Data Collection Survey on Health Sector

Country Report
Republic of Mozambique

October 2012

Japan International Cooperation Agency
(JICA)

KRI International Corp.

TAC International Inc.

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This report is prepared to support JICA's country operation in health through strategic programming. The contents, however, may need to be supplemented with the latest and more detailed information by the readers since the report is mainly based on literature review and not on field study, with the exception of some countries.

Foreword

Background

The current situation surrounding the health sector in developing countries has been changing, especially at the start of the 21st century. Based on the recommendations from the concept of "Macroeconomics and Health"[1], development assistance for health has greatly increased to accelerate efforts to achieve the Millennium Development Goals (MDGs) by 2015. The development assistance for health has risen sharply from USD 10.9 billion to USD 21.8 billion in 2007[2]. Moreover, development assistance was harmonized by the common framework developed at the three consequent high-level forums in Rome (2003), in Paris (2005) and in Accra (2008).

Regardless of such favorable environmental changes for the health sector in developing countries, the outcomes do not seem to reach the level of expectation in many countries. Many developing countries, particularly Sub-Saharan African countries, will not achieve some of their MDGs 4 (Reduce child mortality), 5 (Improve maternal health) and 6 (Combat HIV/AIDS, malaria and other diseases) by 2015. Therefore, while raising more money for health is crucial for lower-income countries striving to move closer to universal coverage[3]; "More Money for Health[4]", it is just as important to get the substantial health gains out of the resources available; "More Health for Money[5]". Efficiency is a measure of the quality and/or quantity of output of services for a given level of input, and improving efficiency should also be seen as a means of extending coverage for the same cost and the improved health outcomes.

Considering this situation surrounding the health sector in developing countries, in a recent movement of its development assistance work, JICA has been working on country-based analytical work. This consists of macro level and sector wide analytical work aiming to clarify JICA's aid direction in each country by looking at priority areas of concern and aid mapping. The purpose of the Data Collection Survey on Health Sector is to contribute to JICA's analytical work efforts. In the past, JICA's analytical efforts were concentrated on the project planning purpose, as a consequence, information gathered in such analytical works were naturally limited to be around the particular projects. It is therefore thought to be important for JICA to conduct a country-based health sector review to gather complete information and analyze the whole sector to learn about the situation of the country and identify high priority problems and issues to be tackled in the health system.

Objectives of the Study

The key to the formulation of a good project is having conducted thorough sector reviews. Good sector reviews and analyses help us to understand the health situation and its determinants, and the capacity for health project implementation in the countries. They also help us to contribute to the countries for identifying the feasible projects in the context of priorities and developing the necessary policies and strategic planning for the health service delivery. It is also necessary to conduct such health sector review studies on a regular basis in order to develop and implement effective and efficient health projects. Based on this concept, JICA decided to carry out the sector review studies of 23 selected countries. The objectives of the sector review are to give recommendations to JICA on the aid direction for the health sector in each country, and to improve strategic approaches and the efficiency of aid cooperation.

Structure of the Report

The health sector study country report consists of seven chapters. Chapter 1 is the summary of the socio-economic situation of each country. Chapter 2 is an analysis of the national health policy, strategic approaches, and plans. Chapter 3 describes the health situation of each country to show the priority health problems by using health information and data. Chapter 4 is an analysis of the health service delivery function of each country, while Chapter 5 is an analysis of other functions of the country's health system namely: human resources for health, health information systems, essential medical products and technologies including the health facilities, health financing, and leadership and governance. Chapter 6 is an analysis of the development partners' assistance and cooperation. Based on the above analysis, Chapter 7 provides recommendations to JICA on the strategic areas of cooperation and its approaches.

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[1] WHO announced "Macroeconomics and Health: Investing in Health for Economic Development" in December, 2000. This regards Health is an intrinsic human right as well as a central input to poverty reduction and socioeconomic development and the process helps place health at the centre of the broader development agenda in countries.

[2] Ravishankar N., Gubbins P. Cooley J.R., et. al; June 2009; Financing of global health: tracking development assistance for health from 1990 to 2007; the Lancet 373:2113-2132

[3] According to WHO, Universal coverage (UC) is defined as ensuring that all people have access to needed promotive, preventive, curative and rehabilitative health services, of sufficient quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship. (http://www.who.int/health_financing/universal_coverage_definition/en/index.html)

[4] In the World Health Report 2010 (WHO), the report advocates it with the following concrete three suggestions as the requirements; 1) Increase the efficiency of revenue collection, 2) Reprioritize government budgets, and 3) Innovative financing. As the forth suggestion, it advocates increasing development aid and making it work better for health.

[5] The World Health Report 2010 also suggests the needs of improving the efficacy in the health systems and eliminating the inefficiency/waste will enable the poor countries to improve the availability and quality of the services.

Abbreviation and Acronyms

ANC	Antenatal Care
ART	Anti-retroviral Therapy
ARV	Anti-retroviral Drug
BCG	Bacille Calmette Guerin
CIDA	Canadian International Development Agency
CNCS	Conselho Nacional de Combate ao SIDA
DHS	Demographic and Health Survey
DOTS	Directly Observed Therapy Short-course
EPI	Expanded Programme on Immunization
GDP	Gross Domestic Product
GNI	Gross National Income
HIV	Human Immunodeficiency Virus
ICS	Instituto de Ciências de Saúde
IMCI	Integrated Management of Childhood Illness
ITN	Insecticide-Treated Mosquito Net
JICA	Japan International Cooperation Agency
MDGs	Millennium Development Goals
MICS	Multiple Indicator Cluster Survey
NGO	Non-Governmental Organization
NHS	National Health Service
ORT	Oral Rehydration Therapy
PEN III	National Strategic Plan for HIV/AIDS
PEPFAR	The President's Emergency Plan for AIDS Relief
PHC	Primary Health Care
SAPHI	The Strategy for the Acceleration of Prevention of HIV Infection
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WHO	World Health Organization

Source: Http://www.freemap.jp/blankmap/ (access on June 15, 2012)

Republic of Mozambique

Summary

1. Mozambique gained independence from Portugal in 1975 and experienced the intense civil war from 1977 to 1992. During the civil war, many health facilities were destroyed. Since the signing of peace agreement in 1992, the country has enjoyed peace and stability. Cash crops such as cashew nut, sugar, and raw cotton, and aquatic resources such as prawns are abundant. The mineral resources such as coal, titanium, natural gas, and crude oil are also rich. The economic growth of 6-10% in the annual rate was achieved. However, since the labor-intensive industry such as manufacturing is undeveloped, the unemployment rate is high, and 54% (2009) of the people belong to the poorest segment of the population. Numerous deaths due to AIDS (estimated at 74,000 in 2009) also influence the nation's economy.

2. The Fourth Five-year Plan (PARP: 2010-2014) aims at the improvement of absolute poverty through development of education, health, and community. Poverty Reduction Action Plan 2011-2014 sets goals to decrease poverty incidence to 42% in 2014. In order to achieve the objective of the poverty reduction, human and social development including health are some of the priorities. The goal of the health sector in this plan is to promote equity in access to health care with special attention to health nutrition for women and children. Also, the main objective of the health sector strategy plan (2007-2012) is to decrease maternal and child death by improving access to health services.

3. Mozambique has the worst figures of infant and maternal mortality ratio, and literacy rate among the surrounding African countries. Mozambique has the classical profile of the disease of poverty, with significant levels of malnutrition and a predominance of infectious diseases, which account for 65% of all deaths. It can be said that the epidemiological transition has not occurred yet. Infant's death decreases well, while maternal mortality is still on a high level. The loss of human resources due to HIV/AIDS has a big influence on the entire country as well as malnutrition on the health condition.

4. The facilities delivery rate was 55%, and the contraceptive prevalence rate was low at 16%, and the availability of EmOC services was limited, thus maternal health services were still insufficient (2008). Although the Integrated Management of Childhood Illness (IMCI) has been introduced since 2000, access to the services is still very limited. The National AIDS Committee (CNCS) plays a key role for the provision of care, monitoring, and evaluation. The rate of women who had voluntary counseling and testing increased to 47% in 2008, and the access to treatment and care has improved, too. The death from Malaria still accounted for 26% of all deaths (2009), and availability of insecticide-treated mosquito net was only 25%. The access to Directly Observed Treatment Short-course (DOTS) in the community is still difficult though DOTS expansion rate on the national average reached to 70%.

5. The health service of Mozambique is mainly provided through the National Health Service (NHS), which consists of facilities in four levels. Though the number of health facilities in the whole country exceeded 1200, it is estimated that only 40-50% of the population have access to health services. The shortage of health human resources is in the crisis situation, and the number of doctors per population is below the average among African countries. Fiscal resources are remarkably insufficient, although the health field

occupies a high ratio in the government budget compared to education. The majority of the health expenditure is financed by aid agencies.

6. Twenty-eight development partners are supporting the health field, and 19 organizations are doing the general budget support through the common fund (2013). The Japanese government has mainly implemented technical cooperation in training, infectious disease control, and HIV control.

7. In the background of health issues, there are problems of poverty and low level of educational attainment. It is preferable to support the health sector with the progress of development in other fields. The burden of HIV/AIDS to the entire nation is still large, and will need support by not only the health field but also by the various approaches in the future. Japan can contribute to strengthen the health system through support on AIDS infection measures and human resource development.

JICA Data Collection Survey on Health Sector

Country Report
Republic of Mozambique

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List of Figures and Tables

Chapter 1 Country Situation

The Republic of Mozambique (hereinafter, Mozambique) is located in Southeast Africa with an area more than twice as Japan, and has a population of about 23 million people of which 99% are Bantu. The official language is Portuguese, which is spoken only by 35% of the population, and a variety of tribe languages exist. As for religion, 23% of the population are Catholics and 17% are Muslims.

Mozambique gained independence from Portugal in 1975 and experienced the civil war from 1977 to 1992. During the civil war, many health facilities and schools were destroyed, and doctors were murdered and kidnapped. Since the signing of peace agreement in 1992, the country has enjoyed peace and stability backed by democratic elections. Under the constitution defining the multi-party system and liberal economy, friendly relations with Western countries are deepened. To intensify economic relations with peripheral English-speaking countries, Mozambique joined the British Commonwealth in 1995. Agriculture, fishing, mining, and tourism are the main contributors to gross domestic product (GDP). Cash crops such as cashew nut, sugar, and raw cotton, and aquatic resources such as prawn are abundant. The mineral resources such as coal, titanium, natural gas, and crude oil are also rich, and the economy has been driven by big projects including the aluminum refining project where the Japanese firm participated. As a result, the economic growth of 6-10% in the annual rate was achieved after 2001, and the growth of 6.6% was achieved even in 2010.

Eighty percent of the population is engaged in small-scale farming, which is controlled by the weather conditions. Many of them lived a self-sufficient life and the economic management of the nation is advancing well. Because manufacturing exists only around the capital city and the labor-intensive industry is not growing fast enough, the unemployment rate in urban area will reach around 40%, and poverty will be a serious problem [1]. The population that live under the poverty line was at 54% in 2009 though it decreased from 69% in 1997-97, and gross national income (GNI) per capita was US$440 in 2010. Mozambique was in the 184th place among 187 countries considering human development index (2011), and is one of the least developed countries in the world. The low income level and the increase of deaths due to HIV/AIDS have a negative impact on the national economy.

