WHO-CHINA Country Cooperation Strategy

2008-2013







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Foreword

The World Health Organization and the Government of the People's Republic of China have been working together to improve the health of people throughout China for many decades. The first Country Cooperation Strategy (CCS) in China covered the period 2004 to 2008. This second CCS is unique in that it is the first to be signed jointly by WHO and the Government of China, representing both the strengthening of this valued partnership and the shared commitment to advance health outcomes in the country.

The Country Cooperation Strategy presents a common vision of priority health areas for WHO-China collaboration in the coming five years. At its core, WHO and China cooperation aims to strengthen the national health care system to meet the needs of its people, and ensure that all Chinese citizens have access to essential health care, especially the most disadvantaged and those living in rural and remote areas. Collaboration in health between WHO and China also means mutually beneficial gains. In a rapidly changing and populous middle-income country like China, WHO's international technical expertise and evidence-based policy advice assists China to attain more equitable health outcomes, and supports progress towards the achievement of global health norms and standards, as well as the Millennium Development Goals. Similarly, China's contributions to international public health are essential for cross-border issues such as the prevention and control of infectious diseases, food and drug safety, and environmental health. In addition, China has considerable technical knowledge and an increasingly wide range of good public health experiences, lessons and practices to share with other countries.

It is in this spirit of partnership that WHO and China have developed the CCS. The CCS agenda was identified through a consultative process involving WHO, the Ministry of Health and other government agencies, UN agencies, as well as other multilateral, bilateral and NGO health partners. Careful analysis of national priorities, the country context, health challenges and opportunities, have led to a set of important strategic programme areas focused on supporting country efforts to strengthen health systems, to reach health-related MDGs, to reduce the high burden of noncommunicable diseases and related diseases, and to address emerging public health threats.

The CCS strategic agenda is framed in the context of China's public health goals and WHO's strategic objectives for this period. Both WHO and the Government of China remain deeply committed to ensuring that the strategy and plans outlined in the CCS are implemented effectively at both central and local levels. The WHO Representative Office in China, the Western Pacific Regional Office and Headquarters will continue to provide resources and technical support based on the highest international standards. We are confident that the implementation of this CCS will contribute to significant improvements in the health status of the people of China.

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Acronyms

AEFI Adverse Events Following Immunization
AIDS Acquired Immune Deficiency Syndrome

APSED Asian Pacific Strategy for Emerging Diseases

ART Antiretroviral Therapy BOD Burden of Disease

CARES China Comprehensive AIDS Response Program

CCA Common Country Assessment
CCM Country Coordinating Mechanism

CCP Chinese Communist Party
CCS Country Cooperation Strategy

CDC Center for Disease Control and Prevention
CIDA Canadian International Development Agency

cVDPV Circulating vaccine-derived poliovirus

DALYs Disability-adjusted Life Years

DOTS Directly Observed Treatment – Short Course

DFID Department for International Development (United Kingdom)

EPI Expanded Programme on Immunization

EU European Union

FAO Food and Agricultural Organization of the United Nations

FCTC WHO Framework Convention on Tobacco Control GAVI Global Alliance for Vaccines and Immunization

GDP Gross Domestic Product

GFATM Global Fund to Fight AIDS, Tuberculosis and Malaria

GNI Gross National Income

GPW WHO General Programme of Work

HCV Hepatitis C Virus

HDI Human Development Index HIV Human Immuno-deficiency Virus

IBRD International Bank of Reconstruction and Development ICC Interagency Coordinating Committee (for immunization)

IHR International Health Regulations
ILO International Labour Organization

IMR Infant Mortality Ratio

IWA International Water Association

JBIC Japanese Bank for International Cooperation
JICA Japanese International Cooperation Agency

MDGs Millennium Development Goals
MDR TB Multi-Drug Resistant Tuberculosis
MFA Medical Financial Assistance

MLSS Ministry of Labor and Social Security
MNT Maternal and Neonatal Tetanus

MOCA Ministry of Civil Affairs

MOEP Ministry of Environmental Protection

MOF Ministry of Finance MOH Ministry of Health

MOU Memorandum of Understanding

MMR Maternal Mortality Ratio
MPS Ministry of Public Security



MSM Men who have Sex with Men

MTSP Medium-term Strategic Plan (2008-2013)

MTSP SO Medium-term Strategic Plan Strategic Objectives

NCD Noncommunicable Disease

NCTB National Center for TB Prevention and Control

NCMS New Cooperative Medical Scheme

NWCCW National Working Committee for Children and Women

NDRC National Development and Reform Commission
NEHAP National Environment and Health Action Plan

NHSS National Health Service Survey

NORAD Norwegian Agency for Development Cooperation
NPFPC National Population and Family Planning Commission

NRA National Regulatory Authority
ODA Official Development Assistance

OECD-DAC Organization for Economic Cooperation and

Development – Development Assistance Committee

PATH Program for Appropriate Technology in Health
PMTCT Prevention of Mother-to-Child Transmission

PRC People's Republic of China

PRSP Poverty Reduction Strategy Paper RCMS Rural Cooperative Medical Scheme

RMB Ren Min Bi (Chinese Yuan)

SARS Severe Acute Respiratory Syndrome

SATCM State Administration of Traditional Chinese Medicine

SCAWCO State Council AIDS Working Committee Office SFDA State Food and Drug Administration

SFDA State Food and Drug Administration
SIAs Supplemental Immunization Activities

Sida Swedish International Development Cooperation Agency

STD Sexually Transmitted Disease STI Sexually Transmitted Infections

SWAp Sector-Wide Approach

TB Tuberculosis

U5MR Under-five mortality ratio

UN United Nations

UNCT United Nations Country Team

UNDAF United Nations Development Assistance Framework

UNDP United Nations Development Programme
UNEP United Nations Environment Programme

UNFPA United Nations Population Fund

UNHPG United Nations Health Partners Group

UNIDO United Nations Industrial Development Organization

UNOPS United Nations Office for Project Services
UNTGH United Nations Theme Group on Health

UNICEF United Nations Children's Fund

USD United States Dollar

VCT Voluntary Counselling and Testing

WB World Bank

WHO World Health Organization

WPRO Western Pacific Regional Office (WHO)

WTO World Trade Organization

XDR TB Extensive-Drug Resistant Tuberculosis

Executive Summary

China's Health and Development Context

Since economic reforms were launched in the late 1970s, China's rapid economic growth has helped lift several hundred million people out of poverty, and led to a higher standard of living and improved health outcomes throughout the country. China's fast changing country context is now characterized by rapid industrialization, massive internal migration and urbanization, increasing environmental health threats, rising disparities and an aging population. With a highly diverse population of over 1.3 billion people spread over a vast land area including remote and hard-to-reach mountainous regions, China faces a variety of health and development challenges.

With respect to health systems development, much progress has been made in national health care system reforms, but China still faces significant problems. Access to affordable health services remains difficult, health services are not of consistent, adequate quality, and essential medicines are not always available or affordable. These conditions are greatly affected by health system governance, coordination and strategies, public health financing, health insurance coverage, human resources for health, and health laboratory quality - all of which require strengthening. Also, effective remedies from traditional Chinese medicine offer possibilities for wider application in China and abroad and can be further integrated into the national health care system.

Preventable infectious diseases remain a significant cause of mortality and morbidity. However, 80% of all deaths are attributed to noncommunicable diseases (NCDs) and injuries, with cerebrovascular diseases, cardiovascular diseases and cancer being the leading causes of NCD deaths. Increased hypertension, tobacco use, unhealthy diets and physical inactivity are associated risk factors.

While the maternal mortality ratio and under-five mortality rate have dropped significantly since 1990, the absolute number of maternal and child deaths due to China's large population makes maternal and child health (MCH) a continuing priority. HIV prevalence remains relatively low and China has made significant progress in developing a more effective national response to HIV/AIDS in recent years. However, about 700,000 people were living with HIV/AIDS in 2007 and the prospect of the epidemic's further spread remains palpable. Interventions on prevention, voluntary testing and counselling, care and treatment, stigma and discrimination, surveillance, research as well as blood safety are still needed. With prevalence of active pulmonary tuberculosis at 367 per 100,000 people and rising multi-drug and extensive-drug resistant tuberculosis, additional TB control efforts are also needed. Environmental pollution is having a health impact in China. In 2004, an estimated 44% of the total population had access to improved sanitation and 77% of the population had access to safe drinking water. Air quality, especially in cities, has declined with the recent surge in vehicle emissions and other pollutants, making environmental health issues a growing concern.

China is also susceptible to emerging public health threats, ranging from new infectious diseases to climate change impacts to food and drug safety. Support is still needed to build surveillance, early warning and response systems to address newly emerging infectious disease outbreaks such as avian influenza. With climate change anticipated to increase levels of vector-borne diseases, as well as diarrhea and respiratory diseases and malnutrition, further national assessments on human health impacts could help identify vulnerabilities, policy options and possible responses. Food and drug safety are growing public health issues as greater numbers of food-related illnesses are reported and as recalls of defective and unsafe drugs rise.

Partnerships

WHO has worked closely with many development agencies in China. Since 2004, major partners have included the UK Department for International Development (DFID) on health sector development; the World Bank, Canadian International Development Agency (CIDA), US Centers for Disease Control and Prevention (US CDC), Australian Agency for International Development (AusAID), the European Union and Asian Development Bank (ADB) on strengthening early detection, surveillance and response of infectious diseases; US CDC, Japanese International Cooperation Agency (JICA), the Government of Luxembourg and AusAID on immunizations and vaccines; the Global Fund to Fight AIDS. Tuberculosis and Malaria (GFATM) on all three diseases: Swedish International Development Cooperation Agency (Sida), CIDA, Norwegian Agency for Development Cooperation (NORAD) and UNAIDS on HIV; CIDA, the Government of Italy, and the Gates Foundation on TB; DFID and the Government of Luxembourg on noncommunicable diseases; the ADB on food safety, child and adolescent health; UNICEF on maternal and child health, injury prevention and immunizations; UNFPA on reproductive health and HIV/AIDS; UNEP on environmental health; and WHO collaborating centers in China on various topics. These partnerships have been invaluable and WHO is committed to continued cooperation with these and other partners to further health development in China.

Strategic Agenda

The China-WHO Country Cooperation Strategy (CCS) presents a medium-term framework for cooperation between WHO and the Government of China to improve national health development. The CCS is based on national health challenges, opportunities, goals and strategies, as well as WHO and international frameworks. Specifically, the Government's main health goal of ensuring universal access to basic health care by 2020, the strategic objectives of WHO's Medium-Term Strategic Plan (MTSP SO) and the UN Millennium Development Goals (MDGs) provide the fundamental basis for the CCS agenda. China's strong commitment to equitable, balanced social and economic development, reflected in national frameworks such as the Government's Eleventh Five-year Plan (2006-2010) and underscored during

the 2007 Chinese Communist Party Congress, provides a foundation for WHO-China cooperation. The strategic agenda was also developed based on areas to which WHO's comparative advantages could be applied for maximum benefit to China, and in consideration of areas which complement the work of other health and development partners in China.

Following in-depth consultations with the Ministry of Health, UN agencies, bilateral and multilateral agencies, nongovernmental organizations, and other development partners, a strategic CCS agenda was identified. The CCS strategic agenda is organized under four umbrella strategic priority areas.

The first is health systems development, which focuses on supporting implementation of health care reform by improving health financing; health services delivery; human resources for health; availability, access and rational use of drugs; strengthening laboratory quality and safety; and research and clinical testing of traditional Chinese medicine to ensure quality and standards.

The second strategic priority area is achieving health-related MDGs. This includes the following: a) supporting poverty reduction in all CCS programme areas, but especially by increasing access to affordable essential health care services in the health system; b) promoting gender equality by addressing and monitoring major gender-related inequalities in public health policies and interventions; c) reducing child mortality and improving maternal health through work on vaccine preventable diseases, EPI, child survival, integrated childhood care, adolescent health, universal access to reproductive health with an essential package of antenatal, obstetrical and neonatal care, and improving MCH surveillance data, among other areas; d) responding to HIV/AIDS through support to prevention, testing and counseling, treatment and care and surveillance; e) combating tuberculosis, particularly drug resistant TB, TB among migrants, and TB/ HIV co-infection; and f) ensuring environmental sustainability and minimizing negative environmental health impacts by addressing concerns about water quality and safe drinking water, and supporting the development of cross-sectoral policies addressing national environmental health priorities.

The third priority area is reducing the high burden of NCDs and related deaths. WHO-China cooperation will focus on implementing national NCD strategies and plans, and supporting NCD surveillance, prevention, coordination and communication among government agencies and the private sector. WHO also will assist the Government to implement the WHO Framework Convention on Tobacco Control.

The fourth strategic priority area addresses emerging public health threats. This includes: surveillance and response for communicable and emerging infectious diseases, climate change and environmental health threats, and food and drug safety. WHO will provide technical assistance to help implement the International Health Regulations and the

Asian Pacific Strategy for Emerging Diseases. WHO will also support the development of health strategies for climate change adaptation and mitigation, vulnerability assessments on air pollution and transportation, and capacity strengthening to implement climate change and energy aspects of the National Environmental and Health Action Plan. Food safety interventions will focus on supporting implementation of the National Food Safety Regulatory Framework, and building food safety legislation and government capacity for food safety management and supervision. Support to drug safety will include capacity strengthening for drug supervision, management and monitoring, technical support to establish a comprehensive national drug safety system, and international information sharing on counterfeit drugs in the supply chain.

Key cross-cutting issues were also identified and include health systems development, poor and vulnerable groups (e.g., poor migrants, low-income ethnic minorities), gender inequality and communications. Attention to these issues will be integrated into all CCS programming areas.

Strategic Approaches

The strategic approaches for CCS implementation were developed based on the Chinese context, WHO's comparative advantages, and its role as a standard-setting international health organization with global expertise, resources and networks. These approaches include support to the development and implementation of country health frameworks using international standards and norms; international cooperation, research and exchanges on key public health issues; evidence-based policy advice and technical support; the promotion of universal access and delivery of essential health care interventions; strengthening human resources in health; building community-based health services and capacities; and strengthening monitoring, evaluation and surveillance systems.

Implementation Strategy

Programme support will reflect the new CCS agenda. Compared to the first CCS (2004-2008), the agenda of this CCS (2008-2013) places greater strategic emphasis on health systems development, and increases support for other key areas, including emerging public health threats, noncommunicable diseases, food and drug safety, environmental health, maternal and child health, and the cross-cutting issues of vulnerable groups, gender equality, data collection and analysis, communication and documentation. The level of assistance for communicable disease surveillance and response will be maintained. In support of country harmonization, this CCS is also more closely aligned with the MDGs. In addition, there is reduced emphasis for areas in which China has already developed significant capacity or where other health partners are providing significant support, namely vaccine preventable-diseases, tuberculosis, HIV/AIDS and malaria. In these areas, WHO will provide support on the basis of government requests and in specific areas jointly identified. This reorientation in

programme areas will be reflected in changes in programme management and technical resources in the country office, budgetary needs, and relations with national and international partners.

To ensure smooth implementation of the CCS programme, WHO and the Government will jointly develop a CCS budget and resource mobilization strategy to support adequate financing. Joint WHO-China efforts will also aim at improving coordination among various government ministries and agencies and development partners in China. Finally, to support effective, efficient, relevant and accountable country programming, the CCS monitoring and evaluation framework includes biennium programme reviews in the second and fourth year of the CCS programme, as well as an independent terminal programme evaluation at the close of the Programme.

Section 1: Introduction

1.1 WHO Policy Frameworks

WHO Global Mission and Strategic Priorities

Across the world, the mission of the World Health Organization (WHO) is to attain the highest possible level of health for all people. To do this, WHO works to promote the development and implementation of appropriate pro-poor health policies and interventions in Member States, guided by global and regional health initiatives. Thus, important areas for WHO work are to strengthen country health systems, to build national capacities and commitment



to develop and implement more equal, pro-poor health policies and interventions, and to ensure equitable access to efficient and good quality health services for all. Support to primary health care is a global priority and is central to WHO's work. WHO is also committed to helping countries achieve the Millennium Development Goals, towards the overarching goal of poverty elimination.

WHO Country Focus

At the national level, WHO puts country priorities at the core of its work. WHO's Country Focus Policy, introduced in 2002, articulates the need to root WHO's work at country level and within national frameworks as a means to improve national health systems and health outcomes in a sustainable way. The Country Cooperation Strategy (CCS), a key instrument for WHO assistance at country level, provides a medium-term strategic framework for WHO cooperation with the Government and other partners for improving national health development. Reflecting careful analysis of country health needs as well as WHO global and regional strategic directions, the CCS outlines the role of WHO in addressing country and regional health priorities. Country objectives, implementation plans, and partners are also mapped out, detailing how WHO will support national health plans and other country health and development frameworks.

WHO Global and Regional Programme Frameworks

The Eleventh General Programme of Work (GPW) for 2006-2015 provides a long-term strategic framework for the work of WHO, sets a global health agenda and delineates WHO core functions. The GPW outlines several global priorities: promoting universal coverage; strengthening global health security; sustaining cross-sectoral action to modify health determinants; increasing institutional capacities to delivery core public health functions; strengthening WHO's leadership at global and regional levels; and supporting the work of governments at country level. Many of these areas overlap with national priorities in China and guide WHO's work over this 10-year period.

In addition, at the May 2007 World Health Assembly, the WHO Director General called for promoting equity in health outcomes by giving priority to the health of two of the poorest, most disadvantaged segments of the world's population: the people of Africa and women. With respect to China, there is significant potential for technical cooperation and assistance to Africa on health-related issues. Empowering women, gender analysis and use of sex-disaggregated data to support better health outcomes for women are also integral to WHO's work in China.

Further, an intermediate framework — WHO's Medium-Term Strategic Plan (MTSP) for 2008-2013 — identifies 13 strategic objectives to advance the global health agenda, providing a more detailed structure for WHO assistance in all countries. These objectives are listed in Annex 1.

At the 58th Session of the Regional Committee for the Western Pacific in September 2007, two regional frameworks were endorsed. The first was the *Western Pacific Regional MTSP for 2008-2013*, and the *Programme Budget for 2008-2009* which reinforces the MTSP strategic objectives. The second was the *People at the Center of Care Initiative*, which focuses on developing more balanced, people-centered health care that considers the broader psychosocial, cultural, ethical and social determinants of health.¹ These important regional frameworks also shape WHO's support in China.

1.2 International frameworks

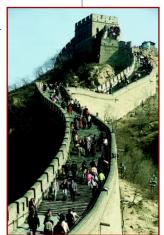
In China, the CCS supports important follow-up work on major international and national health and development frameworks. One key global framework is the UN Millennium Declaration and Millennium Development Goals (MDGs) adopted by world leaders in 2000. With six of eight global MDGs related to health,² WHO will support Government efforts towards MDG progress. In addition, China has signed a number of important international agreements. The International Health Regulations or IHR (2005) and the WHO Framework Convention on Tobacco Control (FCTC) were signed in 2003 and ratified in 2006. China has also ratified two other important frameworks: the Convention on the Elimination of All Forms of Discrimination Against Women in 1980 and the Convention on the Rights of the Child in 1992. WHO will assist China to implement these frameworks and meet the global standards contained within them.

