

Seychelles Strategy for the Prevention and Control of Non-communicable Diseases, 2016-2025

Ministry of Health
Republic of Seychelles

Draft of 30 May 2016, agreed by members of Writing Team and Review Team

Note: Noncommunicable diseases (NCDs) considered in this Strategy refer to four main noncommunicable diseases (cardiovascular disease, cancer, diabetes and obstructive pulmonary disease), which account for more than 65% of all deaths in Seychelles, and to four main underlying risk behaviours (tobacco use, unhealthy nutrition, physical inactivity and harmful use of alcohol). This strategy is abbreviated in this document as the "NCD Strategy".

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Foreword

The National NCD strategy is our nation's response to the increasing prevalence of noncommunicable diseases, the risk factors that lead to these conditions and the threats that they pose to the health of the Seychellois. It is also, at the same time, our nation's response to the increasing wealth of evidence, knowledge, experience and, above all, the conviction that we have the power and ability to address this threat.

We know, from our own studies and experience, that four main noncommunicable diseases (cardiovascular disease, cancer, diabetes and obstructive pulmonary disease) account for more than 65% of all deaths in Seychelles. We know, again from our studies and from world-wide experience, that four main risk behaviours (tobacco use, unhealthy nutrition, physical inactivity and harmful use of alcohol) underlie these diseases. Understanding these diseases, their risk factors, and the interplay of social, cultural and economic factors, is crucially important in developing approaches to tackling noncommunicable diseases.

Seychelles has done much to tackle noncommunicable diseases, and our successes in, for example, reducing the use of tobacco and the rate of high blood pressure, are encouraging signs of what can be achieved. We have in place many of the structures, programmes and activities in health promotion, community awareness, and therapeutic interventions that are essential components of the strategy on NCDs. This Strategy aims to raise our efforts to a higher, better integrated and coordinated national level, creating partnerships, adopting whole government, whole society approaches and sustained action based on well-researched, evidence based and proven effectiveness. Seychelles has committed support to the initiatives launched by the highest international bodies, namely the United Nations and the World Health Organization, and much of the Strategy is based on WHO's recommendations. We are therefore assured of the highest technical support and wealth of experience. The challenge now is to ensure national ownership, commitment and action. In developing the strategy, there has been close consultation among partners and the continuing roles of all sectors of the Seychellois society are clearly laid out.

Government commits itself to implementing the strategy and to facilitate the greatest participation of all sectors and communities. The Ministry of Health will play the lead role in providing guidance, mobilising and coordinating efforts and monitoring and evaluating progress and achievements. We are firmly convinced that a society that has managed to find the resources to treat noncommunicable diseases to the level of coverage, access and sophistication that we have attained, must undertake the prevention with no less commitment, investment and enthusiasm.

The strategy is not only about reducing risk factors and diseases. It is about empowering citizens to attain better health and to truly enjoy the better life and opportunities that our social and economic development makes possible. This is a national endeavour, and I invite and urge everyone to be part of it.

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We acknowledge the useful guidance provided by the World Health Organization through its Global Action Plan for the Prevention and Control of Noncommunicable Diseases 2013-2020.

PART 1. INTRODUCTION

Global NCD burden, policy, targets and indicators

Burden of NCDs, risk factors and impact

Four main noncommunicable diseases (NCDs), including cardiovascular disease, cancer, diabetes, and obstructive pulmonary disease, account for more than 70% of premature mortality and morbidity worldwide, including in the Seychelles. Even if the age-standardized mortality rates of NCDs have decreased during the past three to four decades in a few high income countries, including in Seychelles. Irrespective of changes in the prevalence of risk factors in the population, the total burden of NCDs (i.e. the total number of persons with NCDs) will continue to increase during the next two or three decades because of the double effect of the increasing size of the population and the increasing proportion of older person in the population.

The burden of the four main NCDs is largely attributable to four modifiable risk behaviours (smoking, insufficient physical activity, unhealthy diet, and harmful use of alcohol), and related four proximal modifiable risk factors (increased body mass index, high blood pressure, high blood cholesterol and elevated blood glucose).

Curbing the burden of NCDs is justified on health and economic grounds. Once a person develops a NCD or risk factors for NCDs, most affected individuals will experience a number of health, social, and economic limitations, including decreased quality of life. NCDs have important economic consequences at the micro (family) and macro (society) levels, including intermittent or permanent inability to work, long term need for treatment, and need for rehabilitation and support. From a society perspective, management of the large burden of NCD incurs huge and increasing costs because of the increasing prevalence of NCD patients over time in the population, the increasingly complex and costly nature of diagnostic procedures and treatments, and the need for lifelong treatment for most patients.

Table 1. Four main noncommunicable diseases share four common risk factors

		Causative risk factors			
		Tobacco use	Unhealthy diets	Physical inactivity	Harmful use of alcohol
Non-communicable diseases	Heart disease and stroke	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Diabetes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Cancer	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Chronic lung disease	<input checked="" type="checkbox"/>			

When considering the costs and resources needed to prevent NCDs, it is important to also consider the costs that would result from inaction: how much would it cost to treat NCD patients that would not have occurred if effective preventive strategies had been implemented? It is critically important that policy makers are well aware that preventing diseases that can be prevented (e.g. NCDs, particularly cardiovascular disease and diabetes) is a key strategy to free resources to treat and manage those diseases that cannot be prevented easily, such as neurodegenerative diseases (e.g. Alzheimer's disease), mental diseases and osteo-muscular conditions, many of which contribute an increasingly large burden of disability in Seychelles, particularly because of the aging population.

Priority population and high risk interventions to reduce the NCD burden

There are two types of interventions to reduce the NCD burden in the population: the population strategy (public health approach), which largely relies on multisectoral interventions outside of the health sector, and the “high risk strategy”, which relies on individual-level health care interventions within the health sector (e.g. screening and management of persons at risk of NCDs).

Public health interventions to promote the four main behaviours related to NCDs (abstinence of smoking, healthy diet, avoidance of harmful use of alcohol, regular physical activity) have a large potential to prevent NCDs and reduce the NCD burden in the population. The World Health Organization refers to the “four by four” strategy whereby tackling 4 health behaviours can largely reduce the burden of 4 main NCDs. It is estimated that up to 80% of all cases of cardiovascular disease and diabetes in the population, and up to 40% of all cancer cases, could be prevented if individuals were adopting these four health behaviours.

Public health interventions rely on multisectoral interventions aimed at enabling people to adopt healthy behaviours, which reduces risk factors levels in the population. These interventions are aimed to address a broad range of the societal causes of NCDs and their effective implementation relies on a broad range of sectors in government and civil society (“whole of government approach”, “whole of society approaches”, “health in all policy”). Public health interventions can be particularly effective as they do not necessarily need the full cooperation of the individuals and they may not even need individuals to intentionally change their health behaviours. Examples include regulations that require food manufacturers to reduce the content of salt, sugar or “trans fats” in manufactured foods, raising taxes on tobacco products or reducing taxes on healthy foods. These structural interventions are very cost effective and can even generate revenue for government (e.g. tax on tobacco products, tax on sugary drinks, etc) while effectively reducing risk factors levels in the society. Public health interventions, and particularly “best buys” public health interventions (described below), should be central to any NCD prevention strategy. A mechanism at the highest political level (“multisectoral task force”, “high level NCD committee”, or similar forums) is needed to engage the different sectors involved to advocate, implement, monitor and account for such multisectoral interventions.

On the other hand, interventions aimed at identifying and managing persons at high risk of NCDs (e.g. persons with hypertension, diabetes or personal history of heart attack or stroke) also have a large potential to prevent NCDs and to reduce the NCD burden in the population. However, because high-risk strategies inherently rely on individual-level interventions (e.g. screening and management of individuals at the primary health care level), they require large resources for diagnosis and medical treatment and incur large costs. It is therefore essential, when implementing high-risk strategies, to assess carefully and explicitly the benefits, risks and costs of proposed interventions with the aim of maximizing their cost effectiveness (e.g. limit diabetes screening programs to persons aged more than a certain age, those with hypertension, or with obesity).

The WHO Global Plan of Action for the Prevention of NCD 2013-2020 identifies a small number of public health interventions and high-risk interventions that are particularly cost-effective and have been identified through both technical (expert reviews) and political reviews (WHO Member States). “Best buys” interventions can generate one extra year of healthy life for a cost that falls below the average annual income or gross domestic product per person. A small number of interventions are still in a favourable cost effective range and referred to as “good buys”. Prioritizing cost-effective interventions is important to maximize public health gains within limited available resources.

The importance of prioritizing best buys interventions in national NCD prevention programs is emphasized in three main global policy documents agreed by all WHO Member states, including i) the *Political Declaration from the High Level Meeting on NCDs* adopted at the United Nations General Assembly in 2011, ii) the subsequent *Follow Up Outcome Document*, adopted at the United Nations

by Ministers of Health in 2014, and iii) the *2013-2020 WHO Global Plan of Action on the Prevention and Control of NCDs* adopted at the World Health Assembly in May 2013.

