, screening for oral cancer is an identified activity.

Screening coverage data will be available through STEPs surveys. There are no national targets for this indicator.

Drug therapy to prevent heart attacks and strokes

Indicator: Proportion of eligible persons (defined as aged 40 years and older with a 10-year cardiovascular risk greater than or equal to 30 per cent including those with existing cardiovascular disease) receiving drug therapy and counselling (including gylcemic control) to prevent heart attacks and strokes.

Indicator selection: WHO recommends drug therapy for prevention and control of heart attacks and strokes because it is feasible, high impact and affordable, even in low- and middle-income countries. This approach is considered more cost-effective and less expensive than conventional single risk factor interventions that address hypertension or hyper-cholesterolemia and is one of the 'best buy' interventions.

Data on coverage of drug therapy to individuals identified as at-risk will be available from STEP surveys.

Essential NCD Medicines and basic technologies to treat major NCDs

Indicator: Aavailability and affordability of quality, safe and efficacious essential NCD medicines including generics, and basic technologies (defined as Medicines - at least aspirin, a statin, an angiotensin converting enzyme inhibitor, thiazide diuretic, a long acting calcium channel blocker, metformin, insulin, a bronchodilator and a steroid inhalant. Technologies - at least a blood pressure measurement device, a weighing scale, blood sugar and blood cholesterol measurement devices with strips and urine strips for albumin assay) in both public and private facilities.

Indicator selection: WHO recommends drug treatment for high risk people including those with diabetes in order to prevent and control heart attacks, strokes and diabetic complications. This set of technologies and medicines will enable these 'best buy' interventions to be implemented in primary care.

Information of availability and affordability of essential NCD medicines and basic technologies will be obtained through assessment and inventory of health facilities to determine if the listed medicines and technologies are available. Both the global and national targets are for 80% coverage.

Policies to eliminate industrially produced trans-fatty acids (TFA)
Indicator: National policies that virtually eliminate partially hydrogenated vegetable oils (PHVO) in the food supply and replace with polyunsaturated fatty acids (PUFA).
Indicator selection: Replacement of industrially produced TFA with polyunsaturated fatty acids (PUFA) is a ‚best buy' for the prevention of NCDs. There is no national target set for this.

Trained Workforce
Indicator: Percentage of primary health care workers trained in integrated NCD prevention and control

Indicator selection: This is an indicator identified in the Regional NCD Action Plan but no targets have been set. Recongizing the need for this as a very important component of the national strategy, a national target of 80% has been set. The data for this will come from the Ministries record of staff and the trainings.

Household air-pollution
Indicator: Proportion of households with Solid fuel used as primary source of cooking

Indicator Selection: It is not much of a concern in the western countries where clean energy is available; this is the reason why it is not a global target but a regional target of 50% reduction in proportion of households with SFU as primary source of cooking has been kept.

Annexure 3: Healthy cities

A healthy city is one that is continually creating and improving those physical and social environments and expanding those community resources which enable people to mutually support each other in performing all the functions of life and developing to their maximum potential (Health Promotion Glossary, 1998). In other words, a healthy city is an urban area which maintains and improves the social and natural environment and enables people to support each other through developing their potential to promote health.

The healthy cities concept is based on community participation and partnership between municipal authorities, civil society, individuals and all other stakeholders to take action to improve health, the environment and the quality of life in cities. Therefore, the program is concerned with the physical, social, economic and spiritual determinants of health and the essential elements necessary to improve health and the environment. It addresses issues such as improving health services, the water supply, sanitation, pollution and housing. It also focuses on the promotion of healthy lifestyles and supports projects and activities, which generate income, improve education, address women's issues and children's needs and enlist the support of volunteer groups.

The approach works on the principle that health and quality of life can be improved by modification of living conditions in the home, school, workplace, city—the places or settings where people live and work. Health status is often determined more by the conditions in these settings than merely the lack of or provision of health care services. Looking at the health determinants in urban settings, the program goes beyond the health sector and looks at related aspects including economic status, employment and social needs. Moreover, it creates an awareness of factors related to the pace of urbanization and population growth rates, as well as the impact of national development plans on cities and poverty in urban slums and squatter settlements.