1.3 National Frameworks

In China, there is strong commitment and important policy frameworks endorsing more equitable and balanced social and economic development throughout the country. At the broad national policy level, the Government's *Eleventh Five-Year Plan (2006-2010)* emphasizes the need for China to deepen reforms, to continue opening up the economy to foreign trade and investment, and to maintain balanced, sustainable economic and social development. In recent years, the Government has promoted a national vision of achieving a *Xiao Kang Society* (a well-rounded, harmonious, broadly prosperous society) under which the quality of life for the entire Chinese population would be

significantly improved by 2020. Since 2003, the Government has also been promoting the *Scientific Concept of Development and Five Balances of Development*, which aims to balance urban and rural development, regional development, social and economic development, the needs of people and the environment, and domestic and international development. Recognizing the need to address sharpening rural-urban inequities, the Government initiated a new *Socialist Countryside Policy* in China in 2006.

With respect to national health policy, the Eleventh Five-Year Plan states that the Government will increase public health investment, improve the public health and medical care system, and resolve the problem of limited health care resources and costly medical care. These essential areas form



the foundation of WHO-China CCS cooperation. The Plan also highlights additional health-related areas: enhancing disease prevention and treatment, improving research on medicine and traditional Chinese medicine, deepening health care system reform, strengthening disaster prevention and mitigation capacity, ensuring food and drug safety, and building an emergency response system. These areas also form core parts of this CCS.

The overall health-related goal of the Government is to ensure universal access to basic health care services for all Chinese citizens by 2020. In October 2006, President Hu Jintao reiterated the commitment to raise government spending on health and ensure that all Chinese citizens have access to essential health care. The Government has outlined three key means to reach universal access by 2020: setting priorities based on major health problems, cost effective interventions and international commitments; formulating feasible national and local action plans for quality health care services based on social, economic, environmental and demographic factors; and developing a health evaluation system.³ WHO assistance to government efforts to reach universal access to basic health care services for all is a key underlying goal of the CCS.

A Ministerial Coordination Working Group, comprised of 16 ministries and led jointly by the National Development and Reform Commission (NDRC) and the Ministry of Health (MOH), has developed a framework for Chinese health system reforms in public health service delivery, medical services, health insurance, and drug supply access and availability. Health reform policies provide a framework for more efficient, equitable health care services. Under the reform package, the Government has committed to 100% coverage of rural counties, prefectures and districts under the Rural Cooperative Medical Scheme (RCMS) by the end of 2008; full coverage of all urban employees in employee health insurance schemes and further expansion of the urban residence health insurance scheme by the end of 2010; and universal access to basic health care services by 2020. WHO aims to support the implementation of reforms, towards a more responsive public health system and increased equality in public health services access and delivery.



In October 2007, the 17th Chinese Communist Party (CCP) Congress emphasized the need to improve social welfare provision. CCP General Secretary Hu Jintao echoed earlier calls for balanced development (*Five Balances of Development*), emphasizing rural and agricultural growth, and the need to address people's immediate interests, including employment, social security, income distribution, education, public health, housing, work safety, and the administration of justice.⁴ In addition to broad national health policies, WHO will continue to support a number of important country health frameworks.⁵

1.4 Country Cooperation Strategy Development Process

The CCS for 2008-2013 was developed on the basis of these international and national frameworks, as well as country challenges and emerging public health priorities in China. The MOH has played a central role in CCS development. CCS formulation began with consultations with the Government, UN, multilateral, bilateral and NGO partners in April 2007, led by the WHO Representative in China and supported by WHO Headquarters, the Western Pacific Regional Office (WPRO), and senior WHO country office staff. Additional rounds of dialogue and consultation followed with government and country partners, and WHO regional office and headquarters staff to further develop priorities, roles and implementation plans. This included a review meeting with the UN Theme Group on Health with representatives from the Government, bilateral and multilateral donors, UN agencies and NGOs in April 2008. All of these discussions have been essential to solidifying agreement and building commitment around key areas of work, and have formed the basis of this CCS.

Section 2: Country Health and Development Challenges

2.1 China's Development Context and Key Trends 6

Demographic Profile

China is a country with over 1.3 billion people, with approximately seven million people being added to the total population annually. In the past 50 years, there has been significant demographic change. Family planning and population control policies have led to falling fertility rates: from an average of five births per woman in 1970, to 1.73 births per woman in 2007.8 At the same time, improved living standards and longer life expectancy—which rose from 40 years to over 70 years between the 1950s and 2006—have resulted in a rising number of elderly people in China. In 2005, about 22% of the population was between 0-14 years, 67% was between 15-59 years, and 11% was 60 years and over.9

Basic statistics in China (2005 data, unless otherwise indicated)

Population, total	1.3 billion
Population living below US\$1/day poverty line (%, 1990-2005)	9.9
Population living below the national poverty line (%, 1990-2004)	4.6
Population under 15 (%)	22
Population distribution (% rural, 2007)	58
Migrant population	147 million
GDP growth (%, 2006)	10.7
GNI per capita (2006, US\$)	2,000
Total expenditure on health as % of GDP (2004)	4.7
General Government expenditure on health	
as % of total government expenditures (2004)	10.1
Life expectancy at birth, total (years)	72
Maternal mortality (deaths/100,000 live births, 2005)	45
Infant mortality (est. deaths/1,000 live births)	23
Under 5 mortality (est. deaths/ 1,000 live births)	27
Measles vaccination coverage at one year (%, 2004)	93
HIV prevalence (% of population, 2007)	0.05
TB prevalence, all forms (est. per 100,000 pop, 2000)	208
School enrollment, primary/secondary/tertiary (% gross)	113/74/20
Ratio of girls to boys in primary, secondary education	99.4
Improved drinking water access (% pop, total/urban/rural, 2004)	77/93/67
Adequate sanitation access (% pop, total/urban/rural, 2004)	44/69/28
Sources: Refer to endnote ⁷	

By 2030, those aged 60 years or older will comprise 24% of the country's population. ¹⁰ With an aging population, China's chronic and noncommunicable disease burden is anticipated to increase significantly in the coming years. ¹¹ There has also been a marked increase in the sex ratio at birth, from a relatively normal ratio of 108 males for every 100 females in 1982 ¹² to about 120 males for every 100 females in 2005. ¹³ Health and development policies will need to factor in anticipated social and economic impacts of these demographic shifts.

Economic Reform and Poverty Reduction

Since China first introduced reforms in 1978 and initiated its transition from a centrally-planned to a market-oriented economy, the country has undergone dramatic economic and social change. GDP growth rates have averaged 9.4% a year since 1978. From 1990 to 2004, 246 million people emerged from poverty based on the international poverty line standard of US\$1/day. For the vast majority of people in China, the quality of life has greatly improved.

Despite China's overall economic achievements, growth benefits are not reaching all segments of the population and future reductions in poverty cannot be left to economic growth alone. In 2006, an estimated 101.2 million people remained at or below the

US\$1/day consumption poverty line. ¹⁶ About 9.9% of the population lives under the US\$1/day poverty line, and 34.9% of the population still lives on less than US\$2/day. According to China's national poverty line (approximately US\$ 0.70/day), 4.6% of the population remains below the poverty line. ¹⁷ In a 2006 survey, respondents indicated that the three main reasons for poverty were insufficient agricultural income, rising health expenditure, and the cost of children's education. ¹⁸

Most poor communities are in remote rural and mountainous areas, and areas with poor land quality, scarce water resources, or few linkages to the rest of the economy. Poverty levels are highest in western and central China compared to coastal regions. The income gap between cities and the countryside has also grown significantly, with the urban-rural income ratio estimated at 3.28 to 1 in 2006.¹⁹ Urbanization and domestic migration has contributed to the growing numbers of urban poor.

Recent Trends: Industrialization, Migration, Urbanization and Environmental Degradation



China's drive towards modernization and development has been characterized by rapid industrialization, massive flows of internal migrants, growing urbanization and unsustainable use of environmental resources. The structure of the economy has changed significantly since economic reforms were introduced, shifting from agriculture to industry and services. While the agricultural sector employed 44% of the working population in 2006,²⁰ the share of agricultural output in GDP declined from 27% to 11.7% from 1990 to 2006. During the same period, industry's

share in GDP rose from 42% to 48.4%, and the GDP share of services rose from 31% to $39.9\%.^{21}$

In 2005, the Government estimated that there were 147 million domestic migrants in China. Known as China's "floating population", migrants have moved to cities or industrial zones seeking better jobs and opportunities, and filling the demand for cheap, low-skilled workers. Most migrants are from rural areas and are poor. Migrants with a rural *hukou* (household registration) working in urban areas are disadvantaged since they are unable to access public health care and other social services in the cities where they live and work.

In 2007, about 42% of the population lived in urban areas.²³ If current urbanization rates continue, the share of the urban population is projected to rise to about 60% by 2020.²⁴ With pressure on urban public resources and infrastructure already high, rising energy demands, growing water and air pollution, and crowded urban settlements, future urban development plans will need to account for and manage predicted population growth in cities.

Rapid industrial development in China has also led to increasing environmental

degradation of air and water resources, with major implications for human health and sustainable development. Twenty of the world's 30 most polluted cities are located in China.²⁵ Globally, water pollution and lack of sanitation and proper hygiene have meant reduced access to clean water and a larger burden of disease from diarrhea. Increasing air pollution has contributed to the growing number of lower respiratory infections, and vulnerability to malaria is related to land use, deforestation and water resource management.²⁶

Improved Living Standards, but Widening Inequalities

While the overall health status of the Chinese population has improved since the 1980s, a critical health challenge in China is ensuring that all segments of the population gain from these advances in health. Income disparities are becoming more pronounced and large absolute numbers of people remain in poverty. Some groups, particularly people with low incomes and those living in rural and mountainous areas, have not benefited commensurately.²⁷ For example, while childhood mortality rates in developed coastal areas mirror those of



industrialized countries, rates in most western provinces are three to five times higher. Life expectancy is also generally lower in provinces with high levels of rural poverty. Overall, measures of China's human development have shown widening disparities between regions, between rural and urban areas, between migrant and resident populations and on gender grounds. ²⁸

2.2 Health Sector Profile

From 1949 until the late 1970s, there was nearly universal access to preventive and other essential health services in China. Health service delivery costs were largely covered by Government and cooperative schemes. However, in the post-1979 reform period, after China dismantled work-unit based social welfare provisions and launched market-oriented reforms, health indicators improved more slowly than anticipated based on per capita income growth (Figure 1).

Similarly, Figure 2 below shows the declining pace of life expectancy improvements in contrast to the strong economic performance and structural changes over the past 50 years. However, health indicators have improved overall and are on an upward trend. National data shows that the maternal mortality ratio declined from 64 to 37 per 100,000 live births between 1997 and 2007. Infant mortality rates dropped from 38 to 23 per 1,000 live births between 1990 and 2005, and under-five mortality rate decreased from 49 to 27 per 1,000 live births, reaching levels comparable to middle-income countries.²⁹ Immunization of one-year-olds against measles reached 86% in 2005, and moderate and severe underweight and stunting among children underfive years of age declined to 8% and 14% respectively.³⁰

6 1980 5 2003 loa Infant mortality 3 (per 1,000 live births) China (enlarged) 1 n 2 2.5 5 1.5 3 3.5 4.5 log GDP per capita (\$) Source: Aggregate data from United Nations Common Database and WorldBank World Development Indicators Available at unstats.un.org

Figure 1. Infant mortality and per capita GDP across countries, 1980 and 2003

Global Burden of Disease (BOD) estimates produced by WHO indicate that China's overall disease profile now resembles that of a developed country, with 80% of deaths and 70% of disability-adjusted life years (DALY) ³¹ lost attributed to noncommunicable diseases (NCDs) and injuries. Cerebrovascular disease, cancer and chronic respiratory disease are the main causes of death in China, and accounted for nearly 70% of total deaths in 2005. The surge in NCDs is a consequence of China's demographic transition to an aging population, a rising incidence of NCDs among younger age groups, as well as other socio-economic factors. ³² China faces a double-burden of illness: preventable communicable diseases, common in low-income countries, remain a significant cause of death, particularly among young children in rural areas. Moreover, new emerging infections such as Severe Acute Respiratory Syndrome (SARS) and avian influenza can have catastrophic effects on China's health and economy.

Figure 2. The slowing pace of health improvement comes in contrast to strong economic growth and successful structural changes: Life expectancy and GDP, 1952-2003

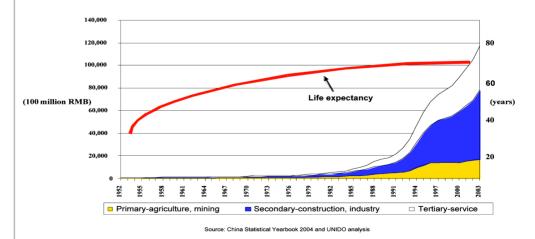


Table 1. Leading causes of death and years of life lost in China, all ages, 2002

Rank	Disease or injury	% total deaths	Years of Life Lost
1	Cerebrovascular disease	18.1	11
2	Chronic obstructive pulmonary disease	14,1	6
3	Ischaemic heart disease	7.7	5
4	Stomach cancer	4.6	4
5	Liver cancer	3.6	4
6	Trachea, bronchus, lung cancer	3.5	3
7	Perinatal conditions	3.0	9
8	Self-inflicted injuries	3.0	5
9	Lower respiratory infections	3.0	5
10	Tuberculosis	2.9	3

Source: Death and DALY estimates by cause, 2002, WHO

Among the remaining infectious diseases, Hepatitis B virus infection, tuberculosis, lower respiratory infections and rabies still account for significant mortality and lost DALYs. Major health threats in underdeveloped areas of rural China include unsafe water, lack of sanitation, under-nutrition, vitamin and mineral deficiencies, and indoor pollution. Whilst there has been significant progress in addressing these issues, important public health challenges remain.

2.3 Key Health and Development Challenges

A. Health Systems Development

While much progress has been made, the health system in China faces significant problems. Access to affordable health services remains difficult, health services are not of consistent, adequate quality, and essential medicines are not always available or affordable. These conditions are greatly affected by health system governance, coordination and strategies, public health financing, health insurance coverage, human resources for health, and health laboratory quality — all of which need



strengthening. In addition, effective remedies from traditional Chinese medicine offer possibilities for wider application within China and can be further integrated into the health care system.

i. Access to Quality Services

Economic growth has enabled wealthier households to benefit more from access to health care and medical technologies. However, most low-income households face important barriers in accessing affordable essential health services and medicine. Despite large-scale government infrastructure investments, the cost of health services remains a major barrier in accessing quality services, particularly for people in remote and rural areas. ³³ Increasing levels of user fees result in low use of health services among low-income households, as medical care expenditure and the cost of health services are rapidly outpacing average incomes. Thus greater prioritization on communicable disease treatment, among poor households in particular, could have a positive impact on the health of the community as a whole. ³⁴

While health insurance coverage is increasing, especially in rural areas, many people are underinsured and continue to face high out-of-pocket costs. The new Rural Cooperative Medical Scheme (RCMS) now covers nearly all of the rural population, and expects to reach 100% coverage of rural counties by the end of 2008. However, benefits are often limited to catastrophic illness and in-patient medical services, frequently requiring full payment by the insured, with later reimbursement that is, on average, 30% of the total bill.³⁵ The technical quality of care is affected by incentives in the existing provider payment mechanisms. Benefits are also not portable across localities; this is a major concern for migrant workers. The implementation of the Medical Financial Assistance (MFA) scheme for both urban and rural poor depends on local fiscal capacity and thus access is inequitable across regions. For example, richer municipalities such as Beijing and Shanghai can offer MFA to families living below the poverty line, but rural counties are generally supported by more modest local government budgets.

Large geographic differences exist in health outcomes. Remote and rural regions face problems in making available to their populations specialized care, including emergency obstetric services and trauma, adequate facilities, and trained health professionals. This presents a major problem in implementing universal health care coverage. The Government places great emphasis on primary health care, as reflected in its Health for All by 2020 strategy, and through its rural Primary Health Care Programme. It will be important to build upon this framework to improve access and reach.

ii. Health Care Financing

Total health expenditures rose from 3.02% of GDP in 1978 to 4.67% of GDP, or RMB748.8 (US\$104) per capita in 2006. ³⁶ Of this total, the Government contributed 18.1%, social health expenditure amounts to 32.6%, and individual out-of-pocket payments amount to 49.3%. Contributions from both the Government and social health expenditure have declined as a proportion of total health expenditures. For example, the Government's share represented 32% of total health spending in 1978, as compared with the current 18.1%. The decline in the Government's contribution and the increase in individual out-of-pocket payments is partly a function of rapidly escalating health care costs, the lack of incentives for cost or quality control in the health delivery system and insufficient coverage under health insurance schemes. While health insurance schemes like the RCMS provide additional health financing funds, this is inadequate for universal coverage in China. Those employed in the informal sector in urban areas may not be covered under health insurance schemes, and as mentioned above, financing under the RCMS in rural areas is comparatively basic.

Public resource allocation is highly decentralized.³⁷ Township, county, prefecture and provincial governments administer about 90% of all government spending on health. While localities are given the responsibility to finance health care, local governments are unable to raise revenue through taxes to finance basic public services, especially in resource poor-communities. Government spending on health tends to be lower in provinces with higher numbers of rural poor. Thus poor localities have access to fewer

and lower quality services for which they must pay out-of-pocket. Decentralization of responsibilities without sufficient funding creates unfunded mandates in impoverished areas, leading to vast inequalities.

Equalization grants from the central government are helping poor regions pay for public services; however, the current level of public subsidy is insufficient to fund a basic health service package. The Government has substantially increased health investment in rural counties of western provinces, but resources mainly reach counties and townships and fail to trickle down to the village level where most rural patients need care.³⁸

iii. Health Care Delivery

Local health departments and other health providers are expected to generate a significant share of their own operating budgets.³⁹ This provides an incentive to focus on more profitable curative care and medicines to generate larger profit margins.⁴⁰ Service fees are applied to public health goods, such as immunization and communicable disease control programs, that have broader economic benefits. This leads to underutilization of health services by the poor and underinvestment in these programmes from a societal welfare standpoint. Insufficient attention to preventive services and health promotion could contribute to preventable morbidity and mortality, and higher long-run health care costs for end-stage clinical care.

Important regulatory gaps exist to ensuring quality of care. For example, hospital accreditation is not linked to comprehensive safety records, and doctors and health institutions are not restricted in their engagement in commercial incentive programs. Deficiencies in clinical quality have resulted from financial incentives in the delivery system, the need to strengthen the management of public hospitals, lack of clinical treatment guidelines, inadequate government resource allocation, weak regulation among service providers, and the low capacity of health care personnel.