Table 2. Best buys for NCD prevention and control implementation in 2015 identified in the WHO Global Plan of Action on the Prevention and control of NCDs, 2013-2020

	Risk factor or disease	"Best buy" interventions
Reducing the level of exposure to risk factors in the entire population: (intersectoral public health interventions)	Tobacco use	<ul style="list-style-type: none"> • Raise taxes on tobacco • Ban smoking in public and work places • Warn about the dangers of tobacco • Enforce bans on tobacco advertising
	Harmful use of alcohol	<ul style="list-style-type: none"> • Raise taxes on alcohol • Restrict access to retailed alcohol • Enforce bans on alcohol advertising nationally and in all media
	Unhealthy diet and physical inactivity	<ul style="list-style-type: none"> • Reduce salt intake in food • Replace trans fat with polyunsaturated fat • Promote public awareness about diet and physical activity
Screening and management of high risk individuals (high risk interventions)	Cardiovascular disease and diabetes	<ul style="list-style-type: none"> • Provide counselling and multi-drug therapy for people with medium or high risk of developing heart attacks and strokes • Treat heart attacks with aspirin
	Cancer	<ul style="list-style-type: none"> • Hepatitis B immunization beginning at birth to prevent liver cancer • HPV vaccine being administered routinely in young girls • Screening and treatment of pre-cancerous lesions to prevent cervical cancer

Table 3. Good buys for prevention and control of NCDs identified in the WHO Global Plan of Action on the Prevention and control of NCDs, 2013-2020

	Risk factor or disease	"Good buy" interventions
Reducing the level of exposure to risk factors in the entire population: (intersectoral interventions)	Tobacco use	<ul style="list-style-type: none"> • Offer counselling to smokers
	Harmful use of alcohol	<ul style="list-style-type: none"> • Enforcing drink-driving laws • Offer brief advice for hazardous drinking
	Unhealthy diet and physical inactivity	<ul style="list-style-type: none"> • Restrictions on marketing of foods/drinks high in salt, fats, sugar, especially to children • Food taxes and subsidies to promote healthy diets • Healthy nutrition environments in schools • Promoting adequate breastfeeding and complementary feeding • National physical activity guidelines • School-based physical activity programs for children • Workplace programs for physical activity and healthy diets
Management	Cardiovascular disease and cancer	<ul style="list-style-type: none"> • Nicotine replacement therapy • Nutrition information and counselling in health care

Global monitoring framework and national voluntary targets to monitor progress in reducing the NCD burden

Setting national targets draws attention to NCDs and helps mobilize resources to address NCD priorities. It also helps ensuring that “what is measured gets done”. In May 2013, all member states of the WHO adopted at the 66th World Health Assembly the **Global Monitoring Framework (GMF)** for

the prevention and control of NCDs. This framework includes a comprehensive set of **25 indicators** capable of application across different regions and country settings to monitor trends and assess progress made in the implementation of national strategies and plans on NCDs.

Member states of the WHO also agreed on 9 areas selected from these 25 indicators to be selected as **national voluntary targets** to be achieved by countries by 2025, compared to baseline in 2010. The 9 voluntary targets include: one mortality target, six risk factor targets and two national systems targets. The nine targets are both attainable and significant, and when achieved will represent major accomplishments for the reduction of NCDs and their risk factors in the population. They include (levels in 2025 vs. 2010):

- 1) 25% reduction of NCD
- 2) 10% reduction in alcohol use
- 3) 10% reduction in prevalence of insufficient physical activity
- 4) 30% reduction in mean population salt intake
- 5) 30% reduction in the prevalence of tobacco use
- 6) 25% reduction in the prevalence of raised blood pressure
- 7) 0% increase in obesity and diabetes
- 8) At least 50% of eligible people receiving drug therapy and counselling to prevent heart attack and stroke
- 9) At least 80% availability of the affordable technologies and essential medicines, including generics, required to treat major NCDs on both public and private facilities

The 25 indicators agreed by the WHO Member States used to assess progress in meeting these targets are listed in Table 4 presents.

Table 4. Targets and indicators according to areas of key outcomes, risk factors and national system response

Area	Target	Indicator
OUTCOMES		
Premature NCD mortality	1. A 25% relative reduction in overall mortality from CVD, cancer, diabetes, or chronic respiratory diseases	1. Unconditional probability of dying between ages of 30 and 70 from CVD, cancer, diabetes or chronic respiratory diseases
Additional indicator		2. Cancer incidence, by type of cancer, per 100 000 population
BEHAVIOURAL RISK FACTORS		
Harmful use of alcohol	2. At least 10% relative reduction in the harmful use of alcohol	3. Alcohol per capita (aged 15+) consumption (liters ethanol per year) 4. Age-standardized (AS) prevalence of heavy episodic drinking in adolescents and adults 5. Alcohol-related morbidity and mortality in adolescents and adults
Physical inactivity	3. A 10% relative reduction in the prevalence of insufficient physical activity	6. Prevalence of insufficiently physically active adolescents (< 60 min of moderate to vigorous intensity activity daily) 7. AS prevalence of insufficiently physically active in persons aged 18+ (<150 min of moderate-intensity activity per week, or equivalent)
Salt intake	4. A 30% relative reduction in mean population salt intake	8. AS mean population intake of salt per day (g) in persons aged 18+
Tobacco use	5. A 30% relative reduction in prevalence of tobacco use	9. Prevalence of current tobacco use among adolescents 10. AS prevalence of current tobacco use at age 18+
BIOLOGICAL RISK FACTORS		
Raised blood pressure	6. A 25% relative reduction in the prevalence of raised BP	11. AS prevalence of raised BP at aged 18+ (≥ 140 and/or ≥ 90 mmHg) and AS mean systolic BP
Diabetes and obesity	7. Halt the rise in diabetes & obesity	12. AS prevalence of diabetes at age 18+ (FPG ≥ 7.0 mmol/l or Rx) 13. Prevalence of overweight and obesity in adolescents (WHO norms) 14. AS prevalence of overweight and obesity at age 18+ (BMI 25, 30)

Area	Target	Indicator
	Additional indicators	15. AS mean proportion of total energy intake from saturated fatty acids at age 18+ 16. AS prevalence among persons aged 18+ consuming <5 total servings (400 grams) of fruit and vegetables per day 17. AS prevalence of raised total cholesterol among persons aged 18+ (≥ 5.0 mmol/l) and mean total cholesterol concentration
NATIONAL HEALTH SYSTEMS RESPONSE		
Drug therapy to prevent heart attacks and strokes	8. At least 50% of eligible people receive drug therapy and counselling to prevent heart attacks and strokes	18. Proportion of eligible persons (>40 years with a 10-year CVD risk $\geq 30\%$, incl. existing CVD) receiving drug therapy and counselling (including glycemic control) to prevent heart attacks and strokes
Essential NCD medicines and basic technologies to treat major NCDs	9. 80% availability of affordable basic technologies and essential medicines required to treat major NCD in public and private facilities	19. Availability and affordability of quality, safe and efficacious essential NCD medicines, including generics, and basic technologies in both public and private facilities
	Additional indicators	20. Access to palliative care assessed by morphine-equivalent 21. Adoption of national policies limiting saturated fatty acids and virtually eliminating hydrogenated vegetable oils in food supply 22. Availability of vaccines against HPV according to national policies 23. Policies to reduce the impact on children of marketing of foods and non-alcoholic beverages high in saturated fats, trans fatty acids, free sugars, or salt 24. Vaccination coverage against hepatitis B virus monitored by number of third doses of HBV vaccine (HepB3) given to infants 25. Proportion of women between aged 30–49 screened for cervical cancer at least once

AS: age standardized

WHO Member States have committed to regularly **report to WHO secretariat on national levels on these 25 indicators**, as appropriate. Levels of selected risk factors in all countries were published in 2010 (WHO Global Status Report on NCDs 2010) and in a subsequent update in 2015 (WHO Global Status Report on NCDs 2015). Further similar reports will be produced in 2020 and in 2025. For ease of data submission, WHO has prepared a template for reporting against the NCD indicators (contact: ncdmonitoring@who.int). This underlies the need for appropriate information systems, including vital statistics and population surveys of NCD risk factors conducted at regular intervals.

Indicators to monitor progress in implementing national NCD prevention program

Consistent with commitments by countries in 2011 (Political Declaration on NCDs, United Nations, New York) and in 2014 (Follow Up Document, United Nations, New York and World Health Assembly Resolution A/RES/68/300), WHO has developed **10 progress indicators** to promote accountability and a comprehensive approach in implementing national plan of actions for the prevention and control of NCDs. WHO Director-General will use these indicators to report progress by countries in implementing national NCD plans of action in preparation of the Third High Level Meeting on NCDs at the U.N. General Assembly in 2018. WHO will be regularly updating the levels of implementation of these 10 indicators for all countries in each region (e.g. AFRO region for Seychelles). Data for each indicator are displayed using traffic light colours to convey a quick overall view on whether a process has been largely implemented (green), partially implemented (orange) or insufficiently developed (red). When reporting to WHO secretariat on progress indicators, countries are requested to also submit all relevant nationally adopted policy documents underlying the implementation of a particular process indicator in order to validate those process indicators that have been achieved.

