



# WHO COUNTRY COOPERATION STRATEGY 2008-2013

**MAURITIUS**



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### **WHO Country Cooperation Strategy 2008-2013 Mauritius**

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# CONTENTS

Map of Mauritius .....	iv
Abbreviations .....	v
Preface .....	vii
Executive Summary .....	ix
<b>Section 1 Introduction .....</b>	<b>1</b>
<b>Section 2 Country Health and Development Challenges .....</b>	<b>3</b>
2.1 Socio-Economic Situation .....	3
2.2 Demographic Situation .....	4
2.3 Epidemiological Transition of Diseases .....	5
2.4 Burden of Chronic Diseases and Related Risk Factors .....	6
2.5 Burden of Main Communicable Diseases .....	8
2.6 Health Systems Delivery .....	9
2.7 Health Systems Policies and Orientations .....	10
2.8 Health and Development Challenges .....	14
<b>Section 3 Development Assistance and Partnerships .....</b>	<b>16</b>
3.1 Development Assistance .....	16
3.2 Partnership and Development Aid Coordination .....	17
<b>Section 4 WHO Policy Framework: Global and Regional Directions .....</b>	<b>19</b>
4.1 Goal and Mission .....	19
4.2 Core Functions .....	19
4.3 Global Health Agenda .....	19
4.4 Global Priority Areas .....	20
4.5 Regional Priority Area .....	20
4.6 Making WHO More Effective at the Country Level .....	21
<b>Section 5 Current WHO Cooperation in Mauritius .....</b>	<b>22</b>
5.1 Contributions of WHO Cooperation Strategy 2004–2007 .....	23
5.2 Realigning CCS to Changing Priorities in Mauritius .....	26
5.3 Support from WHO Regional Office and WHO Headquarters .....	27
<b>Section 6 Strategic Agenda .....</b>	<b>28</b>
6.1 Strategic Intent .....	28
6.2 Linkages of the Strategic Agenda with National Health Priorities .....	34
<b>Section 7 Implementing the Strategic Agenda .....</b>	<b>36</b>
7.1 Implications for WHO Country Office .....	36
7.2 Implications for WHO Regional Office .....	37
7.3 Implications for WHO Headquarters .....	37
<b>Section 8 Monitoring and Evaluation .....</b>	<b>38</b>
<b>Selected References .....</b>	<b>39</b>

# MAP OF MAURITIUS AND ISLAND OF RODRIGUES

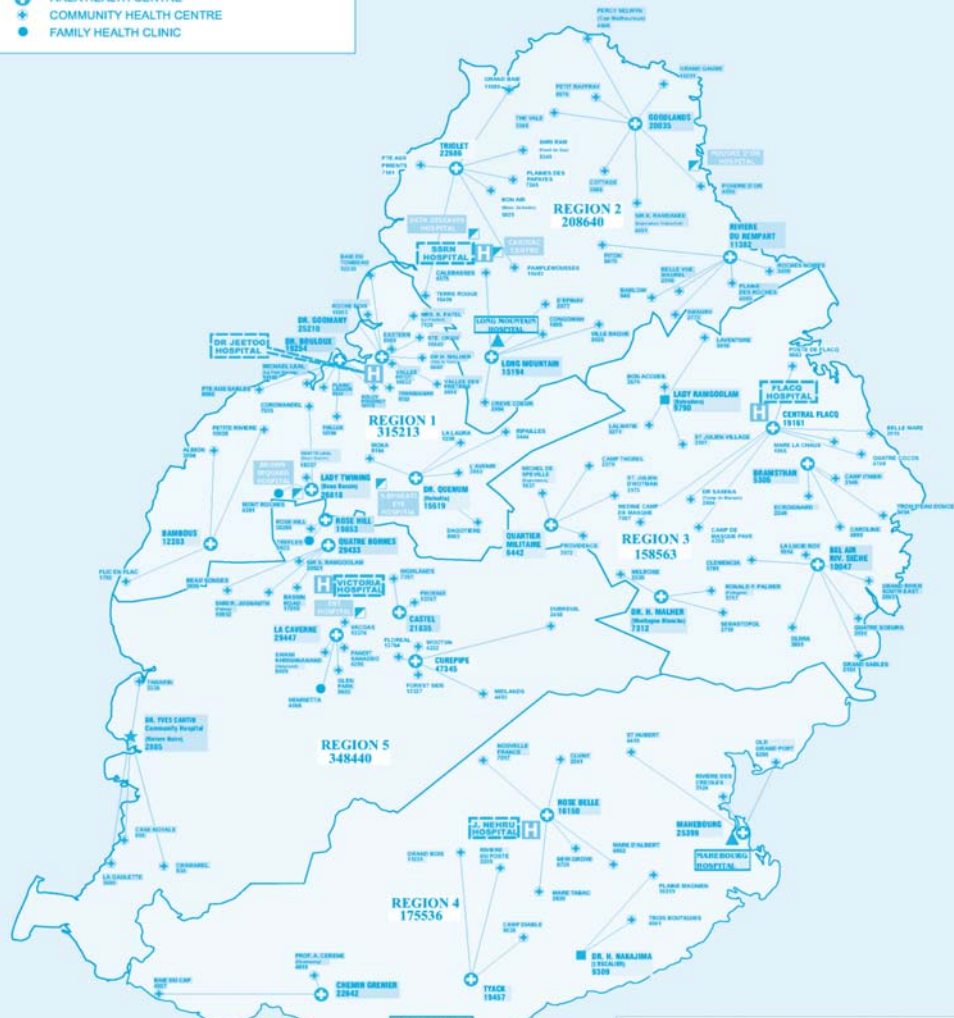
## MAURITIUS

Year 2005

### HEALTH SERVICE POINTS & POPULATION FIGURES

-  REGIONAL HOSPITAL
-  DISTRICT HOSPITAL
-  SPECIALISED HOSPITAL
-  MEDI-CLINIC
-  COMMUNITY HOSPITAL
-  AREA HEALTH CENTRE
-  COMMUNITY HEALTH CENTRE
-  FAMILY HEALTH CLINIC

### Rodrigues



	YEAR 2005					TOTAL
	HEALTH REGION					
	1	2	3	4	5	
Hospital Beds	1548	648	313	475	722	3706
Doctors	167	164	136	153	156	775
Nurses	644	830	378	510	603	2774

Developed by Rodrigues Health Authority of Mauritius and Rodrigues Health Authority of Rodrigues. Ministry of Health, & Ministry of Rodrigues.

# ABBREVIATIONS

AFRO	:	WHO Regional Office for Africa
AHC	:	Area Health Centre
AIDS	:	Acquired Immunodeficiency Syndrome
ANC	:	Ante Natal Clinic
ART	:	Antiretroviral Therapy
ARV	:	Antiretroviral
CCA	:	Common Country Assessment
CCM	:	Country Coordination Mechanism
CCS	:	Country Cooperation Strategy
CHC	:	Community Health Centre
CSW	:	Commercial Sex Worker
DOTS	:	Directly Observed Treatment
EPI	:	Expanded Programme of Immunization
EU	:	European Union
FCH	:	Family and Community Health
GDP	:	Gross Domestic Product
GFATM	:	Global Fund to Fight AIDS, Tuberculosis and Malaria
GSM	:	Global Management System
HIV	:	Human Immunodeficiency virus
HQ	:	Headquarters
HSD	:	Health Systems Development
IDU	:	Injecting Drug Users/Use
IHR	:	International Health Regulations
MARP	:	Most-At-Risk Population
MDGs	:	Millennium Development Goals
MFPWA	:	Mauritius Family Planning and Welfare Association
MoH& QL	:	Ministry of Health and Quality of Life
MSM	:	Men who have Sex with Men
MTSP	:	Medium-Term Strategic Plan
NAS	:	National AIDS Secretariat
NCR	:	National Cancer Registry
NCD	:	Noncommunicable Diseases
NEPAD	:	New Partnership for Africa's Development
NGO	:	Nongovernmental Organization
PBB	:	Programme-Based Budgeting

PHC	:	Primary Health Care
PLWHIV	:	People Living With HIV
RB	:	Regular Budget
SRH	:	Sexual and Reproductive Health
STI	:	Sexually-Transmitted infections
SWAp	:	Sector-Wide Approach
TB	:	Tuberculosis
UN	:	United Nations
UNAIDS	:	Joint United Nations Programme on HIV/AIDS
UNCT	:	United Nations Country Team
UNDAF	:	United Nations Development Assistance Framework
UNFPA	:	United Nations Funds for Population
UNICEF	:	United Nations Children's Fund
UNTG	:	United Nations Theme Group
VCT	:	Voluntary Counselling and Testing
WCO	:	WHO Country Office
WHO	:	World Health Organization

# PREFACE

The WHO Country Cooperation Strategy (CCS) crystallizes the major reforms adopted by the World Health Organization with a view to intensifying its interventions in the countries. It has infused a decisive qualitative orientation into the modalities of our institution's coordination and advocacy interventions in the African Region. Currently well established as a WHO medium-term planning tool at country level, the cooperation strategy aims at achieving greater relevance and focus in the determination of priorities, effective achievement of objectives and greater efficiency in the use of resources allocated for WHO country activities.

The first generation of country cooperation strategy documents was developed through a participatory process that mobilized the three levels of the Organization, the countries and their partners. For the majority of countries, the 2004-2005 biennium was the crucial point of refocusing of WHO's action. It enabled the countries to better plan their interventions, using a results-based approach and an improved management process that enabled the three levels of the Organization to address their actual needs.

Drawing lessons from the implementation of the first generation CCS documents, the second generation documents, in harmony with the 11<sup>th</sup> General Work Programme of WHO and the Medium-term Strategic Framework, address the country health priorities defined in their health development and poverty reduction sector plans. The CCSs are also in line with the new global health context and integrated the principles of alignment, harmonization, efficiency, as formulated in the Paris Declaration on Aid Effectiveness and in recent initiatives like the "Harmonization for Health in Africa" (HHA) and "International Health Partnership Plus" (IHP+). They also reflect the policy of decentralization implemented and which enhances the decision-making capacity of countries to improve the quality of public health programmes and interventions.

Finally, the second generation CCS documents are synchronized with the United Nations development Assistance Framework (UNDAF) with a view to achieving the Millennium Development Goals.

I commend the efficient and effective leadership role played by the countries in the conduct of this important exercise of developing WHO's Country Cooperation Strategy documents, and request the entire WHO staff, particularly the WHO representatives and divisional directors, to double their efforts to ensure effective implementation of the orientations of the Country Cooperation Strategy for improved health results for the benefit of the African population.



Dr Luis G. Sambo  
WHO Regional Director for Africa





# EXECUTIVE SUMMARY

The agreement for the provision of technical advisory assistance between WHO and the Government of Mauritius entered into force in October 1970. The physical representation of WHO at country level dates back to January 1980. There has since been a fruitful cooperation between the country and the World Health Organization, and the country has been one of the best performers in the development of the health sector.

This second WHO Country Cooperation Strategy (CCS) for Mauritius sets out the strategic directions and medium-term agenda of work in Mauritius for the entire WHO secretariat (Headquarters, Regional and Country offices) for the next six years in supporting the national health and development agenda.

The 11th General Programme of Work 2006-2015, the Medium-Term Strategic Plan (MTSP) and the Strategic Orientations for WHO Action in the African Region 2005-2009, which outline key features through which WHO intends to make the greatest possible contribution to health, set out the orientations of the 2008-2013 CCS. The 11th General Programme of Work identifies the broad directions for the work of WHO as the directing and coordinating authority in international health work. The work of the WHO is guided by its core functions, which are based on its comparative advantage and the development of the Global Health Agenda, focusing on seven priority areas. These include: investing in health to reduce poverty; building individual and global health security; promoting universal coverage, gender equality, and health-related human rights; tackling the determinants of health; strengthening health systems and equitable access; harnessing knowledge, science and technology; and strengthening governance, leadership and accountability.

Mauritius has reached an advanced stage in its demographic and epidemiological transition. Communicable diseases, problems of maternal and child health (MCH) has markedly declined and are effectively controlled. On the other hand, noncommunicable and chronic diseases are on the rise. The share of chronic noncommunicable diseases of total morbidity accounted for nearly to 88% in 2006. Since the early 1990's, birth rate is on the decline while the low death rate has been stable. The population is ageing with the proportion of those aged 65 years accounting for 6.6% in 2006, as compared to 5.3% in 1990. Mauritius ranks among countries with the highest prevalence of diabetes mellitus and hypertension, affecting respectively 19.3% and 29.8% of adults aged 30-74 years in 2004.