Table 1-1 shows the main socioeconomic indicator of Mozambique.

Table 1-1 Major Indexes of Mozambique

Index		Unit	Year
Population	23,390,000	Person	2010
Population increase rate	2.3	%	2010
Life expectancy	50	years	2009
Crude birth rate	37.7	Population 1000 pairs	2009
Crude death rate	14.6	Population 1000 pairs	2009
GNI per capita	440	US$	2010
Economic growth rate	6.6	%	2010
Literacy rate (15 years old or more)	55	%	2010
Human development index *(the rank among 187 countries)	184	Rank	2011
Ratio * of the population living under the poverty line	54.7	%	2009

Source: World Bank Development Indicators Online (March 2012) [2], *: Human Development Report 2011 (UNDP) [3]

As for the administrative division, Mozambique is divided into ten provinces and one capital city (capital Maputo), and the provinces are subdivided into 147 districts. The region is classified into three: (i) the northern part (Niassa,Cabo Delgado Delgado, and Nampula); (ii) the central part (Zambezia, Tete, Sofala, and Manica); and (iii) the southern part (Inhambane, Gaza, Maputo, and Maputo City).

Chapter 2 Development Policies and Plans

2.1 National Development Policy

The Five-Year Plan and the Poverty Reduction Plan indicate the framework of the government on how to combat poverty and promote economic development. Policies of each sector will be defined within the context of these two objectives. The Fourth Five-year Plan (2010-2014) aims at the improvement of absolute poverty through the development of education, health, and community. It also indicates the goals of each sector. The goals of the health sector are summarized in Table 2-1.

Table 2-1 Goals of the Health Sector in the Fourth Five-year Plan

Goals
• Increase facilities delivery rate to 66%.
• Increase contraceptive prevalence to 25%.
• Increase exclusive breastfeeding to 50% among infants under six months.
• Provide appropriate diagnosis and treatment of malaria for under-five child and pregnant women.
• Increase treatment success rate of tuberculosis to 86%.
• Increases the rate of children who can receive anti-retroviral therapy (ART).
• Implement infectious disease control program not only in the central but also in each province.
• Implement the survey on the risk factors of the circulatory organ diseases.
• Construct 100 type II rural health centers.

Source: Five-year Government Plan 2010-2014, Republic of Mozambique, 2010 [4]

Poverty Reduction Action Plan 2011-2014 sets goals to decrease poverty incidence to 42% in 2014 so as to realize economic development, fight poverty, and improve human resources. The difference in regional poverty incidence is large from 31% in Niassa Province to 70% in Zambezia Province as shown in Table 2-2 below.

Table 2-2 Trends in Poverty Incidence by Province

	State	1996-97	2002-03	2008-09
Northern Region	Niassa	70	52	31
	Cabo Delgado	57	63	37
	Nampula	68	52	54
Central Region	Zambezia	68	44	70
	Tete	82	59	42
	Manica	62	43	55
	Sofala	87	36	58
Southern Region	Inhambane	82	80	57
	Gaza	64	60	62
	Maputo Province	65	69	67
	Maputo City	47	53	36
National Average		69	54	54

Source: Poverty Reduction Action Plan 2011-2014, Republic of Mozambique, 2011 [5]

The Poverty Reduction Action Plan pointed out factors contributing to poverty as follows: (1) low rate of growth in agricultural productivity and climate shocks; (2) sharp increase in international food and fuel prices which result to an increase in the cost of living; and (3) high mortality and morbidity associated with HIV/AIDS, TB, and malaria affecting labor productivity. It is presumed that 300,000 people died of AIDS from 2004 to 2009, and if the working male dies the income of household decreases, and the rate of malnutrition and other diseases increase [6].

In order to achieve the objectives of poverty reduction, three strategic objectives are essential such as: (1) increasing agricultural and fisheries production; (2) promotion of employment; and (3) human and social development. Priorities in the health sector are shown in Table 2-3.

Table 2-3 Priorities in the Health Sector in the Poverty Reduction Action Plan

Goal: Promote equity of access to health care with special attention to health nutrition for women and children
• Reinforce measures to increase access for children to health care services. • Institute preventive and curative nutritional surveillance to reduce mortality from malnutrition. • Introduce multi-sector intervention packages for reducing chronic malnutrition. • Train trainers and health professionals to provide humanized maternal and neonatal care. • Compile and disseminate good practices in food consumption and hygiene within the community, by providing training to local organizations.

Source: Poverty Reduction Action Plan 2011-2014, Republic of Mozambique, 2011 [5]

2.2 Health Sector Development Plan

The Ministry of Health (MOH) articulated the Health Sector Strategic Plan (2007-2012) for the accomplishment of the goals of the Millennium Development Goals (MDGs), target the achievement of the Five-year Plan, and set the following targets (Table 2-4). The main goal of this plan is to reduce mother and child deaths. The difference from the previous health strategy is to promote the outreach activity and community participation.

Table 2-4 Goals of the Health Sector Strategic Plan (2007- 2012)

Goal
• Increased access to health services for the whole population. • Consolidation of the PHC approach and integrated service delivery. • Strengthened referral system. • Improved quality of services at all the levels. • Improved functioning health facilities at all the levels. • Early response to emergencies and epidemics through strengthened community participation.

Source: Plano Estrategico Do Sector Saude 2007-2012, MOH [7]

Chapter 3 Health Status of the People

3.1 Overview

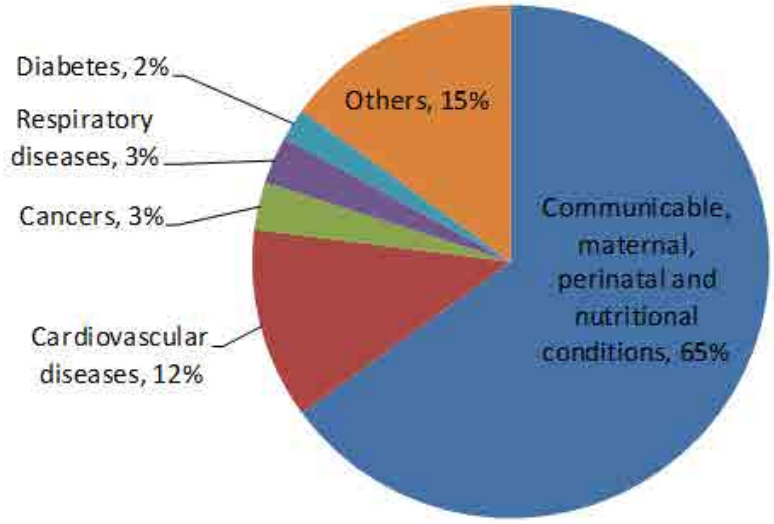
Table 3-1 shows the result of comparing health indicators with the surrounding African countries. Mozambique has the worst figures of infant and maternal mortality ratio and literacy rate. All indexes except maternal mortality ratio have worsened and are mostly higher than the Sub-Saharan mean value.

Table 3-1 Comparison of Health Indexes with Surrounding Countries (2009)

	Life Expectancy	Infant Mortality Rate	Under-5 Mortality Rate	Maternal Mortality Ratio	Stunting (%)	Literacy Rate (%)	GNI (US$) Per Capita
Mozambique	48	96	142	550	44	54	440
Zimbabwe	46	56	90	790	35	91	460
Zambia	46	86	141	470	45	71	970
Malawi	54	69	110	510	53	73	280
Tanzania	56	68	108	790	44	73	500
Average of Sub-Saharan	53	81	129	640	42	63	1147

Source: The State of The World's Children 2011, UNICEF [8]

Mozambique has the classical profile of the disease of poverty, with significant levels of malnutrition and a predominance of infectious diseases, which accounted for 65% of all deaths. It can be said that the epidemiological transition has not occurred yet (Figure 3-1).



Source: WHO NCD Country Profile, 2011 [9]

Figure 3-1 Leading Cause of Death (2008)

Table 3-2 indicates the causes of mortality and morbidity in Mozambique in 2005. Malaria has the highest rate for both mortality and morbidity.

Table 3-2 Morbidity and Mortality of Statutory Communicable Disease (2005)

Main Disease		No. of Cases	Main Cause of Death		No. of Cases
1	Malaria	5,826,588	1	Malaria	4,139
2	Diarrheal disease	612,095	2	Meningitis	417
3	Dysentery	166,432	3	Diarrheal disease	362
4	Measles	12,595	4	Measles	59
5	Cholera	2,039	5	Rabies	36
6	Meningitis	1,277	6	Dysentery	27

Source: Statistical Year Book, Institute Nacional de Estastica [10]

When referred to the index related to MDG, it seemed that prevalence of infant's death decreased well, while maternal mortality is still at a high level. Attainment of the target for maternal mortality seems to be difficult (Table 3-3).

Table 3-3 Trend of MDG Indicators

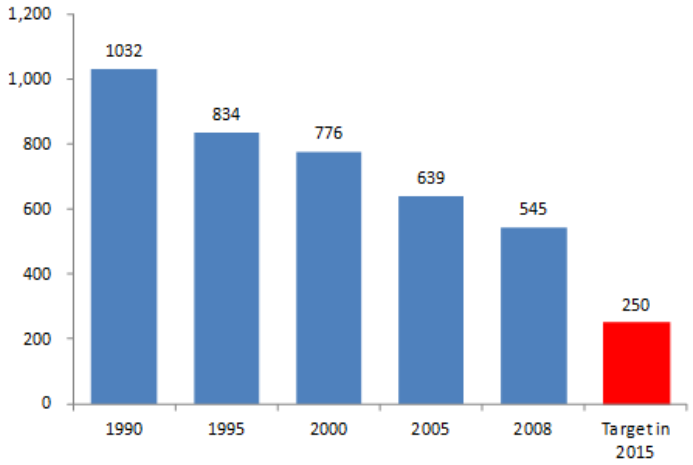
MDG	Indicator	1997	2003	2007/08	Targets in 2015	Achievement Possibility
4	Under-five mortality rate (per 1,000 live births)	245	154	147	108	Potentially
	Infant mortality rate (per 1,000 live births)	143	101	95	67	Potentially
5	Maternal mortality (per 100,000 live births)	692	-	500	250	Unlikely
	Delivery assisted by skilled birth attendants (%)	44	47	55	66	Potentially

Source: Millennium Development Goals Indicators [11]

3.2 Maternal and Child Health

3.2.1 Maternal Health

Maternal mortality ratio in Mozambique decreased by half from 1990 to 2008, but it is still at a high level (Figure 3-2).