While there is strong political commitment and progress in improving health sector governance, there is a need to better define government roles in the health sector for planning, policy, and implementation. Given current ambiguity and redundancy in responsibilities, and competing interests among departments, government roles in health across agencies and government levels need greater clarity.

iv. Human Resources in Health

Key challenges for improving human resources for health include improving the human resources strategy for health development; increasing capacity and technical qualifications; distributing staff more equitably nationwide; and creating a more rational balance among different health care professions.

Over the last several decades, the Government has prioritized increasing the quality and technical capacity of health personnel with two to six years of professional training.

However, capacity issues remain: 47% of health professionals have only technical secondary school diplomas and only 14% of health professionals have bachelor degrees or above.⁴¹

In addition, qualified staff are not well distributed across the country.⁴² Similar to many other countries, poor and rural areas have not been able to attract and retain qualified medical staff.⁴³ After economic reforms were initiated, many experienced health professionals moved to hospitals in cities and areas with well-paying clinics. This poses an enormous barrier to the delivery of quality basic health services in remote and rural regions.

China also is one of the few countries where doctors outnumber nurses. In 2007, China had 15.6 physicians per 10,000 population and 11.7 nurses per 10,000 population (compared with 15.0 physicians and 44.0 nurses per 10,000 people in Singapore, and 19.4 physicians and 38.2 nurses per 10,000 people in Korea).⁴⁴ The relatively high number of doctors compared with nurses raises questions about public investments in training and deployment to achieve the most cost-effective means of service delivery.

v. Availability and Access to Essential Medicines



The availability and affordability of life-saving and common essential medicines needs to be improved. Inadequate access, quality and use of medical products and technologies are rooted in three main factors: 1) the absence of a clear national medicines policy to guide and coordinate different stakeholders and policies in the pharmaceutical sector; 2) inappropriate pricing policies, lack of cost containment and cost efficiency measures of medicines expenditure and generic substitution, which undermine the availability of essential

medicines; and 3) perverse financial incentives in the health care system which contribute to irrational use of medicines. Senior level officials have publicly recognized the problems in the pharmaceutical sector and the insufficient access to essential medicines. The Government is in the process of outlining relevant reforms to improve transparency, monitoring and law enforcement systems, and strengthening good governance in medicines production, registration, selection and distribution systems in order to enhance drug safety.

Box 1: Distorted incentives in the pharmaceutical sector

The pharmaceutical sector provides an illustration of the negative impact of distorted incentives. Weak market governance, pricing distortions, and the drive for profit by health care providers, producers, distributors, wholesalers and retailers, have diminished appropriate and efficient health care options for patients. Cheap effective medicines are often deemed unprofitable and as such, become unavailable on the market. Such incentives have ultimately reduced the ability of the overall health care system to provide the most appropriate and beneficial health care services and medicine to patients.

vi. Quality of Health Laboratories

Laboratory services support multiple disease programmes, providing critical decision-making information to public health, clinical care and noncommunicable diseases interventions. However, key weaknesses include inadequate financial and human resources, poor management, low quality standards, and the need to strengthen biosafety, leading to poor quality services and bio-challenges. Apart from diagnosis, surveillance and response to diseases, monitoring of environment for safe air, water, food and safety of blood also rely on efficient laboratory services. Payments for lab tests which lead to overuse of diagnostic tests and excessive costs also remain problematic. Although implementing quality standards is challenging, it is essential for good laboratory practices.

vii. Traditional Chinese Medicine

Many Chinese people seek out traditional Chinese medicine (TCM) to address health problems. The Government promotes the development of a modern TCM industry, as well as the integration of TCM into the national health care system and integrated training of health care practitioners. In 2008, the Minister of Health identified several key priorities for TCM development, including increasing policy support to TCM, strengthening research on key TCM issues and building capacity for TCM research, training prominent TCM doctors and establishing



leading TCM hospitals and departments, improving and adapting TCM services to meet public needs, increasing access and quality of services in rural and urban communities, and strengthening international cooperation and communication on TCM.⁴⁵

However, to further develop TCM, a number of challenges remain. There is a need for more unified, systematic regulations for assessing the safety and efficacy, and ensuring the quality of TCM products. In addition, TCM standards or guidelines for clinical trials need to be further developed to show efficacy of TCM products. Evidence-based testing and research for TCM products are still needed. In view of the vast differences in the qualifications of TCM practitioners, the quality of TCM education needs to be strengthened and the management and supervision of TCM institutions need to be regulated.

B. Health-related Areas Under the Millennium Development Goals (MDGs)

China has made significant strides in reaching the MDG targets. Poverty has already been halved since 1990 and China is well positioned to reach many of the remaining MDG targets by 2015. The country is on track to achieving the poverty and hunger targets under MDG 1, but further work is needed to address widening disparities, persistent pockets of poverty and the total number of people living in poverty. Gender equality goals under MDG 3 appear to be only partially on track and various qualitative health-related gender equality issues remain. Work towards the goals under MDG 5,



aimed at reducing the maternal mortality ratio and ensuring universal access to reproductive health services, seems to be making good progress, but again the absolute numbers of women affected is significant. Progress towards the under-five child mortality goal (MDG 4) may not be moving as rapidly as needed. Under MDG 6, achievement of the goal seems promising for malaria, but more attention may be needed to achieve HIV and TB goals. Similarly for

MDG 7, work seems to be progressing well towards reaching the goals for safe drinking water and improved sanitation goals, but not as quickly for reversing the loss of environmental resources.⁴⁶

- MDG 1 Eradicate extreme poverty and hunger*
- MDG 2 Achieve universal primary education*
- MDG 3 Promote gender equality and empower women*
- MDG 4 Reduce child mortality
- MDG 5 Improve maternal health
- MDG 6 Combat HIV/AIDS, malaria and tuberculosis
- MDG 7 Ensure environmental sustainability
- MDG 8 Develop a global partnership for development*

* Note: MDG 1 and MDG 3 represent cross-cutting issues and underlying goals of this CCS. Analysis of these issues and programme interventions supporting the achievement of these two goals are not formally elaborated in this section, but can be found throughout the CCS, and more pointedly in CCS Sections 2.4 and 5.4 below under "Cross-cutting Issues". MDGs 2 and 8 are not discussed because they do not deal with health issues.

MDG 4: Reduce Child Mortality and MDG 5: Improve Maternal Health

i. Vaccine-preventable Diseases and the Expanded Programme on Immunization (EPI)

While China achieved polio eradication in 1994, continued support is needed to sustain polio-free status. Hepatitis B remains a major disease burden, causing 260,000 deaths annually. About 120 million of China's population are Hepatitis B virus carriers and thus at risk of chronic complications of cirrhosis and liver cancer. In addition, over 100,000 cases of measles are reported each year. Pneumonia and diarrhea also account for 9% and 4%, respectively, of under-five mortality.⁴⁷ Rates are three to 10 times higher in poorer areas. Successful prevention against infection through childhood immunization therefore continues to be a high priority. New vaccines for pneumonia and diarrhea, likely to become available in China by 2012, could contribute to further reductions in child mortality rates.

Implementation of the Expanded Programme on Immunization (EPI) remains uneven in China. Vaccine coverage rates in most provinces exceed 90% (e.g., 93% for DTP3, 94% for OPV3, 93% for measles and 86% for HepB3).⁴⁸ The poorest areas continue to

have relatively low immunization rates and the highest burdens of vaccine-preventable diseases.

However, recent policy changes should help improve access to vaccines. The Government added the Hepatitis B vaccine to the EPI programme in 2002, and passed a law in 2005 ensuring free EPI vaccines and routine immunizations for all infants, ⁴⁹ allocating RMB1-2 to vaccine providers for each EPI vaccine dose given in poor counties. In 2008, the national Government began financing the cost of 12 vaccines for all children (totaling RMB2.7 billion annually). Key challenges to implementing this new government funding include (1) assuring quality vaccines are available to all infants; (2) assuring effective central and provincial vaccine procurement policy and supply mechanisms; (3) assuring adequate cold chain; (4) expanding the vaccination schedule to include all new vaccines; (5) ensuring sufficient local capacity to deliver vaccines to all age groups, especially in poor areas; and (6) strengthening capacity to monitor vaccine coverage, adverse events following immunization (AEFI) and disease occurrence.

The Government also aims to produce and export Chinese vaccines. Thus to ensure that Chinese vaccines meet global standards and WHO prequalification, the Government will need to improve the vaccine regulation capacity of its State Food and Drug Administration and achieve WHO certification of its National Regulatory Authority.

ii. Maternal and Child Health

China has made significant progress in maternal and child health over the past decade. Both national and international statistical estimates point to rapidly declining mortality rates. The UN Statistics Division estimated that the maternal mortality ratio (MMR) dropped from 95 to 45 per 100,000 live births from 1990 to 2005, while national statistics show that MMR decreased from 64 to 37 per 100,000 live births between 1997 and 2007. According to UNICEF, between 1990 and 2005, the infant mortality rate (IMR) decreased from 38 to



23 per 1,000 live births, and the under-five mortality rate (U5MR) declined from 49 to 27 per 1,000 live births.⁵¹ Official sources show reductions in IMR and U5MR to levels of 15 and 18 per 1,000 live births respectively in 2007.⁵² According to WHO data, about 83% of births were attended by skilled health personnel in 2004.⁵³

Over 75% of maternal and child mortality throughout China can be attributed to a small number of preventable or curable causes. In 2007, the leading causes of maternal mortality were postpartum hemorrhage, embolism, pregnancy induced hypertension, and heart disease. Inadequate access to basic essential obstetric care at the grassroots level is also a key factor contributing to maternal mortality. Major causes of child mortality are neonatal asphyxia and trauma, preterm delivery, low birth weight, injuries and pneumonia. Neonatal mortality accounts for almost 64% of under-five mortality. In addition, maternal and child mortality among poor migrants in urban areas is comparatively high and requires more attention.

Despite steady progress, the decline in maternal mortality ratios and child mortality rates has slowed in recent years and China has been identified by the WHO's Western Pacific Regional Office as one of seven priority countries in the Region that has an unacceptably high total number of maternal mortality deaths, and as one of six countries in the Region with the highest burden of U5MR.⁵⁴ In addition, MMR, IMR and U5MR are much higher in western China compared to coastal areas. For example, in 2004, the MMR in inland and remote areas was 4.1 and 7.7 times higher, respectively, than in coastal areas.⁵⁵

Son preference in rural China means that girls tend to suffer from lower access to good nutrition and health care starting early in life.⁵⁶ The imbalanced sex ratio at birth (120 boys born for every 120 girls) underscores the need to address the cultural bias against girls.

Since 2000, "Reduce maternal and eliminate neo-natal tetanus", a project by the National Working Committee for Children and Women (NWCCW) and MOH, has helped to reduce maternal and child mortality rates in poor areas of western China. By 2005, the neonatal tetanus incidence fell to below 1 per 1,000 births nationally and less than 1% of reported infant mortality. Efforts to make pregnancy safer should further reduce maternal and neonatal tetanus (MNT) mortality and help reach the global MNT elimination standard of less than 1 per 1,000 births per district.

According to China's birth deformity monitoring center, birth defects rose by nearly 40% since 2001, climbing from 104.9 per 10,000 births in 2001 to 145.5 in 2006.⁵⁷ Contributing factors include environmental pollution and inadequate nutrition. The prevalence rate of anemia among women aged 18-44 years, for example, is about 30% in rural areas. Folic acid deficiency is another cause of serious birth defects. Currently China has a National Action Plan for Increasing the Quality of Health at Birth and Reducing Birth Defects and Disabilities (2002-2010). However, interventions for ensuring that women of childbearing age receive adequate nutrition, such as folic acid supplements, are inadequate.

National targets for the control of lodine deficiency disorders (IDD) have not been met in six, mostly central and western, provinces and autonomous regions and one municipality. In areas with low coverage of iodized salt, cases of cretinism emerged in 2006.

A comprehensive policy and legal framework was established to address maternal and child health issues. This includes the *Law on Maternal and Infant Health Care*, two national programmes with women and children's development as core components, and various legislation ranging from national health policy to specific laws protecting maternal and child health. Efforts to further integrate maternal and child health interventions into the national health care system will be essential to promoting maternal and child health.

MDG 6: Combat HIV/AIDS, Tuberculosis, Malaria and Other Diseases

iii. HIV/AIDS

An estimated 700,000 people were living with HIV at the end of 2007. Although HIV prevalence in China is currently low, at approximately 0.05% in 2007, several provinces in central, southern and western China face serious concentrated epidemics, with the epidemic spilling into the general population in some areas. Yunnan, Henan and Guangxi provinces are worst affected, with over 46,000 cumulative HIV cases reported in 2007. ⁵⁸ Sexual transmission is now the main mode of HIV transmission. Among



those living with HIV reported between January and October 2007, 37.9% were infected through heterosexual transmission, 3.3% through homosexual transmission, and 29.4% via injecting drug use.⁵⁹ About 70% of total HIV infections are concentrated in the 20 to 39 age group. There are also indications of increasing HIV infection rates at antenatal sites.

New HIV infections remain concentrated in populations with high-risk behaviors, including injecting drug users (IDU), sex workers and their clients, and men who have sex with men (MSM). Sexual transmission of HIV among migrant workers is also a concern given their potential to act as a bridging population to home villages and the general population. HIV co-infection with TB and Hepatitis C virus (HCV) is also a growing issue as TB/HIV co-infection causes a significant proportion of morbidity associated with AIDS.

China's recent HIV/AIDS response and policy changes have resulted in more people knowing their HIV status, reduced numbers of annual infections, and reduced mortality from HIV/AIDS. In 2003, the Government initiated its China Comprehensive AIDS Response Program (CARES), scaling up its free treatment program. The Four Frees and One Care Policy followed, enabling the provision of free ARVs⁶⁰ to AIDS patients who are rural residents or urban poor, voluntary counselling and testing (VCT) for all, free drugs to prevent mother-to-child transmission (PMTCT), payment of school fees for children orphaned by AIDS, and care and economic assistance to households of people living with HIV/AIDS in China. At the same time, the Government increased HIV/AIDS funding from about US\$47 million in 2003 to US\$171 million in 2006, and China was awarded GFATM support for Rounds 3, 4, 5 and 6, totalling nearly US\$205 million.

Since 2004, China has made significant progress in developing a more effective national infrastructure to respond to HIV/AIDS based on the "three ones" principle. China developed one national plan (National Action Plan for Reducing and Preventing the Spread of HIV/AIDS: 2006-2010); one coordinating mechanism (State Council AIDS Working Committee Office – SCAWCO); and one monitoring and evaluation system (China AIDS Prevention and Treatment Monitoring Evaluation Protocol). Individual



provinces have also developed five-year action or implementation plans, and different government agencies initiated cross-sectoral cooperation.

However, several challenges remain. HIV awareness in the general population is low. In 2005, less than 50% of the urban population had HIV awareness. Migrants lack timely access to HIV/AIDS information, skills and knowledge. There is also considerable stigma and discrimination towards those living with HIV/AIDS, even among health care workers. Globally, stigma and discrimination discourage voluntary testing and discourage people from seeking treatment and care. In addition, treatment and care are inadequate. Implementation of the Four Frees and One Care Policy has been uneven, with migrants and those living in poor remote areas less likely to receive antiretroviral therapy (ART) treatment and care. Access to ART is limited. A more efficient and well-managed procurement and supply system would improve access. There are also no widely available fixed dose combinations, no pediatric formulations and no second line ARVs.

With regard to transmission through the blood supply, the Government has taken action to prevent the illegal collection and sale of blood products, restrict donations from high-risk populations, and improve safety in blood product collection, manufacturing, management, and use. Relatively few cases of HIV infection from the blood supply are now reported, but blood safety still needs to be strengthened.

The current health system is handicapped by weak staff capacity to implement, manage and monitor HIV/AIDS policies and programs. The health system also lacks an HIV/AIDS financing strategy, sufficient levels of multisectoral collaboration, and human resources for HIV/AIDS prevention and treatment, particularly at local levels. In addition, more strategic information is needed, namely surveillance data, estimation and projection data, operational research, and monitoring and evaluation data. These could be used to inform and guide more effective HIV/AIDS responses.

iv. Tuberculosis



China is one of 22 high burden countries for tuberculosis, with the prevalence for all forms of TB estimated at 208 per 100,000 people in 2000. Government data indicates that the prevalence of active pulmonary TB was 367 per 100,000 people in 2000. WHO estimates that in 2006 there were 1.3 million new TB cases in China, of which 600,000 were the highly infectious, smear-positive pulmonary disease.⁶¹ Official statistics in China report on TB among resident populations;

some areas with a high proportion of migrants disaggregate data on TB among the resident and migrant population.

With 75% of the cases occurring in the 15-59 years age group, the disease primarily affects persons in the most productive years of their lives. Men are twice as likely as women to have TB. More studies are needed to determine if the difference is due to

biological or socio-cultural causes. As official statistics in China only cover TB among resident populations, there is limited information about TB in the migrant population. However, what little information there is indicates that TB cases among migrants is increasing in eastern China. In Beijing, Shanghai and Shenzhen, 40%, 50% and 80% of reported TB cases respectively are from the migrant population. While TB can be found everywhere in China, prevalence in poorer rural areas is nearly twice that in urban areas, and prevalence in the central-western provinces is also nearly twice that of eastern provinces. Economic barriers are a major reason for inadequate access to TB control services and the poorest suffer the heaviest financial burden. ⁶²

Having reached the global TB target of 70% case detection and 85% treatment success at the end of 2005 and maintained it through 2006, China remains committed to fighting TB in the years to come. To sustain achievements and reduce TB prevalence and mortality in line with the MDGs, China faces several key challenges. Multi-drug resistant TB (MDR TB) and extensive-drug resistant TB (XDR TB) have evolved as a major problem in recent years, with China accounting for between 25% and 33% of estimated drug-resistant cases of TB globally. In addition, there is limited capacity within the TB laboratory network. Sustained progress is critical to the success of the Global and Regional Strategic Plan to Stop TB.⁶³ It will also be important to ensure access to TB services and appropriate follow-up for TB/HIV co-infected persons and the migrant population. The 2008 regional framework, *Tuberculosis and HIV: A framework to address TB/HIV Co-infection in the Western Pacific Region*, is an important document in this regard and will support country TB control efforts.

In recent years, China has significantly strengthened its national capacity and role in TB prevention and control. However, additional work is needed in order to respond adequately to the problem of MDR and XDR TB. It will be important to enhance DOTS implementation, to address the currently limited capacity of the laboratory network, and to engage all care providers in the timely diagnosis and treatment of all forms of tuberculosis.

v. Malaria, Schistosomiasis, and Other Neglected Tropical Diseases

While China remains vulnerable to the health threats posed by emerging and reemerging infectious diseases, known and preventable diseases such as influenza, malaria, cholera, foodborne parasitic diseases, leishmaniasis, and schistosomiasis continue to occur despite the availability of effective preventative measures.