Classified as an under-developed economy at the time of its independence in 1968, Mauritius emerged as an upper middle income economy with a per capita income of US \$ 6431 or US \$11 643 in purchasing power parity (PPP) terms in 2006. In line with its ongoing economic reform programme aimed at enhancing efficiency of the public sector, including health and fiscal consolidation policy, the Government of Mauritius is introducing Programme-Based Budgeting (PBB) for each line ministry. A country paper for the Health Sector prepared in 2006 to provide core directions for PBB for the health sector reiterates the commitment made under the 2005-2010 Government Programme in terms of provision of universal, accessible and efficient health services through:

- (a) Developing secondary and tertiary services, including the modernization of health infrastructures;
- (b) Strengthening primary healthcare services, including the extension and upgrading of primary healthcare infrastructures and improvement of "home-care" services;

- (c) Re-engineering NCD services and health promotion process, by strengthening the National NCD programme; and
- (d) Enhancing education and training by setting up of teaching departments in clinical services and other disciplines, and designing human resource planning system.

The main area of focus of the first Country Cooperation Strategy (2003-2007) was on strengthening the surveillance, management and prevention of noncommunicable diseases; supporting an integrated surveillance of communicable diseases; enhancing performance of the health system; and supporting development of an integrated approach to health promotion.

The second WHO Country Cooperation Strategy (CCS) sets out the strategic directions and medium-term agenda of work for WHO in Mauritius for the entire WHO secretariat (Headquarters, Regional and Country Offices) for the next six years. The new CCS builds up on the previous one through analysis of the challenges and opportunities at country level and aims at being more responsive to country needs by becoming more selective and focused on national health priorities within the framework of WHO priority areas. This CSS was developed following intensive consultations with the Ministry of Health & Quality of Life.

The WCO Mauritius Core Team (Liaison Officer and Administrative Officer), with the support of the MoH & QL team (Directors, head of technical programmes and national focal points/programme managers), undertook a comprehensive review of first CCS for the period 2004-2007 with a view to assessing the implementation status of the strategic agendas and identifying gaps to be addressed in the second generation CCS for the period 2008-2013. Based on the findings of the review of first CCS and identified emerging public health challenges, the WCO Mauritius Core Team developed the Strategic Directions and Priorities that would guide the work of WHO in Mauritius for the period 2008-2013. The incorporation of the contributions and comments received from the MoH & QL at each stage in drafting the CCS enhanced the quality of the CCS.

The development of this CCS was completed in April 2009 following a thorough and final review at the level of the WHO Regional Office and Headquarters.

The CCS Strategic Agenda, aligned with national and international priorities, has identified six strategic priorities for the work of WHO in Mauritius for the six-year period (2008-2013). The six strategic priorities, which are grouped within three strategic directions, are illustrated below:

### Box 1: Strategic directions and priorities, 2008-2013

Directions	Strategic Priorities / Objectives
A. Building individual and global health security	A.1: To strengthen the control and prevention of new HIV infection and provide a continuum of comprehensive care to all PLWHIV in order to mitigate the impact of the HIV epidemic on the population at large
	A.2: To support and sustain national capacity building of competencies required by the International Health Regulations for alert and response systems in epidemics and other public health emergencies
B. Tackling the determinants of health (behavioural, social and environmental) through sustainable multi-sectoral action	A.3: To build national capacity to ensure better detection, assessment and response to major epidemic and pandemic-prone diseases
	B.1: To promote healthy lifestyles and cost-effective primary and secondary care interventions for prevention and control of major NCDs and injuries, and for mental health promotion
C. Strengthening health systems and equitable access	C.1: To strengthen health system capability so as to adopt a results-based approach for effective policy-making in line with the spirit of the Programme-Based Budgeting and Medium-term Expenditure Framework
	C.2: To enhance the planning, provision (with focus on equitable access) of essential medical products, services and technologies of assured quality and responsiveness to users

Along with implementation of the strategic priorities for 2008-2013 WHO at country level will be called upon to play a more prominent role in terms of supporting policy development, technical advice (serving as a broker) and sharing information and advocacy. This would entail special attention of the entire WHO Secretariat (Headquarters, Regional and Country Offices). The implications of the second CCS pertains among others to the uplifting of existing competencies in critical programme areas such as noncommunicable diseases at country level and promoting innovative approaches, technologies, tools and guidelines in areas where local technical expertise are scarce from the Inter-country Support Team, Regional Office and Headquarters.



# SECTION 1

## INTRODUCTION

This second WHO Country Cooperation Strategy (CCS) for Mauritius sets out the strategic directions and medium-term agenda of work in Mauritius for the entire WHO secretariat (Headquarters, Regional and Country Offices) for the next six years. The principle of “one-country plan and budget” is reflected under the CCS with a description of the activities of WHO as a whole, in and with the country. Through the CCS and the implications defined, the Regional Office and Headquarters will determine and provide an optimal support and back-up to the Country Office.

This ‘second generation’ CCS builds up on the previous one, which covered the period 2004-2007, especially through analysis of the challenges and opportunities at country level and aims at being more responsive to country needs by becoming more selective and focused on national health priorities within the framework of WHO priority areas. The first CCS identified some core strategic domains where WHO technical expertise would provide national authorities with the required leverage to attain the national health goals and consolidate health gains acquired with respect to the Millennium Development Goals. The two successive WHO Biennial Workplans developed for 2004-2005 and 2006-2007 translated the strategic areas into actions. The focus of WHO support centred on strengthening the noncommunicable diseases programme through population-wide health promotion interventions aimed at changing lifestyles coupled with a more targeted high-risk groups strategy and reinforcing, developing an integrated surveillance of communicable diseases and enhancing Health System Performance;

Changing public health challenges calls for a re-thinking of the public health priorities. Thus, the CCSs (second generation) comes at an opportune time where WHO at country level is being called upon to assist national efforts in containing chronic noncommunicable diseases and reducing prevalence of risk factors. With the rapid ageing of the population, provision of adequate and timely healthcare to the elderly is a daunting challenge. Furthermore, as the leading and coordinating authority in health matters, strengthening the surveillance and preparedness response to emerging infectious diseases will feature prominently in WHO agenda at country level. Reviving Primary Healthcare is also another aspect that requires some dedicated attention under the second generation CCS.

Doing business as usual is no longer an option. With the emergence of new infectious diseases ensuring individual and national health security in a globalized environment is more than essential. The threat of a pandemic in humans resulting from avian influenza and the related human-to-human transmission is more than ever real. The re-emergence of tropical diseases arising from the changing climate conditions is of much concern for developing small island states such as Mauritius. The outbreak of Chikungunya, a mosquito-borne disease in 2006, though with no direct related fatality case, affected some 11 000 people. The Chikungunya not only overstretches the public healthcare service delivery but transcends to the economic sector. The tourist sector, an important pillar of the economy, was substantially hit with a temporary loss of interest in Mauritius as a tourist destination until the outbreak was contained. The spread of HIV, mainly among IDUs, calls for new innovative harm-reduction strategies, is another example.

Through the CCS, WHO Strategic Agenda (strategic direction and approaches) will be aligned with national and international priorities, including the Millennium Development Goals (MDGs).

The CCS for 2008-2013 was developed through interactive consultations and planning process involving government officials, development partners and other stakeholders. Under the joint leadership of the WHO Liaison Office and the Ministry of Health & Quality of Life, the CCS development team conducted in-depth reviews and analysis based on a wide range of documents made available.

Within WHO's Framework for Results-Based Management, the CCS acts a reference tool for planning, budgeting and resource allocation of WHO's work at country level. The CCS will guide the preparation of three biennial budgets and operational plans through each biennium.

This Country Cooperation Strategy document provides a succinct analysis of health and development challenges in Mauritius, a framework for development assistance and aid flow, current levels of WHO cooperation and support, and the WHO policy framework, including global and regional directions. It also outlines Strategic Agendas of WHO's work during the period 2008-2013, and implications for the work of the WHO Secretariat at the country, regional and HQ levels to achieve these goals.

## SECTION 2

# COUNTRY HEALTH AND DEVELOPMENT CHALLENGES

## 2.1 SOCIOECONOMIC SITUATION

**Table 1: Key Socioeconomic Development Indicators**

Indicator	Value
Total Population (2006)	1 215 619
% under 15 (2006)	23.7%
Population Urbanized (%) (2006)	43.4
Life expectancy at birth (2006)	68.9 (M), 75.7 (F)
Gross National Income (GNI) per capita US\$ (2006)	5450
Adult (+15) literacy rate (2006)	84.3%
Human Development Index Rank (out of 177 countries) (2006)	65
Human Poverty Index Rank (out of 108 countries) (2006)	27
% population with sustainable access to improved sanitation (2004)	100%

**Sources:** Annual Health Statistics 2006, Ministry of Health & Quality of Life, Human Development Report 2006. Central Statistics Office 2006, Ministry of Education & Human Resources

With a per capita income of about US\$ 260 at the time of independence in 1968, Mauritius emerged from an under-developed economy to that of an upper middle income economy. In 2006 Mauritius had a per capita income of US\$ 6431 or \$11 643 in purchasing power parity (PPP) terms. Mauritius witnessed a shift from a mono-crop agricultural economy to an export-led oriented manufacturing economy, with a buoyant tourism and service sector. At the crossroad of its development path, Mauritius is in the midst of a structural reform programme to diversify the current “four-pillar” economy.

Economic growth rates, which averaged 5.7% annually during the ten-year period (1986-1996) slowed down to 4.5% in the following ten year period (1996-2006). The economy of Mauritius is expected to grow by 5.8% and 6.0% in 2008 and 2009, respectively.

### *Human Development Index (HIS) and Human Poverty*

The past decade saw Mauritius sustaining its position among the first 20 “Medium Human Development” countries, ranking 65<sup>th</sup> in 2007. Concurrently, the HDI for Mauritius rose from 0.772 to 0.804.

With a Human Poverty Index of 11.4, Mauritius ranked 27<sup>th</sup> out of 108 developing countries. The last two household budget surveys showed a significant improvement in equality



of income distribution with the Gini coefficient dropping from 0.387 in 1996/97 to 0.371 in 2001/02. The proportion of low-income households also dropped from 13% to 11% during the same corresponding period.

## 2.2 DEMOGRAPHIC SITUATION

The mid-year resident population in the Islands of Mauritius and Rodrigues, as at 2006, was estimated at 1 215 619 and 37 079, respectively, in 2006. Both Mauritius and Rodrigues shared the sex distribution, that is 49% were male and 51% were female.

The Island of Mauritius has already undergone the classical phases of demographic transition to attain the third phase of a declining birth rate and a relatively stable low death rate since the early 1990s. In 2006, crude birth rate dropped well below the average for the period 2000-2004 (16.06 per 1000 mid-year inhabitants) to 13.8 per 1000 mid-year inhabitants. Crude death rate was on average 6.86 per 1000 mid-year inhabitants over the period 2000-2004.

The rapid ageing population is a main challenge for the healthcare delivery system in terms of provision of geriatric care. The proportion of those aged 65 years and over has been on the rise over the past two decades, with the proportion of females growing faster than men. The number of persons over the age of 65 accounted for 6.6% in 2006 for Island of Mauritius, as compared to 5.3% in 1990. The most vulnerable component of the elderly, namely those aged 75 years and above, is projected to reach 6.9% by the year 2037.

The dependency ratio for the Island of Mauritius dropped from 535% in 1990 to 467.3% in 2000 and further to 436% in 2006. This is explained by a fall in fertility rate and rising life expectancy. The total fertility rate decreased from 2.29 to 1.97 between 1990 and 2000. This trend was maintained with total fertility rate dropping to 1.67 in 2006.

### *Mortality Rates (Infant, Under Five and Maternal)*

The Infant Mortality Rate (IMR) for the Island of Mauritius fluctuated within the range of 18 and 22.2 per 1000 live births over the period 1990- 1999. Since the opening of a Neonatal Intensive Care Service Unit in 1999, IMR has been below 16.0 per 1000 live births. As for the Island of Rodrigues, over the period 1999-2006, IMR fluctuated between 12.3 and 27.3 per 1000 live births.

The Under-Five Mortality Rate (U5MR) has been below 20 per 1000 live births since 2000, averaging 16.36 per 1000 live births over the period 2000-2006. The U5MR for the Island of Rodrigues fluctuates between 14.5 and 31.8 per thousand live births since 1998. The Maternal Mortality Ratio (MMR) for the Island of Mauritius over the period 2000 -2006 the MMR averaged 17 per 100 000 live births. The corresponding MMR for the Island of Rodrigues has been nil per 1000 live births since 2003.

### *Life Expectancy at Birth*

Life expectancy among males and females stood at 68.9 and 75.7% in 2006, respectively. The most vulnerable population groups exposed to high risk of mortality are infants and children and women of child-bearing age. Health Life Expectancy (HALE)<sup>1</sup> was estimated at 60 years for males and 69 years for females in 2002. This implies that about 12% of the total life expectancy is lived with disability.

<sup>1</sup> A measure that a person can expect to live in "full health" by taking into account years lived in less than full health due to disease and/or injury.