Source: Report on the MDG, Republic of Mozambique, 2010 [6]

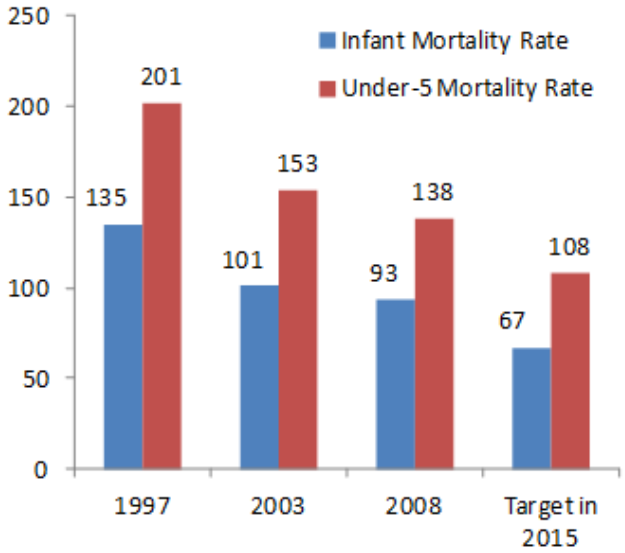
Figure 3-2 Trend in Maternal Mortality Ratio (Per 100,000 Live Births)

About 43% of maternal deaths occurred within 24 hours after the delivery, and the main causes of death were: uterine rupture (17%), hemorrhage (14%), eclampsia (13%), HIV/AIDS (12%), septicemia (11%), malaria (9%), and complication of abortion (7%). HIV/AIDS and malaria accounted for about 20% of these causes. Ninety two percent of women received antenatal care (ANC) services at least once, but deliveries

assisted by skilled birth attendants were only 55% in 2008. Low prevalence rate for contraceptive use (17%), shortage of health staff, and insufficient EmOC services were said to be the factors affecting maternal death [12].

3.2.2 Child Health

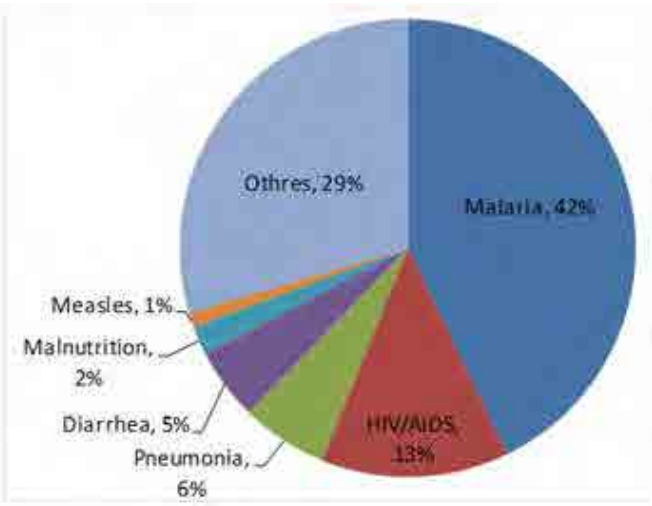
Children's mortality rate in Mozambique is still at a high level (Figure 3-3) but decreasing due to the improvement of the Expanded Programme on Immunization (EPI) coverage (under-five mortality rate ranked 15th place among the 196 countries) [6][8]. The recent pace of the improvement fell in comparison with the period of 1997 to 2003, and the degree of the improvement in urban area also decreased.



Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

Figure 3-3 Trend in Infant Mortality Rate and Under-five Mortality Rate

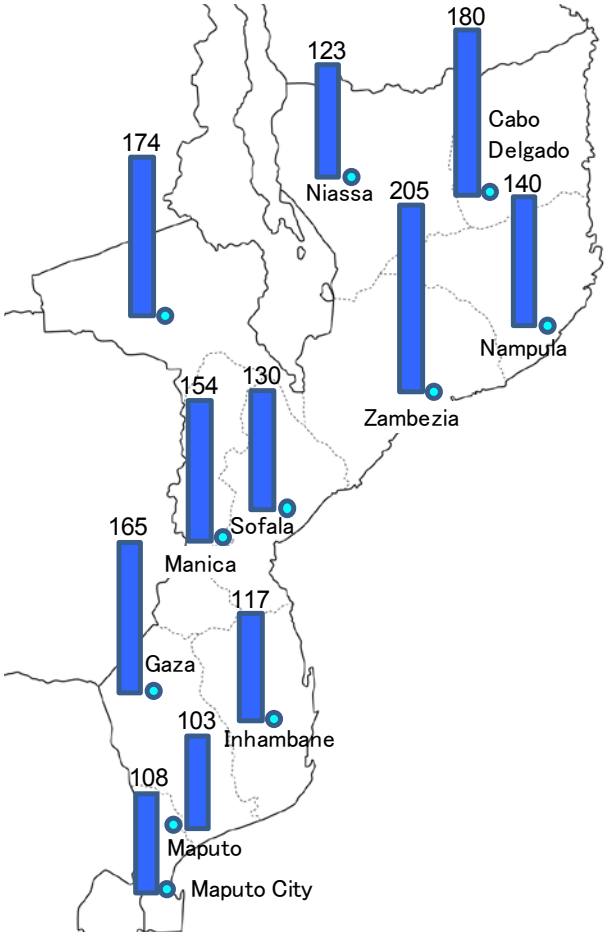
Malaria, as the leading cause of death, accounted for more than 40% of under-five mortality followed by HIV/AIDS (Figure 3-4). About 32% of neonatal deaths occurred within 24 hours after birth. The main causes of neonatal death are premature birth (50%), suffocation (32%), and neonatal sepsis (29%). Poor health of pregnant women and insufficient care after delivery are the factors affecting infant deaths. Therefore, it is essential to increase the number of facility deliveries and improve the quality of neonatal care. Moreover, there were a lot of infants born with low birth weight due to short birth intervals, and chronic malnutrition prevalence was high at 44% (2008).



Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

Figure 3-4 Main Cause of Under-five Mortality (2008)

There is a big gap between provinces with regards to under-five mortality. The highest rate is in the province of Zambezia which is twice as high as the lowest rate in the province of Maputo. In general, the provinces in the northern region have higher mortality rates (Figure 3-5).



Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

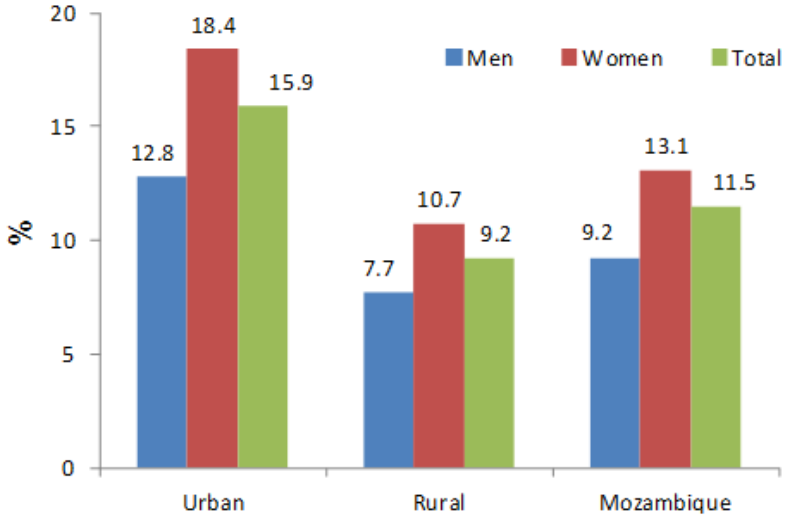
Figure 3-5 Under-five Mortality by Province (Mean Value of 1999-2008)

3.3 Situation of Communicable Disease

3.3.1 HIV/AIDS

HIV/AIDS is one of the big threats to Mozambique's development. HIV prevalence (15-49 years old) rose gradually from 8.6% in 1997 to 11.5% in 2009 [13], and especially among women who lived in urban areas at 18.4% [14]. It was observed that the prevalence is higher in women than in men, and is higher in urban areas than in rural areas. The major routes of infection are through sexual intercourse and mother-to-child transmission.

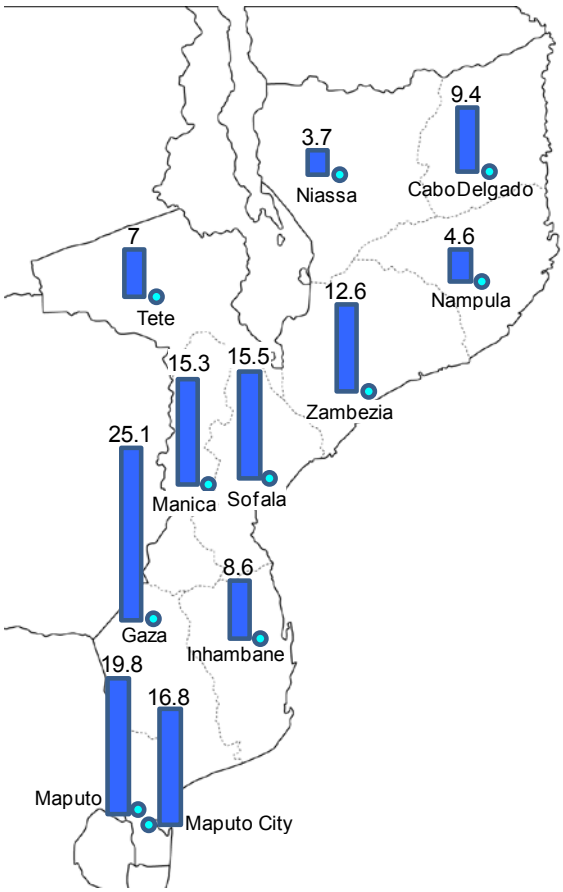
Though the time of the infection spread in Mozambique was later than that of other southern African nations, the infection expansion speed accelerated after the civil war by activating the population mobility. The prevalence rate is lower than that of the surrounding countries such as Zambia (19%), Swaziland (18%), and Malawi (15%). However, 1.4 million people were already infected, and the number of infected individuals exceeded 200,000 every year. Approximately 74,000 people are estimated to die because of AIDS yearly. The loss of human resources due to HIV/AIDS has a big influence in the entire country.



Source: The National Survey on Prevalence, Behavioral Risks and Information about HIV and AIDS in Mozambique, 2009 [15]

Figure 3-6 HIV Prevalence by Sex and Area of Residence (2009)

The high rate of HIV prevalence observed in Gaza may be related to the fact that it is the province that sends a large number of workers to the mines of South Africa. As Niassa Province in the north is very isolated from the rest of the country, it has the lowest rate of prevalence (Figure 3-7).



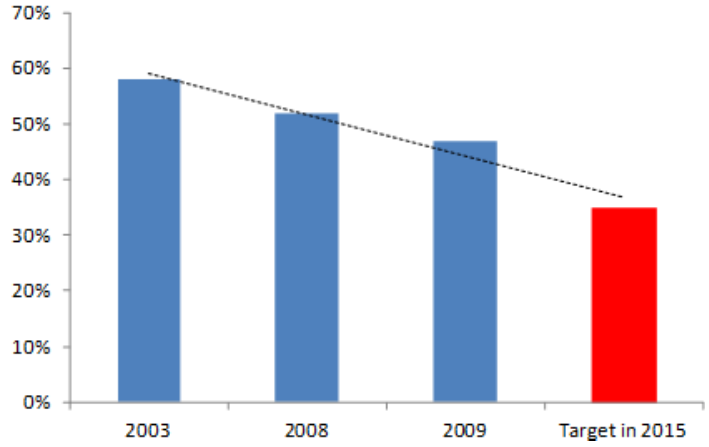
Source: Report on the MDG, Republic of Mozambique, 2010 [6]

Figure 3-7 Prevalence of HIV Among Adults (15-49 years) by Province (2009)

About 78% of women aged 15 to 49 years knew that HIV can be transmitted from mother to child and 59% of women knew how to prevent the infection. Though the knowledge on HIV has increased, condom use in Mozambique is very low. Only 8% of women and 16% of men aged 15 to 49 years used condom during their last sexual encounter [12]. Moreover, HIV prevalence still increases even with health education being provided for both women and men [15].