China's large-scale national malaria control programme, launched in 1955, successfully reduced the 30 million malaria cases that had been occurring annually before 1949 to several hundred thousand cases currently. However, China still faces major malaria control issues in the border areas of the country's tropical south (i.e., in Yunnan and the central eastern mountainous areas of Hainan) and in central China (i.e., Anhui, Hunan, Hebei) where malaria remains very serious. In 2007, an estimated 74 million



people were living in high risk areas.⁶⁴ Drug resistance and counterfeit drugs are of concern.

Schistosomiasis, endemic in China for centuries, is a major health risk in rural, central China. Despite major progress in schistosomiasis control over the last 50 years, the disease is reappearing in some areas, with an estimated 516,000 cases in 2007. ⁶⁵ China has identified schistosomiasis as a priority in communicable disease control, and aims to rein in transmission in mountainous regions by 2008, and interrupt it by 2015. In lake regions, the goal is to control the epidemic by 2008 and control transmission by 2015.

While China formerly had one of the highest lymphatic filariasis burdens in the world, several decades of carefully planned and well coordinated activities have led to China being recognized as having eliminated lymphatic filariasis as a public health problem in 2007. The current challenge is to sustain surveillance for detecting and clearing residual sources of infection, particularly in remote and poor areas.

MDG 7: Ensure Environmental Sustainability

vi. Environmental Health



The rapid pace of urbanization and industrialization in China has had far-reaching effects on environmental conditions in rural and urban areas. The Ministry of Environmental Protection estimates that more than half of the country's rivers are severely polluted and about a third of China is affected by acid rain. Ten percent of the country's total arable land has been polluted by wastewater, solid waste and other pollutants. In 2004, an estimated 44% of the total population had access to improved sanitation and 77% of the population had

access to safe drinking water. However, access in rural areas was considerably lower. Access to improved sanitation in rural areas was 28% compared with 69% in urban areas. Similarly, population access to safe drinking water for rural and urban areas was 67% and 93%, respectively. 66

The Government is seeking ways to support sustainable development while maintaining economic growth. Responses have included national development planning (including environmental management efforts), modern environmental legislation, strengthening environmental institutions, and placing higher priority on environmental and natural resources management. While China has made improvements in air quality, with emissions reductions for major air pollutants (e.g., sulphur dioxide and particulate matter) since 1996, vehicle emissions have risen and have become a problem in some cities.⁶⁷ Moreover, energy use is about 20% higher than the OECD average. Challenges with waste management, desertification, and biodiversity protection also remain.

The National Environment and Health Action Plan (NEHAP) for 2007-2015 was

developed by the Ministry of Health and the Ministry of Environmental Protection, along with other ministries, with WHO support. The Plan aims to control the impact of environmental risk factors on health, reduce the incidence of environment-related disease, and protect public health. The *National Standard for Drinking Water Quality* was also issued by MOH and National Standard Management Committee in December 2006 and came into force in July 2007. The *National Plan on Urban Drinking Water Safety and Security* (2006-2020) was developed by five ministries and approved by the State Council. These plans will guide future environmental health actions.

C. High Burden of Noncommunicable Diseases and Related Deaths

i. Control of Noncommunicable Diseases

Cerebrovascular diseases, cardiovascular diseases and cancer are the main causes of death and the share of noncommunicable diseases (NCDs) occurring at younger ages is growing. The incidence of noncommunicable diseases has risen with increased rates of hypertension and smoking. Unhealthy diet and physical inactivity are also becoming more common risk factors. In 2002, the prevalence of hypertension in people 18 years or older was 19%. 68 Tobacco use is a



major risk factor for noncommunicable diseases, including cancer and cardiovascular and respiratory diseases. Obesity is also a contributing factor. Overweight and obesity are rising rapidly. In 2002, the prevalence of overweight was 23% of adults in China, and the prevalence of obesity was 7%.⁶⁹ Of particular concern are the increasing rates in children, with overweight and obesity rates of 8.5% and 4.4% respectively in urban children aged 7-17 years in 2002.⁷⁰ Rising rates may lead to increased morbidity rates from NCDs in the next generation.

In response, the Ministry of Health created the *Program for Cancer Prevention and Control in China* (2004-2010) in 2003 and launched a *National Healthy Lifestyles Programme* in 2007. China also ratified the WHO *Framework Convention on Tobacco Control* in 2005, and is developing a *National Work Plan on Noncommunicable Diseases*. The latter is focused on adult male smoking, hypertension, overweight and obesity, and capacity building for chronic disease control.⁷¹ A National Work Plan on Health Education and Health Promotion (2005-2010) was also issued by the MOH and is being implemented.

NCDs have become the primary health problem among poor people. Prevalence rates for hypertension and diabetes were 12.6% and 0.8% respectively in some of China's poor rural areas in 2002, and rates for overweight and obesity were 12.8% and 2.7% in the same year. In 2006, some counties reported that nearly 60% of mortalities were caused by NCDs. 72



ii. Tobacco Control

Of the 1.3 billion smokers worldwide⁷³, nearly one-third are in China.⁷⁴ Smokers in China are predominantly male, and smoking rates among men are high. Despite decreased smoking rates from 1996 to 2002, from 66% to 57% among men, and from 3.8% to 2.6% among women,⁷⁵ the absolute number of smokers has increased from 320 million in 2002 to 350 million in 2006.⁷⁶ In addition, more than half of non-smokers report exposure to second-hand smoke.⁷⁷ Tobacco kills approximately 1 million Chinese people annually. ⁷⁸ If smoking rates remain unchanged, the death toll in China is expected to increase to 2.2 million a year by 2020.⁷⁹ Most deaths would be from cardiovascular and respiratory diseases and cancer, which would make tobacco use a major driving force in the rising epidemic of noncommunicable diseases in China.⁸⁰

iii. Injuries, Violence and Mental Health

According to the MOH, injuries and violence contribute to about 9% of the total mortality each year (700,000 to 750,000 deaths). In 2007, most injury deaths were attributed to suicide (28%), road traffic injuries (25%) and drowning (11%), with the suicide rate for women estimated to be 25% higher than that for men, and traffic injury mortality rates twice as high for males as for females.⁸¹ In 2005, the suicide rate in rural areas was nearly twice that of urban areas.⁸²

Mental and neurological disorders are responsible for about 20% of the overall disease burden in China. Sixteen million people suffer from severe mental disorders. More than 30 million children and adolescents under 17 years-old have behavioral and emotional problems. However, the treatment rate for those needing mental health services remains low.⁸³

iv. Occupational Health



Almost 113,000 deaths from work-related accidents were reported in 2006.84 By the end of 2006, there were 676,562 cases of occupational diseases in China, 91.1% of which were pneumoconiosis.85 Experts project that the incidence of occupational diseases will continue to rise. While occupational hazards in traditional industries like coal mining and metallurgy continue to jeopardize human health and safety, emerging and growing industries like automobile manufacturing and bioengineering are posing additional new threats. Weaknesses in safety regulation and enforcement are particularly apparent in rural areas, where township and village enterprises (including dangerous coal mines) operate in a largely unregulated fashion and generate the majority of occupational diseases,

disabilities and deaths. As part of the Global Plan of Action on Workers' Health, WHO and ILO supported the Government to develop the National Profile on Occupational Health and Safety. WHO also assisted in improving coverage of Basic Occupational Health Services (BOHS) especially for migrant and agriculture workers in China.

Occupational health problems have long-term implications for economic development. Occupational diseases not only harm the health of workers, but reduce overall labor productivity. 86

D. Address Emerging Public Health Threats

i. Newly Emerging Infectious Disease Surveillance and Response

Following the 2003 outbreak of Severe Acute Respiratory Syndrome (SARS) in China, there was a clear need to develop comprehensive systems for the prevention, surveillance and response to address newly emerging infectious diseases. The December 2003 outbreak of the highly pathogenic avian influenza (AI) in several Asian countries reiterated this, particularly for infectious diseases with epidemic and pandemic potential. China is home to a fifth of the world's population, a



quarter of the world's poultry, and 75% of the world's wild birds. With poultry and fowl highly susceptible to influenza viruses, and given the close proximity between people and animals on rural farms throughout the country, China is particularly vulnerable to health threats posed by the emergence of a new strain of avian influenza.⁸⁷

In 2005, China endorsed both the revised global International Health Regulations (IHR), and the regional Asian Pacific Strategy for Emerging Diseases (APSED). The revised IHR (2005) sets out a global framework to prevent and respond to public health threats and emergencies, addressing all public health threats, promoting tailored responses which contain infectious diseases at the source. The APSED provides a strategic regional framework to strengthen country capacities in this respect. China has demonstrated its commitment to building surveillance, early warning and response systems, and has initiated implementation of a prevention and control strategy for acute infectious disease outbreaks in 2007. However, much still needs to be done to fully implement the IHR and APSED in China. China will need continued technical advice and support.

ii. Environmental Public Health Threats

Adverse impacts of climate change on human health are predicted to be greatest in countries like China with poorly established environmental health and public health systems in rural and less industrialized areas. In China, as predicted globally, the impact of climate change may lead to changes in the distribution of disease vectors, resulting in an increase in vector-borne diseases, as well as diarrhea and respiratory diseases, and malnutrition. Further national assessments on the potential impact of climate change on human health are urgently needed. It is also necessary to support China to better understand its vulnerabilities and identify possible options and policies to adapt to climate change, and to respond and protect its large population.



iii. Food and Drug Safety

Food and drug safety are growing public health issues both domestically in China as well as internationally. Greater numbers of food-related illnesses are being reported. It is estimated that 200,000 to 400,000 people suffer from food poisoning annually in China, and that about a third can be attributed to biological contamination.⁸⁸

The *National Food Safety Plan of Action* (2003-2007) under MOH has helped to improve food safety legislation and standards. In addition, a draft law on food safety was reviewed by the National People's Congress in late 2007, outlining food safety standards, foodborne disease control measures, institutional systems covering food production, processing, delivery, storage and sales, as well as a mechanism to assess and manage food safety risks, including risk communication.⁸⁹ The Beijing Declaration on Food Safety, adopted by over 50 countries and international organizations in China at the 2007 High-level International Food Safety Forum, shows international commitment for addressing food safety issues and will guide food safety policy in China and globally.

The State Food and Drug Administration (SFDA) introduced a new regulation, "Provisions for Drug Recall" to order manufacturers to recall defective and unsafe drugs and medical devices in December 2007. This regulation covers wholesalers, retailers and drug users, and drug recall is required in three levels according to the seriousness of risks.

While there has been some progress, additional support is needed to enhance crossagency coordination and devise a hazard-reduction-based approach to food safety from farm to table. Safety standards and health regulations related to food and drug safety are inconsistent in design and enforcement across sectors and localities, and should harmonize with international regulations.

2.4 Cross-cutting Issues

Health Systems Development

The need for health systems development cuts across all health challenges listed above. A strengthened health system would have broad implications for improving health outcomes in all programme areas, from child health to noncommunicable diseases to environmental health issues. New schemes for health financing with increased government allocations, expanded health insurance coverage and health services access, improved government regulation, implementation and enforcement of health-related laws and policies, more effective inter-ministerial coordination and planning, and strengthened human resource capacity for health would have positive impacts on all health areas.

MDG1: Eradicate Extreme Poverty and Hunger

Health Care Access by Vulnerable Populations: Low-income Migrants and Poor Ethnic Minorities

Large segments of the population cannot access appropriate, adequate quality health care due to factors that place them at a comparative disadvantage: poverty combined with rising health care costs, geographic barriers, residential status and discrimination. This includes poor families in remote, mountainous and rural areas, migrants, ethnic minorities, women, children, the disabled, and people living with HIV/AIDS. Among the hardest to reach are poor migrants and ethnic minorities.

Low-income migrants, for example, have difficulty accessing public services and social insurance schemes as many schemes are managed locally and do not have portable benefits. Only recently has the migrant population come to the attention of local policymakers and service providers. Supporting migrants access to health care is not only imperative from a human rights perspective, but also from a public health standpoint, in which communicable diseases, such as HIV/AIDS and TB, are more difficult to prevent and control with



mobile populations. Impoverished ethnic minorities, many of whom live in mountainous and remote areas, also face geographic, language and cultural barriers. There is a clear need to improve access and affordability of essential health care for these groups using a systemic health sector development approach.

MDG3: Promote Gender Equality and Empower Women

Gender Inequality

As referred to earlier, large absolute numbers of maternal deaths in China, comparatively high suicide rates for women, and high injury rates for males are significant areas of gender imbalance.

The cultural bias against girls and son-preference in many Chinese families has led to the abnormally high male to female sex ratio at birth.⁹¹ With males traditionally responsible for supporting elderly parents in China, son-preference is exacerbated by public insecurity generated by a weak public social security system. Various negative social impacts are anticipated, including difficulties of old-age support for those who never married, and increasing commercial sex and trafficking of women.

Currently, HIV/AIDS predominantly affects men: 71.3% of people living with HIV were male and 28.7% were female by the end of October 2007.⁹² With the primary mode of HIV infection having shifted from injecting drug use to sexual transmission, the share of new infections for women is likely to increase if China follows global trends. Smokers also are overwhelmingly male following current social norms. With TB



notification rates twice as high for men as for women, more focused studies are needed to determine whether this imbalance is due to socio-cultural determinants or epidemiological differences. Men are also at biologically higher risk of becoming Hepatitis B carriers and suffering from chronic consequences of liver cancer and cirrhosis: 8.6% of males are Hepatitis B virus carriers compared with 5.7% of females in 2006.

The focus of health initiatives traditionally has been geared more towards men. However, in recent years the Government has been placing greater emphasis on women's health. New initiatives, such as research and pilot screening programs for breast and cervical cancer, are aimed at improving women's health.

Communications

After the SARS outbreak, China recognised the critical importance of good communications for public health outcomes, by helping people to make better decisions, prevent illness, and protect themselves. Specifically, communications play a vital role in informing people about emergency crisis situations, like an outbreak, industrial accident or natural disaster; about issues generating substantial public concern; and about high-risk behaviors, like tobacco use, unsafe sex or driving without a seat belt. Chinese-language websites and better access to information by the public—including through reliable translation of critical information and relationship building with Chinese language media — will greatly assist in achieving these goals. Web-based reporting can also play a helpful role in enhancing surveillance.

Prequalification

China also stands much to gain from meeting international standards and WHO prequalification for specific drugs, vaccines and medicines. China has already made progress in strengthening vaccine regulatory functions following several rounds of assessment and capacity building supported by WHO. Enhancing drug procurement and supply management and strengthening laboratories could also improve the response to many diseases. In particular, China as well as other developing countries would benefit from WHO prequalification of drugs and medicines (including traditional Chinese medicine) for HIV/AIDS, TB, HCV and malaria, as well as prequalification for vaccines for international use, and new vaccines for polio, rubella and possibly Haemophilus influenzae type b and Streptococcus pneumoniae (for meningitis and pneumonia) and rotavirus.

Section 3: Development Assistance and Partnerships: Technical Cooperation, Instruments and Coordination

3.1 Overall Trends in Development Assistance

According to the OECD, net official development assistance (ODA) to China rose steadily from US\$ 1.33 billion in 2003 to US\$ 1.76 billion in 2005, representing 0.1 % of GNI for these years. More recently, net ODA to China has begun to decline, totaling US\$1.2 billion in 2006.⁹³ Japan remains China's largest bilateral donor, providing US\$620 million in loans, and US\$55.73 million in grant aid and technical assistance in 2005. The next largest sources of ODA to China were from Germany, France, the United Kingdom and the International Development Association⁹⁴ of the World Bank.⁹⁵ About 10% of total bilateral ODA to China was allocated to health and population-related activities in 2004/2005.

3.2 Key Agencies in the Health Sector

Bilateral and multilateral donors and non-governmental organizations (NGOs) have provided substantial technical assistance to health-related areas throughout China. More recently, a number of donors have increased funding levels for health development. The Gates Foundation has committed US\$50 million for HIV/AIDS and US\$25 million for TB in 2007. AusAID has directed substantial funding to support work on HIV/AIDS, communicable disease surveillance and response, and health systems development. Save the Children also increased health resources to China. Other international partners actively involved in the health sector are shown in Box 2.

The Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) has played an important role in influencing the national health agenda, providing a total of almost US\$341 million in grants to China since 2003. GFATM funding for HIV/AIDS has helped to support HIV treatment, care and prevention, reduce transmission, and mobilize civil society to scale up HIV/AIDS efforts. GFATM assistance for TB control has focused on expanding DOTS, improving health promotion, capacity building and addressing major threats to TB control (e.g., drug resistant TB, TB in internal migrants, TB/HIV coinfection). GFATM efforts to control malaria focus on addressing high transmission regions and rolling back re-emerging malaria.

The Global Alliance for Vaccines and Immunization (GAVI) has also supported expansion of Hepatitis B immunization to reach all Chinese newborn infants since 2002, providing US\$38 million of co-funding for the US\$76 million China GAVI project on Hepatitis B vaccination and immunization injection safety.



Box 2: Key health sector partners in China and main areas of support

UN, Multilateral, Bilateral and NGO Health Partners in China (since 2004)

ADB Nutrition, surveillance, food safety, CSR, HIV/AIDS

AusAID HIV/AIDS, environmental health, health system governance, rational use of

medicine, emerging infectious diseases, vaccine-preventable diseases, primary

health care, rural health

Bloomberg Foundation Tobacco control 96

CIDA Biosafety, TB, HIV/AIDS, emerging infectious diseases
DFID TB, HIV/AIDS, SARS, health sector development
EU Food safety, emerging infectious diseases

FAO Avian influenza, food safety GFATM TB, Malaria and HIV/AIDS

Gates Foundation HIV/AIDS, TB

ILO Occupational health and insurance

Italy Ti

JICA/JBIC Vaccine-preventable diseases, child health, healthy cities, environment

and infectious diseases, including TB, HIV/AIDS

Luxembourg Vaccine-preventable diseases, chronic disease, health education New Zealand Emerging infectious diseases, health systems development

NORAD HIV/AIDS, environment

Save the Children Maternal and child health services

SIDA HIV/AIDS

Spain Millennium Development Goals achievement

UN Foundation Measles elimination
UNAIDS HIV/AIDS coordination

UNDP Environmental health, health sector reform, occupational health, food safety

UNEP Environmental health

UNFPA Reproductive health, HIV/AIDS

UNICEF Maternal and child health, vaccine-preventable diseases, nutrition,

HIV/AIDS, water & sanitation

UNIDO WTO, health and trade issues, food safety

US CDC Vaccine-preventable diseases, HIV/AIDS, emerging infectious diseases,

surveillance, birth defects

World Bank Rural health, health systems development, health promotion, environment,

vaccine-preventable diseases, TB, emerging infectious diseases, road safety

WHO also collaborates closely with several national mass organizations, including the All Women's China Federation, the China Youth Federation and the Disabled People's Federation. These organizations have been involved in implementing WHO-supported programmes, mobilizing communities and carrying out education campaigns at the local level. In addition, other nongovernmental agencies, including community organizations, universities and foundations, play an important role in supporting programme implementation, particularly at the grass-roots level. The 71 WHO Collaborating Centers in China are also valuable WHO partners. (See Annex 2 for full list of centers.) Having local expertise in a wide range of issues, some of these centers have been integral to CCS programme implementation from 2004-2008, providing advice and technical capacity at the local level.