The creation of a healthy city is a process, not an outcome. Similarly, a healthy city does not represent a particular state of health but rather an awareness of health and an ongoing goal of improving the physical conditions in which people live, with the ultimate goal of achieving health for all. A healthy city can be summarized as a clean urban setting with good health and environmental services. It is a physically safe area where people can live with their own beliefs, customs, lifestyles and social bonds. As countries of the Region are unique, it is important to take into consideration societal and cultural norms and community requirements to ensure the creation of a social and physical environment where people do indeed feel comfortable and safe.

A healthy city should possess the following:

- Hygienic and safe living environment, including quality housing;
- Stable and sustainable ecosystem;
- Healthy, friendly and mutually supportive community;
- High degree of participation and control by the public over decisions affecting their
- lives, health and well-being;
- Basic requirements of food, water, shelter, safety, income, work and welfare for all
- citizens;
- Wide variety of sources of experience, resources, interaction and communication;
- Connectedness with cultural heritage and biodiversity;
- A diverse, thriving and innovative economy;
- Good public health services providing appropriate health care for all; and
- High level of health and low prevalence of preventable diseases

Healthy Cities are arguably the best-known and largest of the settings approaches. The program is a long-term international development initiative that aims to place health high on the agendas of decision makers and to promote comprehensive local strategies for health protection and sustainable development. Basic features include community participation and empowerment, intersectoral partnerships, and participant equity.

A Healthy City aims to:

- Create a health-supportive environment,
- Achieve a good quality of life,
- Provide basic sanitation & hygiene needs,
- Supply access to health care

Being a Healthy City depends not on the current health infrastructure, rather upon, a commitment to improve a city's environs and a willingness to forge the necessary connections in political, economic, and social arenas.
Starting in 1986, the first Healthy Cities programs were launched in developed countries (i.e. Canada, USA, Australia, many European nations). About 1994, developing countries used the resources and implementation strategies of initial successes to begin their own programs. Implementation strategies are individual by city, though they follow the basic idea of involving many community members, various stakeholders, and commitments of municipal officials to achieve widespread mobilization and efficiency. Today, thousands of cities worldwide are part of the Healthy Cities network and exist in all WHO regions in more than 1,000 cities worldwide.

Evaluations of 'Healthy Cities' programs have proven them successful in increasing the understanding of health and environment linkages and in the creation of intersectoral partnerships to ensure a sustainable, widespread program. The most successful Healthy Cities programs maintain momentum from:

- Commitment of local community members;
- A clear vision;
- Ownership of policies;
- A wide array of stakeholders;
- A process for institutionalizing the program

Annexure 4: Health Promoting Schools

An effective school health program can be one of the most cost effective investments a nation can make to simultaneously improve education and health. WHO promotes school health programs as a strategic means to prevent important health risks among youth and to engage the education sector in efforts to change the educational, social, economic and political conditions that affect those risks.
The Health Promoting Schools may well be the second most widespread settings-based approach. Health Promoting School program states that schools have various roles and responsibilities in communities, which go beyond simply imparting knowledge. Thus, capitalizing on these roles to ensure the creation of a sustainable social health model provides a benefit to the entire community. To meet Health Promoting School criteria, the community must be committed to working for a healthy living, learning, and working environment.

Similar to other Healthy Settings approaches, the Health Promoting Schools movement relies heavily upon committed community members to maintain momentum and accomplish lasting change. Health

Promoting School programmes are flexible to allow individual schools to address their most pressing needs. A health promoting school is one that constantly strengthens its capacity as a healthy setting for living, learning and working.