3.3.2 Malaria

Malaria is still a big public health problem in Mozambique [16]. Though a decrease on the death rate associated with malaria in the last few years was observed, it still accounted for 42% of under-five mortality. The falciparum malaria accounted for 90%, and many of the serious cases were under-five children and pregnant women who have decreased immunity during pregnancy. There are a lot of cases of miscarriages, stillbirths, and low birth weight among pregnant women infected with malaria.



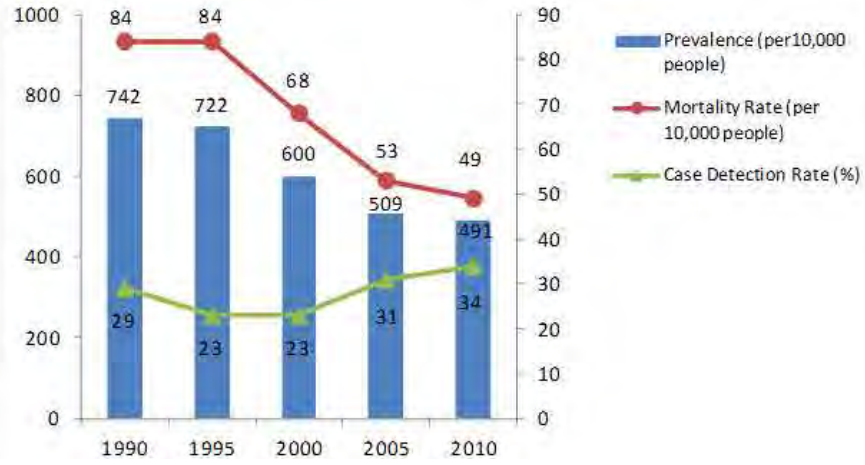
Source: Report on the MDG, Republic of Mozambique, 2010 [6]

Figure 3-8 Trend in Malaria Prevalence

The main interventions that contributed to the reduction of diseases were the distribution of insecticide-treated nets and the improvement of diagnosis and treatment (Figure 3-8).

3.3.3 Tuberculosis

Mozambique has an estimated incidence rate of 491 cases of tuberculosis per 10,000 people in 2010, and ranked 19th among the 22 high-burden countries in the world. More than half (66%) of the patients with TB were HIV positive [6]. The main constraints are the low case-detection rate, poor access to the health services, and the poor laboratory network [16].



Source: Millennium Development Goals Indicators [11]

Figure 3-9 Trend in Prevalence, Mortality Rate, and Case Detection Rate of TB

3.4 Nutrition

Malnutrition causes death of children and pregnant women. Consequently, in Mozambique, 36% of under-five mortality is said to be caused by malnutrition [17]. Chronic malnutrition (stunting) rate remained very high while underweight has decreased (Table 3-4). The nutritional status of children varies substantially in relation to the level of their mother's education. According to the Multiple Indicator Cluster Survey

(MICS) 2008, 49% of children under-five whose mother did not go to school were affected by chronic malnutrition [12], compared with one in every four children whose mother had at least secondary education.

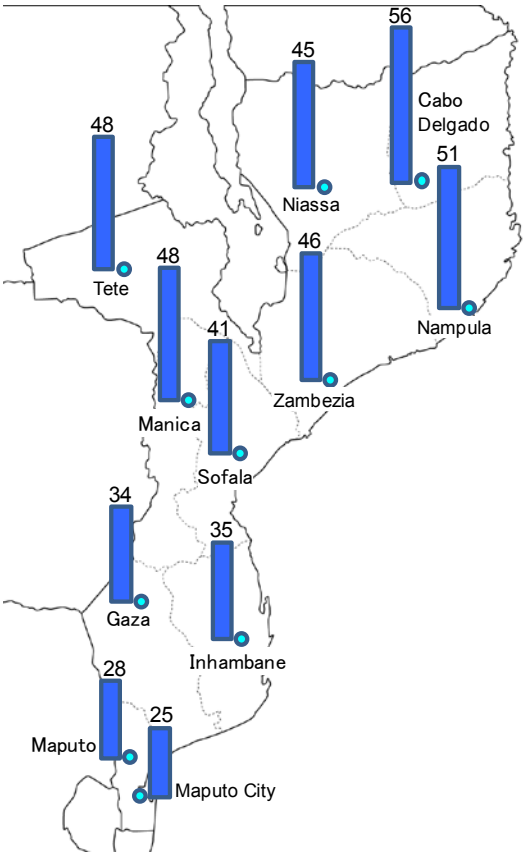
The rate of exclusive breastfeeding was 37% (2008), which was higher than that of the average for Sub-Saharan African countries.

Table 3-4 Trend in the Nutritional Status of Children Under-five

	1997	2003	2009
Underweight babies	26%	23%	17%
Chronic malnutrition	36%	48%	44%
Wasting	8%	5%	4%

Source: Report on the MDG, Republic of Mozambique, 2010 [6]

The prevalence of chronic malnutrition is higher in the northern and central provinces and the regional difference is large (Figure 3-10).



Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

Figure 3-10 Chronic Malnutrition of Under-five Children by Province (2008)

On the other hand, obesity was 12% while poor nutritional status was 8% for women aged 15 to 49 years. Moreover, 5% of women were short in height (shorter than 145 cm) which is consider a risk factor for labor and delivery complications [1].

Chapter 4 Health Services

4.1 Maternal and Child Health

4.1.1 Service Provision for Maternal Care

(1) Family planning

The prevalence of contraceptive use in Mozambique was low, and the percentage of married women 15-49 years old who know at least one method of contraception was only 16.2% (2008). The contraceptive prevalence in Sofala Province was 37% while it was only 3.2% in Cabo Delgado Province [15]. The average rate of condom use was 16% for men and 8% for women, but it was quite low with married persons with 6% for men and 3% for woman. The prevalence of modern contraceptive was 23% in 2011, which has reached the government's target of 16%, due mainly to the training of nurses and the national campaign supported by UNFPA [18].

(2) Antenatal Care (ANC)

About 92% of pregnant women received ANC at least once, and it has exceeded 80% in all provinces. Also 89% of women received ANC that was provided by medical personnel including doctors, nurses, and midwives (Table 4-1).

Table 4-1 Rate of Pregnant Women Who Received ANC and Type of Care Provided (2008)

	Province	Pregnant Woman Who Received ANC at least Once (%)	Type of Care Provided (%)			
			Blood Test	Blood Pressure	Urine Test	Measurement of Body Weight
Northern Region	Niassa	97	54	44	37	88
	Cabo Delgado	97	56	63	24	95
	Nampula	93	46	55	48	85
Central Region	Zambezia	80	39	45	30	74
	Tete	86	59	49	47	75
	Manica	91	76	59	32	89
	Sofala	93	85	77	36	91
Southern Region	Inhambane	99	68	75	25	96
	Gaza	99	76	72	21	98
	Maputo Province	99	91	54	32	96
	Maputo City	100	96	84	75	99
Entire Country		**92**	**61**	**61**	**36**	**87**

Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

However, looking at the care provided at ANC clinics, urine test was 36% and blood test was 61%. It is presumed that a large number of women with high-risk pregnancy were not diagnosed appropriately due to lack of medical equipment and supplies.

(3) Delivery

Fifty-eight percent of births took place in health facilities. The percentage of institutional deliveries was highest in Maputo City and lowest in Zambezia as indicated in the following table (Table 4-2). Also 41% of deliveries were assisted by midwives while only 2% were assisted by doctors. Traditional birth attended by midwives was 8% only in the national average, but it was high in Zambezia Province at 22%. Moreover,

there were a lot of births assisted by relatives, and it was high at 55% in Tete Province where the institutional delivery was low.

Table 4-2 Institutional Delivery and Staff Who Attended the Delivery (2008)

Province	Institutional Deliveries (%)	Staff Who Attended the Delivery (%)			
		Nurse	Midwives	Traditional Midwife	Relative
Niassa	74	4	62	3	26
Cabo Delgado	45	2	42	10	39
Nampula	60	15	46	6	25
Zambezia	40	4	32	22	35
Tete	49	3	29	8	52
Manica	56	14	38	3	36
Sofala	64	8	54	1	31
Inhambane	61	17	38	6	28
Gaza	68	26	35	9	17
Maputo Province	75	39	30	1	13
Maputo City	93	32	43	0	5
Entire Country	**58**	**12**	**41**	**8**	**31**

Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

(4) Emergency Obstetrics Care

The availability of emergency obstetrics care is essential to decrease the maternal mortality ratio. However, the number of experienced nurses and midwives are greatly insufficient, and the number of facilities which can provide basic and emergency obstetrics care is limited. The caesarean section rate has remained at 2% (Table 4-3).

Table 4-3 Situation of Emergency Obstetrics Care

Rate of health facilities which provide basic and emergency obstetrics care	45 (38% of at least necessary number)
Rate of health facilities which provide comprehensive obstetrics care	33 (80% of at least necessary number)
Birth ratio in health facilities which can provide emergency obstetrics care	17%
Caesarean section rate	2% (The WHO recommendation is 5%).

Source: Report on the MDG, Republic of Mozambique, 2010 [6]

4.1.2 Service Provision for Child Care

(1) Vaccination

The EPI was introduced in Mozambique in 1979, and several vaccines such as Bacille Calmette Guerin (BCG), DPT-HB-Hib (a five-kind vaccine), polio, and measles were administered to children (Table 4-4). There is some progress in the coverage of vaccination, but the disparities between rural and urban areas are evident [19].

The shortage of trained staff, inaccurate data, and insufficient cold chain management are the problems of the EPI according to the evaluation of WHO [20]. In addition, the government's joint evaluation report in 2011 mentioned that budget shortage for outreach activities and insufficient reporting system were the influencing factors [18].

Table 4-4 Rate of Immunization in Mozambique

	BCG	DPT3	Polio	Measles	All Vaccinations
1997	78%	58%	54%	55%	-
2003	86%	67%	65%	63%	-
2008	87%	71%	70%	64%	48%

Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

(2) Integrated Management of Childhood Illness (IMCI)

Around 37% of under-five children who had diarrhea used Oral Rehydration Therapy (ORT), while 53% had no treatment according to MICS [12]. The IMCI was introduced in Mozambique after 2000, and various aid agencies such as United Nations Children Fund (UNICEF) and United Nations Agency for International Development (USAID) implemented support and assistance including training. The IMCI has also been introduced into the curriculum of the Department of Medicine and the School of Public Health.

4.2 Communicable Disease Control

4.2.1 HIV/AIDS

(1) National Commitment

The National AIDS Committee (Conselho Nacional de Combate ao SIDA: CNCS), established in 2000, involves not only the health sector but also the Ministry of Education, the Ministry of Woman and Social Welfare, and a variety of related organizations. The role of the CNCS is policy making, coordination, monitoring, and evaluation.

