



Mozambique

Mozambique (pop. 19.4 million) is a PEPFAR and PMI country¹ with an HIV prevalence of 13% and with 95% of the population at risk for malaria. Since 2000, Mozambique has operated a sector-wide approach (SWAp) for health that by 2005 included 17 bilateral and multilateral agencies including the World Bank and a Global Fund for AIDS, Tuberculosis (TB) and Malaria grant. The Strategic Plan for the Health Sector and the Mozambican Poverty Reduction Strategy Paper form the framework for Ministry of Health (MOH)-donor coordination. The health sector is highly dependent on donor funds, which in 2003 represented 40% of total health spending compared with an

average of 16% for sub-Saharan Africa (Annex I). While the country has achieved impressive economic growth, averaging 8% per year since 1992, 50% of the population still lives below the poverty line.

The health service delivery system reaches less than 60% of the population and is dominated by the public sector – the National Health Service – that consists of four levels. Level I, made up of health posts and health centers, delivers at least 40% of all health services and is typically the first (and often only) point of contact with the health system for a large portion of the population (World Bank 2004). Level I facilities have very basic resources and are staffed by clinical officers, nurses, and medical technicians. Level II is district hospitals that offer basic diagnostic, surgical, and obstetric services, and include general medical doctors on their staff. Level III is provincial hospitals, which offer curative services, diagnostic services/ equipment, and training centers. Finally, Level IV consists of the country’s three referral hospitals in Maputo, Beira, and Nampula, serving the southern, central, and northern regions respectively. National and international non-governmental organizations



Community health workers from a village outside Maputo. The health service delivery system in Mozambique reaches less than 60% of the population. The limited number of health workers, facilities, drugs, and supplies has not kept pace with population growth and the rising incidence of HIV/AIDS, malaria, and TB.

¹ PEPFAR is the President’s Emergency Plan for AIDS Relief, PMI the President’s Malaria Initiative.

Health Systems Country Briefs assess a country’s health system to identify “best buys” for health systems strengthening – limited investments in health systems activities that are certain to realize important gains. Information in this Brief comes from review of secondary data sources, country reports, and communication with country experts. Data for comparisons with peer countries come from internationally comparable datasets of the World Bank, World Health Organization, and others; where more recent data are available from the country, those data are used.

TABLE 1: MOZAMBIQUE HEALTH SYSTEM – STRENGTHS AND WEAKNESSES

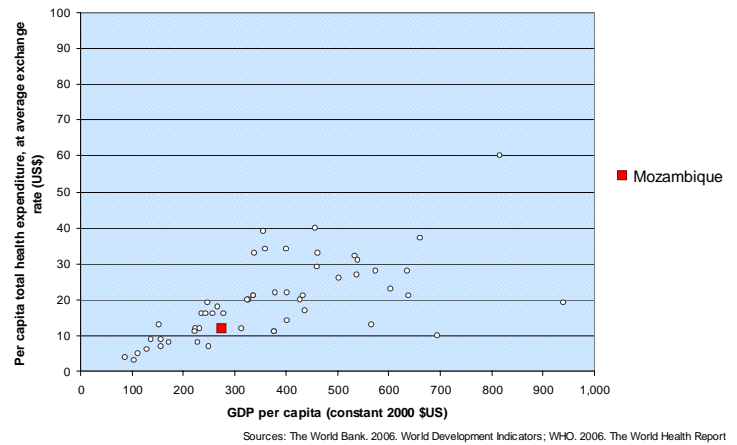
| Health System Function | Data/Evidence | Strengths and Weaknesses |
|----------------------------|---|---|
| Health Financing | <ul style="list-style-type: none"> ● High dependence on donor funding (40%), a significant portion of which is channeled through a SWAp and direct budget support (18% of official development assistance in 2004). ● Low per capita health expenditure (\$12 per year, compared with sub-Saharan Africa average of \$49). ● Low budget execution rates at the district level for non-salary inputs (average 80%), and low execution of grant disbursements by the National AIDS Council. ● 46% of patients who are charged user fees have difficulty paying. | <ul style="list-style-type: none"> ● Slow budget execution and delayed payment of non-salary expenses reflect systemic bottlenecks that constrain service delivery and possibly contribute to charging of user fees. ● Despite significant volume of donor and government health funding, per capita health expenditures very low at \$12 per year. ● No plans or systems, such as National Health Accounts, in place to track non-public health expenditures. |
| Governance | <ul style="list-style-type: none"> ● Highly structured MOH-donor coordination. ● Mozambique ranks better than the regional average on five out of six governance indicators. ● Expected rollout of the public financial administration system (SISTAFE) to the health sector at the central and provincial levels. ● User fees vary widely and are inconsistent with MOH regulations. ● National AIDS Council awarded more than 1,200 grants to more than 200 NGOs. | <ul style="list-style-type: none"> ● SISTAFE expected to improve transparency, accountability, and budget execution levels, but rollout to the MOH has been delayed more than one year. ● Successful experience with public-private partnerships through the National AIDS Council. |
| Service Delivery | <ul style="list-style-type: none"> ● Estimated 40% of the population without access to service delivery system. ● Life expectancy (42 years), infant mortality (104), maternal mortality (1,000), and contraceptive prevalence measures are all worse than regional or income peer groups. | <ul style="list-style-type: none"> ● Service coverage of population is inadequate and hampered by obstacles such as dispersed rural population, lack of roads, and rains/floods. Quality compromised by staff shortages, drug/supply stockouts, and weak health information system (HIS). |
| Human Resources | <ul style="list-style-type: none"> ● Physician and nurses per 100,000 population (3 and 21 respectively) are significantly less than regional averages (19 and 121), and well below World Health Organization (WHO) recommendation of 20 physicians per 100,000. ● Heavy reliance on foreign physicians outside of Maputo (37% of all doctors). ● State medical school produces only 22 doctors/year on average. ● District health directorate posts filled by health workers with limited management skills. | <ul style="list-style-type: none"> ● Shortage of doctors and nurses is a key bottleneck for further progress in health status, especially for diagnosis and treatment/case management of AIDS, malaria, and TB. ● Effective, pragmatic policy of expatriate physician contracting. ● Risk that funding for HIV/AIDS draws scarce human resources away from other critical services (maternal and reproductive health). |
| Health Information Systems | <ul style="list-style-type: none"> ● Health data fragmented among eight functions and vertical programs. A survey in 2002 revealed “absent or inconsistent records on finances, drugs and human resources” across provinces and districts. | <ul style="list-style-type: none"> ● HIS weaknesses impede financial, clinical, and administrative management, and detection of waste/fraud. |