## 2.3 EPIDEMIOLOGICAL TRANSITION OF DISEASES

Mauritius has reached an advanced stage in its epidemiological transition. Communicable diseases, problems of maternal and child health (MCH) have markedly declined and are effectively controlled. On the other hand, noncommunicable and chronic diseases are on the rise. Coverage rates for immunization, ante and postnatal care, and attended births have reached relatively high levels throughout Mauritius and the Island of Rodrigues, following the implementation of a comprehensive national and maternal child health programmes within the framework of the National PHC Programme.

Through a sustained programme of immunization, Mauritius has eradicated several communicable diseases such as Diphtheria, Whooping Cough and Poliomyelitis. The last case of poliomyelitis was notified in 1965 and certification of Mauritius as a polio-free zone is underway. Over the past twenty years, no case of diphtheria was notified and only three cases of whooping cough were recorded – 1990, 1994 and 1999. To maintain its polio-free status Mauritius has to meet the challenge of maintaining national immunization coverage above 80% and pursuing the ongoing active Acute Flaccid Paralysis Surveillance Programme. Other communicable diseases such as Measles, Mumps, Rubella and Tuberculosis are also under control.

The scope of the National EPI Programme in Mauritius has developed over the past half century. The immunization schedule includes BCG, Polio and DPT, Tetanus Toxoid (TT), and Measles-Mumps-Rubella (MMR). Hepatitis B (Hep B) vaccination was introduced in 1997. Vaccination coverage against tuberculosis, diphtheria, whooping cough, tetanus, hepatitis B, poliomyelitis, measles, mumps and rubella is about 90% of live births in the public sector. In addition, it is reasonable to assume coverage of about 8% in the private sector. Nevertheless, immunity gaps do exist in some districts.

With a long well-established medical record system and mortality and morbidity reporting based on the latest classifications of diseases ( ICD 10) hospital-based data is considered as a marker to demonstrate the shift in the pattern and burden of diseases.

**Table 2: Main causes of morbidity based on number of hospital discharges, 1976-2006.**

Reasons for hospital discharges	1986		1996		2005		2006	
1. Communicable diseases	5005	5.1%	6016	4.0%	6070	3.8%	12 291	7.3%
2. Maternal conditions including pregnancy, child birth, perinatal conditions & puerperium	21 455	21.7%	24 633	16.4%	25 476	16.1%	27 874	16.6%
3. Cardiovascular diseases	9077	9.2%	14 138	9.4%	16 395	10.4%	17 786	10.5%
4. Hypertensive diseases	3164	3.2%	4855	3.2%	4226	2.7%	4123	2.5%
5. Neoplasm	1465	1.5%	3023	2.0%	4410	2.8%	4666	2.8%
6. Diabetes Mellitus	2606	2.6%	5583	3.7%	7520	4.7%	6906	4.1%
7. Chronic respiratory diseases	7331	7.4%	9793	6.5%	9759	6.2%	4179	2.5%
8. Digestive diseases	7390	7.5%	11 363	7.6%	10 897	6.9%	11 986	7.1%
9. Neuro-psychiatric, stroke & mental illnesses	1936	2.0%	5192	3.4%	7403	4.6%	7482	4.5%
10. Injuries	13 173	13.3%	18 542	12.4%	16 178	10.2%	15 532	9.2%

**Adapted from:** Health Statistics Annual 1976, 1986, 1996, 2005 and 2006. Mauritius. Ministry of Health and Quality of Life

Morbidity due to communicable diseases has been decreasing over the last three decades from 7% in 1976 to 3.8% in 2005; except for the year 2006, which witnessed an upsurge in communicable diseases. The upsurge is largely attributable to an outbreak of Chikungunya. Excluding communicable diseases (item 1) and maternal conditions, including pregnancy, child birth, perinatal conditions and puerperium and injuries (item 2), the remainder, internationally regarded as a group representing noncommunicable diseases, have been increasing considerably during the period. NCD share of total morbidity rose from 83.2% in 1986 to 87.9% in 2006. Most importantly conditions such as neoplasm, diabetes mellitus and mental illnesses have shown an upward trend over the period. Conditions due to neuro-psychiatric disorder, stroke and mental illnesses recorded the most significant upward trend in terms of hospital discharges, rising from a mere 2.1% in 1976 to 4.5% in 2006.

### ***Causes of Death***

The share of infant and child deaths in the total mortality has dropped from 13.2% and 3.8% to 2.5% and 0.5%, respectively, while the share of deaths in people aged over 50 has risen from 65% to 80.4% over the period 1976-2006.

Over the same corresponding period, the share of deaths attributable to diabetes mellitus rose 3.8% to 22.6%, and that of malignant neoplasm from 3% to 10.3%. In terms of pathologies, the proportional share of causes of death in 2006 has a fairly comparable profile in men: diseases of the circulatory system (35.0%); endocrine, nutritional and metabolic system (19.8%); cancer (9.2%); diseases of the respiratory system (8.4%); external causes (7.9%); and in women diseases of the circulatory system (37%); endocrine, nutritional and metabolic system (27.0%); cancer (11.6%) and external causes (3.1%). There is a marked excess mortality rate in women for diabetes (26.5% versus 19.5% in men) and hypertension (5.3% versus 3.7% for men). An excess mortality rate in men is seen for diseases of the liver (3.9% versus 1.1% for women); ischaemic heart diseases (15.3% versus 12.3% for women), neoplasm of trachea, bronchus and lung (1.8% versus 0.9% for women) and above all for road traffic accidents (2.4% versus 0.6% for women).

## **2.4 BURDEN OF CHRONIC DISEASES AND RELATED RISK FACTORS**

Given the importance of cardiovascular diseases as a cause of death, attention should be focused on some risk factors that cause these diseases— conditions such as diabetes, hypertension, high cholesterol and obesity and high-risk behaviour, in particular smoking—where the influence on the occurrence of cancer is well known. The rapid industrialization along with the openness of the island to the external world has brought in its wake changes in lifestyles, which are in turn impacting on the health and nutritional welfare of the communities. Negative effects that arise from a more sedentary lifestyle are associated with lower physical activity; issues related to time allocation; tendency to consume more convenient foods; and preference for less strenuous recreational activities.

### ***Diabetes***

The prevalence of diabetes mellitus has stabilized over the past decade. In 2004, the national NCD survey confirmed for the first time a slight decrease in the prevalence of diabetes to 19.3%. Overall, within the 20–59 years age group, diabetes is more prevalent among males than females. This pattern is reversed for the over 60 year group, with higher prevalence rates among females.

Diabetes is predominantly of type 2 in Mauritius. The age-standardized prevalence of Impaired Glucose Tolerance<sup>2</sup> (IGT) in the population aged 30 years and above has been declining steadily from 19.3% in 1987 to 12.1% in 2004. As this trend is more significant among males (from 15.6% in 1987 to 8.7% in 2004) than females (from 22.5% to 14.6% in 2004), IGT is more prevalent among women.

**Table 3. Noncommunicable Diseases and related risk factors indicators, 1987-2004**

	TRENDS	1987	1992	1998	2004
Diabetes Mellitus	Increase (1987-1998) Decrease (1998-2004)	14.3% M: 14.2% F: 14.5%	16.9% M: 16.3% F: 17.4%	19.5% M: 18.4% F: 20.6%	19.3% M: 18.9% F: 19.7%
Hypertension (BP ≥ 140/90 mm)	Decrease (1987-1992) Increase (1992-2004)	30.2% M: 31.7% F: 28.9%	26.2% M: 26.5% F: 26.1%	29.6% M: 30.0% F: 29.5%	29.8% M: 29.7% F: 29.9%
Overweight/obesity (Body Mass Index > 25Kg/m <sup>2</sup> )	Increase (1987-1998) Decrease (1998 -2004)	30.5% M: 24.8% F: 35.7%	40% M: 33.4% F: 45.7%	40.6% M: 36.1% F: 43.2%	35.7% M: 30.7% F: 39.4%
Cigarette smoking	Decrease (1987-2004)	30.7% M: 57.9% F: 7.0%	24.3% M: 47.3% F: 4.8%	20.2% M: 42.0% F: 3.3%	18.0% M: 35.9% F: 5.1%
Abusive Alcohol Consumption (e <sup>4</sup> days weekly for men or e <sup>2</sup> days weekly for women)	Increase (1987 -1998) Decrease (1998 -2004)	9.6% M: 18.2% F: 2.2%	7.5% M: 14.4% F: 1.6%	7.2% M: 15.9% F: 0.45%	9.1% M: 19.1% F: 1.9%
Physical Activity	Increase (1987 -2004)	M: 11.8% F: 1.4%	M: 17.3% F: 2.3%	M: 21.2% F: 7.2%	M: 24.5% F: 9.5%

Source: NCD and Risk factor prevalence surveys

Control of diabetes in those receiving treatment was found to be generally poor. However, it is encouraging to note that physical access to facilities for monitoring blood sugar measurement is improving at the level of primary healthcare facilities.

## Hypertension

Prevalence of high blood pressure estimated at 29.8% in adults aged 35-64 years in 2004 has been stable since 1992. The crude prevalence of hypertension in 2004 by age-group shows that only 4.5% of adults aged 20-29 years is hypertensive. The rates increase with age and are higher among males than females below the age of 50 years. After the age of 50 years, hypertension becomes more prevalent in females. A number of conditions may have contributed to this high prevalence of hypertension, namely stressful lifestyle, poor compliance with pharmacological and non-pharmacological treatment and the reluctance of people at risk to get screened and treated early. The NCD 2004 survey, confirms that 39% of hypertensive patients were poorly controlled, and more significant among males (42.3%) than females (37.1%).

## Obesity and Alcohol

Age-standardized prevalence of obesity and overweight dropped for the first time since 1987, but it still remains relatively high at 35.7%. The declining trend is largely attributable to increasing physical activity as high as 100% among males aged 30 or more and about 500% among females of the same age over the period 1987-2004. Prevalence of abusive alcohol consumption among males rose to 19.1% in 2004, representing an increase of 20% between

<sup>2</sup> A risk factor for both future Type 2 diabetes and cardiovascular diseases.

1998 and 2004. Among women, abusive alcohol consumption is low. Moreover as heavy alcohol intake is responsible for the major proportion of psychiatric disorders in the country, amendments were introduced to the Public Health Act for the control of its consumption.

## Smoking

Tobacco consumption continues to decrease steadily, with current smoking among males dropping from 57.9% in 1987 to 35.9% in 2004. In females, the trend has been on the decline over the period 1987-2004. This steady fall may have resulted from greater awareness of the ill effects of tobacco on health, fiscal and legislative anti-smoking measures taken by the Government and anti-tobacco campaigns by nongovernmental and other organizations. Smoking patterns among the youth is a cause for concern as evidenced by the Global Youth Tobacco Survey (2003). According to the 2003 Global Youth Tobacco Survey, 31.3% of students had never smoked cigarettes (Male: 40.4%; Female: 22.6%). 14.8% of youth attending school currently smoke cigarettes.

Existing legislation on tobacco control is being amended in line with the Framework Convention for Tobacco Control (FCTC). Furthermore, an Action Plan on Tobacco Control has been finalized and will soon be implemented.

The National Action Plan on Tobacco Control 2007-2011 provides the framework for comprehensive action on smoking cessation as well as the national policy on smoking cessation services. The cessation programme in Mauritius would use a combination of therapies to reach smokers and influence their behaviour. Individual counselling would be the core focus of the behavioural therapy and this would be supported by educational materials targeting smokers.

## Cancer

Cancer is the third most common cause of death in men. This pathology is likely to increase with the ageing population and the increase of risk factors related to changes in lifestyles. According to the National Cancer Registry (NCR) the incidence of all cancers combined for the period 2001-2004 was 95.5 per 100 000 for males and 126.2 per 100 000 for females. The mortality/incidence ratio was 0.8 for males and 0.6 for females. This confirms the fact that severity of cancer and poorer prognosis is greater among males. An incidence study undertaken by the NCR for the year 2005 confirmed a fall in cancer incidence. Crude incidence rate was estimated at 83.8 per 100 000 for males and 121.5 per 100 000 for females. Cancer incidence rate estimated by sites for 2005 showed no major change as compared to the period 2001-2004. For men, the most common cancer site in 2005 was colon-rectum (13%) followed by lungs (10.4%) and prostate (9.4%). For women, the most common cancer site in 2005 was breast (34.7%), followed by cervix (10.7%) and colon-rectum (6.9%). A National Cancer Control and Prevention Action Plan would soon to be finalized.

## 2.5 BURDEN OF MAIN COMMUNICABLE DISEASES

### HIV/AIDS

The HIV epidemic in Mauritius is classified as 'Concentrated', with prevalence of around 30-60% among vulnerable groups such as prison inmates, intravenous drug users (IDUs) and commercial sex workers (CSWs). At the beginning of the epidemic, the mode of transmission of the virus was predominantly heterosexual. A shift in mode of transmission

from heterosexual to injecting drug use occurred in 2003 when 66% of the new cases were detected among Injecting Drug Users (IDUs) as compared to 14% in 2002. This shift reached its peak in 2005 (92%) and leveled off to around 80% in 2007.