(2) Policy

The present policy is the third National Strategic Plan for HIV/AIDS: PEN III (2010-2014), and its priority is the development of its capacity to conduct HIV/AIDS measures effectively for the long-term and to strengthen monitoring and evaluation. The Strategy for the Acceleration of Prevention of HIV Infection 2009-2010 (SAPHI) defines strategies to decrease the incidence of HIV from 350 in 2010 to 150 in 2015. It has eight priority areas such as antibody test, condom use, and mother-to-child transmission.

(3) Progress

The rate of women who had voluntary counseling and testing was 3% in the Demographic and Health Survey (DHS) in 2003, and it increased to 47% in 2008. The rate was higher in the southern region as indicated in the following table (Table 4-5).

Table 4-5 Woman Who Had HIV Voluntary Counseling and Testing (2008)

	Province	%
Northern Region	Niassa	29
	Cabo Delgado	34
	Nampula	31
Central Region	Zambezia	19
	Tete	39
	Manica	68
	Sofala	74
Southern Region	Inhambane	61
	Gaza	73
	Maputo Province	86
	Maputo City	97

Source: Multiple Indicator Cluster Survey 2008, UNICEF, 2009 [12]

Access to anti-retroviral drugs (ARV) by pregnant women remains a major challenge in Mozambique. It was 14% in 2006, but increased to 66% in 2011 [14].

4.2.2 Malaria

(1) Policy and Strategy

The malaria control started in the 1950s, and the national malaria control program was established in 1982 after independence. The early diagnosis, the eradication of mosquito, and health promotion were priorities, but these were reviewed in 1999 since the health service was not provided enough to rural areas where the majority of the population lived. Community participation in addition to diagnosis, disease management is one of the present strategies. The Strategic Plan for Malaria Control (2006-2009) aims to decrease the death of pregnant women and children due to malaria, and the following numerical targets were set:

- Children's malaria mortality rate will be reduced from 30% in 2000 to 15% in 2015; and
- The malaria prevalence rate among pregnant women will be reduced from 20% in 2000 to 10% in 2015.

Distribution of insecticide-treated mosquito nets (ITN), indoor residual spraying, and preventive medicine provision to pregnant woman, were conducted so as to achieve these targets [21].

(2) Progress

Table 4-6 shows the trend in the index of malaria control. The death from malaria accounted for 26% (2009) of the deaths in the hospital, though the numerical value of the index is being improved [6]. In 2008, as the national average, 22% of children used ITN, while it was only 8% in Maputo Province.

Table 4-6 Trend in Index of Malaria Control

Index	2003	2008	2009
Rate of household with insecticide-treated mosquito net	8%	15%	25%
Rate of household conducting effective indoor residual spraying	15%	35%	42%
Malaria prevalence rate of under-five children (per 10,000)	134	108	94

Source: Report on the MDG, Republic of Mozambique, 2010 [6]

4.2.3 Tuberculosis

(1) Policy and strategy

The Strategic Plan to Combat TB (2008-2012) defines priorities as follows: (1) improvement of diagnosis and treatment of TB; (2) promotion and introduction of DOTS to community; and (3) control for double infection of HIV/AIDS. Its strategies are (1) strong commitment of politics, (2) improvement of health system, (3) commitment by all health stakeholders, and (4) community participation.

(2) Progress

It is difficult to reach the targeted value of the MDGs to decrease the prevalence of tuberculosis from 491 in 2010 to 144 in 2015, though mortality rate and prevalence are being improved (Refer to Chapter 3.3).

Table 4-7 DOTS Expansion (2007)

	Province	%
Northern Region	Niassa	86
	Cabo Delgado	89
	Nampula	68
Central Region	Zambezia	37
	Tete	75
	Manica	90
	Sofala	45
Southern Region	Inhambane	100
	Gaza	54
	Maputo Province	93
	Maputo City	54
Entire Country		**70**

Source: Strategic Plan to Combat TB 2008-2012, MOH [22]

Chapter 5 Health System

5.1 Governance

5.1.1 Health Administration

The Ministry of Health (MOH) is responsible for drawing up the health policy, the distribution of health budget, and monitoring. The MOH has a vice minister and a permanent secretary under the minister, and has five departments. Each province has a health department which is responsible for the distribution of health budget, employment of staff, and monitoring.

5.1.2 Service Provision

The health services in Mozambique are mainly provided by the National Health Service (NHS). Since approximately 700 health facilities have been destroyed during the civil war, restoration and construction of new facilities were done with the support of the development partners. The present NHS consists of facilities in four levels as shown in Table 5-1. Though the number of health facilities in the whole country exceeded 1200, it is estimated that only 40% to 50% of the population has access to health services, and 70% of the population used the traditional medicine.

Table 5-1 Health Service Provision System of Mozambique

Level	Administration/Location	Health Facility
Quaternary	Maputo City, Nampula Province, and Sofala Province (MOH)	Central hospital Specialized hospital (psychiatry department)
Tertiary	Provincial capital (Provincial health department)	Provincial hospital
Secondary	Urban and rural areas of provinces	Rural hospital, district hospital, and general hospital
Primary	District	Health center (859 places) Health post (365 places)

Source: National Inventory of Health, Service and Resources, MOH 2007 [23]

Table 5-2 Number of Hospitals by Province (2007)

	Province	Central Hospital	Specialized Hospital	Provincial Hospital	District Hospital	Rural Hospital	General Hospital
Northern Region	Niassa			1		1	
	Cabo Delgado			1	1	3	
	Nampula	1	1		2	4	2
Central Region	Zambezia			1	2	4	
	Tete			1		3	
	Manica			1	3	1	
	Sofala	1				4	
Southern Region	Inhambane			1		2	
	Gaza			1		4	
	Maputo Province					1	1
	Maputo City	1	1				3
Total		**3**	**2**		**8**	**27**	**6**

Source: Mozambique National Health Account 2004-2006, WHO [24]

5.2 Human Resources for Health (HRH)

5.2.1 Overview

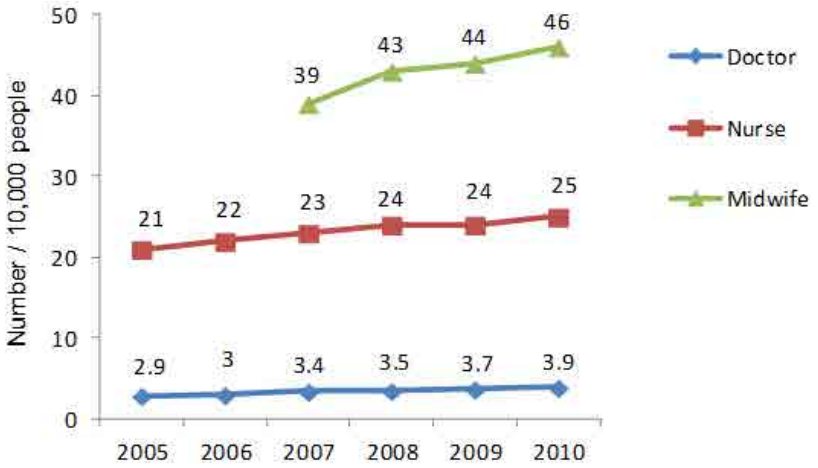
WHO admitted that Mozambique is one of the countries that is in the crisis situation as to the shortage of human resources for health. Because a lot of doctors were murdered and kidnapped during the civil war, the remaining number was absolutely insufficient so the Chinese-style of barefoot doctors was introduced. The system, however, did not succeed because of high dropout rate and lack of support from the communities. Moreover, the number of health staff who die of AIDS has increased but the need for health staff still increased in response to the HIV epidemic in recent years. The brain drain of doctors resulted migration to South Africa and Portugal and uneven distribution of human resources also made the problem more serious [25].

Although the number of the doctors and nurses have increased gradually (Table 5-3 and Figure 5-1), the number of medical staff per population is far below the average of Southern African countries. Especially, the shortages of doctors and nurses are severe (Table 5-4). Moreover, among the 406 medical specialists in the whole country, 203 are foreigners (2010).

Table 5-3 Trends in the Number of Medical Staff

	2005	2006	2007	2008	2009	2010
Doctor	569	606	692	735	796	863
Nurse	4,040	4,282	4,637	5,020	5,213	5,397
Midwife	-	-	3,233	3,629	3,828	4,110

Source: Information on Human Resources for National Health Services, MOH, 2011 [26]



Source: Information on Human Resources for National Health Services, MOH, 2011 [26]

Figure 5-1 Number of Medical Staff per Population

Table 5-4 Comparison on the Number of Doctors and Nurses with Neighboring Countries (2010)

	Number of Doctors per 100,000 Population	Number of Nurses per 100,000 Population
Mozambique	3.95	25
Zambia	7.0	60
Malawi	1.0	27
Zimbabwe	6.6	135
Average of Southern African countries	55	383

Source: Information on Human Resources for National Health Services, MOH, 2011 [26]

As for the number of doctors and nurses per 100,000 population, both were concentrated on Maputo City. Especially, doctors working in Maputo City increased more than tenfolds, and the doctor's uneven distribution is remarkable (Table 5-5).

Table 5-5 Number of Doctors and Nurses per Population by Province (2010)

	Province	Number of Doctors per 100,000 Population	Number of Nurses per 100,000 Population
Northern Region	Niassa	2.0	19.1
	Cabo Delgado	2.3	21.7
	Nampula	1.8	21.5
Central Region	Zambezia	1.3	20.8
	Tete	1.8	17.5
	Manica	2.0	20.0
	Sofala	3.7	20.0
Southern Region	Inhambane	2.2	26.5
	Gaza	3.0	30.2
	Maputo Province	2.9	15.7
	Maputo City	32.7	74.3

Source: Information on Human Resources for National Health Services, MOH, 2011 [26]

5.2.2 Policy and Strategy

The Human Resources Development Plan (2008-2015) was settled and its priority areas are as follows: (1) the contribution to the MDGs by health human resources development, (2) improvement on the shortage of health staff, (3) improvement on the unequal distribution of health staff, (4) improvement of health staff's performance. The absolute shortage of health staff, brain drain due to low salary and poor working conditions, low motivation of staff, and low quality of training are serious problems regarding human resources [27].

5.2.3 Human Resource Development

Training of health professionals is a shared responsibility between the MOH and the Ministry of Education. There are four types of training institutions such as (1) medical faculty of the universities train medical doctors and senior special engineers, (2)superior institutions for health personnel (ISCISA) train senior special engineers, (3) training schools for health personnel (ICS: Instituto de Ciências de Saúde) train middle-class medical personnel, and (4) training centers for health personnel (CF) train basic-level medical personnel. Medical students are trained at the Eduardo Mondlane University in Maputo and the private university in Beira. In 2012 there are four ICSs and 14 CFs in Mozambique.