Part II: Situation and response in Seychelles

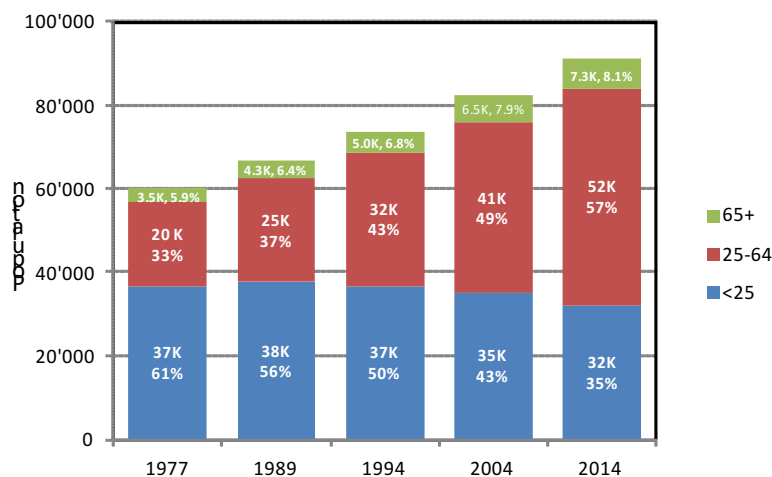
Trends in NCDs

Vital statistics covering all deaths in Seychelles are available for more than four decades. Cardiovascular disease and cancer account for more than 65% of all deaths in the country. The main causes of mortality in 2015 were cardiovascular diseases (30%), neoplasm (19%), respiratory system disease (12%), infectious and parasitic diseases (8%) and external causes (7%). However, while the total NCD burden (i.e. the total number of deaths due to NCD) is increasing (or at least not decreasing) over time because of the demographic transition (i.e. both increasing population and aging population), the age-standardized mortality rates of cardiovascular disease and cancer have substantially decreased during the past two decades (*Stroke* 2012; 43: 2283-88). This is consistent with trends observed in high-income countries and in some middle-income countries. The decrease in age-standardized mortality rates for several NCDs reflects the improved socio-economic situation, adequate public health policy and adequate health care over time in Seychelles. Specific explanatory factors include strong tobacco control measures (e.g. strong tobacco control policy since more than 3 decades and comprehensive tobacco control legislation in 2009), improved overall nutrition patterns (e.g. increasingly diverse food patterns for most people), and continued free health care since several decades (including medications for hypertension, diabetes and hypercholesterolemia) provided down to all primary health care centres in the country.

Demographic transition and implications for the NCD burden

The total burden of NCDs (i.e. the total number of patients with NCD or NCD risk factors in the population) will inevitably continue to increase during the next two or three decades because of the rapidly growing and aging population in Seychelles (demographic transition), no matter how successful the interventions to prevent and control NCDs may be. This will inevitably result in an increasing demand for general and specialized health care services for the management of patients with conditions such as cardiac diseases, hypertension, diabetes, haemodialysis, cancer or pulmonary diseases. The anticipated increasing NCD burden attributable to the demographic transition over the next few decades provides an additional strong rationale to further strengthen programs aimed at preventing NCDs.

Figure 1. Increasing and aging population of Seychelles between 1977 and 2014



CVD risk factors

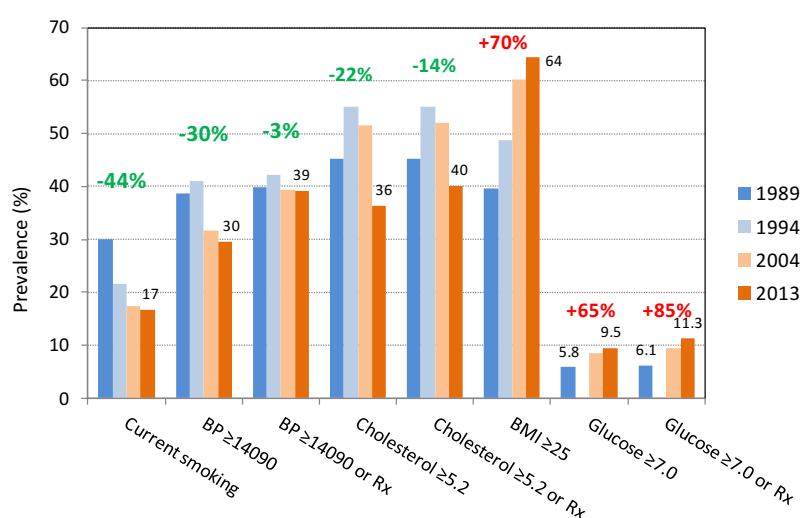
Adequate knowledge on the current levels of risk factors in the population is a key element to guide the choice of interventions to reduce the NCD burden in the population (“the current levels of risk factors in the population predicts the future burden of NCDs, while the current burden of NCDs reflects past risk factor levels”). Information on the prevalence of risk factors in the population (e.g.

tobacco use, blood pressure, diabetes) relies on population-based surveys in which participants are randomly selected from the general population (i.e. the sample of participants are representative of the whole population). In Seychelles, population-based examination surveys of NCD risk factors were conducted in 1989, 1994, 2004 and 2013. Findings have been summarized in several reports issued by the Ministry of Health and in more than 50 publications describing specific NCD issues.

In the future, information on risk factors in the population could possibly be obtained through “whole population surveillance”, if electronic medical files are put in place in all health centre, considering that most people (80% in the 2013 NCD survey) attend a health care centre at least once per year and if risk factors are measured in all or most patients.

Globally, results from the past four national NCD surveys (1989, 1994, 2004, 2013) show a marked 25-year downward trend for smoking (a favourable trend), unchanged or slightly downward trends for high blood pressure and high blood cholesterol (a favourable trend), but a worrisome marked upward trends for diabetes and obesity (e.g. http://www.who.int/chp/steps/Seychelles_2013_STEPS_Report.pdf).

Figure 2. Prevalence of main NCD risk factors in national NCD surveys in 1989, 1994, 2004 and 2013



The sharp increase in mean body mass index (BMI) in the population during the past 25 years, irrespective of sex, age and socio-economic status, indicates continued excessive calorie intake in the entire population and insufficient physical activity. On the favourable side, diet in Seychelles has become markedly more varied (e.g. fresh and frozen fruit and vegetables, brown bread, breakfast cereals, olive oil, etc) as a consequence of nutrition policy over past 20 years (e.g. switch from palm oil to other vegetable oils, “Take Five” campaign) and larger availability of a broad range of healthy foods in shops in recent years. The consumption of salt was fairly low by international standards (mean of 6 grams per day, based on 24 hour urine collections in 400 adults examined in a study in 2000), possibly linked to the facts that the staple diet of the population was based on largely unsalted unpolished rice and fish. Data on the consumption of salt based on 24 hour urine collection have been re-assessed recently and results will be available soon. It is predicted that the mean salt consumption has increased over the past decade, following substantial changes of the diet, including larger reliance on imported manufactured/processed foods.

Data on harmful alcohol use, nutrition and physical activity are available from national NCD surveys in 1989, 1994, 2004, 2013, but these variables have not always been assessed using the same methodology, making direct comparison difficult. Overall, consumption of pure alcohol per capita is high in Seychelles, is much larger in men than women, and has substantially decreased during the past 24 years mainly because homebrew drinking, which accounted for almost half of the total ethanol consumption in 1989 has regularly declined over time to very low levels in 2013. Significant proportions of adults report excessive alcohol consumption (e.g. around a quarter of men have more

than 4 drinks per day on average in the survey of 2013) with similar large proportions engaging in binge drinking (drinking over weekends and/or on special occasions).

Findings on health behaviours and risk factors (mean levels and prevalence of abnormal levels in the population) from the 4 NCD surveys conducted over the past 25 years in Seychelles have been instrumental in guiding NCD prevention and control programs in Seychelles since the early 1990s. The NCD survey in 2013–2014 provides an update of the situation of NCD risk factors, last assessed in 2004. Trends in risk factor levels from these NCD surveys will be useful to predict risk factor levels in 2015, which is the baseline for assessing changes in the 9 targets and 25 indicators to be achieved in 2025.

Response to curb NCDs in Seychelles

A comprehensive appraisal of all major interventions, policies, legislations, guidelines and programs directly aimed at addressing the 4 main NCDs and 4 underlying risk factors will be performed by an independent consultant shortly after the NCD Strategy is adopted. This assessment will enable the accurate mapping of ongoing interventions and to identify gaps between the interventions implemented in 2015 and the recommended policy options in this NCD Strategy. This will help identify and plan priority interventions.

The status of the 10 WHO progress indicators (noted in Part 1) in Seychelles in 2016 is shown in Table 5. The interventions underlying these 10 progress indicators are largely related to the “best buy” interventions (referred to in Part I) but a number of other interventions in different sectors will also be needed to effectively prevent and control NCDs in Seychelles.