With an important population size of IDUs, estimated at 17 000, the threat of rapid infiltration of the HIV epidemic into the general population is real. This is confirmed by indicators such as the prevalence among HIV-infected pregnant women, which increased from 0.05% in 2000 to 0.28% in 2005 and the number among blood donors from 3 cases detected in 2000 to 19 in 2006. Furthermore, the recent increase in heterosexual transmission from 5.9% in 2005 to 10.2% in 2006 after a major decline is another indicator of infiltration of HIV in the population. This issue should be considered in the development of future strategies. The prevalence rate of HIV/AIDS among pregnant women aged 15–24 years remained below 0.5% for the period 1999–2007. Despite the low prevalence rate of HIV/AIDS, an increasing trend in the number of HIV-positive pregnant women is noticed during the period 1999–2007.

At present, 3020 people are known to be living with the disease. Around 300 of them are already on ARV therapy. Analysis of the age group distribution reveals that 55.1% of the HIV-infected population is within the 25–39 years age group followed by the 15–24 years age group accounting for 17.9% of the HIV-infected population. Two thousand PLWHIV are actively coming for follow-up. However, a recent estimate using the “Estimate and Projection Tool”, carried out in September 2007 indicates the prevalence of HIV in the 15–49 years age group at 1.8% (that is approximately 12 600 people are living with HIV/AIDS). Of the estimated 12 600 HIV-positive persons, some 9000 have not been detected.

Based on notified HIV-positive cases, the epidemic is predominantly among males, with a male/female ration of 5.1:1. However, the feminization of the epidemic is a concern, especially as the female population constitutes an important share of MARP.

The major co-infection with HIV is Hepatitis B & C infection among Injecting Drug Users, with a prevalence rate estimated as high as 95%. HIV-TB co-infection among the population of TB patients is very low, with only 7 cases registered in 2006.

### ***Tropical and Vector-borne Diseases***

Since 1990, some 30 malaria (indigenous) cases were notified in 1992, 1996 and 1997. The threat of imported malaria cases is real. The large inflow of visitors travelling to and from malarious countries and immigrant workers from malarious countries altogether constitute a potential reservoir of parasites. The total number of imported malaria cases notified annually, from 1990 to date, ranged between 44 and 73. The total number of introduced malaria cases ranged from 1 to 7, with no episode notified in 1995, 1997, 1999, 2000 and 2003. As for Rodrigues Island, no case of malaria has been notified so far. The three last entomological surveys carried out in 2001, 2004 and 2007 revealed the absence of anopheles mosquito, the vector responsible for malaria transmission.

A first outbreak of Chikungunya was reported in 2005, with 3,586 cases detected. A second outbreak on a higher scale of transmission, with over 11 000 cases occurred over the period February–May 2006. No indigenous case has been reported since 2006. In response to the 2006 outbreak, an integrated approach was implemented, focusing on a four-pronged strategy based on Surveillance, Vector Control, Health Education and Community Mobilization. The four-pronged strategy, which continued to be implemented in 2007, had the desirable impact, as only one case (imported) of chikungunya was reported in 2007. The

strengthening of existing surveillance mechanisms and early warning systems is to be pursued in view of climatic changes.

## 2.6 HEALTH SYSTEMS DELIVERY

### *Organisation of Health Systems*

The health system, which was traditionally hospital-focused, has since independence in 1968 undergone a gradual shift in focus on public health promotion. Most of the public health component of national health problems has been tackled through the establishment of a network of health centres around which basic healthcare services have gradually been organized, especially in the early 1980s after the Alma-Ata Conference on PHC in 1978. The current nomenclature and management of public health sector dates back to the Health Sector Review undertaken in 1988. Decentralization of health services was ensured then with the establishment of five (5) health regions. Within the current decentralized system, each health region is, in principle, given more autonomy in the management of their respective health programmes. Policy formulation and coordination of the health sector response remain with the Ministry of Health and Quality of Life at the central level. In essence, the central level fulfils the stewardship role of the country's health system through planning, resource mobilization and allocation, coordination, management, regulation and overall administration.

### *Healthcare Delivery (Public Sector)*

#### **Primary Healthcare Services**

This first level of contact comprises a network of CHCs (113), AHCs (23), mediclinics (2) and dental clinics. The peripheral units are managed through a multi-disciplinary team, namely Medical & Health Officer, Dental Surgeon, Community Health Nursing Officer, Dispenser and Health Inspector. 100% of the population has reasonable access to the first point of contact with the health system (CHC and AHC) within a radius of three (3) miles.

#### **District & Regional Healthcare Services**

This second (secondary) level comprising two district hospitals and five regional hospitals provides primary inpatient and outpatient medical care to their respective catchment populations, emergency services and supervision of satellite AHCs and CHCs. Services provided include accident and emergency, general medicine, general and specialized surgery, gynecology and obstetrics, orthopaedics, traumatology, pediatrics and intensive care services.

#### **Hi-tech/Quaternary Healthcare**

The tertiary level is the highest referral level, comprising four specialized hospitals (Eye Centre, ENT Centre, Psychiatric Hospital and a Tuberculosis and Chest Diseases Centre). This level also consists of a Cardiac Centre, offering multidisciplinary specialized services in cardiac surgery, invasive cardiology. In addition, neurology, renal transplantation, laser and laparoscopic treatment are offered as part of the national high-tech programmes. Dialysis is provided for patients with end-stage renal failure. Notwithstanding the referral system in place, some 30% of patients continue to attend the OPD of Regional Hospitals for minor injuries or diseases. These patients could have availed themselves of facilities provided in AHCs and CHCs, thereby relieving the pressure of health personnel at regional hospitals and allowing quality of care for more complicated cases.

## Health Laboratories and Supply of Safe Blood

Each regional hospital has its own laboratories for bio-chemistry, haematology, histology, microbiology and parasitology testing and, also provides blood transfusion services. The Central Laboratory provides pathological tests for both public and private sectors. A specialized virology unit also operates under the aegis of the Central Laboratory. With an ever-increasing demand for supportive and therapeutic care of patients on dialysis and chemotherapeutic protocols along with a steady increase in cardiac surgery, there is increasing pressure on the Blood Transfusion Service for supply of safe blood and blood products. Adequacy, safety and quality can only be ensured if all Blood Transfusion operations and activities are carried out within a defined policy framework. A national Blood Policy was adopted in 2004 and is being implemented. The ratio of voluntary donors to family replacement donors is 3:1. Blood donation is predominantly driven by males who account for 84% of blood donated. All units of blood collected in Mauritius are systematically screened for all major transfusion transmissible infections, and the HIV prevalence among blood donors was 0.05% in 2006.

A new Blood Transfusion Policy has been developed to address the current limitations of the Blood Transfusion Service and covers areas relating to Quality Assurance; Biosafety issues; Clinical use of blood; Medical ethics and Human Resource Development & Research in BTS.

## *The Island of Rodrigues*

The Island of Rodrigues is served by a main hospital with some specialist services. Major surgical cases are referred to the Island of Mauritius. There are 2 AHCs and 14 CHCs on the Island for 37 000 inhabitants.

## Private Sector

Private healthcare has evolved in two forms: private practice of medical and dental care practitioners, and private clinics with in-patient beds and facilities for examination, consultation and diagnostic procedures. There are at present 13 clinics with in-patient service operating in the private sector, which, besides renal dialysis, also provide cardiac surgery among other services.

## Health System Performance

With an overall performance index of 0.691, the health system in Mauritius was ranked 84<sup>th</sup> out of 191 countries.<sup>3</sup> In terms of responsiveness, the health system in Mauritius is rated among the highest achieving group of countries, ranking 56, with an index of 5.57. With a health system performance (in terms of Disability Adjusted Life Expectancy (DALE)) index of 0.679; Mauritius was ranked 113<sup>th</sup>. As a follow-up to the health system performance evaluation carried out in 2000, a World Health Survey was carried out in 2003 to assess in detail the responsiveness of the health systems and the fairness of financial contribution to health.

## Responsiveness of the Health Systems - to the Achievement of the Expected Health Goal/Status

Healthcare users ranked in order of importance the following domains as critical for adequate responsiveness provided by the healthcare delivery system – communications;

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<sup>3</sup> World Health Report 2000.



dignity; basic amenities and confidentiality<sup>4</sup>. An analysis of the domains (listed above as a critical marker for health responsiveness) for ambulatory and in-patient services showed that overall public health establishments scored lower than private health establishments. A comparison of the public and private health establishments in terms of skills, equipment and drug supplies revealed that patients' assessment of ambulatory and in-patient health services were more or less at par, with a slightly higher score for the private health establishments.

### ***Fairness in Distribution of Health Payments***

Two approaches are available to assess the distributional consequences of health payments<sup>4</sup>. The first approach quantifying the impact of health systems contribution on poverty showed that 2.6% of households were drifted under the poverty line after effecting out-of-pocket health-related expenses. The second approach estimated that as high as 9.0% faced catastrophic health spending out of health pocket payments in Mauritius, as compared to only 0.5% in developed countries.

Protection of healthcare users from catastrophic payments should be a prime objective of any health policy<sup>3</sup>. At least 12.6% of households seeking care had to contract loans from third parties or sell personal items to pay for their care. It is, therefore, critical to identify the characteristics of the health system and/or that of the household that affects the population's vulnerability to catastrophic payments.

### ***Expenditure and Financing of Health Services***

Total health expenditure increased from around 3.8% of GDP in 2000 to 4.3% of GDP in 2006. This rise is correlated with the development of the private sector. Concurrently, per capita total expenditure on health (at average exchange rate in US\$) rose by nearly 50% over the period 2000-2006 to reach US\$ 223 in 2006.

General Public Expenditure on health as% of total expenditure on health recorded a constant decline from 54.7% in 2000 to 50.4% in 2006. The public sector only absorbs about 50% of total expenditure on health, and yet provides about 80% of consultations and almost all prevention activities. The private practice sector absorbs the other 50% of expenditure but, provides a considerably lower volume of services.

With the public health sector expenditure growing at a much faster rate (an average of 11% per annum) than population growth (merely 1% per annum), per capita total public expenditure on health maintained an upward trend during the period 1999-2006. Per capita Total Government expenditure on health at average exchange rate (in US\$) rose by 60% over the said period.

Four main sources of financing healthcare exist in Mauritius namely: tax funded; private household out-of-pocket payment; private firms and corporations, including health insurance and foreign aid.

### ***Tax Funded Expenditure***

With the right for health deeply enshrined in its Constitution and a strong commitment to the principles of welfare state, healthcare services at all public service point ranging from primary healthcare to tertiary care, is free. Public healthcare services are financed mostly by receipts generated through direct and indirect taxes levied.

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<sup>4</sup> World Health Survey (2003).

Health expenditures (recurrent and capital) in current prices rose by more than two-fold from Rs 2051 million in 1999 to Rs 4460 million in 2006, representing an average annual increase of 11%. The Ministry of Health & Quality of Life was the principal financing agent, as it received 96.6% of the budget allocated for funding public expenditure on health.

### **Private Household Out-of-pocket Payment**

According to the 2001/2002 household budget survey, the bulk of expenditure was incurred on medical and pharmaceutical products (50%), followed by physician services (29%) and clinic fees (18%). Private households' out-of-pocket payment rose to Rs 3587 million in 2006, representing nearly a three-fold increase since the last 2001/2002 household budget survey. Household out-of-pocket payment as a share of total health expenditure rose from 35% in 2000 to 40% in 2006, representing nearly 0.9 per cent of GDP.

### **Private Firms and Corporations, including Health Insurance**

Employers' contributions represent the third source of financing of healthcare expenditure. Overall employers' contribution share of total health expenditure dropped from 12% in 2000 to 9% in 2006. Population coverage in terms of medical insurance is still limited in Mauritius, with approximately 5.8% of household members having an insurance coverage. Though medical insurance coverage remains fairly low, private expenditure on prepaid and risk-pooling medical plans health buoyed rapidly over the last few years, rising from Rs 181 million in 2000 to Rs 444 million in 2006.

### **External Assistance**

The decline in the level of Overseas Development Assistance (ODA) is correlated with the rising per capita income. ODA contribution represented only 1% of total health expenditure in 2006.

### **Health Personnel**

Over the past ten years, the population-doctor ratio improved from 1137 in 1997 to 898 in 2006, representing a 40% rise. The population-dentist ratio in 2006 was 7264 inhabitants per dentist as compared to 7968 in 1997. Migration of qualified paramedics, which was once a cause for concern, seemed to have subsided over the past years. The number of qualified nurses and midwives in the public sector rose from 2951 in 1997 to 3070 in 2006. However, this increase was not in pace with the population increase. Thus, the population-nurse ratio slightly deteriorated from 391 inhabitants per nurse in 1997 to 409 inhabitants per nurse in 2006. Notwithstanding the fact that the population-medical / paramedical ratio in Mauritius is comparable to other developing countries, the ability of the public sector to recruit and retain qualified health professionals remains a challenge.