5.3 Health Financing

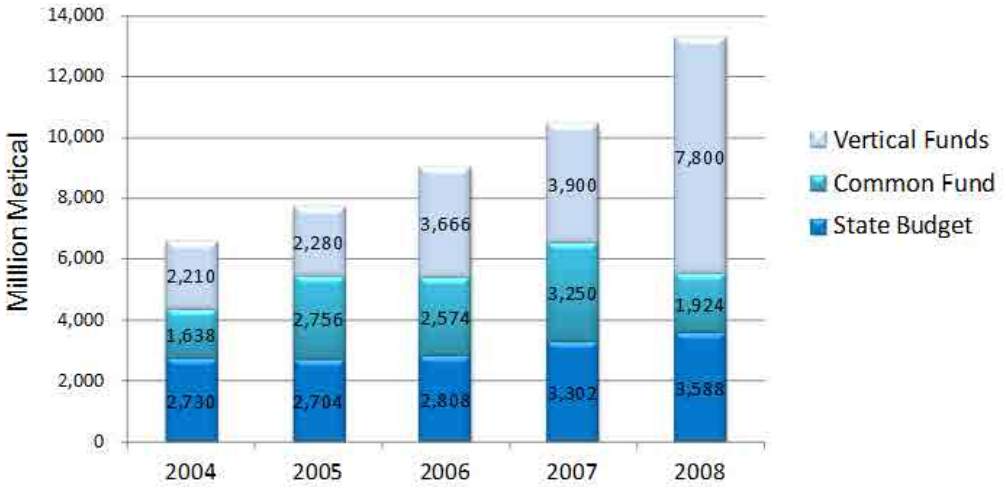
Mozambique government spares the second largest share of budget at about 18% to the health sector (current expenses are excluded), after the education sector (Table 5-6).

Table 5-6 Trends in the Expenditure Rate by Sector (%)

	2006	2007	2008	2009	2010
Education	18.9	18.0	19.0	19.8	21.2
Health and AIDS	19.0	18.1	18.1	18.0	18.3
Road	12.5	13.4	13.8	13.6	13.9
Office of the President, defense, and statistics	9.9	11.6	9.8	10.3	8.6
Legal system	8.1	7.6	7.4	7.3	7.3
Agriculture, industry, resource, and tourism	7.2	7.6	7.6	7.3	7.2
Water	5.3	5.3	5.9	5.8	5.5
Others	16.0	15.0	14.7	14.2	14.1

Source: Action Plan for the Reduction of Avsolute Poverty 2006-2009, Republic of Mozambique, 2006 [28]

As Mozambique government heavily depends on donors, the donor capital accounted for 15% of the GDP, and donors pay nearly half of the public expenditure of the health sector.



Source: Mozambique National Health Accounts 2004-2006, WHO [24]

Figure 5-2 Trends in Health Budget According to Fiscal Sources (Unit: One million metical)

The amount of health expense per capita and health expense rate per GDP in Mozambique was the lowest when compared with SADC countries, and was lower than the average amount of Africa. The government spending on national health expenditures was 69% and private spending (NGO and out-of-pocket payment) was 30% (Table 5-7).

Table 5-7 Comparison of the Amount of Health Budget with Neighboring Countries (2006)

	Amount of Health Expenditure per Capita (in USD)	% of Health Expenditure to GDP
Mozambique	21	5.3%
Malawi	21	12.9%
Tanzania	23	6.4%
Zimbabwe	36	9.3%
Zambia	58	6.2%
Average of African Countries	58	5.6%

Source: Mozambique National Health Accounts 2004-2006, WHO [24]

5.4 Health Management Information System

The epidemiological surveillance system that collects data on 11 diseases from all health facilities was introduced in 1979. It accounts to the total data from three central hospitals and seven provincial hospitals from 1990, and noncommunicable diseases were included in 2005. The statistics of diseases are not analyzed in most health facilities, and the heath staffs do not know how to draw graphs due to insufficient knowledge according to the assessment of the WHO [29]. A review of the technological guideline and training manual, and the training on reporting and case detection are necessary. The joint evaluation report (2011) pointed out the insufficient data collection on TB, EPI, and nutrition [18].

5.5 Drug Supply

The essential medicines list in Mozambique has not been revised since 2002, and the laws and regulations on medicines are still being enacted since 1998. There is no organization that restricts and controls the medicines in the provinces [30]. The national drug policy has not been settled, and there is a problem on procurement, distribution, and safekeeping. Legislation and human resources development are necessary [18].

Chapter 6 Development Assistance and Partnership

6.1 Framework of Donor Coordination

The cooperation of the MOH and its development partners is based on a well-structured sector-wide approach program, which has been in place since 2000. Mozambique has 28 development partners supporting the health sector. Fifteen aid agencies conduct general budget support through the common fund, which was established in 2003. In 2007, the global fund and the President's Emergency Plan for AIDS Relief (PEPFAR) alone were providing over half of all funding for the sector. Mozambique was the first country where the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) channelled its support through the common fund [31].

The GFATM, Ireland, Norway, and the European Union are in the high ranking in terms of the amount of contribution among development partners. The support of Denmark is being targeted for Tete Province and Canada for Inhambane Province [32].

6.2 Activities of Major Development Partners

6.2.1 Overview

The major development partners in the health sector are indicated in Table 6-1.

Table 6-1 Donor Cooperation Situation

	Child Health	Maternal Health	Nutrition	TB Malaria	HIV/ AIDS	Human Resource	PHC/ Community Health	Health Promotion	Health Administration	Facility/ Equipment
WHO	○	○		○	○	○			○	
CIDA	○	○	○		○	○				○
Ireland					○	○	○		○	
USAID	○	○			○			○	○	
WB				○	○	○	○		○	

6.2.2 World Health Organization (WHO)

The priority areas of the support in 2009-2013 are maternal and child health (MCH), health system strengthening, leadership, and governance.

6.2.3 The World Bank

The main components of the Health Service Delivery Project are training, malaria control, and capacity development of the MOH with the cooperation of the Canadian International Development Agency (CIDA). The target areas of this project are the three provinces in the northern region. Also, HIV/AIDS, health system strengthening, and malaria control are supported in the Health Commodity Security Project.

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

The table below shows the present grant portfolio of the global fund.

Table 6-2 Grant Portfolio of the Global Fund

Grant Type	Round	Grant Title	Principal Recipient	Total Signed Amount	Phase and Status
HIV/AIDS	8	Strengthening the Health System and Communities through Government-Civil Society Partnerships	MOH	US$11,823,414	Phase I - in progress
	9	Response to the HIV Epidemic in Mozambique Through Effective Government-Civil Society Partnerships	Fundacao para o Desanvolvimanto da Comunidade	US$14,3841,504	Phase I - in progress
	9	Response to the HIV Epidemic in Mozambique Through Effective Government-Civil Society Partnerships	MOH	US$41,140,895	Phase I - in progress
Tuberculosis	7	Reducing TB Morbidity and Mortality in Mozambique by 2102	MOH	US$10,040,142	Phase II - in progress
Malaria	9	Malaria Prevention and Control in Mozambique	MOH	US$32,308,603	Phase I - in progress
	9	Malaria Prevention and Control in Mozambique	World Vision	US$21,737,126	Phase I - in progress

Source: The Global Fund to Fight AIDS, Tuberculosis and Malaria, Grant Portfolio Mozambique [33]

6.2.5 Canadian International Development Agency (CIDA)

CIDA has been supporting Mozambique for more than 30 years. Currently, CIDA supports improvement of access to quality health services, HIV/AIDS, promotion of the delivery facility, and human resource development.

6.2.6 Ireland (Irish Aid)

The support of Ireland to Mozambique started in 1996, and its support is in line with the national objectives of poverty reduction. In the health sector, Irish Aid supports the strengthening of the health system, human resource development, and home-based care for AIDS patients.

6.3 Outline of Japanese Cooperation

6.3.1 Japan's Cooperation Policy to Mozambique and Place of the Health Sector

Since the civil war ended in 1992, the Japanese government has been supporting the economic development of Mozambique mainly with grant aids and technical cooperations. The yen loan was granted for the first time in 2006. The priority field of Japan is the revitalization of local economies, environment and climate change, administrative ability improvement, and the health sector is placed under the administrative ability improvement.

6.3.2 Cooperation of Japan in the Health Sector

The Japanese government's previous support in the health sector was mainly on the implementation of technical cooperation in training, infectious disease control, and HIV control. Also, the Japan Overseas Cooperation Volunteers were dispatched (AIDS control etc.) and training programs are being conducted.

Table 6-3 Main Support in the Health Sector (After 2005)

Modality	Cooperation Period	Name of Program/Project
Uncompensated Financial Assistance	-2010	Facilities and Equipment Expansion Plan for Health Personnel Development
Individual Specialist	2009-2011 years	Training Advisers of Health Human Resources Development
Technical Cooperation Project	2005-2008 years	Improvement of Health Personnel Development Organization Ability Project
	2007-2010 years	IEC Activity Reinforced Project for HIV/AIDS Enlightenment in the Sofala Province
	2007-2010 years	Improvement of the EPI Management System Project in Tete Province
	2012-2015 years	Strengthening the Ability of Lecturers on Health Personnel Organizational Development Project
	2012-2015 years	AIDS Task Force Ability Strengthening Project in Gaza Province

Source: Countries Data Book, Ministry of Foreign Affairs, 2010 [34]

Chapter 7 Priority Health Issues and Recommendations

7.1 Priority Health Issues

7.1.1 Problems in the Health Sector

The problems facing the health sector in Mozambique can be summarized in the following four points:

1. Presence of disease of poverty;
2. Insufficient health service provisions;
3. Shortage of health personnel and low quality service; and
   Low management level of both the MOH and health facilities.

In these conditions, there are problems on the economic policy that cannot promote the labor-intensive industry besides agriculture, and the low degree of educational attainment. If the approach in the other sectors and the construction of basic infrastructure to decrease poverty do not obtain the result, it is difficult to improve the condition of health in Mozambique.

7.1.2 Actions to Problems by the Government and Development Partners

The government and various aid agencies have worked on the improvement of MCH, infectious diseases control such as HIV/AIDS, and health system strengthening. However, insufficient human resources which are the base of the health system and the constitution of the MOH become the bottleneck since more than half of the health budget depends on the aid agencies. Thus many of the health indices are lower than that of the average of Sub-Saharan African countries.

7.2 Recommendations

Japan has mainly conducted the cooperation on the infectious disease control and human resource development. The technical cooperation projects on HIV/AIDS and human resource development are already being implemented.

The burden of HIV/AIDS to the entire nation is still large, and will need support by not only the health sector but also by various approaches in the future. It is not only the lack of health professionals but also the low degree of skills is the problem in the component of the health service system. Moreover, the development of high-quality human resources is the urgent need for Mozambique.