Table 5. Status in Seychelles in 2016 of the 10 progress indicators used by the World Health Organization to report progress in the implementation of national strategies and plans of action for the prevention and control of NCDs (green: largely implemented/ongoing, orange: partially implemented, red: insufficiently developed)

Time-bound commitment	Progress indicator
By 2015, set national targets for 2025 and process indicators , taking into account the 9 voluntary global targets for NCD and building on guidance provided by WHO (Resolution WHA63.10)	<ol style="list-style-type: none"> 1) Country has set time-bound national targets and indicators 2) Functioning system for generating reliable cause-specific mortality data on a routine basis 3) Population-based survey or a comprehensive health examination survey every 5 years (or as appropriate)
By 2015, develop or strengthen national multisectoral policies and plans to achieve the national targets by 2025 , building on guidance provided in the WHO Global NCD Action Plan 2013–2020	<ol style="list-style-type: none"> 4) Operational multisectoral national strategy/action plan that integrates the major NCDs and their shared risk factors
By 2016, reduce risk factors for NCDs through the implementation of interventions to create health-promoting environments, taking into account WHO Global NCD Action Plan 2013–2020 (Appendix 3)	<ol style="list-style-type: none"> 5) Implemented four demand-reduction measures of the WHO FCTC at the highest level of achievement: <ol style="list-style-type: none"> a. Reduce affordability of tobacco products by increasing tobacco excise taxes b. Create by law completely smoke-free environments in all indoor workplaces, public places and public transport c. Warn people of the dangers of tobacco and tobacco smoke through effective health warnings and mass media campaigns d. Ban all forms of tobacco advertising, promotion and sponsorship 6) Implement the three following measures to reduce the harmful use of alcohol along WHO Global Strategy to Reduce the Harmful Use of Alcohol (Resolution WHA63.10): <ol style="list-style-type: none"> a. Regulations over commercial and public availability of alcohol b. Comprehensive restrictions or bans on alcohol advertising and promotion c. Pricing policies such as excise tax increases on alcoholic beverages 7) Implemented the following four measures to reduce unhealthy diets: <ol style="list-style-type: none"> a. Adopted national policies to reduce population salt/sodium consumption b. Adopted national policies that limit saturated fatty acids and virtually

Time-bound commitment	Progress indicator
	<p>eliminate industrially produced trans fatty acids in the food supply</p> <p>c. WHO set of recommendations on marketing of foods and non-alcoholic beverages to children</p> <p>d. Legislation /regulations fully implementing the International Code of Marketing of Breast-milk Substitutes</p> <p>8) Implement at least one recent national public awareness program on diet and/or physical activity</p>
By 2016, strengthen health systems to address NCD prevention and control , through primary health care and universal health coverage	<p>9) Evidence-based national guidelines/protocols/standards for management of major NCDs through a primary care approach approved by government or competent authorities</p> <p>10) Provision of drug therapy, including glycemic control, and counselling for eligible persons at high risk to prevent heart attacks and strokes, with emphasis on the primary care level</p>

Important policies and programmes directly related to NCDs in Seychelles in 2016

There are several laws, written policies, guidelines, programs and mechanisms directly related to prevention, control and surveillance of NCDs, including:

1) Constitution of the Republic of Seychelles, 1993

“The state recognises the right of every citizen to protection of health and to the enjoyment of the highest attainable standard of physical and mental health and to take steps to provide for free primary health care in state institutions for all its citizens.” This means, inter alia, that treatment for NCDs including medications, e.g. for hypertension, diabetes and dyslipidaemia, are provided free to all patients in all hospitals and district health centres.

2) Seychelles Sustainable Development Strategy & Action Plan, 2012-2020

Requires, inter alia, to put in place an effective programme for NCDs, to undertake risk assessment for NCDs in the population, implement healthy eating campaigns, develop areas to increase physical activity amongst the population, establish areas for fitness activities, including trails and bicycle paths (Section on Social and Human Development).

4) National Health Policy for 2016-2025 and National Health Strategic Plan 2016-2025

Recognizes, inter alia, the importance of NCDs, and identifies measures to respond to the NCDs, including the need to develop strategies for addressing specific issues related to NCDs. This NCD Strategy is therefore developed in the greater context of the National Health Strategic Plan and it is one of a series of plans of action.

5) Standard Treatment Guidelines, Ministry of Health, 2003 (partly revised in 2010)

Include, inter alia, protocols for the diagnosis and treatment of the main NCDs, including patients at risk of NCDs (e.g. hypertension, diabetes and hypercholesterolemia).

6) Seychelles National Medicine Policy, Ministry of Health, 2009

Includes, inter alia, recommendations on essential medicines, generic substitution, and procurement of medicines.

7) WHO Country Cooperation Strategy 2008-2013 (to be followed by 2016-2020 CCS)

The CCS, which describes WHO’s technical cooperation with Seychelles and highlights strategies to address priority health issues, largely focuses on the responses to reduce the burden of NCDs. Priority areas include, inter alia, measures to promote a healthier environment, public policies in all sectors to address the root causes of environmental threats to health; measures to improve nutrition throughout the life course; measures to strengthen management of NCDs; and surveillance of NCDs and their risk factors.

Tobacco control

1) Seychelles Tobacco Control Act 2009 and related regulations

Prescribes, inter alia, a total ban on all tobacco advertising, marketing and sponsoring; a total ban on smoking in enclosed premises, transports and selected public places; compulsory pictorial health warnings on tobacco products packets; and establishes a National Tobacco Control Board. All these provisions were well enforced in 2016.

2) Excise Tax Act 2009 (Schedule 2015)

Sets high excise tax on tobacco products, last increased in January 2014 to SR 60.6 [~US\$ 5] per packet of 20 cigarettes, bringing total tax to >65% of retail price of cigarettes in 2016.

Nutrition

1) National Food and Nutrition Security Policy, 2014

Recognizes the role of foods and nutrients on the incidence of NCDs, including obesity. It aims to promote, inter alia, the local production of healthy foods, quality standards and adequate labelling on manufactured foods.

2) Nutrition Policy, Ministry of Health, 2008

Recognizes, inter alia, the important role of NCDs and makes specific recommendations about healthy eating.

3) National School Nutrition Policy, Ministry of Health & Ministry of Education, 2012

Establishes, inter alia, nutrition standards for school meals, guidelines for tuck shops, including prohibits selling carbonated sugar drinks and energy dense snacks in tuck shops located within the school premises, a provision well implemented in 2015.

4) Standards and procedures for school tuck shops operators, Ministry of Education and Ministry of Health, 2013

Establishes, inter alia, mechanisms to ensure that foods and beverages provided in school tuck shops and school meals are healthy and consistent with the school nutrition policy.

5) Seychelles Hospital Infant Feeding Policy, Ministry of Health, 2010

Promotes optimal infant feeding from birth to age of 2 years, targeting the staff of Ministry of Health and the families using the health service.

6) Value Added Tax Act 2010 (Amendment of Schedule for VAT 2014)

Exempts VAT on all fresh fruit and vegetables.

Physical activity

1) Seychelles Strategic Plan, 2015

Government of Seychelles will, inter alia, promote walking and cycling, create high quality public spaces, pedestrian links and facilities for cyclists, and develop a network of multi-functional connected open spaces and recreational areas (Section on Promoting Multi-modal Transport). Standards for community facilities include that fresh water outlets are available inside and outside of schools, in sport centres, and in playing fields.

2) National Sports Strategic Plan for 2014-2018, Ministry of Social Affairs, Community Development and Sports

Establishes, inter alia, a frame for a variety of policies and programmes to promote sports and physical activity in different settings and across the entire life course.

3) Programmes to promote physical activity led by the National Sports Council

Several different programmes to promote physical activity are implemented in several settings and different population targets (schools, elderly, community, etc).

4) Programme SEYx30, Youth Department

This program, run under President's Office, aims at **promoting 30 minutes of physical activity per day** and it is implemented in schools, workplaces, and other community settings.

5) Seychelles Framework for Early Childhood Care & Education and National Action Plan 2013-2014

Requires that all districts are child friendly and include green and safe spaces

Alcohol

1) Seychelles National Alcohol Policy 2014, Drug And Alcohol Council

Makes a number of recommendations related to policy options, leadership, awareness, production, distribution, sales and monitoring alcohol to reduce consumption of alcohol.

2) Excise Tax Act 2009 (Schedule 2015)

Sets high excise taxes on alcohol beverages (e.g. SR 144 [~US\$ 11] per bottle of spirit in 2015).

Cancer

1) **Human Papilloma Virus vaccine** provided to all school going girls

2) **Hepatitis B vaccine** provided to all children

3) **Cervical cancer screening programme** in all government health centres

Health information and surveillance

1) **Vital statistics** covering all deaths with cause of death certified by a doctor

2) **National health examination surveys** of NCD risk factors in 1989, 1994, 2004 and 2013

3) **National Cancer Registry**

PART III. STRATEGY

Vision

Seychelles free of the avoidable burden of NCD.

Goal

To reduce the preventable and avoidable burden of morbidity, mortality and disability due to NCDs to ensure that all inhabitants reach the highest attainable standards of health, quality of life, and productivity, by means of multisectoral interventions that enable people to adopt healthy behaviors and strengthening the health care system to identify and manage individuals at risk of NCDs.

Objectives

- 1) To raise the priority accorded to the prevention and control of NCDs.
- 2) To strengthen national capacity, leadership, governance, partnerships and multisectoral action to accelerate the country's response to the prevention and control of NCDs.
- 3) To reduce modifiable risk factors for NCDs in the population through creation of health-promoting environments.
- 4) To strengthen health systems to address the prevention and control of NCDs through people-centred primary health care and universal health coverage.
- 5) To promote and support national capacity for high-quality research and development for the prevention and control of NCDs.
- 6) To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control.