## **2.7 HEALTH SYSTEMS POLICIES & ORIENTATIONS**

At the core of the national economic programme, which focuses mainly on fiscal consolidation and enhancing efficiency of the public sector including health, is the introduction of a Programme-Based Budget (PBB). A country paper for the Health Sector was prepared in 2006 setting the basis for the formulation of the PBB formulation in 2007/08 and delineating the Government's broad strategies in the Health sector for the period 2006-09. The document reiterates the commitment made under the Government Programme 2005-2010 in terms of provision of universal, accessible and efficient health services through:

- (a) Developing secondary and tertiary services, which incorporates the modernization of health infrastructures;
- (b) Strengthening primary healthcare services which include the extension and upgrading of primary healthcare infrastructures and strengthening of “home care” services;
- (c) Re-engineering NCD services and health promotion process, by strengthening the National NCD programme; and
- (d) Enhancing education and training by setting-up of teaching departments in clinical service and other disciplines, and the design of a human resource planning system.

Furthermore, the other health orientations will focus on:

- Setting up of a full-fledged Directorate of Medical Services and implementing a Patient’s Charter;
- Restructuring the casualty units with adequately trained personnel so as to remove bottlenecks at such points. Efforts will be made to ensure patient-friendliness and professionalized service. Services in healthcare centres will be computerized with the aim of providing patient and management information as well as promoting the elimination of resource wastage;
- Reforming the ‘AIDS /STIs Unit, and setting up of a detoxification unit;
- Setting-up of a National Service Framework for Diabetes with achievable objectives and targets;
- Setting-up of a specialized Children’s Hospital and intensive neo-natal services in two major regional public hospitals;
- Implementing innovative measures to address the problem of brain drain of healthcare professionals; and
- Reviewing and upgrading health services.

## 2.8 HEALTH AND DEVELOPMENT CHALLENGES

The national health system, per se, is facing emerging challenges in the wake of changing lifestyles accompanied by new dietary patterns and globalization, which, on the one hand, increase the burden of chronic diseases and, on the other hand, constitute a risk of acceleration of global transmission of communicable diseases. Furthermore, as a small developing island State, the health system in Mauritius is not immune to the backdrop of climate change and recent food insecurity crisis. All these factors pose daunting challenges for the (public) health systems in terms of providing effective and equitable response. A holistic reform of Primary Health Care as an integral component of health systems needs to be undertaken, focusing, among others, on re-organizing the service delivery model to address rising patients’ expectations and social determinants of health responsible for health inequalities.

NCDs in Mauritius represent 74% of the total burden of disease in men and 76% in women and include diabetes, hypertension, cerebrovascular diseases, cancer, mental illness and substance-related diseases linked to tobacco use and alcohol abuse. Successive surveys have shown that NCDs and their risk factors represent a major threat to public health development in Mauritius. In spite of the considerable volume of work done by various ministries with regard to alcohol consumption and tobacco use, coordinated efforts by these ministries should be requested to address them more effectively as risk factors for NCDs. Projections indicate that the burden of disease for the single component of alcohol

abuse in this country could increase by as much as 202% in men and 90% in women by 2005, unless alcohol consumption is reduced and prevention and treatment services are improved. Containing the problems of drug abuse and suicide are two other important tasks ahead.

The Island of Mauritius is already facing problems associated with an ageing population. The index of ageing<sup>5</sup>, which was 35.8 in 2001, is projected to rise to 72.18 in 2017 and to 130.35 in 2037. The most vulnerable component of the elderly, namely those aged 75 years and above is increasing. Whereas this group constituted 0.85% of the elderly in 1962, it increased to 2.39% 2001 and is projected to reach 6.9% by the year 2037. Combined with the globalized lifestyle changes already happening since over a decade in Mauritius, ageing will further accelerate the burden of chronic and noncommunicable diseases – including cancers, cardiovascular diseases, diabetes and depression – and require changes in the organization of service delivery. Increasing frequency of multi-morbidity will be more prevalent with an ageing population. Addressing the issue of co-morbidity, with focus on mental health problems - would require a fundamental shift from the current model of health delivery, with greater emphasis on providing comprehensive care to the patient.

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<sup>5</sup> (Number of persons aged 60+ per 100 children aged 0-14 years).

## SECTION 3

# DEVELOPMENT ASSISTANCE AND PARTNERSHIPS

### 3.1 DEVELOPMENT ASSISTANCE

#### *General Framework*

Sustained economic growth during the past two decades has enabled Mauritius to move up to the league of upper middle-income countries. Rising per capita income, coupled with the favorable health indicators, has impacted on Mauritius' eligibility for external aid, especially for the health sector. In fact, rising gross national income has been accompanied by a declining trend in the flow of overseas development assistance (ODA). Overall, gross ODA is relatively meager with an estimated average amount of US\$ 65.2M for the period 2005-2006. Net ODA in 2006 represented only 0.3% of Gross National Income. Bilateral partners are estimated to account for 60% of ODA for the period 2005-2006. France emerges as the most important donor (US\$ 21.3M), followed by the European Commission (US\$ 17.5M) and Japan (US\$ 16.5M).

Apart from WHO Technical Assistance, international development partners, namely World Diabetes Foundation, UNFPA, the World Bank, UNAIDS and the French Corporation Agency are also contributing to the development of the health sector in Mauritius.

#### *World Diabetes Foundation*

As part of the response to curb the diabetes epidemic, a National Service Framework for Diabetes (NSFD) was developed in April 2007. The NSFD is a ten-year programme aimed at making optimal use of and enhancing available resources for better outcomes in the prevention and control of diabetes in Mauritius. The World Diabetes Foundation will provide financial support up to US\$ 400 000 for implementation of the NSDF.

#### *UNFPA*

As a result of the enhanced socio-economic and health indicators, two UN Agencies, namely UNICEF and UNFPA, closed down their respective country offices in Mauritius in December 2003. Since then, UNDP and WHO are the only two UN Agencies with a physical presence in Mauritius. UNFPA, however, still provides from its Madagascar Country Office, programmatic support to Mauritius. Under the present UNFPA Country Programme 2008-2011, the overall goal is to support improvement in SRH of young people and underserved groups and the prevention of HIV/AIDS for a better quality of life, and a more gender-equitable society. The UNFPA country programme will focus, among others, on strengthening availability, accessibility and utilization of comprehensive quality SRH/HIV/AIDS services for the youth and underserved groups; supporting extension of STIs, HIV

prevention programmes and HIV Testing and Counselling (HTC) services. The UNFPA Country Programme budget for the period 2008-2011 is US\$800,000.

### ***Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)***

Mauritius became eligible, after a very long time, for the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM). The proposal submitted by Mauritius to access funds under the 8<sup>th</sup> Round of GFATM was accepted by the GFATM Board in November 2008. The proposal will be supported financially in an amount representing 35%. The remaining 65% will be funded from national sources and, among others, by WHO and UNAIDS. Mauritius, through its two principal recipients, namely the National AIDS Secretariat and the MFPWA, is expected to receive funding amounting to EUR 7.8 M for the first two years, effective 2009.

### ***Multilateral***

The World Bank opened a Country Office in February 2008 to underscore its commitment to its partnership with Mauritius and to enhance the efficiency and effectiveness of its programmes. The World Bank intervention in the health sector at present is to support institutional assessment and capacity building for the National AIDS Secretariat, which was set up in 2007. To that end, the financial support provided by the World Bank, under the IDF grant to the National AIDS Secretariat, will be to the tune of US\$ 480 000 for a period of 18 months, starting from January 2008.

Under the “Indian Ocean Commission HIV/AIDS Regional Project”, funded by the African Development Bank (AFDB) and the French Cooperation Agency, Mauritius benefits from limited support in terms of high-level HIV/AIDS-related workshops.

### ***Bilateral***

The French Government has provided some support for capacity building of health personnel through the placement in French health training institutions and direct technical assistance to the Mauritius Institute of Health for local training programmes. Illustrations of assistance to the Mauritius Institute of Health (training operating arm of the Ministry of Health & Quality of Life) are ongoing partnerships with learning centres such as *Université Bordeaux II* and *Université de Montpellier – Diplôme Universitaire (DU)* in areas of Psychiatry and Cardiology; and General Surgery.

## **3.2 PARTNERSHIP AND DEVELOPMENT AID COORDINATION**

The first and only United Nations Development Assistance Framework (UNDAF), developed for Mauritius, covered the period 2001-2003. With the transfer of the UNICEF and UNFPA offices to Madagascar in December 2003, Mauritius is since classified by UNDG as a ‘Category C /non-harmonized cycle’ country, implying that a CCA/UNDAF process is not a requirement. Instead, its relevance is left to the appreciation of the UN Country Team. On the basis of availability of reasonable national strategic documents providing sectoral analyses and identifying country priorities, the UNCT (Mauritius) decided not to proceed with the CCA/UNDAF process in Mauritius.

The Ministry of Finance & Economic Empowerment is the authority in charge of coordinating grants and technical assistance and ensuring its monitoring and evaluation. There is no formal sector-wide approach (SWAp) mechanism in place to align and harmonize technical and financial support between the Government and all the potential partner

organizations in the health sector. However, the Ministry of Finance & Economic Empowerment is well aware of its role of harmonizing donor support and ensuring its alignment with national plans and strategies. Commitment to promote sector-wide approaches in the future is palpable.

There are three platforms where health partners share best practices, experience, information and discuss challenges, namely the UNTG on HIV and AIDS and the Country Coordinating Mechanism (CCM) for the Global Fund to fight AIDS, TB and Malaria. The UNTG meetings are convened monthly with the chair almost every year. The Country Coordination Mechanism (CCM), which is currently chaired by the NAS, was revamped in February 2008 with Mauritius being eligible for the 8<sup>th</sup> Round of the Global Fund. Since February 2008, the CCM has held monthly regular meetings for preparation of the country proposals. The NAS, with the support of the World Bank, is in the midst of reviewing the existing institutional arrangements to ensure better coordination of the multi-expanded response from different agencies.

Against the backdrop of Programme-Based Budgeting, which is to be embedded in a three-year Medium-Term Expenditure Framework, strategies have to be formulated for each sector/ministry, in particular the Ministry of Health and Quality of Life. As these strategies have to be aligned with the reform programme, a comprehensive health strategy and related programme-based budget will be developed with funding from the African Development Bank and UNDP.

The intervention of development partners in areas relevant to the national burden of disease are illustrated in Box 2 below.

**Box 2: Development Partners**

HIV/AIDS, including Sexual and Reproductive Health and Family Planning	GFATM, UNDP, UNAIDS , World Bank
Noncommunicable Diseases	World Diabetes Foundation
Health Systems and Capacity Building	World Bank, French Cooperation Agency, African Development Bank

## SECTION 4

### WHO POLICY FRAMEWORK: GLOBAL AND REGIONAL DIRECTIONS

WHO has been -and is still -undergoing significant changes in the way it operates, with the ultimate aim of better supporting its Member States to address key health and development challenges, and the achievement of the Health-related MDGs. This organizational change process has, as its broad frame, the WHO Corporate Strategy.

#### 4.1 GOAL AND MISSION

The mission of WHO remains “the attainment by all peoples, of the highest possible level of health” (Article 1 of WHO Constitution). The WHO Corporate Strategy, the 11th General Programme of Work 2006-2015, the Medium-term Strategic Plan (MTSP) and the Strategic Orientations for WHO Action in the African Region 2005-2009 outline key features through which WHO intends to make the greatest possible contribution to health. The Organization aims at strengthening its technical, and policy leadership in health matters, as well as its management capacity to address the needs of Member States, including achieving the Millennium Development Goals (MDGs).

#### 4.2 CORE FUNCTIONS

The work of the WHO is guided by its core functions, which are based on its comparative advantage, namely:

- (a) providing leadership in matters critical to health and engaging in partnerships where joint action is needed;
- (b) shaping the research agenda and stimulating the generation, dissemination and application of valuable knowledge;
- (c) setting norms and standards and promoting and monitoring their implementation;
- (d) articulating ethical and evidence-based policy options;
- (e) providing technical support, catalyzing change, and building sustainable institutional capacity,
- (f) monitoring the health situation and assessing health trends.

#### 4.3 GLOBAL HEALTH AGENDA

In order to address health related policy gaps in social justice, responsibility, implementation and knowledge, the Global Health Agenda identifies seven priority areas.

These include:

- (a) investing in health to reduce poverty;



- (b) building individual and global health security;
- (c) promoting universal coverage, gender equality, and health-related human rights;
- (d) tackling the determinants of health;
- (e) strengthening health systems and equitable access;
- (f) harnessing knowledge, science and technology; and
- (g) strengthening governance, leadership and accountability.

In addition, the WHO Director-General has proposed a six-point agenda:

- (i) Health Development;
- (ii) Health Security;
- (iii) Health Systems;
- (iv) Evidence for Strategies;
- (v) Partnerships; and
- (vi) Improving the performance of WHO.