3.3 Key Partnerships and Coordination Mechanisms

Development Cooperation Frameworks and Health Sector Coordination

Supporting China towards achievement of the Millennium Development Goals and the Millennium Declaration provides an important organizing framework for donor coordination in China. The majority of donors in China have reflected this in country assistance plans. Poverty Reduction Strategy Papers do not provide a basis for donor and government cooperation in China since China became ineligible for concessional IBRD loans in 2001. Thus, sector-wide approaches are not a part of development cooperation for health in China.



The United Nations Theme Group on Health (UNTGH) is an important government-donor forum for cooperation on health issues in China. WHO chairs and acts as Secretariat for the UNTGH, which is comprised of UN agencies, bilateral and multilateral donors, government agencies and international nongovernmental organizations. (See full list of members in Annex 3.) This Group meets to share information, coordinate health-related activities and undertake special initiatives.

The United Nations Development Assistance Framework (UNDAF) for 2006-2010 places MDGs at the center of the UN's work and seeks to provide a framework for coordinated UN assistance in China. The overarching goals of the UNDAF in China are growth with equity; implementing equitable social policies; environmental sustainability; reduced infection rates, and improved care, support and protection related to HIV/AIDS, Malaria and TB; and an enhanced Chinese role in international cooperation. WHO contributes to UNDAF outcomes through programmes that link economic growth to better health and reduced poverty; expand coverage of quality health services; support national coordination and health policy development especially on TB, HIV/AIDS, environmental health and noncommunicable diseases; strengthen surveillance, response systems, and global partnerships for infectious and emerging diseases; and support implementation of the IHR (2005) and the WHO Framework Convention on Tobacco Control.

Programme and Disease-specific Coordinating Mechanisms

The GFATM Country Coordinating Mechanism (CCM) in China plays a major role in government-donor coordination for all three diseases of HIV/AIDS, TB and Malaria. The GFATM CCM is chaired by the Ministry of Health. Individual GFATM Working Groups for all three diseases also play an important facilitating role, convening government agencies, donors and NGOs to provide recommendations and technical advice to the CCM.

For EPI, key coordinating mechanisms are the ICC for immunization, led by MOH, supported by China CDC, WHO, UNICEF, JICA and others, and the GAVI Operations Advisory Group which guides GAVI project funding, is led by MOH and is supported by China CDC, WHO, UNICEF and the GAVI Secretariat.



3.4 Key Challenges and Opportunities to Development Aid and Partnerships

Declining Aid Levels

With China's graduation from a low-income country to a lower-middle-income country, a booming economy, and its own expanding overseas aid programmes, ODA flows to China are anticipated to decrease. Major donors, such as the U.K.'s DFID⁹⁷ and JBIC, have already scaled back operations and plan to cease or decrease funding significantly through 2013.⁹⁸ World Bank and DFID programs on TB control, for example, are set to phase out in 2009. While these decreases in aid are being offset somewhat by increases from other aid agencies and possibilities for private sector resource mobilization, a general trend toward declining levels of aid is anticipated.

However, in a vast, diverse and populous country such as China, international cooperation and technical assistance is still needed to achieve equitable national development and growth, as well as to assist China to adopt international norms, meet global standards and contribute to critical areas for international cooperation. International collaboration is necessary to prevent and control infectious diseases, address environmental health issues, and regulate food, product and drug safety. Moreover, government agencies continue to request international technical support.

With respect to declining ODA levels, it will be necessary to support the development of appropriate exit strategies in health areas where donors will discontinue external funding to ensure continuity and sustainability of programme impacts.

Intersectoral Collaboration

In a modern China, it is recognized that collaboration beyond the health sector is necessary to address complex public health issues in a holistic and sustained way. WHO will assist by supporting and facilitating collaboration among relevant agencies to develop more holistic approaches towards better health outcomes for all segments of the population. Such efforts would also contribute to improving aid effectiveness and efficiency.

Section 4: Past and Current WHO Cooperation

4.1 Brief History of WHO in China

The WHO Representative Office in China was established in 1981. Throughout the years, cooperation between WHO and China has been mutually beneficial. Recent donor contributions from the Government of China to WHO further underscore this spirit of cooperation and partnership. Over the past 25 years, the nature of WHO assistance in China has adapted to the changing social and economic context to address pertinent health needs. In more recent years, WHO has turned its attention to the mounting problems associated with the rapid industrialization, urbanization and rising disparities in health access and health outcomes as economic growth surges ahead in China's transitional economy.

In 2004, the Chinese Ministry of Health and WHO Director-General signed a Memorandum of Understanding (MOU) to strengthen health cooperation and exchange, identifying key areas of cooperation. These are 1) public health priorities (rural health, prevention and treatment of major diseases, mechanisms for public health emergency response); 2) control of major communicable diseases (HIV/AIDS, TB, Hepatitis B, Schistosomiasis, Malaria and other emerging diseases); 3) noncommunicable diseases (including health determinants such as environment, tobacco control, food safety); 4) traditional medicine (including standard setting, quality control and safe use of TCM in accordance with World Health Assembly policies); and 5) human resources for health.

4.2 Key Areas, Modalities of Work and Roles of WHO

Key Areas of WHO's Work from 2004-2008

In keeping with the framework of the 2004 MOU, WHO assistance under the 2004-2008 CCS focused on 10 priority areas, falling under four overarching umbrellas. The first umbrella emphasized a focus on WHO's core strengths: working on vaccine-preventable diseases, and tuberculosis prevention and control. The second set of priority areas revolved around strengthening areas of strategic importance: HIV/AIDS prevention and control; communicable disease surveillance and response; health systems development; and health and trade. The third umbrella highlighted the need for strategic development in new and neglected areas: noncommunicable diseases (including injuries), and environmental and occupational health. The fourth set of priorities sought to enhance partnerships and increase the focus of existing programmes: maternal and child health (including nutrition), and parasitic and vector-borne diseases.



Key Roles and Modalities of WHO's Work

Cooperation between WHO and China operates under several important modalities or principles. Collaborative activities are demand-driven, responsive to the country's changing needs and based on jointly agreed upon assessments and plans. WHO's main counterpart — the Ministry of Health — is integrally involved in planning and monitoring. WHO also supports capacity strengthening based on country-specific needs, focuses on improving quality and scaling up effective interventions at the local level, and supports monitoring and evaluation. Such modalities contribute to ensuring country sustainability of programmes.

Globally, WHO has mapped out key roles and areas where it can add value:

- 1. Leadership on critical health issues and partnerships for joint action
- 2. Shaping the research agenda and stimulating the generation and dissemination of valuable knowledge
- 3. Setting norms and standards, and promoting and monitoring their implementation
- 4. Articulating ethical and evidence-based policy options
- 5. Providing technical support, building sustainable institutional capacity

WHO Roles under the 2004-2008 Country Cooperation Strategy

During the last CCS period, WHO fulfilled many of these essential roles in China. WHO has provided **leadership**, **policy advice and technical input on the critical issues**, such as health system reform and promoting more accessible pro-poor health care services. WHO worked closely with the Government to develop the *National Environment and Health Action Plan* (2007-2015) which is the first document to articulate concrete environmental health plans in China. As Chair of the UNTGH, WHO helped to facilitate strategic dialogue and deepen discussion among government, donors and other development partners on key health issues such as health sector reform and food safety.

WHO also has helped to **shape and develop research and disseminate valuable knowledge** by supporting the development of several important research initiatives and publications. For example, WHO, UNICEF, UNFPA and MOH undertook a Joint Review of the Maternal and Child Survival Strategy in China in 2006, resulting in joint recommendations for follow up and a consensus on key issues, such as the definition of an essential package of MCH services. In 2006, WHO China published an important report, *Turning the Tide: Injury and violence prevention in China*, highlighting the large share of deaths attributable to injury and violence as well as key issues for prevention. WHO supported drug resistance surveys (DRS) in several provinces to determine the burden of drug-resistant TB.

In addition, WHO has supported China to build commitment and **adopt international norms and standards**, notably for the revised International Health Regulations (2005), the regional Asian Pacific Strategy for Emerging Diseases (2005), and the ratification of the WHO Framework Convention on Tobacco Control (2006).

WHO has worked to produce **ethical and evidence-based policy options**. For instance, WHO assisted efforts to expand voluntary HIV testing and counseling. A successful WHO-supported pilot project in Guizhou Province provides a national demonstration model for eliminating measles at the provincial level. Additional provincial level work which greatly improved Hepatitis B vaccine coverage, also provides a model for western provinces where many births occur at home.

Finally, cutting across all of WHO's work in China is the provision of technical assistance and transfer of international health expertise, knowledge and experience to **strengthen national institutional capacity** in the areas mentioned above. In EPI, WHO provides key technical guidance and supports policy development for all routine childhood immunizations and new vaccines. WHO has provided significant capacity strengthening support to the Government on HIV/AIDS surveillance, prevention, treatment and care. WHO also strengthened provincial planning capacity, the national monitoring and evaluation framework for HIV/AIDS, as well as built capacities of local health committees. Government capacity to assess and manage food safety was also reinforced. Finally, WHO provided considerable support to strengthen national capacity for communicable disease surveillance and response.

WHO Roles not Reflected in Work Plan

WHO has undertaken additional work that does not appear in formal work plans. Most significant is WHO policy advice provided in response to requests by the Government or country partners. For example, WHO played an advisory role on health sector reform during the 2004-2008 CCS period, with the Government inviting WHO China to submit a proposal for China's health sector reform in 2007. WHO provided technical assistance to support government preparation of various international proposals (e.g., The Global Fund, Gates Foundation, GAVI). In addition, WHO participated in collaborative UN initiatives, such as the development of the UNDAF, UN discussion papers, the UN Health Theme Group's Health Situation Assessment of China, and joint UN programme proposals, all of which fall outside of WHO work plans.

4.3 WHO Financial and Human Resources

During the 2002-2007 period, expenditures under the Programme Budget totaled US\$61.421 million. Regular budget expenditures accounted for 32% (US\$19.485 million) and extra-budgetary funds accounted for 68% (US\$41.936 million). Expenditures of extra-budgetary funds rose from US\$5.85 million in the 2002-2003 biennium to US\$17.334 million in the 2006-2007 biennium. The country planning figure for the regular budget was US\$7.08 million for the 2008-2009 biennium.

In 2007, the WHO country office employed 48 staff members: 27 professional staff and 21 general service staff. Of the 27 professional staff, 13 were international staff and 14 were national programme officers. Overall, there were 31 female staff and 17 male staff. Of the 48 staff members, there was one short-term staff (STP) member, and the remaining 47 were fixed-term staff.

4.4 WHO Partnerships with Other Agencies

WHO has worked closely with many development agencies during the 2004-2008 CCS programming period. Major funding partners have included DFID on health sector development; the World Bank, CIDA, US CDC, AusAID, the European Union and the Asian Development Bank on strengthening early detection, surveillance and response of infectious diseases; US CDC, JICA, Luxembourg and AusAID on immunizations and vaccines; GFATM for HIV/AIDS, TB and malaria; Sida, CIDA, NORAD and UNAIDS on HIV; CIDA, Government of Italy, and the Gates Foundation on TB; Norway on SCC; DFID and Luxembourg on noncommunicable diseases; and the Asian Development Bank on child and adolescent health and food safety. During the 2004-2008 period, WHO also cooperated closely with UNICEF on maternal and child health, injury prevention and immunizations, and UNFPA on reproductive health and HIV/AIDS.

In addition, China has the second largest number of WHO Collaborating Centers in the world, with 71 collaborating centers focusing on a range of issues. While WHO and MOH have agreed to review the qualifications of collaborating centers to determine which continue to meet accreditation standards and provide needed specialist capacity, many of these centers have proven to be an important resource, providing appropriate local expertise, technical advice, and implementation capacity to WHO-supported programmes. These centers also benefit from WHO knowledge transfer and capacity strengthening activities. Under the 2008-2013 Country Cooperation Strategy, selected centers will be key partners in programme implementation, as appropriate.

4.5 Key Strengths, Challenges and Opportunities of WHO Cooperation

Key Strengths



WHO and the Ministry of Health have a long established good working relationship. Throughout the years, WHO also has established itself as a trusted source of independent policy advice and technical expertise in China. With its global health network, pool of international health experts, as well as technical specialists within the WHO country office in China, WHO is recognized as a valuable resource. WHO's prominent role in responding to health emergencies such as the recent SARS and Avian Influenza

outbreaks, has further highlighted the critical role that WHO plays in addressing international health threats and enhancing global health security and connecting countries at risk to global public health development and cooperation systems.

In addition, the ability of WHO to convene meetings and facilitate collaboration among both international and national health agencies on important health-related issues is a major strength. This has supported the mobilization of both partnership forums and resources. In particular, WHO has played a significant role in linking China to international resources, supporting the country to mobilize funds for critically needed areas. For certain communicable disease programmes, such as EPI and TB, extrabudgetary funds comprise the majority of programme resources. Extra-budgetary funding levels are closely linked to the WHO professional staff in-country, who play a major role in resource mobilization.

Finally, in China, WHO also works effectively with other national and international agencies at all levels.

Key Challenges

However, there are areas in which cooperation among Government, WHO and other donors could be strengthened. Despite progress in recent years, Government-WHO joint planning and prioritization of areas under the regular budget could be improved. With a rising share of programme budgets sourced from voluntary contributions, it will be necessary to ensure that these resources are directed to critical health areas where impact can be maximized and WHO's comparative advantages can be fully utilized based on overall country needs. This is especially relevant given wide variations in access to quality services among different regions and among certain segments of the population.

In addition, greater multisectoral cooperation among government agencies under an authoritative interagency coordinating government body for specific areas would enable a more effective response to addressing a number of important health issues.

Ensuring that national policies, legislation, programmes and plans filter down to local government levels is a recognized challenge, particularly with respect to having sufficient capacity and infrastructure to deliver and implement national policies, and to enforce legislation. Defining implementing units, improving management systems, and ensuring sufficient capacity for management and technical back-up at both central-level MOH and other implementing levels, could greatly enhance programme results. In addition, establishing direct programming with provincial authorities for some areas could enable more efficient programming, and help build provincial and local capacity where support is greatly needed.

WHO and Government cooperation in data and information sharing could also be strengthened. Accurate, authoritative, complete and up-to-date data and information on critical health indicators and disease surveillance could greatly improve programme analysis, targeting, and thus health outcomes for the population. Reporting of national indicators has improved. However, information on indicators by province and for disease prevention and control could be further strengthened to support more appropriate



decision-making and monitoring of program progress. For time-sensitive areas, such as communicable disease outbreaks or environmental emergencies, cooperation and improving communication is especially important.

Key Opportunities

There are new opportunities for promoting international norms and standards in China. China's increasing outward orientation is apparent from its growing international engagement in various global and regional forums. As China plays host to the 2008 Summer Olympics in Beijing and the 2010 World Exposition in Shanghai, China is stepping up efforts to demonstrate to the world that it is a modern, rapidly industrializing country that is advanced and able to meet global standards. The Government has committed to a tobacco-free Olympics and smoke free zones, and increased efforts to reduce carbon emissions and enforce environmental standards. China has also invested in a communicable disease surveillance system and increased its commitment to the International Health Regulations. There is an opportunity for WHO to support health authorities to build on this momentum, accelerate and sustain national progress towards tobacco control, IHR commitments, environmental health (especially for air and water pollution), product and food safety, towards strengthened regulatory systems, and international and WHO standards and norms. ⁹⁹

In recent years, China has hosted several major international technical health forums on primary health care, communicable diseases, food safety, and social determinants of health. China's active multilateral engagement on public health issues as such is an integral part of WHO-China cooperation. In addition, China has developed technical excellence in many public health disciplines over the past decade. China has played an important and expanding role in providing technical assistance and expertise, strengthening research capacity and providing pharmaceuticals and medical technologies to other countries, both within the Region and globally. The extensive Collaborating Centre network within China has played a key role in these developments. In this context, there is scope for expanding China's support to other countries in collaboration with WHO, particularly to Africa, as well as promoting the role of China in public health development and exchange across the world.

Challenges within WHO Modes of Operation

A large share of WHO funds at country, regional and global levels are earmarked. To effectively implement the CCS, it will be necessary to further decentralize programmes and funds. This implies that a larger share of un-earmarked funds is made available at country level.

In addition, in a vast, populous country like China, WHO needs to deploy more senior-level international technical expertise to the country level in strategic areas in order to extend reach, increase the impact of programmes and provide more rapid, readily accessible technical expertise on the ground. In China, international expertise in

technical areas that require a rapid response (e.g., CSR), areas of strategic importance, or areas needing regular technical input (e.g., environmental health) should be prioritized.

Finally, the WHO office in China will need to allocate more resources to recruit national professional staff in key areas.



Section 5: Strategic Agenda: Priorities jointly agreed for WHO-China Cooperation

5.1 Strategic Priorities

In view of the overall health and development needs and priorities of China, WHO and the Government of China have identified four main overarching strategic priorities for WHO support under the 2008-2013 Country Cooperation Strategy. These are to support government efforts towards 1) health systems development through implementation of health sector reforms towards universal access of basic health care services; 2) achievement of health-related Millennium Development Goals; 3) reducing the high burden of noncommunicable diseases, including work on tobacco control; and 4) addressing emerging public health threats.

5.2 Strategic Approaches

WHO and the Government will employ seven key approaches to attain these strategic priorities.

One key underlying strategic approach for all four CCS priorities will be to **support the development or implementation of relevant country health frameworks and policies based on international standards and norms**. Assistance is expected to result in health outcomes that are more equitable and pro-poor. Under the first strategic priority on health systems development, WHO will provide assistance to the Government to implement the new health sector reforms. For the remaining three strategic priority areas on MDG progress, NCDs and emerging public health threats, WHO will support the implementation of other major country health frameworks at central as well as at local levels.

These frameworks include the following: the National Plan of Action for Measles Elimination (2006-2012), National Guidelines for Hepatitis B Prevention and Treatment (2006-2010), Implementation Plan of Expanded National Immunization Program (issued in December 2007), recommendations from the Maternal and Child Health Review, and adaptation of relevant aspects of the regional strategies for maternal and child survival; Law on Maternal and Infant Health Care; National Action Plan for Reducing and Preventing the Spread of HIV/AIDS (2006-2010); National AIDS and STI Prevention and Control Plans; National Tuberculosis Control Plan (2006-2010); National Strategy on Noncommunicable Diseases; National Plan for Chronic Disease Control and Prevention (2005-2015); National Campaign to Promote Healthy Lifestyles; National Environmental Health Action Plan (2007-2015); and National Food Safety and Regulatory Framework. WHO will also support China to implement international agreements, namely, the WHO Framework Convention on Tobacco Control, the International Health Regulations (2005) and the regional APSED.