Scope

This strategy focuses on the four major NCDs—cardiovascular diseases, cancer, chronic respiratory diseases and diabetes and their four common behavioural risk factors—tobacco use, unhealthy diet, physical inactivity and harmful use of alcohol. The strategy recognizes that the conditions in which people live and work and their lifestyles influence their health and quality of life, particularly in relation to the four main NCDs.

There are a number of other NCDs, including renal, endocrine, neurological, haematological, gastroenterological, hepatic, musculoskeletal, skin and oral diseases and genetic disorders; mental disorders; disabilities and violence; road traffic accidents, other accidents and injuries, which also contribute a large burden of mortality and morbidity in Seychelles. Despite the close links between several of these other NCDs and the shared risk factors of the main NCDs, one strategy (or action plan) to address all NCDs in equal detail would be excessively weighty. Furthermore, several of these other NCDs are already the subject of other strategies and action plans.

Targets

The Seychelles NCD Strategy adopts the 9 national voluntary targets agreed by WHO Member States:

- 1) 25% reduction of NCD
- 2) 10% reduction in alcohol use
- 3) 10% reduction in prevalence of insufficient physical activity
- 4) 30% reduction in mean population salt intake

- 5) 30% reduction in the prevalence of tobacco use
- 6) 25% reduction in the prevalence of raised blood pressure
- 7) 0% increase in obesity and diabetes
- 8) At least 50% of eligible people receiving drug therapy and counselling to prevent heart attack and stroke
- 9) At least 80% availability of the affordable technologies and essential medicines, including generics, required to treat major NCDs on both public and private facilities

Monitoring and indicators

Progress in implementing the national NCD strategy for the prevention and control NCDs will be assessed using the 25 outcome (Table 4) and 10 progress indicators (Table 5) agreed by WHO Member States.

Overarching principles

Human right approach

It is recognized that the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being, without distinction of race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status, as enshrined in the Universal Declaration of Human Rights and the Constitution of the Republic of Seychelles.

Equity-based approach

It is recognized that the unequal distribution of NCDs is ultimately due to the inequitable distribution of social determinants of health, and that action on these determinants, both for vulnerable groups and the entire population, is essential to create inclusive, equitable, economically productive and healthy societies.

National action, personal responsibility and solidarity

While it is recognized that behaviours of individuals can be determined to a large extent by the environment in which people live, individuals who take personal responsibility for their own health are more likely to adopt healthy behaviours. The success of this strategy therefore rests on the principle that individuals who are informed, aware, and take responsibility for their own health will be better empowered to adopt healthy behaviours, while government and society will continue to have a primary role in creating conditions that enable individuals to adopt healthy choices. The global economic social and political context and interconnectedness are also recognized and underlie the important role of international cooperation in complementing national efforts to address the challenge of NCDs.

Multisectoral action

It is recognized that effective NCD prevention and control require leadership, coordinated multistakeholder engagement for health both at the highest government level and at the level of a wide range of actors, with such engagement and action including, as appropriate, health-in-all policies and whole-of-government approaches across sectors such as health, agriculture, communication, education, employment, energy, environment, finance, food, foreign affairs, housing, justice and security, legislature, social welfare, social and economic development, sports, tax and revenue, trade and industry, transport, urban planning and youth affairs and partnership with relevant civil society and private sector entities.

Life course approach

Opportunities to prevent and control NCDs occur during multiple stages of life. Interventions in early life often offer the best chance for primary prevention. Strategies, policies, plans and services for the

prevention and control of NCDs need to consider health and social needs throughout all stages of the life course, from antenatal and postnatal care, infant feeding practices including promotion of breastfeeding, and health promotion for children, adolescents and youth, through to the promotion of a healthy working life, healthy ageing, and finally care for people with NCDs in later life.

Empowerment of people and communities

People and communities should be empowered and involved in activities and decision making for the prevention and control of NCDs, through advocacy, policy, planning, legislation, service provision, monitoring, research and evaluation.

Evidence-based strategies

Strategies and practices for the prevention and control of NCDs need to be based on scientific evidence and/or best practices, cost-effectiveness, affordability and public health principles, taking cultural considerations into account.

Universal health coverage

All people should have access, without discrimination, to nationally determined sets of the needed promotive, preventive, curative and rehabilitative basic health services and essential, safe, affordable, effective and quality medicines. At the same time it must be ensured that the use of these services does not expose the users to financial hardship, and the needs of the poor and populations living in vulnerable situations are addressed.

Management of real, perceived, or potential conflicts of interest

Multiple actors, both State and non-State actors including civil society, academia, industry, non-governmental and professional organizations, need to be actively engaged for NCDs to be tackled effectively. While it is recognised that the priorities and interests of actors may differ, the primacy of people's health must be acknowledged. Common ground must be sought in the pursuit of public health policies and strategies. Multisectoral efforts for the prevention and control of NCDs must be protected from undue influence by any form of vested interest, including commercial interest and motives. Real, perceived or potential conflicts of interest must be acknowledged and managed. These issues are particularly relevant in the context of increased vulnerability of a small island state, which largely relies on imported foods and goods.

Objective 1: To raise the priority accorded to the prevention and control of NCDs

The desired outcomes of this objective are stronger advocacy, enhanced resources, improved capacity and creation of enabling political and administrative environment, and international cooperation, at all levels of the country and in all sectors, to attain the nine voluntary global targets and to raise NCDs as a national priority.

Advocacy

Generate actionable evidence, and disseminate information relating to the effectiveness of interventions or policies, at the national level, linking NCD prevention and control to sustainable development, social and economic development, sustainable housing, environment protection, food security, climate change, and gender equality.

Broader health and development agenda

Integrate the prevention and control of NCDs into national health-planning processes and broader development agendas.

Continue to promote universal health coverage and integrated people-centred health services as important means of prevention and control of NCDs.

Partnerships

Forge multisectoral partnerships to promote cooperation at all levels of governmental agencies, intergovernmental organizations, nongovernmental organizations, civil society and the private sector in order to strengthen comprehensive and integrated efforts for prevention and control of NCDs.

National and international partnerships

Encourage the continued inclusion of NCDs in development cooperation agendas and initiatives, economic development policies, and sustainable development frameworks.

Develop or strengthen alliances and initiatives and forge new collaborative partnerships to strengthen capacity for the prevention and control of NCDs.

Objective 2: To strengthen national capacity, leadership, governance, partnerships and multisectoral action and to accelerate the country's response to the prevention and control of NCDs

As the ultimate guardians of the population's health, government has the lead responsibility for ensuring that appropriate institutional, legal, financial and service arrangements are provided for the prevention and control. Government has a central role in promoting change to improve social and physical environments and to enable progress against NCDs, including through constructive engagement with relevant private sector actors.

Upstream policy and multisectoral action to address social determinants of health is necessary to address the societal roots of NCDs and to achieve sustained progress in prevention and control of NCDs. Hence, effective prevention and control of NCDs requires multisectoral approaches at the government level, including a whole-of-government, whole-of-society and health-in-all policies approach across all sectors.

An effective national response for prevention and control of NCDs also requires effective multistakeholder engagement including individuals, families and communities, intergovernmental organizations, religious institutions, civil society, academia, the media, policy-makers, voluntary associations, the private sector and industry.

The active participation of civil society in efforts to address the prevention and control of NCDs, including organizations representing people living with NCDs and their carers, can empower society and improve accountability of public health policies, legislation and services, making them acceptable, responsive to needs and supportive in assisting individuals to reach the highest attainable standard of health and well-being.

From the perspective of health care to people with NCDs, universal health coverage, people-centred primary health care and social protection mechanisms are critically important mechanisms to ensure full access to health services for all and to protect people from possible financial hardship.

The **desired outcomes of this objective** are strengthened stewardship and leadership, increased resources, improved capacity, and enabling environments for forging a collaborative multisectoral response at national level, in order to attain the nine targets.

Enhance governance

Integrate the prevention and control of NCDs into national health-planning processes and national development plans, with special attention to social determinants of health, gender equity, and the health needs of people living in vulnerable situations.

Set up a national multisectoral mechanism

In order to enable effective multisectoral action for the prevention and control of NCDs, it is necessary to set up a national high level multisectoral mechanism (commission, agency or task force) for engagement, policy coherence, and mutual accountability of the different spheres of policy-making that have a bearing on NCDs. Such a mechanism is important to effectively implement health-in-all-policies, whole-of-government and whole-of-society approaches, to convene multistakeholder working groups, to secure budgetary allocations for implementing and evaluating multisectoral actions, and to monitor progress and act on gaps identified in relation to the social and environmental determinants of NCDs.

Develop and update a strategy and national plan of action

Develop, implement and regularly update a national multisectoral NCD strategy and plan of action, taking into account national priorities and domestic circumstances, in coordination with the relevant organizations and ministries, including the Ministry of Finance.

Allocate a budget and mobilize sustained resources

Increase and prioritize budgetary allocations for addressing surveillance, prevention, early detection and treatment of NCDs and related care and support, including palliative care. Strengthen the provision of adequate, predictable and sustained resources for the prevention and control of NCDs, including universal health coverage, through domestic budgetary allocations to health from Ministry of Finance, voluntary innovative financing mechanisms and other means, including private sector and/or nongovernmental sources. Improve efficiency of resource utilization, including through synergy of action, integrated approaches and shared planning across sectors.