The Director General has, in addition, indicated that the success of the Organization should be measured in terms of results on the health of women and the African population.

#### 4.4 GLOBAL PRIORITY AREAS

The Global Priority Areas have been outlined in the 11th General Programme of Work 2006-2015. They include:

- (a) providing support to countries in moving to universal coverage with effective public health interventions;
- (b) strengthening global health security;
- (c) generating and sustaining action across sectors to modify the behavioural, social, economic, and environmental determinants of health;
- (d) increasing institutional capacities to deliver core public health functions under the strengthened governance of ministries of health; and
- (e) strengthening WHO's leadership at global and regional levels and supporting the work of governance at country level.

#### 4.5 REGIONAL PRIORITY AREAS

The regional priorities take into account the Global documents and the resolutions of the WHO governing bodies, as well as the health-related millennium development goals, the NEPAD health strategy, resolutions on health adopted by heads of state of the African Union and the WHO strategic objectives, which are outlined in the Medium-Term Strategic Plan (MTSP) 2008-2013. These regional priorities have been expressed in the "Strategic Orientations for WHO Action in the African Region 2005-2009". They include prevention and control of communicable and noncommunicable diseases, child survival and maternal health, emergency and humanitarian action, health promotion, and policy making for health in development and other determinants of health. Other objectives cover health and environment, food safety and nutrition, health systems (policy, service delivery, financing, technologies and laboratories), governance and partnerships, and management and infrastructures.

In addition to the priorities mentioned above, the Region is committed to support countries attain the health MDGs, and assist in tackling its human resource challenge. In collaboration with other agencies, the problem of how to assist countries source financing for the goals of the countries will be done under the leadership of the countries. To meet these added challenges, one of the important priorities of the Region is that of decentralization and the installation of Support Teams to further support countries in their own decentralization process, so that communities may benefit maximally from the technical support availed to them.

To effectively address the priorities, the region is guided by the following strategic orientations:

- (a) strengthening the WHO country offices;
- (b) improving and expanding partnerships for health;
- (c) supporting the planning and management of district health systems;
- (d) promoting the scaling-up of essential health interventions related to priority health problems;
- (e) enhancing awareness and response to key determinants of health.

## **4.6 MAKING WHO MORE EFFECTIVE AT THE COUNTRY LEVEL**

The outcome of the expression of WHO's cooperation strategy at country level will vary from country to country depending on the country-specific context and health challenges. Building on WHO's mandate and its comparative advantage, the six critical core functions of the Organization is adjusted to suit each individual country's needs in line with the WHO Country Focus Policy, which gears the operations of WHO to the needs of Member States at country level.

## SECTION 5

### CURRENT WHO COOPERATION IN MAURITIUS

WHO Medium-Strategic Plan for 2008 -2013, which is developed from the 11<sup>th</sup> General Programme of Work, sets the strategic direction for the Organization. 13 strategic objectives have been formulated with a view to advancing the global public health agenda through a multi-biennial framework. Within the 13 strategic objectives, some specific domains have been identified guiding the work of WHO in Mauritius over the period 2008-2013. These areas, which respond to emerging health concerns, include:

- implementing the International Health Regulations (2005);
- addressing the epidemic of chronic diseases with due focus on measures to reduce risk factors;
- strengthening health systems performance and partnership building.

WHO will endeavour to promote partnership building with a view to mainstreaming interventions within the spirit of “ONE WHO” (that is “one country plan, one country budget”). The brokerage ability of WHO, especially among the developmental partners, will be strengthened so that the organization will act as a catalyst in promoting closer international engagement on national health policies.

The overall goal of the first generation CCS (2004-2007) was to enable WHO to contribute measurably to improve health outcomes and sustenance of an equitable, responsive, financially-fair and sustainable health system in Mauritius. The corporate intent of WHO under the first CCS was to break away from business as usual and undertake a paradigm shift from routine implementation to focus on policy/technical advice (serving as a broker) and sharing information and advocacy. The strategic agenda under the first CCS was drawn from the White Paper for Health Sector Development & Reform (2002) and realigned with the 2006 Country Paper and Health Sector. The CCS spelt out six main components, as shown in Box 3 below.

#### Box 3: WHO/Mauritius 1<sup>st</sup> Generation CCS Agenda

(1) Supporting the development of an Integrated Approach to Health Promotion
(2) Strengthening Surveillance, Management and Prevention of Noncommunicable Diseases
(3) Supporting an Integrated Surveillance of Communicable Diseases
(4) Strengthening Human Resource for Health Planning & Development/Capacity Building
(5) Enhancing Health System Performance
(6) Promoting cooperation and partnership for health development

Technical contributions of WHO to address national priorities during the first WHO Cooperation Strategy and the implementation challenges are outlined below.

## 5.1 CONTRIBUTIONS OF WHO COOPERATION STRATEGY 2004-2007

For the period 2004-2007, the regular budget allocated to HIV/AIDS, Malaria and TB was US\$ 524 000; Noncommunicable diseases and chronic diseases programme was US\$ 604 000 and Health System sub-component was US\$ 376 000.

Funds allocated to Health Promotion in support of NCDs activities amounted to about US\$ 174 000.

Extra-Budgetary funds were also received for various activities during the period, but were not included in the above analyses. The bulk of these funds were obligated to support the health sector's response to HIV/AIDS (approximately 70%).

The major achievements in the five core areas of the CCS are outlined below:

### ***Strategic Component 1: Supporting the development of an Integrated Approach to Health Promotion***

Assessment of risky behaviours among adolescents was carried out. As schools are among the key settings through which the health status of the youth and the wider community can be promoted, a Global School-Based Health Survey (GSHS) was conducted in secondary schools, including in the Island of Rodrigues. The findings of the survey would provide a baseline of prevalence of health risk behaviours among students and the basis for future periodic monitoring. The support of the WHO Regional Office for Africa in building national capacity of a critical group in the area of health promotion is acknowledged. With the support of WHO, regular media campaigns on the promotion of healthy lifestyles, with focus on NCDs and related risk factors, as well as impact evaluation of these campaigns were conducted.

Health promotion has been strengthened through interventions in areas like alcohol and tobacco control, physical activity, nutrition, and HIV/AIDS. Community awareness on issues of national concern has been promoted through the conduct of media campaigns and the production of educational materials. The capacity of national health personnel was strengthened through participation in regional meetings and workshops organized by WHO.

### ***Strategic Component 2: Strengthening Surveillance, Prevention and Management of Noncommunicable Diseases***

Surveillance systems for cancer were strengthened with the implementation of the second phase of the Cancer Registry generating evidence for health policy makers to support implementation of policies and cost effective strategies. Under its second implementation phase, the National Cancer Registry has successfully undertaken a fundamental shift to a population-based registry; whereby private laboratories and clinics are encouraged to participate; the quality of data collected for each case has been enhanced; and the survival pattern of the different types of cancer reported and the quality of care to cancer patients evaluated. This is documented by the Cancer Incidence Study for 2001-2002 and the Cancer Mortality Survey for 2003-2004. Advocacy building within the health sector and national stakeholders on the burden of cancer and consensus building on what should constitute the strategic orientations of the National Cancer Control Programme for delivery of cost effective cancer prevention and control interventions were achieved.

Mauritius has one of the highest prevalence rates of diabetes mellitus world-wide, with one out of every five adults aged 30 or above being affected. This is further exacerbated by the rate of poorly-controlled diabetic persons, which is as high as 40%. A National Service Framework for Diabetes (NSFD) has been formulated and is being implemented. The new measures taken, include the following: Glycated Haemoglobin (HbA1C) measurements are now available; a Digital Retinal Screening Programme is being introduced in a phased manner; a pediatric service is being set up; protocols for the management of diabetes have been developed and disseminated; an International Advisory Committee has been set up to advice on the implementation of the NSFD, to support proper management of care of poorly-controlled diabetics patients.

The support of WHO has enabled the national programme to further scale-up its secondary prevention strategic interventions by building laboratory capacity in terms of HbA1C services, especially for management of diabetes, particularly among poorly-controlled patients. Moreover, since 2007, the national laboratory service is enrolled in an external quality assessment for HbA1C.

The present Mental Health Legislation (enacted in 1998) sets out procedures for admission and discharge of patients, provisions for treatment issues (from the perspective of care providers), plan of treatment, follow-up, etc. To promote the decentralization of mental health services and facilitate integration of mental health patients and with the technical support of WHO, the current legislation has been reviewed and proposals put forward to strengthen some components, in particular the integration of patients into the communities and, along with the latter, community psychiatric services/care. A national strategic plan for Mental Health was developed in 2005 and reviewed in 2007.

Support was provided for the conduct of the National NCD Survey 2004, in the design of the survey, data collection and analysis. The level of support has been designed and dispensed, such that the capacity of the national team is further strengthened to ensure sustainability of the programme in terms of surveillance. In the same vein, WHO provided technical support for the anthropometric analysis of the National Nutrition Survey 2004.

Mauritius forms part of the Global Tobacco Surveillance System established by WHO and it conducted its first Global Youth Tobacco Survey (GYTS) in 2003. The use of a common methodology by all countries conducting the GYTS facilitates the comparison of data at the global level.

Mauritius also ratified the Framework Convention on Tobacco Control (FCTC) on 17 May 2004. Since then, it has taken some important initiatives to control the tobacco epidemic and meet its obligations towards the global community. A National Action Plan on Tobacco Control for the period 2007-2011 has also been developed and the existing tobacco legislation is being revised in order to enforce stricter control in areas like the sale of tobacco products to minors, advertising, promotion and sponsorship, illicit trade, packaging and labeling”

### ***Strategic Component 3: Strengthening Human Resource for Health Planning & Development/Capacity Building***

The evaluation of the first Diploma Course in Community Psychiatric Nursing undertaken by WHO has enabled the trainers and curriculum developers to identify existing weaknesses, draw lessons for future programmes and also learn best practices from other similar courses organized regionally and internationally. Furthermore, a critical mass of over hundred community physicians and community health workers have received in-service training in

the provision of basic mental healthcare and this has been beneficial and facilitated the integration of patients with minor disorders in the community. Furthermore building the capacity of healthcare personnel in the identification and follow-up of patients with mental health disorders has helped to relieve unnecessary workload on the sole psychiatric hospital of the island and, thereby, allowed the specialists to concentrate on the most important cases.

#### ***Strategic Component 4: Supporting an Integrated Surveillance of Communicable Diseases***

In response to the epidemic, essentially IDU-driven since 2002, the Government implemented a three pronged harm reduction strategy focusing on methadone substitution therapy, needle exchange and enactment of a legislation on HIV and AIDS. To facilitate the introduction of methadone as substitution therapy for opiate addicts, WHO technical support was sought accordingly. Guidelines were provided to develop standard protocols and a training programme was developed for a critical mass of medical and paramedical staff involved in the management of care for IDUs, including the prescription and dispensing of methadone.

As planned under the 2003-2007 CCS, the 2001-2005 HIV/AIDS Multi Sectoral Strategic Plan was evaluated. The findings and recommendations of the evaluation exercise were critical inputs for developing a new National Multisectoral Strategic Framework for HIV/AIDS (covering the period 2007-2011). The new NSF developed with the technical support of WHO Intercountry Support Team for Eastern and Southern Africa is based on the 'Three Ones' principle.

WHO in joint collaboration with UNAIDS supported the drafting of an HIV and AIDS legislation aimed at providing measures for the control and prevention of the spread of HIV and AIDS, protecting the human rights of persons infected or not with HIV, regulating HIV testing and counselling services and providing a legal framework for the implementation of the needle exchange programme. The HIV and AIDS Act was passed in August 2007, following extensive consultations with all national stakeholders (ministries, NGOs and associations/network of PLWHIV). WHO also contributed to the purchase of the necessary equipment for implementation of the needle exchange programme.

Monitoring and Evaluation is carried out, on yearly basis, on HIV prevalence among high-risk groups (sex workers, injecting drug users and prison inmates) and other HIV/AIDS-related issues.

WHO contributed significantly to the strengthening the surveillance mechanism of the Malaria Control Programme through entomological surveys and offer of logistical support for screening visitors entering Mauritius after visiting a malaria-endemic country, continuing education and training of staff and upgrading of laboratory facilities for early case detection. In support of larviciding of potential risky malaria-breeding foci, the entomological unit has been equipped with spraying and protective materials to ensure the safety of field workers, as well as adequate supply of abate. As part of the ongoing surveillance activities blood samples are taken from passengers arriving from malaria-endemic countries.

WHO facilitated the implementation of the National Preparedness Plan for Avian Influenza in terms of equipping isolation wards of main regional hospitals.

In response to the outbreak of the chikungunya epidemic in early 2006, a joint WHO HQ and AFRO rapid assessment mission was fielded to Mauritius as well as other affected islands in the Indian Ocean region to evaluate its impact and advise national authorities in

developing a sub-regional and national coordinated strategy for strengthened surveillance and early warning systems. A multi-pronged preventive response hinged on vector control (including chikungunya, dengue and malaria), and social mobilization strategies to ensure efficient eradication of mosquito breeding sites was developed. In the same vein, WHO supported national authorities in developing and implementing a Communication for Behavioural Impact (COMBI) Plan for Chikungunya vector transmission control and prevention.