A health promoting school:

- Fosters health and learning with all the measures at its disposal.
- Engages health and education officials, teachers, teachers' unions, students, parents, health providers and community leaders in efforts to make the school a healthy place.
- Strives to provide a healthy environment, school health education, and school health services along with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, opportunities for physical education and recreation, and programmes for counseling, social support and mental health promotion.
- Implements policies and practices that respect an individual's wellbeing and dignity, provide multiple opportunities for success, and acknowledge good efforts and intentions as well as personal achievements.
- Strives to improve the health of school personnel, families and community members as well as pupils; and works with community leaders to help them understand how the community contributes to, or undermines, health and education.

Health promoting schools focus on:

- Caring for oneself and others
- Making healthy decisions and taking control over life's circumstances
- Creating conditions that are conducive to health (through policies, services, physical / social conditions)
- Building capacities for peace, shelter, education, food, income, a stable ecosystem, equity, social justice, sustainable development.
- Preventing leading causes of death, disease and disability: helminthes, tobacco use, HIV/AIDS/STDs, sedentary lifestyle, drugs and alcohol, violence and injuries, unhealthy nutrition.
- Influencing health-related behaviors: knowledge, beliefs, skills, attitudes, values, support.

Annexure 5: Healthy workplaces

With the global trend of increasing hours spent at the workplace over recent decades, the importance of protecting and promoting health at the workplace is becoming central to a fully functioning global economy. The WHO healthy workplace model is a comprehensive way of thinking and acting that addresses work-related physical and psychosocial risks, promotion and support of healthy behaviors and broader social and environmental determinants.

The United Nations high-level meeting on non-communicable disease prevention and control in 2011 called on the private sector to "promote and create an enabling environment for healthy behaviors among workers, including by establishing tobacco-free workplaces and safe and healthy working environments through occupational safety and health measures, including, where appropriate,

through good corporate practices, workplace wellness programs and health insurance plans." WHO considers workplace health programs as one of the best-buy options for prevention and control of non-communicable diseases and for mental health. Such programs can help achieve the WHO objective of reducing the avoidable deaths of NCDs and the burden of mental ill health and to protect and promote health at the workplace as stipulated in the Global Plan of Action on Workers' health 2008-2017.

A healthy workplace is one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace based on identified needs by considering the following:

- Health and safety concerns in the physical work environment;
- Health, safety and well-being concerns in the psychosocial work environment, including organization of work and workplace culture;
- Personal health resources in the workplace;
- Ways of participating in the community to improve the health of workers, their families and other members of the community

To create a healthy workplace, an enterprise needs to consider the avenues or arenas of influence where actions can best take place and the most effective processes by which employers and workers can take action. According to the model described here, developed through systematic literature and expert review, four key areas can be mobilized or influenced in healthy workplace initiatives: the physical work environment; the psychosocial work environment; personal health resources; enterprise involvement in the community.

Annexure 6: Health promoting health facilities (HPHF)

The responsibility for health promotion in health services is shared among individuals, community groups, health professionals, health service institutions and governments. They must work together towards a health care system, which contributes, to the pursuit of health. The role of the health sector must move increasingly in a health promotion direction, beyond its responsibility for providing clinical and curative services. Health services need to embrace an expanded mandate, which is sensitive, and respects cultural needs. This mandate should support the needs of individuals and communities for a healthier life, and open channels between the health sector and broader social, political, economic and physical environmental components.

Accordingly, HPHFs aim at improving the health gain of hospitals (and other health services) by a bundle of strategies targeting

- Patients
- Staff and
- The community

The 'Health Promoting Hospitals' project and network began in 1988 and 1993, respectively, to promote the total quality management of hospitals. The program objectives are:

- To improve the inter-disciplinary nature and transparency of decision-making in hospital care;
- To evaluate and compile evidence on healthy promotion activities in the health care setting;
- To better incorporate health promotion into quality management systems at the hospitals and nationally.

The HPH standards and strategies are based on the principles of the settings approach, empowerment and enablement, participation, a holistic concept of health (somato-psycho-social concept of health), intersectoral cooperation, equity, sustainability, and multi-strategy.