Strengthen national NCD related programs with adequate expertise

Strengthen programs for the prevention and control of NCDs with suitable expertise, resources and responsibility for needs assessment, strategic planning, policy development, legislative action, multisectoral coordination, implementation, and monitoring and evaluation.

Conduct national needs assessment and evaluation

Conduct periodic assessments of epidemiological and resource needs, including the workforce and institutional and research capacity, of the impact on NCDs of policies in all sectors (e.g. agriculture, communication, education, employment, energy, environment, finance, industry and trade, justice, labour, sports, transport and urban planning) in order to inform country action.

Improve accountability

Improve accountability for implementation of prevention and control of NCDs by assuring adequate surveillance, monitoring and evaluation of actions taken to curb NCDs in all sectors, and by setting up a monitoring framework with national targets and indicators consistent with the global monitoring framework.

Strengthen institutional capacity and workforce

Provide training and appropriately deploy health, social services and community workforces, and strengthen institutional capacity for implementing the national strategy and action plan, for example by including prevention and control of NCDs in the teaching curricula for medical, nursing and allied health personnel, providing training and orientation to personnel in other sectors, including such factors as multisectoral action, advertising, human behaviour, health economics, food and agricultural systems, law, business management, psychology, trade, commercial influence such as advertising of unhealthy commodities to children and limitations of industry self-regulation, urban planning, training in prevention and control of NCDs, and integrated primary care approaches and health promotion.

Forge partnerships

Lead collaborative partnerships to address implementation gaps, including in the areas of community engagement, training of health personnel, development of appropriate health care infrastructure, and sustainable transfer of technology for the production of affordable, quality, safe and efficacious medicines, including generics, vaccines and diagnostics, as well as for product access and procurement.

Empower communities and people

Facilitate social mobilization, engaging and empowering a broad range of actors to promote dialogue, catalyze societal change and shape a systematic society-wide national response to address NCDs, their social, environmental and economic determinants, e.g. through engaging faith-based organizations, labour organizations, human rights organizations, organizations focused on children, youth, adults, elderly, women, patients and people with disabilities, intergovernmental and nongovernmental organizations, civil society, academia, media and the private sector.

3) Objective 3: To reduce modifiable risk factors for NCDs in the population through creation of health-promoting environments

The Political Declaration of the High-level Meeting of the General Assembly of the United Nations on the Prevention and Control of NCDs (New York, 2011) recognizes the critical importance of reducing the level of exposure of all individuals to the common modifiable risk factors for NCDs through strengthening their capacity to make healthier choices and follow lifestyle patterns that foster good health.

While deaths from NCDs mainly occur in adulthood, exposure to risk factors begins in childhood and builds up throughout life. This underpins the importance of legislative and regulatory measures and health promotion interventions in sectors to prevent tobacco use, physical inactivity, unhealthy diet, and harmful use of alcohol throughout the life course of individuals.

Government should be the key stakeholder in the development of policies that promote health and reduce the exposure of individuals to risk factors. However, effective multisectoral action also requires allocation of defined roles to other stakeholders.

Supportive environments that protect health and promote healthy behaviours need to be created through multisectoral action, using incentives and disincentives, regulatory and fiscal measures, laws and other policy options, and health education, as appropriate within the national context, with a special focus on maternal health (including preconception, antenatal and postnatal care, and maternal nutrition), children, adolescents and youth, including prevention of childhood obesity.

The **desired outcomes of this objective** are to indicate actions that contribute to achieve all the targets related to the reduction of risk factors in the population 25% reduction of NCD (10% reduction in alcohol use, 10% reduction in prevalence of insufficient physical activity, 30% reduction in mean population salt intake, 30% reduction in the prevalence of tobacco use, 25% reduction in the prevalence of raised blood pressure, 0% increase in obesity and diabetes) as well as the target for a 25% reduction in premature mortality from NCDs.

In the list of options below, **best buys and good buys are written in bold**.

Tobacco control

The policy measures (see below) aim to make progress in achieving the target of a 30% relative reduction in prevalence of current tobacco use in persons aged 15 or older.

Accelerate the full implementation of the WHO Framework Convention on Tobacco Control (FCTC) in order to reduce tobacco use and exposure to tobacco smoke, including implementing the guidelines

adopted by the Conference of the Parties to the FCTC, for the implementation of the following measures as part of a comprehensive multisectoral package, including:

- 1) **Repeatedly raise taxes on all tobacco products, above inflation rate, to reduce tobacco consumption**, consistent with Article 6 (Price and tax measures to reduce the demand for tobacco) of the FCTC and in accordance with the Political Declaration of the High-level Meeting of the General Assembly on the Prevention and Control of NCDs.
- 2) **Protect tobacco control policies from commercial and other vested interests of the tobacco industry**, consistent with Article 5.3 of the FCTC.
- 3) **Legislate for 100% tobacco smoke-free environments in all indoor workplaces, public transport, indoor public places and other public places**, consistent with Article 8 (Protection from exposure to tobacco smoke) of the FCTC.
- 4) **Warn people about the dangers of tobacco use**, including through hard-hitting evidence-based mass-media campaigns and large, clear, visible and legible health warnings, consistent with Articles 11 (Packaging and labelling of tobacco products) and 12 (Education, communication, training and public awareness) of the FCTC.
- 5) **Implement comprehensive bans on all forms of tobacco advertising, promotion and sponsorship**, consistent with Article 13 (Tobacco advertising, promotion and sponsorship) of the FCTC.
- 6) **Offer help to people who want to stop using tobacco, especially pregnant women, including through the provision of nicotine replacement therapy**, consistent with Article 14 (Demand reduction measures concerning tobacco dependence and cessation) of the FCTC.
- 7) Regulate the contents and emissions of tobacco products and require manufacturers and importers of tobacco products to disclose to governmental authorities information about the contents and emissions of tobacco products, consistent with Articles 9 (Regulation of the contents of tobacco products) and 10 (Regulation of tobacco product disclosures) of the FCTC.
- 8) Monitor tobacco use in youths and adults and monitor the implementation of tobacco control policies and measures consistent with Articles 20 (Research, surveillance and exchange of information) and 21 (Reporting and exchange of information) of the FCTC.
- 9) Reinforce and finance a national coordinating mechanism (e.g. Tobacco Control Board) and increase capacity and resources of focal point for tobacco control, consistent with Article 5 (General obligations) of the FCTC.
- 10) Establish and finance mechanisms to ensure enforcement of the adopted tobacco control policies, consistent with Article 26 (Financial resources) of the FCTC.

Promoting a healthy diet

The policy measures mentioned below aim to make progress towards the targets of a 30% relative reduction in mean population intake of salt; a 0% increase in diabetes and obesity; a 25% relative reduction in the prevalence of raised blood pressure and, more generally, national food security.

- 1) Develop or strengthen national food and nutrition related legislation policies and action plans, including:
 - a) **Restrict or ban the advertising and marketing of unhealthy foods and beverages through regulations, especially when targeting children**, including mechanisms for monitoring.
 - b) **Promotion of exclusive breastfeeding for the first six months of life.**
 - c) **Continued breastfeeding until two years old and beyond, adequate and timely complementary feeding.**

- 2) Develop guidelines, recommendations or policy measures that engage the relevant sectors, such as food producers and processors, and other relevant commercial operators, as well as consumers, to:
 - a) **Reduce the level of salt/sodium added to food (prepared or processed).**
 - b) **Replace trans-fats with unsaturated fats in foods.**
 - c) Increase the availability, accessibility and consumption of fruit and vegetables.
 - d) Reduce saturated fatty acids in food and replace them with unsaturated fatty acids.
 - e) Reduce the content of free and added sugars in food and non-alcoholic beverages.
 - f) Limit excess calorie intake, reduce portion size and energy density of foods.
- 3) **Conduct evidence-informed public campaigns and social marketing initiatives to inform and encourage consumers about healthy dietary practices.** Campaigns should be multisectoral in approach and should be linked to supporting actions across the community and within specific settings for maximum benefit and impact.
- 4) **Promote the sustained availability and accessibility of healthy food in all public institutions, such as educational institutions and the workplace.** This includes, inter alia, implementing **nutrition standards for public sector catering establishments**, using government contracts for food purchasing providing, and providing free drinking water through water fountains in selected public settings, such as schools or workplaces.
- 5) **Improve the accessibility and encourage the consumption of healthier food products and discourage the consumption of less healthy options by implementing economic tools, such as taxes and subsidies that create incentives for behaviours associated with improved health outcomes** (e.g. excise tax on sugar-sweetened beverages and reduction of taxes on selected fruit and vegetables).
- 6) **Create health- and nutrition-promoting environments, including through nutrition education, in schools, child care centres and other educational institutions, workplaces, health centres and hospitals, and other public and private institutions.**
- 7) Develop policy measures that engage food retailers and caterers to improve the availability, accessibility and acceptability of healthy food products (plant foods, including fruit and vegetables, and products with reduced content of salt, saturated fatty acids, trans-fatty acids and free sugars).
- 8) Develop policy measures in cooperation/partnership with the agricultural sector to reinforce actions directed at food producers, processors, retailers, caterers and public institutions, in order to provide greater opportunities for utilization of healthy agricultural products and foods, including those locally made.
- 9) Promote nutrition labelling, according to but not limited to, international standards, in particular the Codex Alimentarius (e.g. providing at least contents in energy, carbohydrates, sugar, saturated and unsaturated fats, proteins, salt, in a well and easily readable format and possibly using traffic light warnings), for all pre-packaged foods, particularly for those for which nutrition or health claims are made and those targeting youths.
- 10) Actively seek to mobilize the required financial and non-financial resources through budgetary allocation and other means as required for implementation of activities 1-9 above.