Another key strategic approach is to promote international cooperation and support studies and information exchanges between China and other countries on selected public health issues under the CCS agenda.

A third approach will be to **provide evidence-based policy advice and technical** support.

A fourth approach will focus on promoting the delivery and universal access of essential health interventions for prevention, treatment, care and support to halt transmission of diseases and curtail morbidity and mortality, particularly for people living in rural areas.

A fifth strategic approach will be to support the strengthening of human resources for health management and development systems.

A sixth key programme approach will be to **strengthen community-based health services and capacities** to enable more equitable and efficient provision of health care services at local levels, using primary health care approaches.

The final strategic approach is to **strengthen monitoring**, **evaluation and surveillance systems** to support decision-making, monitor progress, and enhance accountability.

Overall, supporting national ownership of health investments and capacity building are intrinsic to all of these approaches and will result in more sustainable health improvements and results in the long term.

5.3 Main Focus of the Strategic Agenda

Based on the assessment of major health challenges (outlined in Section 2) and in consideration of national and WHO priorities, specific areas for WHO-China cooperation were identified for the 2008-2013 Country Cooperation Strategy. These areas, categorized under the four overarching strategic priority areas, will be the primary, proactive areas of WHO support. These priority areas are elaborated in Annex 4. Also indicated in this annex are the corresponding strategic object under WHO's Medium-term Strategic Plan (MTSP SO) for each programme area.

In sum, the first strategic priority on health systems development will focus on improving health financing, improved health services delivery, human resources for health, availability, access and rational use of medicines, improving the quality of laboratory safety, and further integrating traditional Chinese medicine into the national health system. The second strategic priority supports MDG progress: addressing poverty and gender inequalities through cross-cutting work in all CCS programme areas; reducing child mortality and improving maternal health via EPI work and strengthening the integration of maternal and child health interventions in the health system; combating HIV/AIDS through work on surveillance, testing, counselling, prevention, treatment

and care, and tuberculosis by focusing on drug-resistant TB and TB/HIV co-infection. The third strategic priority concentrates on lowering the burden of noncommunicable diseases and related deaths under targeted NCD and tobacco control work. The final priority area addresses emerging public health threats related to communicable and emerging infectious diseases, environmental health, and food and drug safety.

Because of current resource availability, feasibility of results, and other significant constraints, programming in some important areas identified earlier will not be pursued proactively, but rather WHO will provide support as appropriate and as requested by the Government. These areas include injury prevention, occupational health and safety, and mental health. A range of reasons exist for not focusing on these areas in the strategic agenda of this CCS, including inadequate international funding or technical capacity; insufficient national capacity; prioritization of resources in areas likely to have a greater health impact; and reduced need for WHO engagement due to other partners working in the area.

A. Health Systems Development towards Universal Access to Basic Health Care Services



It is widely recognized that increasing the level of government spending needs to be done in conjunction with reform and regulatory programs that provide incentives for quality, performance and health outcomes. WHO will provide assistance to the Government in implementing its health sector reforms and national strategies that aim to achieve universal coverage of essential health care by 2020 and to improve quality, equity, and efficiency. WHO will support the Government's efforts to expand access to and quality of care through international technical support, enhanced capacity in making evidence-based policies, policy advice in the development and implementation of health reforms, better multisectoral coordination within

government, and capacity building of government officials in implementing, monitoring and evaluating health policies and interventions. This will assist to provide systematic support for health policy development in China. Support to expanding access and quality of essential community-based health care services will also be provided. The Regional Office and the WHO country office work closely with the Region's governments in supporting national efforts to upgrade health systems and address these issues.

i. Health Sector Governance, Planning and Coordination

The Government is committed to its health sector reform platform and established a high-level Ministerial Coordination Working Group on health sector reforms. This Working Group has recently finalized plans for health reforms and the Government will begin piloting these reforms in 2008. Overall health reform progress has been made in recent years, as evidenced by multi-department cooperation and the establishment of special institutional arrangements to address specific problems. Some examples include recent improvements in infectious disease surveillance, avian flu

preparedness, tuberculosis and HIV/AIDS control and treatment, and child delivery support. WHO will support the implementation of health sector reforms by assisting government in its efforts to design, pilot and evaluate the reform platform and support evidence-based policies aiming towards a basic health services scheme.

Ensuring active regulation and enforcement of regulatory frameworks, appropriate financing and service delivery arrangements, and equitable access to health care of adequate safety and quality, would also greatly enhance health sector governance and outcomes. In addition, strategic planning in the health sector could be strengthened. For example, the promotion of healthy lifestyles and prevention of chronic noncommunicable diseases have not been prioritized appropriately. WHO will support the implementation of health reforms and national strategies based on government requirements, including government commitments to strengthen rural primary health care programmes.

Overall, WHO will also facilitate collaboration among donors and national partners in support of policy development in the health sector. Finally, to address the critical need for better intersectoral coordination, WHO will promote collaboration among relevant government agencies.

ii. Health Financing towards Universal Access to Basic Health Care Services

Health systems in many countries of the Region are underdeveloped and several continue to struggle to deliver a minimum level of health services to all areas. Achieving national goals depends largely on health improvements among the poor and disadvantaged. Thus, greater public health investments are needed to strengthen health systems and essential health services, and health care must be made affordable for all. In particular, WHO will support government financing policies towards more efficient and rational investments in hospital and curative care services, as well as prevention, primary care and community-based health care services. It will be necessary to integrate technical and financial resources to strengthen the sustainable development of health systems.

To strengthen the national health system in China, WHO will provide policy advice and support in a number of key areas. In the context of current health care reforms, WHO will support the Government to meet international and WHO standards for a more equitable and accessible health care system, including universal coverage with a basic and essential package of health care by 2020. With respect to health financing policy, WHO will support the Government to strengthen equity, improve efficiency and a develop a provider payment system. Assistance to health security systems and schemes will include a design for a benefit service package, purchasing and provider payment mechanism, contributions, complementarities across schemes, and protection for the poor. To support government plans to cover all counties under the Rural Cooperative Medical Scheme (RCMS) by the end of 2008, WHO will assist to strengthen the capacity of management institutions and personnel under the New RCMS (NCMS). To enhance



the service delivery system, WHO will support improvements to health delivery structures, incentives, accountability and capacities.

iii. Human Resources for Health Strategy

The existing national human resources strategy for the health sector in China needs to be revised based on health reform plans, and needs to address the gaps in capacity and deployment for rural and remote regions, and at the peripheral levels of the health system. WHO will contribute to a needs assessment and support the strengthening of the national human resources strategy for the health sector to ensure strategic planning, development and management towards a strong, qualified, future health care workforce. This will include support to human resources for health strategic planning and management, education, training and scaling up of health workers, particularly in primary health care, human resources for health retention and migration strategies, and the areas of leadership and governance. Support will also be provided to policy development to encourage health care professionals to work at the community level and in remote areas to build community-based health care services.

iv. Health Monitoring and Evaluation and Quality Assurance

WHO will support strengthening the capacity for evidence-based policies. This includes strengthening the capacity to systematically monitor and evaluate the health reform agenda, and ensure that such findings feed back into policy planning, development and resource allocation. Gender analysis of key health policies and programmes, and disaggregation of health information by various relevant indicators of social inclusion will be carried out.

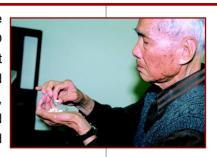
In support of strengthening governance and health monitoring and evaluation systems, WHO will work on designing health-related indicators to serve as the basis for performance evaluation in the health system and subnational governments, as well as designing independent monitoring mechanisms. In addition, WHO will support mechanisms to improve the quality of health care.

With respect to capacity building toward evidence-based health policy development and implementation, and access to quality services for the poor, WHO will provide incountry support at the central and subnational levels across government agencies. WHO will also provide technical assistance to the Government in needed areas and help strengthen capacities of senior and mid-level officials.

v. Availability and Access to Essential Medicines

To expand access to essential and safe and effective medicines and vaccines in China, WHO will provide advisory and policy support to improve the national medicine policy and the regulatory framework, more rational use of drugs, quality assurance and improvement in medicines and medical devices. The Regional Strategy for Improving

Access to Essential Drugs in the Western Pacific (2005-2010) and the WHO Global Medicines Strategy will provide a guiding framework. WHO capacity building support will focus on strengthening government regulatory and enforcement capacity (i.e., SFDA, MOH, NDRC), and compliance with good clinical practice, good manufacturing practice, and good distribution practice. In addition, to improve monitoring and evaluation, WHO will provide assistance to policy implementation and oversight at subnational and central levels.



vi. Quality of Health Laboratories

To improve the quality and standards of health laboratories and biosafety, WHO will provide direction and technical guidance for adopting a systematic approach and a logical roadmap for strengthening health laboratories, introducing quality management principles and regulation in health laboratories to address poor management, low quality standards, inadequate staff and inefficient procurement.

vii. Traditional Chinese Medicine

WHO will strengthen the collaboration with the State Administration of Traditional Chinese Medicine (SATCM), professional and academic associations, and other partners to support research, evaluation and clinical trials. Specifically, WHO will provide technical guidance on international standards and methods, towards the development of national policy, standards, regulations and guidelines to ensure efficacy and quality of TCM products and practices. This will support the safe and more regulated use of TCM and ultimately TCM's further integration into the national health system. WHO will also provide technical support and assistance to the relevant government agencies to establish a global networking mechanism for cooperation and exchanges on research between China and other countries.

B. Achievement of Health-related Millennium Development Goals

MDG 4: Reduce Child Mortality and MDG 5: Improve Maternal Health

i. Vaccine-Preventable Diseases and Expanded Programme on Immunizations (EPI)



China is committed to several key EPI-related goals. WHO support for China will focus on meeting WHO Regional and national goals for disease reduction, namely, measles elimination by 2012; Hepatitis B reduction among infants and children under five years to the national goal of 1% by 2010 (including the regional goal of less than 2% by 2012); sustaining polio-free status; and reducing under-five mortality by two-thirds by 2015, based on the MDG goal. To meet

these goals, WHO will direct technical assistance towards planning and policy,

developing strong disease surveillance and monitoring, and supporting field projects to reduce disease and enhance surveillance among poor and disadvantaged populations.

Furthermore, WHO will provide support to expand the scope and impact of childhood immunization in China. Specifically, WHO will assure strong surveillance and laboratory capacities for polio, measles, hepatitis and rubella; measure disease burdens of vaccine preventable diseases for which new vaccines are becoming available (including H. influenzae, S. pneumoniae, and rotavirus); and build policymaking capacity for introducing new vaccines and developing policies in the post-polio eradication era. WHO will also continue to support laboratory containment of wild poliovirus infections and potentially infectious materials. Pending central government funding and support, WHO will support national work to improve monitoring of routine immunization and to assure equity in immunization delivery in clinics and in schools, particularly through better enforcement of school-based immunization requirements. To achieve the 2012 measles elimination goal, additional work will include supporting catch-up and follow up measles vaccination campaigns, improving routine immunization coverage with two doses of measles vaccine, and improving care-based measles surveillance and outbreak investigations. WHO will also assist in global advocacy for international financial support for measles elimination. To assure a strong immunization program, WHO will assist China with additional technical support to monitor immunization safety issues including AEFI, and to conduct causality assessments of serious AEFI cases. In addition, WHO will continue to support efforts to assure safe and effective vaccines are available within China and globally, through support for China's National Regulatory Authority (vaccines) to meet WHO pre-qualification standards.

ii. Maternal and Child Health



To reduce child and maternal mortality ratios and increase access to basic services, including reproductive health services, WHO will follow up on the recommendations of the joint MCH Review of National Strategy and Interventions (2005-2006), implementing activities in targeted geographic areas in collaboration with other partners. The WHO/UNICEF Regional Child Survival Strategy will also guide interventions. Activities will focus on integrated women's health services focused on reproductive health, particularly tailored to the needs of young people; making pregnancy safer; child survival, particularly among poor migrant populations and in western provinces where child mortality rates remain very high; adolescent health;

ensuring universal access to reproductive health, an essential package of quality antenatal, obstetrical and neonatal care, and integrated childhood care; integrated management of childhood illnesses; hospital care for children; surveillance of maternal and child mortality and improving the quality of MCH surveillance data, given the absence of good data; monitoring and evaluating delivery of the basic MCH package (as part of the basic health services package); and costing the delivery of the basic MCH package. Additionally, WHO will support birth defect prevention efforts and

folic acid supplementation to pregnant women.

To address the imbalanced sex ratio at birth, WHO will support further collection of sex-disaggregated data for infant and child mortality. WHO will address the bias against girls in its child survival programme, by integrating an education component into the training of technical MCH and reproductive health staff at local levels, focused on changing negative attitudes about girls and on the rights of girls and women. The infant and young child feeding and nutrition programme in northwestern provinces will include a similar education component, as well as local incentives for encouraging adequate nutrition for girls. The safe motherhood programme will include an awareness raising component to reduce bias against girls. WHO will continue advocating for an expanded social security system for the elderly within the health sector development programme to relieve the pressure to have sons for security in old age.

MDG 6: Combat HIV/AIDS, Tuberculosis, Malaria and Other Diseases

iii. HIV/AIDS

The goal of the HIV/AIDS programme is to halt and reverse the spread of HIV/AIDS by 2015 by establishing an effective, coordinated and responsive system for HIV/AIDS and STI prevention and control, with strong government leadership, multisectoral cooperation and civil society involvement. Implementation of effective prevention initiatives and provision of appropriate treatment and care interventions to people living with HIV/AIDS is central to the national HIV/AIDS response.

WHO support in China will focus on policy development, strategic planning, developing technical guidelines and capacity building. It will emphasize in-country support at the central and subnational levels, sharing experiences and lessons learned from across China and abroad, and facilitating access to and management of international funding (e.g., GFATM). Activities will also help to combat the existing stigma and discrimination towards those living with HIV/AIDS, as well as shape interventions according to the specific needs of young people.

In line with the UN joint programme on AIDS in China (2007-2010), WHO will provide assistance to define and implement an essential package of integrated health sector interventions for prevention, care and support. WHO support will focus primarily on some priority elements within the following five broad strategic areas:

- 1) enhancing access to confidential HIV testing and counseling through different approaches, including client and provider initiated processes;
- 2) maximizing the health sector's contribution to HIV prevention, with a main emphasis on support and expansion of the 100% Condom Use Programme (CUP), prevention and control of STIs, including syphilis and the elimination of congenital syphilis, through comprehensive harm reduction interventions among injecting drug users, prevention of transmission in health care settings, and



- prevention for people living with HIV/AIDS;
- increasing access to and the quality of HIV/AIDS treatment and care, including antiretroviral therapy for adults and children, prophylaxis and management of opportunistic infections, strengthening of patients tracking systems;
- 4) strengthening the health system to support universal access to HIV prevention, treatment and care, and including implementation of collaborative activities with other disease control programmes like TB, and operational linkages with reproductive health, child and adolescent health and family planning;
- 5) strengthening HIV/AIDS and STI strategic information: national HIV, STI and behavioral surveillance, national and local system to monitor the health sector's response to HIV, prevention, surveillance and monitoring of HIV drug resistance, and operational research.

iv. Tuberculosis

The regional Strategic Plan to STOP TB in the Western Pacific Region (2006-2010) aims to reduce TB prevalence and mortality by 50% with respect to 2000 rates. The global STOP TB Plan (2006-2015) along with the National TB Control Plan (2006-2010) will guide TB interventions in China. To reduce TB prevalence and mortality, priorities for TB control include a) pursuing high quality DOTS enhancement; b) programmatic management of MDR TB and XDR TB, including strengthening laboratories; c) increasing equal access to TB services for the entire population, especially the poor and vulnerable; d) engaging all care providers; e) strengthening TB/HIV collaboration; f) increasing access to and management of quality assured drugs for China, including supporting China's prequalification eligibility to provide first and second line drugs for the global market; and g) surveillance and impact measurement, and monitoring and evaluation.

WHO will support capacity building at the central and subnational levels, the exchange of experiences and lessons learned across China and from abroad, and facilitating access to and management of international funding possibilities such as the GFATM. In this context, WHO will continue to respond to government requests for technical advice on its national malaria control programme.

MDG 7: Ensure Environmental Sustainability

v. Environmental Health



With rapid industrialization and economic development in the Western Pacific Region, addressing environmental health issues in countries and across borders is also an increasing priority. The Regional Initiative for Environmental Health will support this process. Where appropriate, strategic international studies and exchanges on environmental health issues will be supported to enable China to learn from the experiences of other countries.

WHO will assist the Government to implement the *National Environmental Health Action Plan* (NEHAP), including support to facilitate governmental coordination and communication. WHO will strengthen surveillance and response systems, as well as build capacity and partnerships (such as with the Ministry of Environmental Protection, UNEP and UNDP) to reduce the environmental burden on health.

In particular, to address major concerns about water quality and safe drinking water, WHO will support the Government to establish networks to monitor national drinking water and waterborne diseases surveillance in pilot provinces. WHO will also collaborate with UNICEF and IWA to support the Ministry of Health and the Ministry of Construction in the WHO Water Safety Plan Project to assess and improve access to safe drinking water in urban and rural areas. In collaboration with UNDP and Spain, WHO will help to develop and implement a strategy to scale up water safety plans in rural and urban areas, establish rural Water Safety Plan Resource Centers in poor provinces, build capacities for effective implementation, and strengthen capacity to improve standards, regulations, monitoring mechanisms and enforcement in water supply and water quality control.

As part of the global Health and Environment Linkages Initiative, WHO will support the development of cross-sectoral policies addressing national environmental health priorities related to rapid economic growth. This will involve applying integrated health, environmental and economic assessment methods to priority issues, once they are identified.

C. Addressing High Burden of Noncommunicable Diseases and Tobacco Use

i. Control of Noncommunicable Diseases

WHO will provide support to the implementation of national strategies and plans related to noncommunicable diseases, including the *National Strategy and Work Plan on Noncommunicable Diseases*, as well as the *Medium and Long-term High-level National Plan for Chronic Disease Control and Prevention (2005-2015)*. Assistance to strengthen surveillance will also be key.

WHO will support and promote coordination and communication among government agencies, private sector and industries, especially inter-ministerial collaboration. In particular, WHO will assist to clarify roles and support communication among relevant stakeholders with respect to the prevention of NCDs.

ii. Tobacco Control

The push for greater tobacco control is greatly aided by government commitment to the WHO Framework Convention on Tobacco Control. The Western Pacific Region is the first WHO Region in which all Member States have ratified this Convention. There are a number of interventions that could help to reduce tobacco use in China. Increasing tobacco taxes would help reduce smoking, for example. The Regulations for Hygiene Administration are under review and may be revised to place more restrictions on public smoking. The State Administration for Industry and Commerce also has revised the Interim Tobacco Advertising Management Rules. By 2011, all tobacco advertisements will be banned.