In the area of Tuberculosis control, WHO has played a significant role, by contributing to the strengthening of the laboratory and logistics of the national programme to implement the DOTS Strategy.

### ***Strategic Component 5: Enhancing Health System Performance***

Implementation of the tenth revision of International Classification of Diseases (ICD 10) scaled-up with the reporting of mortality cases effective from 2005. With the technical support of WHO, training programme has been designed and mounted to train a critical mass of medical record officers on ICD 10. This has enabled the Health Statistical Unit of the Ministry of Health & Quality of Life to sustain reporting of all morbidity (since 2003) and mortality cases under ICD 10.

In the framework of implementation of a Quality Assurance Programme at the national Blood Transfusion Services Unit, a rapid assessment of Quality Management System in place at the BTS of the Ministry of Health (Mauritius) was conducted with technical support from WHO. In line with the recommendations of the rapid assessment, a training programme on building national capacity in Quality Management Systems and consisting of five levels was implemented with facilitators from WHO.

A second follow-up situational assessment of the Blood Transfusion Services unit was conducted in 2007. Limitations mainly pertaining to availability of basic equipment essential for maintaining quality and sterility of blood and blood products were addressed with the purchase of core set of equipment with financial support from WHO.

### ***Strategic Component 6: Promoting Cooperation and Partnership for Health Development***

The Ministry of Health & Quality of Life was supported in preparing for observation of International Health Days such as the World Health Day, the World No Tobacco Day, the World Mental Health Day, the World Diabetes Day and the World AIDS Day.

## **5.2 REALIGNING CCS TO CHANGING PRIORITIES IN MAURITIUS**

The CCS represents WHO's medium-term strategic directions, based on the needs of each country. However, country priorities do change and, therefore, the focus of the strategic agendas needs some re-orientation. For instance, one of the core strategic objectives of the 2003-2007 CCS was to support the Ministry of Health & Quality of Life in the implementation of the White Paper for Health Sector Development and Reform. To that end the focus of strategic objective 5 was to provide technical advice for the introduction of a 24-hour family doctor service with a view to ensuring a more coherent screening service for NCDs and its risk factors and provide technical assistance in designing and developing a National Health Insurance Scheme as well as identifying efficient financing mix options to fund the proposed components of the Health Sector Development and Reform. As the White Paper for Health Sector Development and Reform was put on hold strategic objectives 5 was reviewed.

### 5.3 SUPPORT FROM WHO REGIONAL OFFICE AND WHO HEADQUARTERS

At the request of the Government of Mauritius and within the framework of regional initiatives developed as a follow-up to Regional Committee recommendations, Mauritius benefited from the visit of several missions by experts from the Regional Office for Africa and, in some cases, from both AFRO and HQ. The national stakeholders commended the excellent quality of the level of technical support provided by WHO Experts, especially in terms of policy formulation and institutional capacity development. WHO/AFRO and HQ supported the participation of technical officers from the Ministry of Health in meetings of WHO governing bodies, technical and program review meetings, joint missions to countries and increasing information exchange.



## SECTION 6

### STRATEGIC AGENDA

The mission of WHO in Mauritius, which draws from the constitution of the organization, continues to work towards *“the attainment of the highest possible level of health by the people of the Republic of Mauritius”*. The overall goal of this CCS is to enable the WHO to contribute measurably in improving health outcomes and promoting an equitable, responsive, financially fair and sustainable health system in Mauritius.

#### 6.1 STRATEGIC INTENT

Drawing from the analysis of the health trends and situation and emerging challenges besetting the health sector over the medium to long term, past WHO country programmes and that of health development partners, the work of WHO with and in Mauritius will be organized around three core areas of WHO Global Agenda as identified under the WHO Eleventh General Programme of Work: A: Building individual and global health security ; B: Tackling the determinants of health and C: Strengthening health systems and equitable access. On the basis of the above Agenda, 5 strategic priorities have been developed and agreed upon, and will form the basis of the CCS for the period 2008-2013 and the development of future workplans.

#### Box 4: WHO Strategic Priorities & Directions 2008 – 2013

Directions	Strategic Priorities / Objectives
A. Building individual and global health security	A.1: To strengthen the control and prevention of new HIV infection and to provide a continuum of comprehensive care to all PLWHIV in order to mitigate the impact of the HIV epidemic on the population at large
	A.2: To support and sustain national capacity building of competencies required by the International Health Regulations for alert and response systems in epidemics and other public health emergencies
	A.3: To build national capacity to ensure efficient detection, assessment and response to major epidemic and pandemic-prone diseases
B. Tackling the determinants of health (behavioural, social and environmental) through sustainable multi-sectoral action	B.1: To promote healthy lifestyles and cost-effective primary and secondary care interventions for prevention and control of major NCDs and injuries, and promotion of mental health
C. Strengthening health systems and equitable access	C.1: To strengthen health system capability so as to adopt a results-based approach for effective policy-making in line with the spirit of the Programme-Based Budgeting and Medium-Term Expenditure Framework
	C.2: To enhance the planning, provision (with focus on equitable access) of essential medical products, services and technologies of assured quality and responsiveness to users

***Strategic Priority A.1: To strengthen the control and prevention of new HIV infection and provide a continuum of comprehensive care to all PLWHIV in order to mitigate the impact of the HIV epidemic on the population at large.***

In view of the intricate links between IDUs and their occasional sexual partners and other risk-taking behaviours indicate potential extensive transmission in the general population, Mauritius faces an emergency situation in the region. The strategies will aim at scaling-up HIV/AIDS preventive and treatment services to reach out to the majority of the not-yet-reached injecting drug users, their regular sex partners and sex workers, and other vulnerable groups like migrant populations, street children, etc .

The decentralization of HIV/AIDS services and management through an expansion of ARV and VCT sites as well as methadone dispensing units within the health sector is a precondition. This objective will provide for comprehensive management of HIV for PLWHIV, including treatment with ART, prophylaxis and treatment of opportunistic infections, psychosocial support, pre- and post-initiation adherence counselling. Expansion of ART services will require significant investments in training and skills development of clinical, counselling, pharmacy and laboratory staff, as well as increased equipment and supplies.

National commitment to the Abuja and Maseru Declarations, UNGASS, MDGs and World Health Assembly Resolutions on HIV and AIDS demonstrate the prominent position of HIV/AIDS on the multi-sectoral agenda in Mauritius.

To ensure timely tracking of this rapidly evolving epidemic trend and its drivers, a sound and quality HIV surveillance system, which will provide data for policy, planning, M&E and advocacy is critical. A situational assessment of HIV/STI Serological and Behavioural surveillance system has been undertaken to set the basis to initiate the 2<sup>nd</sup> Generation Sentinel System, which will include: sentinel sero-surveillance among the sub-population such as IDUs, CSWs, MSM, pregnant women attending ante-natal clinics, STI and TB cases; and behavioural surveillance – MARP-based surveys (every two years) and general population-based surveys (every five years). In line with the recommendations of the situational assessment, WHO technical support will be available to:

- develop the national HIV/ STI Surveillance plan;
- develop the HIV surveillance protocol;
- decentralization and establish a system of contact tracing;
- review the data management system and the human resource component of HIV/STI surveillance;
- enhance the patient monitoring system.

The M&E Monitoring and Evaluation Unit in NAS is established under the umbrella of the Prime Minister's Office (PMO).

Decentralization and integration of HIV/ STI services at all levels of sexual and reproductive health services will be scaled-up.

**Main Focus**

WHO will provide technical support to strengthen the ongoing harm reduction interventions in particular through the scaling-up of the needle exchange and methadone substitution therapy programme.

The strengths and weaknesses of each of the existing components of the Mauritius HIV/STI surveillance system will be identified, using the guidelines of 2<sup>nd</sup> generation surveillance as a best practice. More specifically, the availability and quality of national HIV/AIDS/STI surveillance framework (behavioural surveillance/surveys, focusing on MARP and 'bridging' population; HIV sentinel surveillance for the general population; surveillance for STIs and other blood-borne infections, particularly Hepatitis C) will be assessed. A surveillance plan and protocol will be developed to address the existing gaps identified above.

Counselling and testing is a key entry point to HIV/AIDS care and treatment, as well as prevention services. The lack of decentralization of testing services would hamper the efficacy of the programme. WHO will ensure the promotion of a comprehensive approach, including training of health professionals for rapid testing with 100% sensitivity, to screen widely all negative profiles. As part of the comprehensive approach to be adopted for rapid testing, Standard Operating Procedures detailing instructions on all aspects of testing would be produced. The development of Standard Operating Procedures together with the training components will ensure a quality system approach, as well as accuracy and reliability on Rapid HIV Testing.

National Guidelines for Home-based and Palliative Care will be developed to guide providers and caregivers in the implementation and ensure quality care.

***Strategic Priority A.2: To support and sustain national capacity building of competencies required by the International Health Regulations (IHR) for alert and response systems in epidemics and other public health emergencies***

With the entry into force of IHR in 2007, the Member States are committed to developing and strengthening the national core competencies for surveillance and response. This entails surveillance and early warning for epidemic-prone diseases and essential diagnostic; response and communication capacities.

**Main Focus**

Initially, WHO's technical and financial resources will be made available to assist national assessments of IHR compliance and preparation of action plans to build capacity and meet IHR requirements. This will be followed by technical support for implementation of action plans as well as the monitoring and evaluation of achievements.

WHO will promote institutional capacity building within the MIH to mount initially short-term training programmes (3 weeks) in applied field epidemiology targeting health personnel involved in surveillance activities. Field epidemiology and laboratory training programmes of longer duration to strengthen and sustain adequate functioning of the surveillance mechanism, and the epidemic and early warning system. In the same vein, there is need for a full-fledged epidemiologist for an effective alert and response system. An appropriate alternative may be intensive training by an expert in this area for a small group of officers, including Regional Public Health Superintendents, Health Statisticians and officers c the Health Inspectorate. This group of trained officers will be responsible for the Monitoring and Evaluation Mechanism in respect of the International Health Regulations implementation process.

### ***Strategic Priority A.3: To build national capacity to undertake better detection, assessment and response to major epidemic and pandemic-prone diseases***

The avian influenza crisis and its related threats as a global pandemic underscores the importance of putting in place standard operating procedures and stock piling of medicines, which are critical to mitigate the potential impacts.

#### **Main focus**

Technical assistance will be provided for the various aspects of pandemic preparedness and response. The national preparedness plan for the influenza pandemic, incorporating the medical and non-medical response, will be developed, implemented and tested.

### ***Strategic Priority B.1: To promote healthy lifestyles and cost-effective primary and secondary care interventions for prevention and control of major NCDs and injuries, as well as mental health***

Behavioural modifications through the implementation of comprehensive health promotion strategies need to be pursued to address the risk factors impacting adversely on the incidence of noncommunicable diseases and the health of the population. In the same vein, improvement in the quality of life will be mainly possible through the adoption of a multi-sectoral approach to health promotion. Health promotion provides an effective combination of educational, preventive and protective approaches that can impact positively on lifestyles and the overall health of the population.

A comprehensive School Health Programme is now in place. Screening for early detection of NCDs and Health Promotion activities is underway at work sites.

Implementation of a comprehensive public health approach that builds on multisectoral collaboration and evidence-based strategies will to a large extent determine the success of the ongoing national programme in addressing the risk factors driving the problems of NCDs. WHO will continue to promote and support the development of coordinated and distinct responses to chronic NCDs, mental disorders and mental health, based on a comprehensive and integrated action. Reviewing the prevention programmes for NCDs and reorienting the focus on primary prevention will be pursued, while concurrently promoting community participation and upgrading primary healthcare settings.

Chronic mental illnesses leading to chronic disability remain a daunting challenge. To address the increasing prevalence of mental illness the national policy for decentralizing mental health service and integrating mental health services into primary care is to be scaled-up. In the same vein, community psychiatry is to be further promoted. The present Mental Health Legislation (enacted in 1998) set forth procedures of admission and discharge of patients provisions for treatment issues (from the perspective of care givers), plan of treatment, follow-up, etc.

The incidence of over-nutrition and diet-related degenerative diseases are on the increase. The contributing factors are the changing food habits and preferences; stressful lifestyles, time constraints and lower physical activities; switching over to fast and convenient foods; low intake of fibres, fruits and vegetables, aggravated by increasing consumption of salts and fats. In response to this challenge, a National Nutrition Action Plan has been developed and will be implemented soon.

## Main Focus

Building national capacity within the NCD programme for the analysis and interpretation of data for report writing and results-based approach for effective policy-making is a priority.