Physical activity

The policy measures mentioned below are intended to contribute to achieving the targets of a 10% relative reduction in prevalence of insufficient physical activity; halt the rise in diabetes and obesity (0% change); and a 25% relative reduction in the prevalence of raised blood pressure. In addition,

measures increasing population levels of physical activity result in many ancillary benefits, such as improved social and mental health, cleaner air, reduced traffic, and sustainable development.

1) Develop or implement national guidelines on physical activity for health.

- 2) Establish a multisectoral body to provide strategic leadership and coordination for the promotion of physical activity at all ages.
- 3) Develop appropriate partnerships and engage all stakeholders across government, NGOs, civil society and economic operators, in actively implementing actions aimed at increasing physical activity across all ages.
- 4) Develop policy measures, in cooperation with relevant sectors, to promote physical activity through activities of daily living, including through active transport, recreation, leisure and sport:
 - a) Develop or strengthen national urban planning and transport policies to improve the accessibility, acceptability and safety of supportive infrastructures for walking and cycling, including safe and well lit sidewalks, and cycling lanes in and around towns where appropriate.
 - b) **Improve provision of compulsory and quality physical education programs in educational settings from infant years to tertiary level**, including a minimal number of hours of physical activity during school hours and by providing opportunities for physical activity before and after the formal school day.
 - c) Promote and support “physical activity for all” initiatives for all ages.
- 5) Create and preserve built and natural environments (such as green areas) which support physical activity in schools, universities, workplaces, clinics and hospitals, and in the wider community, with a particular focus on providing infrastructures that support active transport, i.e. walking and cycling, active recreation and play, and participation in sports.
- 6) Promote community involvement in designing and implementing local actions aimed at increasing physical activity.
- 7) **Conduct evidence-informed public campaigns through mass media, social media and at the community level, and social marketing initiatives, to inform and motivate adults and young people about the benefits of physical activity in order to encourage healthy behaviours.** Campaigns should be linked to supporting actions across the community and within specific settings for maximum benefit and impact.
- 8) Encourage the evaluation of actions aimed at increasing physical activity, to guide these interventions and to contribute to the development of an evidence base of effective and cost-effective actions.

Reducing harmful use of alcohol

Proposed policy options are intended to advance the adoption and implementation of the targets of at least a 10% relative reduction in the harmful use of alcohol and a 25% relative reduction in the prevalence of raised blood pressure.

Develop and implement comprehensive and multisectoral national policies and programs to reduce the harmful use of alcohol addressing the general levels, patterns, and contexts of alcohol consumption, and the wider social determinants of health in the population.

- 1) Implement or reinforce the measures advocated in the WHO global strategy to reduce the harmful use of alcohol, adopted by all Member states, which recommends the following 10 target areas for national policies and programs:
 - a) Leadership, awareness and commitment.

- b) **Implement or strengthen pricing policies, including excise tax increases on alcoholic beverages.**
 - c) **Limit availability of alcohol, including regulating commercial and public availability of alcohol products.**
 - d) **Limit marketing of alcoholic beverages, including restriction or ban of alcohol advertising and promotions, particularly when it targets young people.**
 - e) **Implement drink-driving policies and countermeasures, including revision, as appropriate, of minimal legal blood alcohol content.**
 - f) Strengthen health services' response.
 - g) Strengthen community action.
 - h) Reduce the negative consequences of drinking and alcohol intoxication.
 - i) Reduce the availability and public health impact of illicit alcohol and informally produced alcohol.
 - j) Monitoring and surveillance.
- 2) Formulate public health policies and interventions to reduce the harmful use of alcohol based on clear public health goals, using existing best practices.
 - 3) Strengthen capacity and empower lead agencies health and stakeholders for effective public policy development and implementation to prevent and reduce the harmful use of alcohol, and protecting those policies from undue influence of commercial and other vested interests.
 - 4) Enforce the legal provisions on the ban of the sale of alcohol to children and restrictions on marketing practices, including avoidance of messages that are misleading or deceptive.
 - 5) Engage with the alcohol industry in implementing codes of practice in the production, distribution and promotion of alcohol, including with regards to the marketing of new products designed to recruit new consumers and in measures to reduce the harmful use of alcohol. This may include the separate placement of alcoholic vs. non alcoholic beverages for sale.
 - 6) Increase the capacity of health care services to deliver prevention and treatment interventions for hazardous use of alcohol and alcohol use disorders, **including screening and brief interventions in all settings providing treatment and care for noncommunicable diseases.**
 - 7) Develop an effective framework for monitoring the harmful use of alcohol based on indicators included in the global monitoring framework for NCDs and in line with the WHO global strategy to reduce the harmful use of alcohol.

Objective 4: To strengthen health systems to address the prevention and control of NCDs through people-centred primary health care and universal health coverage

For comprehensive care of NCDs, which often require long-term management, all people need to have access to a nationally determined sufficient set of promotive, preventive, curative, rehabilitative, and palliative basic health services. The use of these services should not expose users to financial hardship. The Political Declaration recognizes the crucial importance of universal health coverage to provide access to health services and social services for all (paragraph 45[n] of the Political Declaration of the United Nations General Assembly High-level Meeting on the Prevention and Control of NCDs).

The health system should be well equipped to address prevention, early detection, treatment and sustained management of people with or at high risk for cardiovascular disease, cancer, chronic

respiratory disease, diabetes, in order to prevent complications, minimize the need for hospitalization and costly high-technology interventions, and premature deaths. Health systems also need to collaborate with other sectors and work in partnership to ensure that social determinants are considered in service planning and provision within communities.

The **desired outcomes of this objective** are strengthened health system including the health workforce, reinforced reliance on universal health coverage, and contribution to the achievement of the following targets: 25% reduction in premature mortality target; at least 50% of eligible people receive drug therapy and counselling to prevent heart attacks and strokes; 80% availability of the affordable basic technologies and essential medicines required to treat major NCDs in both public and private facilities; and 25% relative reduction in the prevalence of raised blood pressure.

In the list of options below, **best buys and good buys are written in bold**.

Integration of NCDs in health services

- 1) Ensure that quality health care services to manage NCDs are available at all levels of the health services
- 2) Ensure continuum of care for NCDs across the life course.
- 3) Orient health systems towards addressing the impacts of social determinants of health.

Financing

- 1) Ensure universal health coverage through appropriate mechanisms of financing which are sustainable and which do not disadvantage those who are more vulnerable or in greater need.
- 2) Give priority to financing a combination of cost-effective preventive, curative and palliative care interventions for NCDs at different levels of care.

Expanded quality services coverage

- 1) Strengthen services, access and referral systems related to NCDs around close-to-user and people-centred primary health care that is fully integrated with the secondary and tertiary health care delivery levels, including quality rehabilitation, comprehensive palliative care and specialized ambulatory and inpatient care facilities.
- 2) Enable all providers (including nongovernmental organizations, for-profit and not-for-profit providers) to address NCDs equitably while safeguarding consumer protection and also harnessing the potential of a range of other services such as complementary medicine, prevention, rehabilitation, palliative care and social services to deal with such diseases.
- 3) Improve the efficiency of service delivery of cost-effective, high-impact interventions to address cardiovascular disease, diabetes, cancer, and chronic respiratory disease.
- 4) Meet the needs for long-term care of people with NCDs, related disabilities and comorbidities through innovative, effective and integrated models of care that are suitable for chronic diseases and conditions.
- 5) Establish quality assurance and continuous quality improvement systems for prevention and management of NCDs with emphasis on primary health care, including the use of evidence-based guidelines, treatment protocols and tools for the management of major NCDs, risk factors and comorbidities, adapted to national context.
- 6) Take action to empower people with NCDs or NCD risk factors to seek early detection and manage their own condition better, and provide education, incentives and tools for self-care and self-management, based on evidence-based guidelines, patient registries, and team-based patient management, including through information and communication technologies such as eHealth or mHealth.

- 7) Review existing health programs, such as those on nutrition, HIV, tuberculosis, reproductive health, maternal and child health and mental health, for opportunities to integrate prevention and control of NCDs into them.

Human resource development

- 1) Identify competencies required, and invest in improving the knowledge, skills and motivation of the current health workforce to address NCDs, and plan health workforce needs along expected future demand, particularly in the light of population ageing.
- 2) Incorporate the prevention and control of NCDs in the training of all health personnel, including community health workers, social workers, professional and non-professional (technical, vocational) staff, with an emphasis on primary health care.
- 3) Develop career tracks for health workers through strengthening postgraduate training, with a special focus on NCDs, in various professional disciplines (e.g. medicine, allied health sciences, nursing, pharmacy, public health administration, nutrition, health economics, social work and medical education).
- 4) Optimize the scope of nurses' and allied health professionals' (including for examples nurse practitioners, NCD nurses, nutritionists, podiatrists) to contribute to prevention and control of NCDs, including task sharing with various health professionals to perform selected tasks related to screening and management, and addressing barriers to that contribution.
- 5) Strengthen capacities for planning, implementing, monitoring and evaluating service delivery for NCDs through government, public and private academic institutions, professional associations, patients' organizations and self-care platforms.