To lower prevalence rates, WHO will support the completion of the national plan and WHO FCTC implementation, and support activities related to the Bloomberg Initiative in China. WHO will advocate for smoke-free public and work places, and promote action on taxation, labelling, and advertising. To increase awareness, WHO will promote heath education related to tobacco. WHO will also assist China to strengthen surveillance.

D. Address Emerging Public Health Threats

i. Newly Emerging Infectious Disease Surveillance and Response



WHO support to strengthening communicable disease surveillance and response (CSR) is guided by three overarching frameworks: the International Health Regulations (2005), the regional Asian Pacific Strategy for Emerging Diseases (APSED), and a country-specific WHO-China medium-term planning framework (2006-2010) which outlines major areas for cooperation on influenza agreed upon between the Chinese Government and WHO.

Engaging established global networks and international technical expertise, WHO will assist to build the capacity of China's surveillance and response system for infectious diseases. Specifically, WHO will provide technical assistance to strengthen capacity in early alert and response to communicable disease outbreaks, as well as in the prevention and control of seasonal avian and pandemic influenza. While the APSED outlines five major focus areas (i.e., surveillance and response, laboratory, zoonoses, infection control, risk communication), WHO will focus mainly on areas that enhance the country's capacity for early alert and response to infectious disease outbreaks. This will include the following interventions:

- a. Improve the early detection of events of public health significance through the development of an integrated surveillance system and strengthening of laboratory diagnostic capacity. Key to this will be the creation of a reporting system that will allow epidemiological, clinical and laboratory information from human and animal health, environment and other relevant sectors to be analyzed and made available to all relevant decision makers.
- b. Strengthen the response to events of public health significance through improvements in event investigation skills and in the early application of effective

community and hospital based public health interventions. Development of investigative protocols, wider dissemination of effective, evidence based interventions and system development to support quality improvement will be important areas of activity.

- c. Prevent the emergence of infectious diseases through improvements in biosafety, closer collaboration with animal sector and strengthening of nosocomial surveillance and health care facility infection control.
- d. Strengthen public health networks to better utilize limited resources and improve domestic and international integration.

Under the regional APSED umbrella, funds will be provided for core WHO activities in this area. Key partners for CSR include the US CDC, AusAID and the Government of Japan who are also providing substantial financial resources to this area. Finally, the UN Country Team also collaborates under a joint UN Avian Influenza Coordination Group.

With regard to malaria, filariasis and schistosomiasis, WHO will provide technical advice and support should such assistance be requested by the Government.

ii. Environmental Public Health Threats

WHO will support the development of health strategies and vulnerability assessment for climate change adaptation and mitigation. Expertise and methodologies will be provided for several environment and health impact risk assessments, including assessments on air pollution and transportation. Additionally, under the global WHO/UNDP joint pilot project on Global Climate Change Adaptation to Protect Human Health, China is one of seven countries selected for participation on the basis of vulnerable ecosystems. The project will help to increase China's capacity to adapt and respond to climate-sensitive health risks.

Finally, WHO will support implementation of a Joint Programme on China's Climate Change Partnership Framework under the Spanish MDG Fund. The Programme aims to strengthen capacity to implement the climate change and energy related aspects of the new National Environment and Health Action Plan. Specifically, the project will enhance national capacity to supervise and manage national and local level environmental health risks, as well as strengthen environmental health information, monitoring systems and indicators.

iii. Food and Drug Safety

Within this area, WHO will work to implement the *National Food Safety and Regulatory Framework*, improve food safety legislation, and strengthen government capacity for food safety management and supervision, especially at the provincial level. This includes assisting food safety agencies to develop mechanisms, systems and capacity for food safety risk analysis. WHO will carry out community education campaigns on key



messages. WHO also will assist the Government to engage consumers through an effective food complaints system; engage industry and food safety regulators in strengthening food tracing and recall processes; be better prepared for food safety emergencies; and strengthen the national network of food safety authorities and link this network with the International Food Safety Authorities Network (INFOSAN).

Similarly, WHO will support improvements to ensuring drug safety, including strengthening capacities for drug supervision, management, and monitoring, as guided by the Regional Strategy for Improving Access to Essential Medicines in the Western Pacific Region 2005-2010. As requested by the Government, WHO will provide technical support to assist in establishing a comprehensive national drug safety system, which will include integrating current resources, and developing and implementing a capacity building plan for such a system. WHO also works with Member States to increase access to safe, affordable medicine. The *Rapid Alert System for Combating Counterfeit Medicines*, a computerized information-sharing network developed in the Western Pacific Region, is now being replicated globally, assisting authorities to identify fake drugs in the supply chain. In addition, WHO will continue to strengthen capacity of the regulatory functions of the drug and vaccine regulatory authorities, as well as help both regulatory authorities and industries comply with international standard for drugs and vaccines (e.g., good manufacturing practices).

WHO encourages the Government to develop and coordinate a national medicine policy and effective regulations for Western and traditional Chinese medicines, in order to improve access to affordable and effective medicines. To promote rational use of medicines, the Government will need to develop comprehensive enforced regulations on pharmaceutical production, pricing, quality, distribution and use of medicines.

5.4 Cross-cutting issues

MDG 1: Eradicate Extreme Poverty and Hunger

Poor and Vulnerable Groups

In order to ensure the reach of the CCS programme to poor and disadvantaged groups, WHO interventions will target low-income populations, particularly poor migrants, poor ethnic minorities and those living in remote areas. Each CCS programme area (e.g., EPI, HIV/AIDS, TB) will further examine social, cultural and economic determinants

affecting access to essential health care by these poor and disadvantaged groups and develop interventions that address access barriers. For example, as part of support to health systems development, WHO will provide policy advice to ease *de facto* access to affordable health services for poor migrants and integrate migrants into



the national health care system. Interventions will have a special focus on making health insurance coverage portable, and developing incentives for poor migrants and ethnic minorities to seek out health services (e.g., supporting health information systems, such as portable electronic identification health cards with individual medical records, indicating patient's eligibility for TB or ART medication, and public financing mechanisms for health services and drugs). As the WHO-supported pilot project on improving coverage of Basic Occupational Health Services (BOHS) for migrants and farmers nears completion in 2009, primary responsibility for BOHS will shift to the Government, but WHO will continue to provide technical assistance to scale up, strengthen capacity and integrate BOHS into the national health care system.

Similarly, by supporting policies to increase the availability of qualified health care staff through an improved human resources for health strategy, and to increase the number of adequate health facilities in remote areas, poor families in isolated regions as well as ethnic minorities may more easily access essential health services. WHO will support government efforts to further integrate maternal and child health interventions into the national health care system; this will have a positive impact on low-income ethnic minorities, especially in remote areas. By developing more culturally-sensitive health care services and providing health information in appropriate languages at local levels, access to primary health care services for ethnic minorities may increase.

MDG 3: Promote Gender Equality and Empower Women

Gender Inequality

Women, as predominant caregivers, often expend great effort and spend incomes on school fees, better nutrition, routine health care and other health promoting areas, and thus are known agents for reducing poverty and improving health in households and communities. To address gender inequalities and empower women, gender analysis and use of sex-disaggregated data to support better health outcomes for women will be integral to WHO's work in China. Creating institutional mechanisms and strengthening WHO and MOH staff capacity on gender will also support gender equality in programmes. Overall, interventions will be guided by WHO's gender mainstreaming strategy adopted at the 2007 World Health Assembly.

WHO-supported training and capacity strengthening for health service delivery providers in various programme areas (including EPI, maternal and child health care, HIV/AIDS, TB) will include an education component aimed at changing negative attitudes about girls and women, as relevant to specific programme areas. More detailed descriptions of approaches are outlined in programme areas above.

WHO will support interventions that address gender imbalances and threats related to TB and HIV/AIDS. Specifically, to prevent HIV transmission among migrants as well as transmission associated with backward linkages to spouses in rural townships and villages, information campaigns will target low-income migrants vulnerable to risky



behaviour in the cities as well as in rural villages, following broad migration patterns. With respect to tobacco control, marked gender-based differences in smoking prevalence and the potential increased numbers of female smokers will be taken into account in designing tobacco control interventions.

Communications

WHO is supporting China to strengthen public communications capacity in three main areas: 1) risk communication, including managing challenging issues that generate



substantial public concern; 2) crisis communication, including managing outbreaks and emergencies; and 3) public and media relations, including enhancing relations with international and national media and promoting messages. Specifically, before the 2008 Olympic Games, WHO will support China to strengthen risk communications capacity. WHO will also promote information sharing by supporting translation and dissemination of up-to-date technical scientific and programmatic information in Chinese.

5.5 Conclusion

Managing overall sustainable economic and social development in the context of these trends is a difficult task, further complicated by the size and diversity of China's population and land area. With 1.3 billion people located across 33 provinces, municipalities and autonomous regions, China has the tremendous challenge of meeting the needs of a multifaceted population and ensuring that all citizens have equal access to public services and income earning opportunities.

However, sharp disparities in health outcomes can be avoided even in a country as populous and complex as China. Major improvements in health outcomes can be achieved with relatively modest increases in public spending. Over 75% of maternal deaths and 70% of mortality among children under five years are preventable with better access to basic inexpensive health care and health information.

WHO will provide technical assistance to support pro-poor health policies in many areas. This includes work to promote universal access to essential drugs; improve social protection, especially against unaffordable health expenditures, through pro-poor health care financing mechanisms; strengthen knowledge and evidence through national health accounts, cost-effectiveness analysis and other operational research; and make services accessible to all, especially the poor and marginalized.

Section 6: Implementing the Strategic Agenda: Implications for WHO Secretariat

Priorities for WHO-China CCS collaboration were identified in the context of China's changing development context, within the framework of WHO's 13 Strategic Objectives for 2008-2013, and the larger Millennium Development Goal framework. Inputs from the Ministry of Health on the CCS formed the basis of the 2008-2009 country programme.

Capitalizing on current national health sector reform efforts, the health systems development programme will play a central role within this CCS, cutting across all other programmatic areas. There will also be increased emphasis on addressing new public health threats — such as environmental health, and food and drug safety — brought on by China's economic growth drive and problems related to an increasingly globalized world. Other areas, such as EPI, TB, HIV/AIDS and malaria, where significant national goals and targets have been attained, substantial domestic capacity has been built, or where other development agencies have significant interventions, may require relatively less technical assistance from WHO during this CCS cycle.

The proposed programmes for WHO-China collaboration have implications for programme management and technical resources in the country office, budgetary needs, and relations with national and international partners.

6.1 Programme Management and Technical Resources

Programme Support

Based on the strategic approach agreed in the CCS, collaborative projects and programmes will aim at orienting and supporting national level activities to develop policy, guidelines and standards, but also will focus increasingly on strengthening capacity to deliver quality services to previously unreached groups, such as less developed areas in western China and urban migrants, particularly in the context of the rural Primary Health Care Programme. To address the agreed priorities, there will be a reorientation of resources to proactively-supported programme areas, along with a modest increase in the number of professional staff in the office over this CCS period. This will be followed by a gradual reduction.

Given the high priority assigned by China to health sector reform and the past and planned collaboration with WHO in this area, the success of the CCS will depend on ensuring that technical resources at the country office to support health sector reform and development (SO10) remain at current levels. To further improve health systems, the delivery of basic maternal and child health services (SO4) and the control of noncommunicable diseases (SO6) will need to be strengthened and will involve the recruitment of senior professional staff in these areas.

China attaches great importance to addressing the challenges to human health posed by climate change and environmental pollution. The formulation of the NEHAP and its policy implications will require additional expertise at the country office in line with SO8. This also applies to the area of food and drug safety (SO9, SO11) where major structural changes and new legislation have recently highlighted the level of attention assigned by the national authorities to food safety management and supervision. Hence the country office will need to mobilize resources to ensure the availability of technical and financial resources for food safety, and capacity development concerning pharmaceuticals.

There is a need to maintain current staffing levels for communicable disease control and response, with additional strengthened professional capacity for laboratory improvement and biosafety (SO1).

It is expected that there will be a gradual reduction in staffing levels at the country office in areas where national goals and targets have been attained, significant national capacity has been built or where there are substantial inputs from other agencies. This includes EPI, HIV/AIDS, tuberculosis and malaria (SO1 and SO2).

In support of more equitable health outcomes in China, capacity strengthening for country office and MOH staff on health systems, rights, gender, and disaggregated data collection and analysis will be undertaken.

National Program Officers (NPO) play an important role in the WHO country office and will have increased responsibilities in the long-term. Currently, all NPOs are seconded by the Ministry of Health. In line with changes that have already taken place in other UN agencies working in China, it is likely that during this CCS period, there will be changes in the national regulations that govern their employment conditions. The office will continue its learning and development programme for national staff.

Documentation and Communication

As a resource for international health-related experiences and knowledge, WHO will need to document the many valuable experiences and lessons learned from the China programme. This would assist in bringing good practices and lessons to other regions in China, such as western and poorer areas, as well as to disseminate these good practices to other countries. To do so, it will be necessary to strengthen the documentation capacity of the office and produce regular publications of this nature. This could be done in collaboration with a local research or academic institution.

Advocacy and increased capacity to deliver timely and compelling information will play an important role in increasing the effectiveness of the planned activities. The country office will need to continue its communication and media activities and increase the use of its English and Chinese-language web sites and related materials. It will be necessary to develop and implement a communications strategy that takes into

consideration capacity building in counterpart agencies, as well as the dissemination of information on the in-country activities of the WHO-China programme.

Office Organization

China's country priorities and WHO's Strategic Objectives drive the CCS and in turn, drive the organization of the office. Team composition and areas of responsibilities will be reviewed and reconfigured in line with the programmes proposed under the CCS.

Health systems development will increasingly form a core part of many areas of work. A mechanism cutting across all programme areas is needed to ensure that those links are established and mutually reinforced. The same mechanism could also facilitate regular planning, dialogue and experience sharing in cross-cutting areas, such as poor and vulnerable groups, gender inequalities and communications. Technical backstopping will be provided by regional and headquarters levels of WHO.

6.2 Resource Mobilization

The CCS provides a framework of expected results and strategic approaches. The 2008-2013 programme budget and plans for resource mobilization will be developed and monitored based on this framework. While the total country programme budget and the share funded by extra-budgetary sources are anticipated to increase during this CCS period, there remain funding gaps for agreed upon priority areas. A strategy needs to be developed to ensure that technical and financial resources are available to assist programme development and implementation in these areas. As part of the overall CCS programme planning process, WHO and MOH will jointly develop budget and resource mobilization plans, and work on mobilizing both national and international resources, as well as private sector resources.

6.3 Coordination with International and National Stakeholders

To implement the CCS, the WHO country office will continue strengthening linkages with relevant public health agencies. WHO will dedicate resources to facilitate communication among various partners and stakeholders, including collaboration and joint initiatives with other UN bodies and donor agencies. MOH is WHO's counterpart authority in China, and it is very important that this bilateral relationship be strengthened.

As several agreed upon CCS priorities require an effective coordinated multisectoral effort, WHO will strengthen the relationships and lines of communication with the National Development and Reform Commission, State Food and Drug Administration, State Administration of Traditional Chinese Medicine, General Administration of Quality Supervision, Inspection and Quarantine, and the Ministries of Environmental Protection, Finance, Agriculture, and Science and Technology.

In addition to government agency cooperation, increasing collaboration with national



academic institutions and the network of WHO Collaborating Centers in China will enable WHO to support the development of human resources for health, promote quality research and improve programme monitoring and evaluation. The country office and the MOH need to continue their joint review of the Collaborating Centers towards increasing the depth of collaboration with a smaller number of Centers working on the relevant priorities for China and for WHO's global strategic objectives.

6.4 Programme Monitoring and Evaluation

Monitoring of Programmes

Joint monitoring of programme activities will be undertaken by the Ministry of Health, WHO and stakeholders as a continuous process, aimed at measuring and assessing programme progress against identified programme targets, indicators and timeframes. Findings from monitoring will help support programme management, and assist to identify potential implementation problems, bottlenecks, and areas needing improvement. Monitoring mechanisms include monthly project review meetings between MOH and WHO, joint visits to project sites, annual meetings between MOH and WHO and joint annual reviews for each programme area. Findings from these and especially the joint annual reviews will feed into the Programme Review in Year 2 and Year 4, as well as the Terminal Programme Evaluation. As more specific objectives and indicators are identified during programme development, baseline information for CCS programmes will be obtained, including data disaggregated according to social and economic determinants (e.g., sex, residential status, regions, income levels), against which progress can be measured in subsequent years.

Biennium Programme Reviews - Year 2 and Year 4

A joint review of programme implementation is scheduled to take place during the third quarter of 2009, and the third quarter of 2011. These reviews are scheduled so that findings can feed into the development of WHO biennium programme and budgets for 2010-2011 and 2012-2013. The biennium programme reviews will assess the performance of the CCS Programme, take stock of progress towards the achievement of expected CCS results, provide information for operational planning, and develop recommendations on any needed adjustments in broad programme directions and strategies for improving programme implementation through 2013 for the remainder of the CCS programme. Progress will also be measured against the strategic objectives of WHO's Medium-term Strategic Framework and the MDG framework (under which several programmatic areas fall). The review will be guided by assessment criteria such as those used by OECD-DAC (i.e., relevance, efficiency, effectiveness, impact and sustainability).

Terminal Programme Evaluation

At the end of the CCS programme period in 2013, an independent terminal review will

be conducted. This final evaluation will examine overall results, impacts and outcomes of programme activities, and assess progress as measured against CCS programme objectives, the strategic objectives of WHO's Medium-term Strategic Framework and the MDG framework. This evaluation will also be guided by the OECD-DAC evaluation criteria mentioned above. Evaluation findings will outline lessons learned and recommendations that may feed into larger policy discussions and future health interventions.