The implementation of the strategic framework and national action plans developed to address the prevention, management and surveillance of chronic diseases and NCDs and related risk factors will be the focus of WHO technical and financial support. This will include support in implementation of the following:

- National Nutrition Action Plan;
- National Tobacco Control Action Plan;
- National Cancer Control Action Plan;
- Physical Activity Action Plan;
- Cardiovascular Disease Prevention Strategy;
- National Service Framework for Diabetes.

A core and important focus of the NCD National Action Plan is on health promotion interventions with a view to changing NCD-related lifestyles and shaping up prevention-related practices in the population and among patients. WHO will support the scaling-up of implementation of effective interventions, especially in the following areas:

- (i) Behavioural targeted media campaigns;
- (ii) policy development, strategic framework and review of legislations to control alcohol and tobacco consumption;
- (iii) review of nutrition policies with focus on food labelling, intake of salt and saturated fats.

Along with health promotion, an important aspect of NCD prevention is the ongoing monitoring of risk factors. This is critical for evaluating the impact of prevention and health promotion activities aimed at addressing the risk factors in the population. The previous NCD population-based surveys have generated reliable trend data on risk factors, thereby, making it possible for the process policy-makers to review and fine-tune prevention the interventions. WHO will continue to provide technical support for future NCD surveys. In line with the NCD National Action Plan's objective of monitoring ongoing changes in target behaviours (lifestyles and prevention practices), WHO will support process evaluation in terms of simple (interview) population surveys.

To promote the decentralization of mental health services and facilitate the integration of mental health patients, the current legislation needs some revision to cater for community psychiatric services/care.

Technical support will be made available for setting-up Community Psychiatric Services, which will serve as the basis for implementation of the Community Treatment Order (CTO), as proposed under the Mental Health Act.

In line with the VISION 2020 Global Initiative, WHO will continue to support the development of a national action plan to address the problem of visual impairment and its implementation, with the focus on the disease control aspect related to NCDs and prevention of visual impairment.

### ***Strategic Priority C.1: To strengthen health–system capability to adopt a results-based approach for effective policy-making in line with the spirit of the Programme-Based Budgeting and Medium-Term Expenditure Framework***

The Government of Mauritius is implementing a broad-based economic reform programme focusing, among others, on fiscal consolidation and enhancing the efficiency of the public sector with a view to steering the economy to a higher economic growth path. At the core of the economic programme is the introduction of a Programme-Based Budget (PBB). A country paper for the Health Sector was prepared in 2006, setting the basis for the formulation of the PBB in 2007/08. A comprehensive Health Sector Strategy is being formulated to guide the implementation of the PBB and the Medium-Term Expenditure Framework for 2008-2011.

#### **Main Focus**

WHO will use its technical expertise to support the development of a comprehensive health strategy and its implementation.

The formulation of a Human Resource for Health strategy for the medium-term that would cover issues relating to motivation, retention, succession planning and reducing wastes is critical as it would help achieve an optimum match between existing and required skills as the current predominance of NCDs and the threat of emerging health problems require periodic update of skills and maintenance of high standard of performance.

### ***Strategic Priority C.2: To enhance the planning, provision (with focus on equitable access) to essential medical products, services and technologies of assured quality and responsiveness to users***

Within the framework of the re-organization of the laboratory services and, as recommended by the WHO Assessment Team, quality manuals will need to be developed. Standard Operating Procedures would have to be reduced by merging some of them into one document, and attaching the relevant instructions. There is also a need to revise some Standard Operating Procedures to conform to the materials used and the current practice in some regional blood banks.

The participation of the Blood Transfusion Services and other laboratory departments in an External Quality Assessment (EQA) schemes is envisaged. The implementation of the guideline developed on appropriate clinical use of blood and blood components is to be intensified. To that effect, it is important to ensure that the Hospital Blood Transfusion Committees are made functional. The Hospital Blood Transfusion Committees, in collaboration with Blood Transfusion Service, should ensure the implementation of a hemovigilance programme in the country. A road map for health laboratory services for the period 2008-2012 is under preparation.

Support will be geared towards framing health-sector policy and implementing change, through systematic collaboration when undertaking the national strategic planning exercise and reform of the health system. Efforts to enhance health service delivery through evidence-based and informed advice on innovative strategies for restructuring health services will be intensified. An integrated approach for delivery of health services across health institutions to ensure a continuum of care for patients, with the focus on quality of care and patient safety, will be a priority. Moreover, WHO support will aim at improving further the performance of health systems, by strengthening the development and management of the health workforce in order to achieve better quality of care.

## Main focus

Health Laboratory Services are undergoing major re-organization and a Road Map document is being finalized. WHO will be approached to provide assistance for the formulation of a National Health Laboratory Services Policy and for capacity building in developing laboratory quality and safety programmes in view of preparedness of accreditation. Further support will be required to ensure effective implementation of the policy on blood transfusion.

WHO will support the strengthening of the drug management and regulatory system, with particular emphasis on quality assurance and pharmaco-vigilance. It will also provide technical support in undertaking surveys to monitor the availability and affordability of essential medicines. This survey is critical for the development of an evidenced-based pricing policy, which is an essential component of any national drug policy.

## 6.2 LINKAGES OF THE STRATEGIC AGENDA WITH NATIONAL HEALTH PRIORITIES

Based on the WHO 11<sup>th</sup> General Programme of Work (which defines the six core functions of the organization) and the Medium-Term Strategic Plan 2008-2013 (MTSP), this second generation Country Cooperation Strategy for Mauritius has been aligned with national priorities, and harmonized with the work of the agencies of the United Nations system and other partners in Mauritius. The Strategic Agenda of this CCS – developed under the Strategic Priorities and focus – have strong linkages with the national health priorities of the Government of Mauritius, as well as with the six core functions of WHO and the WHO Strategic Objectives of the MTSP, which sets out the policy, planning and implementation framework for WHO's work at country level. Box 5, below, illustrates how and where the CCS country-specific strategic directions are linked with national priorities.

### Box 5: Linkages Between CCS Strategic Priorities and National Priorities

National Priorities	A.1: To strengthen the control and prevention of new HIV infection and to provide a continuum of comprehensive care to all PLWHIV in order to mitigate the impact of the HIV epidemic on the population at large	sustain national capacity building of competencies required by the International Health Regulations for alert and response systems in epidemics and other public health emergencies	B.1: To promote healthy lifestyles and cost-effective primary and secondary care interventions for prevention and control of major NCDs and injuries, and for mental health promotion	C.1: To strengthen health – system capability so as to adopt a results-based approach for effective policy-making in line with the spirit of the PBB and MTEF	C.2: To enhance the planning, provision (with focus on equitable access) to essential medical products, services and technologies of assured quality and responsiveness to users
<b>CCS PRIORITIES</b>					
1. Public health Interventions (Health Education and promotion, Immunizations and Occupation and Environmental Health)	+++	+++	+++	+++	+++
2. Communicable Disease Control (HIV and AIDS, STIs, TB, Malaria, )	+++	+++	+	+++	+++
3. Noncomm-unicable Diseases ( Surveillance & Management) and health promotion	++	+	+++	+++	+++
4. Strengthening of Health Systems through upgrading of facilities at the three levels ( primary, secondary and tertiary)	++	+	++	+++	+++

Notes: + + +: Very strong linkage; + +: Strong Linkage; +: Some Linkage



## SECTION 7

# IMPLEMENTING THE STRATEGIC AGENDA

### 7.1 IMPLICATIONS FOR WHO COUNTRY OFFICE

As set out under the previous sections, the Government of Mauritius is engaged in a fundamental reform of the health sector. Against this background, it is the corporate intent of WHO to move towards providing more strategic technical support and expertise in priority areas with a shift from procurement activities with substantial financial implications and to some extent scaling down non-essential routine implementation.

More specifically, WHO will work with the Government to bridge the gap between policy intention and policy implementation.

WHO will be called upon to play a more prominent role in terms of supporting policy development, technical advice (serving as a broker) and sharing information and advocacy. Support for routine implementation will be scaled-down except for strengthening surveillance of communicable diseases, health promotion activities and scaling-up of HIV prevention programmes.

The present CCS document developed through extensive consultation and consensus will be made a core and integral part of the WHO Budgeting, Managerial and Planning Process. The CCS will be the basis for formulating and implementing Biennial Plan of Actions and act as an important tool for promoting policy dialogue. It is expected that implementing the strategic agenda as spelt out in this CCS is a dynamic process, as the CCS will be updated and revised as and when required, with the active involvement of all stakeholders.

In order to ensure implementation of the strategic agenda of the CCS and, in the process, effective and efficient performance of WHO Core functions, the WCO Team would be required to uplift its existing set of competencies. As the strategic intent and focus of the second generation CCS differs from the previous one, some new capacities would have to be developed within the Country Office. The WCO will need to maintain a balance of highly technical staff and be strengthened in critical programme areas.

As was the case for the first CCS, an enabling work environment, with increased administrative and managerial efficiency as well as adequate logistics is of essence for the WHO Country Team to carry out WHO core functions and deliver as per expectations. In the wake of GSM and the WHO Regional Office going live in 2009, all staff will be provided with the training needed to effectively utilize the GSM. In the same vein, investments in terms of strengthening the ICT infrastructure needed to support the increasing ICT needs will be pursued.

As the leading technical authority in health matters, promoting coordination and partnership for health development is at the centre of WHO's work in Mauritius. The CCS will provide the leverage and orientation of the WHO Country Office work with organizations

of the United Nations system and development partners. In the same vein, the CCS will determine WHO input into health and national health development processes. Through the CCS the WCO will be expected to ensure delivery of quality of services while ensuring that complementarity of effort could be enhanced through intensified coordination

WHO will have to re-position itself to reaffirm its commitment to support national authorities in its mission to assume its stewardship role. The role of WHO as a broker among the developmental partners will be strengthened to enable the organization to act as a catalyst in promoting closer international engagement on national health policies.

## **7.2 IMPLICATIONS FOR WHO REGIONAL OFFICE**

Implementation of “one WHO country plan and budget”, based on the CCS, and ensuring timely response to emergencies will require, first and foremost, an integrated approach in terms of programmatic and technical support from the WHO Inter-country Support Team for Eastern and Southern Africa (IST) and AFRO. Within the framework of the policy of decentralization of technical support in place through the setting-up of Inter-country Support Teams (IST), it is expected that the IST/Eastern and Southern Africa, based in Zimbabwe, would provide the first level response. More thorough technical backstopping for implementing the Strategic Agenda in the areas where expertise is not available in the country will be tapped from AFRO.

## **7.3 IMPLICATIONS FOR WHO HEADQUARTERS**

In view of the specificity of the WHO Country Office, especially in terms of staffing and competencies in specific areas, the success of implementing the CCS efficiently and also addressing other national health development challenges hinges on the commitment and responsiveness of regional offices and headquarters to provide timely and high quality technical staff. WHO Headquarters, through AFRO, will continue to provide the Country Office with policy advice, directives on health development, and guidance on global norms and standards. Another explicit implication of the CCS is that WHO Headquarters would be expected to promote innovative approaches, technologies, tools and guidelines for especially noncommunicable disease control and related risk reduction, harm reduction (needle exchange programme and methadone substitution therapy) health-care management and service delivery. More over, WHO Headquarters would promote resource mobilization for the country at the global level.

## SECTION 8

### MONITORING AND EVALUATION

The CCS process and document will be fully integrated into the WHO Managerial Process at the three levels. The CCS Strategic Agenda will be translated into the Programme Budget and Biennial Plans of Action and used as basic document for developing the next two Biennial Plans of Action. The CCS Strategic Agenda will be used as the basis for developing Country-Specific Expected Results. In the WHO results-based management framework, performance indicator(s), baselines and targets for each Country Specific Expected Result will be established within the workplans to allow for monitoring and assessment of the performance of the Country Office.

Programmatic implementation of the CCS Strategic Agenda will be monitored periodically at six months interval on the basis of operational plans developed for each biennium. The Semi-Annual Monitoring in-built within the Managerial Process of the Plan of Actions will review progress and adopt remedial actions for implementation of specific activities. At the end of the first year of each biennium, a mid-term review will be initiated to assess the progress towards realization of Country Specific Expected Results derived from the Strategic Agenda and for which WHO are accountable. Issues and concerns will be identified to that end and as well as actions required to enhance and scale-up progress towards achieving the stated results.

Programme-Budget Performance will be evaluated at the end of each biennium with focus on adequacy of the results achieved and its contribution and relevance to national, regional and global priorities; and the efficiency with which the results were achieved. Lessons learnt and best practices emerging from the biennial evaluation will serve as inputs in the formulation of Country-Specific Expected Results derived from the CCS Strategic Agendas and future plans of actions.

To ensure that the work of WHO at country level through the CCS addresses the changing and evolving health challenges, an expanded CCS group will be established to determine and monitor the relevance of each Strategic Agenda. In addition to the monitoring and evaluation mechanism described above, a CCS Support Network involving the three levels of the Organization, MOH and selected key partners will evaluate and review the Country Cooperation Strategy for impact and adjustments as deemed necessary or at least 6 months before the end of the year indicated on the document.

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