Access

- 1) Promote access to comprehensive and cost-effective prevention, treatment and care for the integrated management of NCDs including access to affordable, safe, effective, and quality medicines, diagnostic equipment and other technologies, including through the full use of trade-related aspects of intellectual property rights (TRIPS) flexibilities.
- 2) Adopt evidence-informed strategies to improve patient access to affordable medicines, including relevant medicines in national essential medicines lists, separating prescribing and dispensing, controlling wholesale and retail mark-ups through regressive mark-up schemes, and exempting priority medicines required for essential NCDs interventions from import and other forms of tax.
- 3) Promote procurement and use of safe, quality, efficacious and affordable medicines, including generics, for prevention and control of NCDs, including access to medicines for alleviation of pain for palliative care and vaccinations against infection-associated cancers, through measures including quality assurance of medical products, preferential or accelerated registration procedures, generic substitution, preferential use of the international non-proprietary names, financial incentives where appropriate and education of prescribers and consumers.
- 4) Improve the availability of life-saving technologies and essential medicines for managing NCDs in the initial phase of emergency response.

Management of main NCDs

The health care components mentioned below are recommended by the WHO Global Plan of Action 2013-2020 for the management of specific NCDs in countries with limited resources and are consistent with WHO manuals: WHO Package of essential noncommunicable (PEN) disease interventions for primary health care including costing tool (WHO, 2011); Prevention of cardiovascular disease: Guidelines for assessment and management of cardiovascular risk (WHO, 2007); Integrated clinical protocols for primary health care and WHO ISH cardiovascular risk

prediction charts (WHO, 2012); and “Prevention and control of noncommunicable diseases: Guidelines for primary health care in low-resource settings diagnosis and management of type 2 diabetes and management of asthma and chronic obstructive pulmonary disease (WHO, 2012). The measures mentioned below are particularly cost-effective and affordable.

A number of other measures to manage NCDs are effective but are also more resource-intensive (e.g. hemodialysis, chemotherapy and other treatments for selected cancers, vascular interventions for cardiovascular disease, bariatric surgery, etc), with several of them being implemented in Seychelles. These measures are not addressed in this Strategy.

The measures listed below contribute to the following targets: a 25% relative reduction in overall mortality from cardiovascular diseases, cancer, diabetes or chronic respiratory diseases; at least 50% of eligible people receive drug therapy and counselling (including glycemic control) to prevent heart attacks and strokes; a 25% relative reduction in the prevalence of raised blood pressure.

Cardiovascular disease and diabetes

1) Drug therapy (including glycemic control for diabetes mellitus and control of hypertension) and lifestyle/nutritional counselling to individuals who had a heart attack or stroke and to individuals at high risk of cardiovascular diseases or who have diabetes.

2) Detect, treat and control hypertension and diabetes using a total risk approach.

3) Low dose acetylsalicylic acid for all patients who had an acute myocardial infarction.

4) Acetylsalicylic acid, a beta-blocker and thrombolytic therapy (streptokinase or similar) for acute myocardial infarction.

5) Secondary prevention of rheumatic fever and rheumatic heart disease.

6) Treatment of congestive cardiac failure with an ACE inhibitor (or an angiotensin receptor blocker), beta-blocker and diuretic.

7) Cardiac rehabilitation post myocardial infarction.

8) Anticoagulation for medium-and high-risk non-valvular atrial fibrillation and for mitral stenosis with atrial fibrillation

9) Low-dose acetylsalicylic acid for ischemic stroke.

Cardiovascular disease and diabetes

1) Lifestyle and nutritional interventions for preventing type 2 diabetes, particularly among persons with pre-diabetes.

2) Consider influenza vaccination for patients with diabetes.

3) Preconception care among women of reproductive age, including patient education and intensive glucose management.

4) Detection of diabetic retinopathy by dilated eye examination followed by appropriate laser photocoagulation therapy to prevent blindness.

5) Effective angiotensin-converting enzyme inhibitor or angiotensin receptor blocker drug therapy to prevent progression of renal disease.

6) Special care for acute stroke and rehabilitation, possibly through stroke units.

7) Multidisciplinary clinics; interventions for foot care: educational programs; access to appropriate footwear.

Cancer

1) Prevention of liver cancer through hepatitis B immunization.

2) Prevention of cervical cancer through screening linked with timely treatment of pre-cancerous lesions.

3) Vaccination against human papilloma virus.

4) Population-based breast cancer and mammography screening (50-70 years) linked with timely treatment, particularly for women at risk.

5) Population-based colorectal cancer screening, including through a faecal occult blood test, as appropriate, at age >50, linked with timely treatment.

6) Oral cancer screening in high-risk groups (e.g. tobacco users) linked with timely treatment.

Chronic respiratory disease

1) Cost-effective interventions to prevent occupational lung diseases, e.g. from exposure to silica, asbestos

2) Treatment of asthma based on standard guidelines.

3) Influenza vaccination for patients with chronic obstructive pulmonary disease.

Objective 5: To promote and support national capacity for high-quality research and development for the prevention and control of NCDs

Although effective interventions exist for the prevention and control of NCDs, implementation is inadequate worldwide. Comparative, applied and operational research, integrating both social and biomedical sciences, is required to scale up and maximize the impact of existing interventions in order to meet the nine targets. The Political Declaration calls upon all stakeholders to support and facilitate research related to the prevention and control of NCDs and its translation into practice, in order to enhance the knowledge base for national, regional and global action.

Investment

Increase investment in research, innovation and development, and its governance, as an integral part of the national response to NCDs. In particular, there is a need to allocate adequate budgets to promote relevant research to fill gaps around interventions aimed at achieving targets, in terms of their scalability, impact and effectiveness.

National research policy and plans

Develop, implement and monitor, in collaboration with academic and research institutions, a national policy and plan on NCD-related research, including community-based research and evaluation of the impact of interventions and policies.

Capacity strengthening

Strengthen national institutional capacity for NCD-related research and development, including research infrastructure, equipment and supplies in research institutions, retaining research workforce and incentivizing innovation, and making effective use of local and foreign academic institutions and multidisciplinary agencies.

Ensure wide dissemination of research findings.

Evidence to inform policy

Strengthen the scientific basis for decision making through NCD-related research and enhance the knowledge base to support ongoing national actions for the prevention and control of NCDs.

Accountability for progress

Track the domestic resource flows for research and national research output and impact related to NCD prevention and control.

Objective 6: To monitor the trends and determinants of NCDs and evaluate progress in their prevention and control

The actions listed under this objective will assist in monitoring national progress in the prevention and control of NCDs, using the global monitoring framework consisting of 25 indicators and nine targets. Monitoring of NCDs using these indicators and targets enables internationally comparable assessments of trends over time and with other countries. Monitoring NCDs and their risk factors provides the foundation for advocacy, policy development and coordinated action, and helps to reinforce political commitment. Inclusion of the indicators outlined in the global monitoring framework does not preclude using additional indicators and targets, as appropriate, to monitor progress of the national strategy for the prevention and control of NCDs.

Substantial financial and technical support, and institutional strengthening, is needed in order to collect, analyze and communicate NCD-related data for national surveillance and monitoring.

Monitoring

Assess or update, as appropriate, legislation and regulations pertaining to collection of health statistics.

Strengthen vital registration and cause of death registration systems and provide key findings in a timely manner.

Define and adopt a set of national targets and indicators based on the global monitoring framework.

Integrate monitoring systems for the prevention and NCDs, including prevalence of relevant key indicators and interventions, into national health information systems, in order to systematically assess progress in the use and impact of the implemented interventions.

Diseases registries

Develop, maintain and strengthen disease registries, including for cancer, hypertension and diabetes, for better understanding of national situation and needs.

Surveillance

Identify data sets and sources of data from routine surveillance mechanisms and NCD-related studies, and integrate surveillance into national health information system.

Undertake periodic data collection on the behavioural and metabolic risk factors (harmful use of alcohol, physical inactivity, tobacco use, unhealthy diet, overweight and obesity, raised blood pressure, raised blood glucose, and hypercholesterolemia), and determinants of risk exposure such as marketing of food, tobacco and alcohol, with disaggregation of the data by gender, age, geographic location and socioeconomic status, in order to monitor trends, including progress in addressing inequalities.

Capacity strengthening and innovation

Strengthen technical and institutional capacity to manage and implement surveillance and monitoring systems that are integrated into the existing health information system, with a focus on capacity for data management, analysis and reporting, in order to improve timely availability of high-quality data on NCDs and risk factors.

Dissemination and use of results

Contribute, on a routine basis, information on trends on NCDs with respect to morbidity, mortality by cause, risk factors, and other determinants, disaggregated by age, gender, and socioeconomic groups.

Provide information to WHO on progress made in the implementation of national NCD action plan and on effectiveness of national policies and strategies.

Budgetary allocation

Increase and prioritize budgetary allocations for surveillance and monitoring systems for the prevention and control of NCDs.