ATTACHMENTS

Attachment 1: Major Health Indicators

Attachment 2: References

Attachment 1: Major Health Indicators (Republic of Mozambique)

Republic of Mozambique				MDGs	Sources	1990	2000	Latest	Latest year	Latest in Region	(Latest year)	Region
0 General Information	0.1 Demography	0.1.01	Population, total		WDI	13,547,076	18,200,656	23,390,000	2010	853,434,000	(2010)	Sub-Saharan Africa (developing only)
		0.1.02	Population growth (annual %)		WDI	1.3	2.6	2.3	2010	2.5	(2010)	Sub-Saharan Africa (developing only)
		0.1.03	Life expectancy at birth, total (years)		WDI	43.2	47.2	49.7	2010	54.3	(2010)	Sub-Saharan Africa (developing only)
		0.1.04	Birth rate, crude (per 1,000 people)		WDI	43.3	43.6	37.7	2010	37.4	(2010)	Sub-Saharan Africa (developing only)
		0.1.05	Death rate, crude (per 1,000 people)		WDI	20.6	17.1	14.6	2010	12.6	(2010)	Sub-Saharan Africa (developing only)
		0.1.06	Urban population (% of total)		WDI	21.1	30.7	38.4	2010	37.4	(2010)	Sub-Saharan Africa (developing only)
	0.2 Economic・Development Condition	0.2.01	GNI per capita, Atlas method (current US$)		WDI	170	230	440	2010	1,188.5	(2010)	Sub-Saharan Africa (developing only)
		0.2.02	GNI growth (annual %)		WDI	3.7	0.4	6.4	2010	4.1	(2010)	Sub-Saharan Africa (developing only)
		0.2.03	Total enrollment, primary (% net)	2.1	WDI	44.0	56.0	92.0	2010	76.3	(2009)	Sub-Saharan Africa (developing only)
		0.2.04	Ratio of female to male primary enrollment (%)	3.1	WDI	75.5	75.5	90.1	2010	91.6	(2009)	Sub-Saharan Africa (developing only)
		0.2.05	Literacy rate, adult total (% of people ages 15 and above)		WDI			55.1	2009	62.3	(2009)	Sub-Saharan Africa (developing only)
		0.2.06	Human Development Index		HDR	0.15	0.32	0.32	2010	0.46	(2011)	Sub-Saharan Africa
		0.2.07	Human Development Index (rank)		HDR	146/160	170/173	184/187	2010			
		0.2.08	Poverty gap at $1.25 a day (PPP) (%)		WDI			25.1	2008	20.6	(2008)	Sub-Saharan Africa (developing only)
	0.3 Water and Sanitation	0.3.01	Improved water source (% of population with access)	7.8	HNP Stats	36	42	47	2010	61.1	(2010)	Sub-Saharan Africa (developing only)
		0.3.02	Improved sanitation facilities (% of population with access)	7.9	HNP Stats	11	14	18	2010	30.6	(2010)	Sub-Saharan Africa (developing only)
1 Health Status of People	1.1 Mortality and Morbidity	1.1.01	Age-standardized mortality rate by cause (per 100,000 population) - Communicable		GHO			957	2008	798	(2008)	Africa
		1.1.02	Age-standardized mortality rate by cause (per 100,000 population) - Noncommunicable		GHO			908	2008	779	(2008)	Africa
		1.1.03	Age-standardized mortality rate by cause (per 100,000 population) - Injuries		GHO			153	2008	107	(2008)	Africa
		1.1.04	Cause of death, by communicable diseases and maternal, prenatal and nutrition conditions (% of total)		HNP Stats			64.5	2008	64.6	(2008)	Sub-Saharan Africa (developing only)
		1.1.05	Cause of death, by non-communicable diseases (% of total)		HNP Stats			27.6	2008	28.3	(2008)	Sub-Saharan Africa (developing only)
		1.1.06	Cause of death, by injury (% of total)		HNP Stats			7.9	2008	7.1	(2008)	Sub-Saharan Africa (developing only)
		1.1.07	Distribution of years of life lost by broader causes (%) - Communicable		GHO			76	2008	78	(2008)	Africa
		1.1.08	Distribution of years of life lost by broader causes (%) - Noncommunicable		GHO			15	2008	15	(2008)	Africa
		1.1.09	Distribution of years of life lost by broader causes (%) - Injuries		GHO			8	2008	17	(2008)	Africa
	1.2 Maternal and Child Health	1.2.01	Maternal mortality ratio (modeled estimate, per 100,000 live births)	5.1	MDGs	1000	780	550	2008	650	(2008)	Sub-Saharan Africa (developing only)
		1.2.02	Adolescent fertility rate (births per 1,000 women ages 15-19)	5.4	MDGs		152.7	134.3	2010	107.6	(2010)	Sub-Saharan Africa (developing only)
		1.2.03	Mortality rate, under-5 (per 1,000)	4.1	MDGs	218.7	176.7	135.0	2010	121.2	(2010)	Sub-Saharan Africa (developing only)
		1.2.04	Mortality rate, infant (per 1,000 live births)	4.2	MDGs	146.2	118.9	92.2	2010	76.4	(2010)	Sub-Saharan Africa (developing only)
		1.2.05	Low-birthweight babies (% of births)		HNP Stats			16	2008	13.3	(2010)	Sub-Saharan Africa (developing only)
		1.2.06	Fertility rate, total (birth per woman)		HNP Stats	6.2	5.7	4.9	2010	4.9	(2010)	Sub-Saharan Africa (developing only)
	1.3 Infectious Diseases	1.3.01	a) Prevalence of HIV, male (% ages 15-24)	6.1	MDGs			3.1	2009	1.5	(2009)	Sub-Saharan Africa (developing only)
			b) Prevalence of HIV, female (% ages 15-24)	6.1	MDGs			8.6	2009	3.8	(2009)	Sub-Saharan Africa (developing only)
		1.3.02	Notified cases of malaria per 100,000 population	6.6	MDGs Database			32,555	2008			
		1.3.03	a) Malaria death rate per 100,000 population, all ages	6.6	MDGs Database			80	2008	96	(2009)	Sub-saharan Africa
			b) Malaria death rate per 100,000 population, ages 0-4	6.6	MDGs Database			62	2008	519		
		1.3.04	Tuberculosis prevalence rate per 100,000 population (mid-point)	6.9	MDGs Database	742	600	491	2010	479		
		1.3.05	Incidence of tuberculosis (per 100,000 people)	6.9	MDGs	401	513	544	2010	271	(2010)	Sub-Saharan Africa (developing only)
		1.3.06	Tuberculosis death rate (per 100,000 people)	6.9	MDGs	84	68	49	2010	28	(2010)	Sub-Saharan Africa (developing only)
		1.3.07	Prevalence of HIV, total (% of population ages 15-49)		HNP Stats	1.2	8.6	11.5	2009	5.5	(2009)	Sub-Saharan Africa (developing only)
		1.3.08	AIDS estimated deaths (UNAIDS estimates)		HNP Stats	2,200	36,000	74,000	2009			
		1.3.09	HIV incidence rate, 15-49 years old, percentage (mid-point)		MDGs Database	0.39	1.74	1.19	2009			
		1.3.10	Paritial Prioritization Score by the Global Fund (HIV)		GF			12	2012			
			Paritial Prioritization Score by the Global Fund (Malaria)		GF			12	2012			
			Paritial Prioritization Score by the Global Fund (TB)		GF			10	2012			
	1.4 Nutrition	1.4.01	Prevalence of wasting (% of children under 5)		HNP Stats			4.2	2008			
2 Service Delivery	2.1 Maternal and Child Health	2.1.01	Births attended by skilled health personnel, percentage	5.2	MDGs Database			55.3	2008			
		2.1.02	Birth by caesarian section(%)		GHO			1.9	2003	3.5	(2011)	Africa
		2.1.03	Contraceptive prevalence (% of women ages 15-49)	5.3	MDGs			16.2	2008	21.7	(2010)	Sub-Saharan Africa (developing only)
		2.1.04	Pregnant women receiving prenatal care (%)	5.5	HNP Stats		75.8	92.3	2008	73.5	(2010)	Sub-Saharan Africa (developing only)
		2.1.05	Pregnant women receiving prenatal care of at least four visits (% of pregnant women)	5.5	HNP Stats		53.1	53.1	2003	45.6	(2010)	Sub-Saharan Africa (developing only)
		2.1.06	Unmet need for family planning, total, percentage	5.6	MDGs Database			18.9	2004	24.8	(2008)	Sub-Sahara Africa
		2.1.07	1-year-old children immunized against: Measles	4.3	Childinfo	59	71	70	2010	75	(2010)	Sub-Saharan Africa
		2.1.08	1-year-old children immunized against: Tuberculosis		Childinfo	54	84	90	2010	84	(2010)	Sub-Saharan Africa
		2.1.09	a) 1-year-old children immunized against: DPT (percentage of infants who received their first dose of diphtheria, pertussis and tetanus vaccine)		Childinfo	71	84	77	2010	85	(2010)	Sub-Saharan Africa
			b) 1-year-old children immunized against: DPT (percentage of infants who received three doses of diphtheria, pertussis and tetanus vaccine)		Childinfo	46	70	74	2010	77	(2010)	Sub-Saharan Africa
		2.1.10	1-year-old children immunized against: Polio		Childinfo	46	69	73	2010	79	(2010)	Sub-Saharan Africa
		2.1.11	Percentage of infants who received three doses of hepatitis B vaccine		Childinfo			74	2010	74	(2010)	Sub-Saharan Africa
	2.2 Infectious Diseases	2.2.01	Condom use with non regular partner, % adults (15-49), male	6.2	MDGs			33.1	2003			
		2.2.02	Condom use with non regular partner, % adults (15-49), female	6.2	MDGs			23.5	2003			

Attachment 1: Major Health Indicators (Republic of Mozambique)