Annex 1: WHO Medium-term Strategic Objectives (from the Medium-term Strategic Plan 2008-2013)

No.	Medium-term Strategic Objectives
1.	To reduce the health, social and economic burden of communicable diseases
2.	To combat HIV/AIDS, malaria and tuberculosis
3.	To prevent and reduce disease, disability and premature death from chronic
	noncommunicable conditions, mental disorders, violence and injuries
4.	To reduce morbidity and mortality and improve health during key stages of
	life, including pregnancy, childbirth, the neonatal period, childhood and
	adolescence, and improve sexual and reproductive health and promote active
	and healthy ageing for all individuals
5.	To reduce the health consequences of emergencies, disasters, crises and
	conflicts, and minimize their social and economic impact
6.	To promote health and development, and prevent or reduce risk factors for
	health conditions associated with use of tobacco, alcohol, drugs and other
	psychoactive substances, unhealthy diets, physical inactivity and unsafe sex
7.	To address the underlying social and economic determinants of health through
	policies and programmes that enhance health equity and integrate pro-poor,
	gender-responsive, and human rights-based approaches
8.	To promote a healthier environment, intensify primary prevention and influence
	public policies in all sectors so as to address the root causes of environmental
	threats to health
9.	To improve nutrition, food safety and food security throughout the life-course,
	and in support of public health and sustainable development
10.	To improve health services through better governance, financing, staffing and
	management informed by reliable and accessible evidence and research
11.	To ensure improved access, quality and use of medical products and
	technologies
12.	To provide leadership, strengthen governance and foster partnership and
	collaboration with countries in order to fulfill the mandate of WHO in advancing
	the global health agenda as set out in the Eleventh General Programme of
	Work
13.	To develop and sustain WHO as a flexible, learning organization, enabling it
	to carry out its mandate more efficiently and effectively

Annex 2: WHO Collaborating Centers in China

WHO Collaborating Centers

- WHO Collaborating Centre for Food Contamination Monitoring (National Institute of Nutrition & Food Safety)
- 2. WHO Collaborating Centre for Research and Traning in Neurosciences (Institute of Neurology, Fudan University)
- 3. WHO Collaborating Centre for the Research and Training in Preventive Dentistry (Research Institute of Stomatology, Peking University)
- WHO Collaborating Centre for Occupational Health (National Institute of Occupational Health and Poison Control, Chinese Center for Disease Control and Prevention (China CDC))
- 5. WHO Collaborating Centre for Lymphatic Filariasis and Taeniasis/Cysticercosis (Shandong Institute of Parasitic Diseases)
- 6. WHO Collaborating Centre for Primary Health Care (Health Bureau of Conghua County)
- 7. WHO Collaborating Centre for Research and Training in Maternal and Infant Health (Beijing Obstetrics & Gynecology Hospital, and Beijing Municipal Women's Health Institute)
- 8. WHO Collaborating Centre for Neonatal Health Care (Shanghai Institute for Pediatric Research, Shanghai Medical University)
- 9. WHO Collaborating Centre for Research on Human Reproduction (Family Planning Research Institute, Zhejiang Academy of Medical Sciences)
- 10. WHO Collaborating Centre for Research in Human Reproduction (Sichuan Family Planning Research Institute)
- 11. WHO Collaborating Centre for Research in Human Reproduction (Shanghai Institute of Planned Parenthood Research)
- 12. WHO Collaborating Centre for Blood Transfusion Services (Shanghai Blood Centre)
- 13. WHO Collaborating Centre for Research on Cancer (Cancer Hospital and Institute, Chinese Academy of Medical Sciences)
- 14. WHO Collaborating Centre for Research on Cancer (Shanghai Cancer Institute)
- 15. WHO Collaborating Centre for Research on Cancer (Cancer Centre, Sun Yat-sen University)
- WHO Collaborating Centre for Prevention, Control and Research of Cardiovascular Diseases in China (National Center for Cardiovascular Diseases Control and Research)
- 17. WHO Collaborating Centre for Research and Training in Cardiovascular Diseases (Shanghai Institute of Cardiovascular Diseases)
- 18. WHO Collaborating Centre for Research and Training in Cardiovascular Diseases (Guangdong Provincial Cardiovascular Institute)
- 19. WHO Collaborating Centre for Perinatal Health Care (Shanghai First Maternity and Infant Health Hospital)
- 20. WHO Collaborating Centre for Child Health (Capital Institute of Paediatrics)

- 21. WHO Collaborating Centre for the Family of International Classification (WHO-FIC) (Peking Union Medical College Hospital (PUMCH), Chinese Academy of Medical Sciences (CAMS))
- 22. WHO Collaborating Centre for Rehabilitation (Hong Kong Society for Rehabilitation)
- 23. WHO Collaborating Centre for Research and Training for Prehospital Emergency Services (Shanghai Medical Emergency Centre (SMEC))
- 24. WHO Collaborating Centre for the Community Control of Hereditary Diseases (Institute of Basic Medical Sciences, Chinese Academy of Medical Sciences)
- 25. WHO Collaborating Centre for Health and Biomedical Information (Institute of Medical Information, Chinese Academy of Medical Sciences)
- 26. WHO Collaborating Centre for Health Education and Health Promotion (Shanghai Health Education Institute)
- 27. WHO Collaborating Centre for Sports Medicine and Health Promotion (The Chinese University of Hong Kong)
- 28. WHO Collaborating Centre for Primary Health Care (Laizhou Health Bureau)
- 29. WHO Collaborating Centre for Primary Health Care (Jiading Primary Health Care Centre)
- WHO Collaborating Centre for Health Technology Assessment and Management (National Key Lab of Health Technology Assessment, Fudan University)
- 31. WHO Collaborating Centre for Reagent Production (Shanghai Centre for Clinical Laboratory)
- 32. WHO Collaborating Centre for Immunological Research (Institute of Basic Medical Sciences, Peking Union Medical College, Chinese Academy of Medical Sciences)
- 33. WHO Collaborating Centre for Immunogenetics and Immunopathology (Shanghai Institute of Immunology, Shanghai Second Medical University)
- 34. WHO Collaborating Centre for the Promotion and Translation of WHO Publications (People's Medical Publishing House (PMPH))
- 35. WHO Collaborating Centre for Occupational Health (School of Public Health, Fudan University)
- 36. WHO Collaborating Centre for Oral Health (Yuncheng Stomatological Health School)
- 37. WHO Collaborating Centre for Cysticercosis Control (Beijing Tropical Medicine Research Institute)
- 38. WHO Collaborating Centre for Drug Quality Assurance (National Institute for the Control of Pharmaceutical and Biological Products)
- 39. WHO Collaborating Centre for the Prevention of Blindness (Department of Ophthalmology, Beijing Institute of Ophthalmology)
- 40. WHO Collaborating Centre for Research in Reproductive Health and Population Science (Institute of Population Research, Peking University)
- 41. WHO Collaborating Centre for Research in Human Reproduction (Tianjin Municipal Research Institute for Family Planning)
- 42. WHO Collaborating Centre for Research and Training in Reproductive Health (Peking Union Medical College Hospital)

- 43. WHO Collaborating Centre for Research in Human Reproduction (National Research Institute for Family Planning)
- 44. WHO Collaborating Centre for Research and Training in Mental Health (Institute of Mental Health, Peking University)
- 45. WHO Collaborating Centre for Research and Training in Neurosciences (Beijing Neurosurgical Institute)
- 46. WHO Collaborating Centre for Research and Training in Child Mental Health (Nanjing Child Mental Health Research Centre)
- 47. WHO Collaborating Centre for Research and Training in Mental Health (Shanghai Mental Health Centre, Shanghai Institute of Mental Health)
- 48. WHO Collaborating Centre on Community-based Integrated Noncommunicable Disease Control and Prevention (National Center for Chronic and Noncommunicable Disease Control and Prevention, China CDC)
- 49. WHO Collaborating Centre for Tobacco or Health (Beijing Institute of Respiratory Medicine, Beijing Chaoyang Hospital)
- 50. WHO Collaborating Centre for Traditional Medicine (Institute of Medicinal Plant Development (IMPLAD), Chinese Academy of Medical Sciences (CAMS))
- 51. WHO Collaborating Centre for Traditional Medicine (Institute of Acupuncture Research, Shanghai Medical College, Fudan University)
- 52. WHO Collaborating Centre for Traditional Medicine (Institute of Acupuncture & Moxibustion, China Academy of Chinese Medical Sciences)
- 53. WHO Collaborating Centre for Traditional Medicine (Shanghai University of Traditional Chinese Medicine)
- 54. WHO Collaborating Centre for Traditional Medicine (Institute of Chinese Materia Medica, China Academy of Chinese Medical Sciences)
- 55. WHO Collaborating Centre for Traditional Medicine (Institute of Clinical Research & Information, China Academy of Chinese Medical Sciences)
- 56. WHO Collaborating Centre for Traditional Medicine (Nanjing University of Chinese Medicine)
- 57. WHO Collaborating Centre for Research and Training on Tuberculosis (Beijing Tuberculosis and Thoracic Tumor Research Institute, National Center for TB Control and Clinical Medicine, Center for Disease Control of China (CDC China))
- 58. WHO Collaborating Centre for Gene Synthesis and Expression (Department of Etiologic Biology, Second Military Medical University)
- 59. WHO Collaborating Centre for Community Health Services (Faculty of Health and Social Sciences, The Hong Kong Polytechnic University (HKPU))
- 60. WHO Collaborating Centre for Research and Training in Women's and Children's Health (Research and Training Centre in Women's and Children's Health, Peking University)
- 61. WHO Collaborating Centre for Information Support to Primary Health Care (Suihua Municipal Health Bureau)
- 62. WHO Collaborating Centre for the Prevention and Control of Sexually Transmitted Infections (National Center for Sexually Transmitted Diseases (STD) Control, Institute of Dermatology, Chinese Academy of Medical Sciences and Peking Union Medical College)

- 63. WHO Collaborating Centre for Surveillance, Research and Training of Emerging Infectious Diseases (Centre for Disease Control and Prevention of Guangdong Province)
- 64. WHO Collaborating Centre for Urban Health Development (Dongcheng District Health Bureau)
- 65. WHO Collaborating Centre for Human Resources for Health (Health Human Resources Development Center (HHRDC), Ministry of Health)
- 66. WHO Collaborating Centre for Malaria, Schistosomiasis and Filariasis (Institute of Parasitic Diseases (IPD), China CDC)
- 67. WHO Collaborating Centre for Psychosocial Substance Abuse and Health (Mental Health Institute, Central South University)
- 68. WHO Collaborating Centre on Schistosomiasis Control in Lake Regions (Hunan Institute of Parasitic Diseases)
- 69. WHO Collaborating Centre for Rehabilitation (Department of Rehabilitation Medicine, Sun Yat-Sen University of Medical Sciences)
- 70. WHO Collaborating Centre for Training and Research in Rehabilitation (Department of Rehabilitation Medicine, Tongji Hospital, Tongji Medical College)
- 71. WHO Collaborating Centre for Research and Training in Suicide Prevention (Beijing Suicide Research and Prevention Centre, Beijing Hui Long Guan Hospital)

Source: WHO website on Collaborating Centers,

http://www.who.int/kms/initiatives/collaboratingcentres/en/index.html

Annex 3: Members of United Nations Theme Group on Health (UNTGH) in 2007

UNTGH Chair: WHO

UN Agencies

- 1. FAO
- 2. ILO
- UNAIDS
- 4. UNDP
- 5. UNESCO
- 6. UNFPA
- 7. UNICEF
- 8. UNIDO
- 9. UN Resident Coordinator's Office
- 10. WHO

Government of China

- 1. Ministry of Health
- 2. National Development and Reform Commission
- 3. State Food and Drug Administration

Multilateral banks

- 1. Asian Development Bank
- 2. International Monetary Fund
- 3. World Bank

Bilateral donors

- 1. Australian Embassy/AusAID
- 2. Canadian Embassy/CIDA
- 3. European Union
- 4. German Embassy/GTZ/ Kreditanstalt fuer Wiederaufbau (KfW)
- 5. Italian Embassy
- 6. JBIC/JICA
- 7. Netherlands Embassy
- 8. Royal Norwegian Embassy
- 9. U.S. Embassy
- 10. U.S. Centers for Disease Control and Prevention
- 11. U.K., DFID

International NGOs / Private Foundations

- 1. Damien Foundation
- 2. The Ford Foundation
- 3. Global Fund to Fight AIDS, Tuberculosis and Malaria
- 4. International Federation of the Red Cross
- 5. Medecins Sans Frontieres MSF Belgium
- 6. Save the Children



Annex 4: Strategic Agenda of the China-WHO Country Cooperation Strategy 2008-2013

1. Health systems development towards universal access to basic health care services

Support implementation of health sector reforms and improve health financing, health services
delivery, human resources for health, availability, access and rational use of drugs, laboratory
safety, and research and clinical testing of traditional Chinese medicine to ensure quality and
standards (MTSP SO10)

2. Achievement of health-related Millennium Development Goals (MDGs)

- · MDG 1 Eradicate extreme poverty and hunger
 - Focused attention on poor and vulnerable groups (especially low-income migrants, poor ethnic minorities and those in remote areas) as a cross-cutting issue and underlying aim of all CCS programme areas, particularly in health systems development (MTSP SO7)
- MDG 3 Promote gender equality and empower women
 - Address gender inequalities as a cross-cutting issue, through use of sex-disaggregated data, gender analysis and responses in all programme areas, with targeted activities in child and maternal health, Hepatitis B, HIV/AIDS, TB, and tobacco control (MTSP SO7)
- MDG 4 and MDG 5 Reduce child mortality and improve maternal health
 - Support vaccine-preventable diseases and the expanded programme on immunization, with an emphasis on Hepatitis B reduction, measles elimination, sustaining polio-free status, introducing new vaccines and adverse effects following immunization (MTSP SO4)
 - Strengthen maternal and child health (MCH) interventions, focused on access to
 integrated women's and reproductive health services; an essential package of quality
 antenatal, obstetrical and neonatal care; child survival; integrated management of
 childhood illnesses; adolescent health; MCH surveillance and surveillance data quality;
 costing, monitoring and evaluating delivery of the basic MCH package; infant and young
 child feeding and nutrition; and prevention of birth defects (MTSP SO4)
- MDG 6 Combat HIV/AIDS, malaria and tuberculosis
 - o HIV/AIDS prevention, surveillance, testing, counseling, treatment and care (MTSP SO2)
 - Focus on multi-drug and extensive-drug resistant TB, TB among migrants and TB/HIV co-infection (MTSP SO2)
- MDG 7 Ensure environmental sustainability
 - Strengthen water quality, access to safe drinking water and sanitary lavatories, and cross-sectoral policies to address national environmental health priorities (MTSP SO8)

3. Reducing the high burden of noncommunicable diseases (NCD) and related deaths

- Support implementation of national NCD strategies and plans, surveillance, prevention, and coordination and communication among government and the private sector (MTSP SO3)
- Support tobacco control efforts and implementation of the WHO Framework Convention on Tobacco Control (MTSP SO6)

4. Addressing emerging public health threats

- Communicable and emerging infectious diseases: Strengthen surveillance and response interventions and implementation of the International Health Regulations and Asian Pacific Strategy for Emerging Disease (MTSP SO1)
- Food safety: Support implementation of National Food Safety Regulatory Framework, strengthen national legislation, and build capacity for food safety management and supervision (MTSP SO9)
- Drug safety: Support establishment of a comprehensive national drug safety system, capacity strengthening for drug supervision, management and monitoring, and international information sharing on counterfeit drugs (MTSP SO11)
- Environmental health threats: Conduct vulnerability assessments and develop health strategies
 for climate change adaptation and mitigation, and for air pollution; build capacity to implement
 climate change and energy-related aspects of the National Environmental Health Action Plan
 (MTSP SO8)

Endnotes

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- ² Health-related MDGs are 1) eradicate extreme poverty and hunger; 2) reduce child mortality; 3) improve maternal health; 4) combat HIV/AIDS, malaria and other diseases; 5) ensure environmental sustainability; and 6) develop global partnerships for development.
 - ³ Work Report by Minister Chen Zhu at the Annual Health Conference, Beijing, China, 2008.
- ⁴ Hu Jintao's Report at the 17th Party Congress, "Hold High the Great Banner of Socialism with Chinese Characteristics and Strive for New Victories in Building a Moderately Prosperous Society in all Respects" Report to the Seventeenth National Congress of the Communist Party of China on October 15, 2007, Xinhua, October 25, 2007.
- ⁵ Country health frameworks include national goals for reaching the Millennium Development Goals; national goals for sustaining polio-free status, *National Plan of Action for Measles Elimination (2006-2012)*, *National Hepatitis B Prevention and Control Plan (2006-2010)*, *National Tuberculosis Control Plan (2006-2010)*, *WHO-China Medium-term Planning Framework for Influenza Cooperation* (2006-2010), *National Action Plan for Reducing and Preventing the Spread of HIV/AIDS (2006-2010)*, *National AIDS and STI Prevention and Control Plans, Four Frees and One Care Policy, National Strategy on Non-communicable Diseases, National Plan for Chronic Disease Control and Prevention (2005-2015)*, *National Environmental Health Action Plan (2007-2015)*, *National Food Safety and Regulatory Framework, Law on Maternal and Infant Health Care,* two National Programmes on women and children's development as core components, and the *Law on the Protection of Maternal and Child Health*.
- ⁶ This section uses data from China Statistical Yearbook (various years), and *Promoting Growth with Equity*, Country Economic Memorandum Report #24169, Poverty Reduction and Economic Management Unit, The World Bank, Geneva, 2003.
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- ⁸ A Health Situation Assessment of China, UN Health Partners Group in China, Beijing, 2005, and State of the World's Population 2007, Unleashing the Potential of Urban Growth, UNFPA, 2007.
- ⁹ United Nations, Department of Economic and Social Affairs, Population Division: World Population Prospects. The 2006 Revision, CD-ROM Edition, Extended Dataset, New York, 2007 (ST/ESA/SER.A/266). [code 15]
- ¹⁰ United Nations, Department of Economic and Social Affairs, Population Division: World Population Prospects. The 2006 Revision, CD-ROM Edition, Extended Dataset, New York, 2007 (ST/ESA/SER.A/266). [code 15]
 - ¹¹ State of the World's Population 2007, Unleashing the Potential of Urban Growth, UNFPA, 2007.
 - ¹² The normal sex ratio at birth across the world is between 105-107 males for every 100 females.
- ¹³ 2007 China Statistical Yearbook, Vol 26, 1 percent population sample survey in 2005, National Bureau of Statistics of China, China Statistics Press, Beijing, p.108.
- ¹⁴ Kuijs, Louis, and Wang Tao, World Bank Policy Research Working Paper No. 3767, "China's Pattern of Growth: Moving to Sustainability and Reducing Inequality," November 2005.
- ¹⁵ World Bank Country Brief China, http://web.worldbank.org/WBSITE/EXTERNAL/COUNTRIES/EASTASIAPACIFICEXT/CHINAEXTN/0,,menuPK:318960~pagePK:141132~piPK:141107~theSitePK: 318950,00.html, 2007.
 - ¹⁶ World Bank, East Asia & Pacific Update: Will Resilience Overcome Risk, November 2007, p.12.
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 - ²³ State of the World's Population 2007, Unleashing the Potential of Urban Growth, UNFPA, 2007.
- ²⁴ Qiu Xiaohua pointed out: too slow progress of China's urbanization, which needs urgent acceleration, Xinhuanet, September 22, 2003, http://news.xinhuanet.com/fortune/2003-09/22/content_1093315_2.htm; Wu Shangmin: Thinking on China's Urbanization Road, China Economic Times, September 16, 2003.
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