In order to realize the full potential of the comprehensive HPHF approach for increasing the health gain of hospital patients, staff, and the community, HPHF needs to be supported by an organizational structure: Support from top management, a management structure that embraces all organizational units, a budget, specific aims and targets, action plans, projects, and programs, standards, guidelines and other tools for implementing health promotion into everyday business. This needs to be supported by evaluation and monitoring, professional training and education, research and dissemination.

One way to implement HPHF in a hospital or other health care organization is by linking HPHF aims and targets with quality management, and understanding health promotion as one specific quality aspect in hospitals and health care. Ideally any managerial or professional decision in an HPHF should also consider the health / disease impact of that decision, together with other decision criteria (e.g. effectiveness, sustainability).

Annexure 7: Stakeholder officials consulted

Organization	Officials
BNCA	Mr. Chimi Dorji, Program Officer, Senior Program Officer
RSTA	Mr. Thinley Namgyel, Chief Transport Officer Mr. Sonam Tobgay, Senior Motor Vehicle Inspector
BAFRA, (MoAF)	Mr. Jamyang Phuntsho, Chief Laboratory Officer, Analytical and Certification Division Ms. Tashi Yangzom, Regulatory and Quarantine Officer, Quality Control and Quarantine Division
Environmental Health , DoPH, (MoH)	Ms. Rada Dukpa, Program Officer
RH, School Health, Adolescent Healt, HMIS , (MoH)	Ms. Ugyen Zangmo, Deputy Chief Program Officer Ms. Sonam Peldon, Deputy Chief Program Officer Ms. Sangay Thinley, Assistant Program Officer Mr. Tshering Jamtsho, Head HMIS Mr. Dopo, Senior Health Information Officer
HPD, (MoH)	Mr. Dorji Phub, Chief Program Officer Mr. Tshering Gyeltshen, Communication Officer
LSRDP, (MoH)	Mr. Wangchuk Dukpa, Senior Program Officer Ms. Karma Doma, Deputy Chief Program Officer
VHW, Nutrition, Health Research, Diabetes, District Health Services, (MoH)	Mr. Rinchen Namgay Mr. Yeshi Wangdi, Senior Program Officer Mr. Ugyen Dendup, Program Officer Mr. Tshering Dhendup, Deputy Chief Program Officer
Department of Youth and Sports –MoE	Mr. Chencho Dorji, Director General Mr. Nima Gyeltshen , Deputy Chief Program Officer Mr. Rinzin Wangdi, Chief Program Officer
Zilukha Middle Secondary School	Mr. Namgay Dorji, Principal
Department of Renewable Energy –MoEA	Mr. Miwang Gyeltshen, Chief Engineer Mr. Satchi, Chief Engineer Ms. Dawa Zangmo, Chief Engineer Mr. Karma Tshewang, Chief Engineer
Bhutan Broadcasting Service	Mr. Tashi Dorji, General Manager
Thimphu Thromde	Mr. Minjur Dorji, Chief Executive Officer
Gelephu Thromde	Thrompon
Samdrupjongkhar Thromde	Mr. Thuji Tshering, Executive Secretary
Phuntsholing Thromde	Thrompon
Khesar Gyalpo University Medical Sciences	Dr. Tashi Tobgay, Director, KGUMS Dr. Ripa Chakma, Lecturer, FNPH
Central Monastic Body	Lopen Passa, Project Coordinator, Religion and Health Project, Central Monastic Body Lopen Gembo Dorji, General Secretary, Central Monastic Body
Bhutan Olympic Committee	Mr. Sonam Karma Tshering , Secretary General Ms. Tshering Zangmo, Program Officer Mr. Pema Dorji, Program Officer
Department of Human Settlements -MoWHS	Ms. Sonam Zangmo, Chief Urban Planner, MoWHS Ms. Latha Chhetri, Chief Urban Planner, MoWHS
Druk Fitness Center, Thimphu	Mr. Tsheten, Propriator
District Health Sector, Wangduephodrang	Mr. Namgay Dawa, District Health Officer