Republic of Mozambique				MDGs	Sources	1990	2000	Latest	Latest year	Latest in Region	(Latest year)	Region
		2.2.03	Men 15-24 years old with comprehensive correct knowledge of HIV/AIDS, percentage	6.3	MDGs Database			33.7	2009	33	(2005-2010)	Sub-Saharan Africa
		2.2.04	Women 15-24 years old with comprehensive correct knowledge of HIV/AIDS, percentage	6.3	MDGs Database			15.2	2009	26	(2005-2010)	Sub-Saharan Africa
		2.2.05	Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years	6.4	MDGs Database			0.83	2009	0.92	(2005-2010)	Sub-Saharan Africa
		2.2.06	Use of insecticide-treated bed nets (% of under-5 population)	6.7	HNP Stats			22.8	2008	34.0	(2010)	Sub-Saharan Africa (developing only)
		2.2.07	Children under 5 with fever being treated with anti-malarial drugs, percentage	6.8	MDGs Database			36.7	2008	36	(2008-2010)	Sub-Saharan Africa
		2.2.08	Tuberculosis treatment success rate under DOTS, percentage	6.10	MDGs Database		75	85	2009	80	(2008)	Sub-Saharan Africa
		2.2.09	Antiretroviral therapy coverage (% of people with advanced HIV infection)	6.5	MDGs			30.0	2009			
		2.2.10	People aged 15 years and over who received HIV testing and counselling, estimated number per 1,000 adult population		GHOr			106.3	2010			
		2.2.11	Testing and counselling facilities, estimated number per 100,000 adult population		GHOr			11.9	2010			
		2.2.12	Pregnant women tested for HIV, estimated coverage (%)		GHOr			87	2010			
		2.2.13	Percentage of HIV-infected pregnant women who received antiretroviral drugs to reduce the risk for mother-to-child transmission (Mid point)	6.5	MDGs Database			51	2009			
		2.2.14	Tuberculosis case detection rate (all forms)		HNP Stats	29.0	23.0	34.0	2010	60	(2010)	Sub-Saharan Africa (developing only)
		2.2.15	Tuberculosis treatment success rate (% of registered cases)	6.1 0	MDGs		75.0	85.0	2009	79	(2009)	Sub-Saharan Africa (developing only)
	2.3 Nutrition	2.3.01	Vitamin A supplementation coverage rate (% of children ages 6-59 months)		HNP Stats			100.0	2010	85.8	(2010)	Sub-Saharan Africa (developing only)
		2.3.02	Consumption of iodized salt (% of households)		HNP Stats			25.1	2008	49.8	(2010)	Sub-Saharan Africa (developing only)
	2.4 Quality and Coverage	2.4.01	Estimate of health formal coverage		ILO					11.6		Countries of very high vulnerability
		2.4.02	Population not covered (%) due to financial resources deficit		ILO			85.9		85.8		Countries of very high vulnerability
		2.4.03	Population not covered (%) due to professional health staff dificit		ILO			92.0		74.6		Countries of very high vulnerability
3 Health System	3.1 Human Resources	3.1.01	Physicians (per 100,000 people)		HRInfo	-	3.0 (2004)	3.9	2010	0.2	(2010)	Sub-Saharan Africa (developing only)
		3.1.02	MCH Nurses (per 100,000 people)		HRInfo	-	31 (2004)	46	2010			
		3.1.03	Nurses (per 100,000 people)		HRInfo	-	21 (2004)	46.0	2010			
		3.1.04	Dentistry personnel density (per 10,000 population)		GHO			0.1	2004	0	(2007)	Africa
		3.1.05	Density of pharmaceutical personnel (per 10,000 population)		GHO			0.39	2008	1.0	(2007)	Africa
	3.2 Health Financing	3.2.01	Health expenditure, total (% of GDP)		HNP Stats		5.9	5.2	2010	6.5	(2010)	Sub-Saharan Africa (developing only)
		3.2.02	Health expenditure, public (% of total health expenditure)		HNP Stats		71.9	71.7	2010	45.1	(2010)	Sub-Saharan Africa (developing only)
		3.2.03	Health expenditure, private (% of total health expenditure)		HNP Stats		28.1	28.3	2010	54.9	(2010)	Sub-Saharan Africa (developing only)
		3.2.04	Out-of-pocket health expenditure (% of private expenditure on health)		HNP Stats		45.2	48.3	2010	64.7	(2010)	Sub-Saharan Africa (developing only)
		3.2.05	Health expenditure, public (% of government expenditure)		HNP Stats		17.9	12.2	2010	10.0	(2005)	Sub-Saharan Africa (developing only)
		3.2.06	External resources for health (% of total expenditure on health)		HNP Stats		26.4	24.2	2010	10.5	(2010)	Sub-Saharan Africa (developing only)
		3.2.07	Social security expenditure on health as a percentage of general government expenditure on health		GHO		0.3	0.3	2009	7	(2009)	Africa
		3.2.08	a) Health expenditure per capita (current US$)		HNP Stats		13.9	21.3	2010	84.3	(2010)	Sub-Saharan Africa (developing only)
			b) Per capita total expenditure on health (PPP int. $)		GHO		26	55	2009	157	(2009)	Africa
		3.2.09	Per capita government expenditure on health at average exchange rate		GHO		10.0	20	2009	41	(2009)	Africa
	3.3 Facilities, Equipments and Supplies	3.3.01	a) Median availability of selected generic medicines (%) - Public		GHO							
			b) Median availability of selected generic medicines (%) - Private		GHO							
		3.3.02	a) Median consumer price ratio of selected generic medicines - Public		GHO							
			b) Median consumer price ratio of selected generic medicines - Private		GHO							
		3.3.03	Hospital beds (per 1,000 population)		HNP Stats	0.9		0.7	2011	1.2	(1990)	Sub-Saharan Africa (developing only)

WDI: World Development Indicators & Global Development Finance (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
HDR: Human Development Reports (http://hdr.undp.org/) (Accessed 07/2012)
HNP Stats: Health Nutrition and Population Statistics (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
GF: Global Fund eligibility list for 2012 funding channels, the Global Fund to Fight AIDS, Tuberculosis and Malaria (http://www.theglobalfund.org/en/application/applying/ecfp/) (Accessed 07/2012)
GHO: Global Health Observatory Country Statistics (http://www.who.int/gho/countries/en/) (Accessed 07/2012)
GHOr: Global Health Observatory Repository (http://apps.who.int/ghodata/) (Accessed 07/2012)
MDGs: Millennium Development Goals (http://databank.worldbank.org/ddp/home.do) (Accessed 07/2012)
MDG database: Millennium Development Goals Indicators (http://mdgs.un.org/unsd/mdg/) (Accessed 07/2012). Regional data is available on The Millennium Development Goals Report Statistical Annex 2011 (United Nations).
Childinfo: Childinfo UNICEF (http://www.childinfo.org/) (Accessed 07/2012)
ILO: World Social Security Report 2010/11: Providing coverage in times of crisis and beyond. International Labour Office Geneva: ILO 2010.

1.3.10 Partial Prioritization Score is composed of the income level score for the country and the disease burden score for the particular disease in the country. The minimum score is 3 and the maximum score is 12.

2.4.01 Estimate of health formal coverage is indicated as percentage of population covered by state, social, private, company-based, trade union, mutual and other health insurance scheme.

2.4.02 Population not covered (%) due to financial resources deficit (based on median value in low-vulnerability group of countries) uses the relative difference between the national health expenditure in international $ PPP (excluding out-of-pocket) and the median density observed in the country group with low levels of vulnerability as a benchmark for developing countries. The rate can be calculated using the following formula:

Per capita health expenditure not financed by private households' out-of-pocket payments (PPP in int. $) [A]
Population (in thousands) total [B]
Total health expenditure not financed by out of pocket in int. $ PPP (thousands) [C = A x B]
Population covered by total health expenditure not financed by out-of pocket if applying Benchmark* (thousands) [D = C ÷ Benchmark]**
Percentage of the population not covered due to financial resources deficit (%) [F = (B - D) ÷ B x 100]
*Benchmark: Total health expenditure not financed by out-of-pocket per capita = 350 international $ PPP.
**This formula was partially modified from the original in the source to suit an actual calculation.

2.4.03 Population not covered (%) due to professional health staff dificit uses as a proxy the relative difference between the density of health professionals in a given countries and its median value in countries with a low level of vulnerability. The rate can be calculated using the following formula:

Total of health professional staff [A = B + C]
Number of nursing and midwifery personnel [B]
Number of physicians [C]
Total population (in thousands) [D]
Number of health professional per 10,000 persons [F = A ÷ D x 10]
Total population covered if applying Benchmark* (thousands) [E = A ÷ Benchmark x 10]
Percentage of total population not covered due to health professional staff deficit [G = (D - E) ÷ D x100]
Benchmark: 40 professional health staff per 10,000 persons.

3.1.02 MCH Nurses work as midwives.

Attachment 2：References (Republic of Mozambique)

	TITLE	AUTHOR	URL	YEAR
1	Poverty Profile Survey Mozambique	JICA	http://www.jica.go.jp/activities/issues/poverty/profile/pdf/moz_01.pdf	2011
2	World Development Indicators (WDI) and the Global Development Finance (GDF) databases	World Data Bank	http://databank.worldbank.org/ddp/home.do?Step=2&id=4&DisplayAggregation=N&SdmxSupported=Y&CNO=2&SET_BRANDING=YES	2012
3	Human Development Report	UNDP	http://hdr.undp.org/en/reports/global/hdr2011/	2011
4	Five-year Government Plan 2010-2014	Republic of Mozambique		2010
5	Poverty Reduction Action Plan 2011-2014	Republic of Mozambique		2011
6	Report on the MDG	Republic of Mozambique	http://undp.org.mz/en/Publications/National-Reports/Report-on-the-Millennium-Development-Goals-Mozambique-2010	2010
7	Plano Estrategico Do Sector Saude 2007-2012	MOH		
8	The States of The World's Children 2011	UNICEF	http://www.unicef.org/sowc2011/pdfs/SOWC-2011-Main-Report_EN_02092011.pdf	2011
9	NCD country profiles	WHO	http://www.who.int/nmh/countries/moz_en.pdf	2011
10	Statistical Year Book	Institute Nacional de Estastica		
11	Millennium Development Goals Indicators	United Nations	http://mdgs.un.org/unsd/mdg/Default.aspx	
12	Multiple Indicator Cluster Survey 2008	UNICEF	http://www.childinfo.org/files/MICS3_Mozambique_FinalReport_2008.pdf	2009
13	Disease and Injury Country Estimate 2008, Global Health Observatory	WHO	http://apps.who.int/ghodata/	
14	2012 Global AIDS Response Progress Report	National AIDS Council		
15	The National Survey on Prevalence, Behavioral Risks and Information about HIV and AIDS in Mozambique	National Institute of Health		2009
16	World Maralia Report 2011	WHO		2011
17	Nutrition of Young Children and Mothers in Mozambique 2003	USAID	http://measuredhs.com/pubs/pdf/ANC19/ANC19-Eng.pdf	2006
18	Avaliação Conjunta Anual do Desempenho do Sector de Saúde - 2011, Esboço Pré-Final	MOH		2012
19	EPI Comprehensive Multi-year Plan 2008-2009	MOH		
20	EPI Team Presentation	WHO		2009
21	Strategic Plan for Malaria Control in Mozambique 2006-2009	MOH		2006
22	Strategic Plan of TB Control 2008-2012	MOH		
23	National inventory of health, service and resources	MOH		2007
24	Mozambique National Health Account 2004-2006	WHO	http://www.who.int/nha/country/moz/mozambique_2004-2006.pdf	
25	The Human Resource for Health Situation in Mozambique	World Bank	http://siteresources.worldbank.org/INTAFRICA/Resources/no_91.pdf	2006

Attachment 2：References (Republic of Mozambique)

	TITLE	AUTHOR	URL	YEAR
26	Information on Human Resources for National Health Services	MOH		2011
27	Human Resources Development Plan 2008-2015	MOH		
28	Action Plan for the Reduction of Avsolute Poverty 2006-2009	Republic of Mozambique		2006
29	Assessment of Epidemiological Disease Surveillance System in Mozambique 2006	WHO	http://www.who.int/hac/crises/moz/sitreps/mozambique_epi_surv_nov_dec2006.pdf	
30	Situation analysis of essential drugs and medicine	WHO		
31	Country Cooperation Strategy 2009-2013	WHO	http://www.afro.who.int/en/mozambique/who-country-office-mozambique.html	
32	Health Service Delivery Project, Project Appraisal Document	World Bank		2009
33	GFATM Grant Portfolio Mozambique	GFATM	http://portfolio.theglobalfund.org/en/Country/Index/MOZ	
34	Japan's ODA: Country Data Book 2011, Mozambique 【in Japanese】	Ministry of Foreign Affairs of Japan	http://www.mofa.go.jp/mofaj/gaiko/oda/shiryo/kuni/11_databook/pdfs/05-46.pdf	
35	Chinese style of barefoot doctors and Japanese stationed nurses	Niigata University, No. 21	http://www.nsu.ac.jp/nc/htdocs/nsu/pdf/library/e-asia/h21-5.pdf	2010