(NGOs) and faith-based organizations (FBOs) coordinate with district health officials and public facilities. The private commercial health sector, legalized in 1991, is small and concentrated in urban areas. District directorates of health are responsible for operational implementation of health activities at the district and community levels, including delivery of primary care, planning, budgeting, and human resource and medical supply management.

HEALTH SYSTEM STRENGTHS AND WEAKNESSES

Mozambique's health indicators for infant mortality, maternal mortality, life expectancy, contraceptive prevalence, HIV/AIDS, malaria, and TB prevalence are generally worse than its regional or income group peers (Annex 1). Strengths of the Mozambican health system include significant MOH-donor coordination for planning, budgeting, and monitoring; relatively low out-of-pocket health expenditures; relatively better ranking on five out of six measures of good governance; and positive experiences with donor basket funding and partnering with non-public organizations. Health system weaknesses include limited population access to formal health services; shortages of health workers, drugs, and

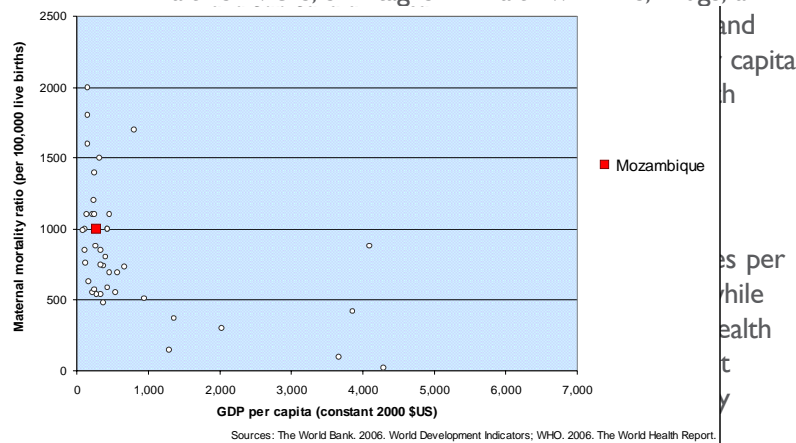
FIGURE 1: PER CAPITA TOTAL HEALTH EXPENDITURE FOR MOZAMBIQUE AND LOW-INCOME COUNTRIES



SERVICE DELIVERY

Despite investment in rehabilitation of health facilities and measures to improve service delivery, the service delivery system still does not reach an estimated 40% of the population. Consumers who do seek services face an average of 48 minutes travel time and 45 minutes waiting time for a four-minute encounter at the nearest primary care facility (World Bank 2004). The limited supply of facilities, health workers, drugs, and supplies has not kept pace with population growth and the rising incidence of HIV/AIDS, malaria, and TB. Lack of these system inputs is an obstacle to delivering accessible quality primary care services, which is a disincentive to families seeking services – including new interventions supported by PEPFAR, PMI, and the Global Fund. Consequently, health indicators remain some of the worst in sub-Saharan Africa (see Figure 2).

FIGURE 2: MATERNAL MORTALITY RATIO FOR MOZAMBIQUE AND SUB-SAHARAN AFRICA



disbursements by the National AIDS Council represent bottlenecks to ensuring that external disbursements are spent efficiently. They also may discourage or delay further integration of disease-specific interventions into the general health service delivery system. This would be a lost opportunity to leverage disease-specific funds to expand and strengthen the broader health system.

HUMAN RESOURCES

Mozambique faces severe shortages of physicians and nurses (Figure 3). The MOH has had positive experiences with contracting foreign doctors, mainly Cuban and former Soviet Union, through a variety of mechanisms in partnership with bilateral donors (Switzerland, Norway, Netherlands) and UN agencies. In 2004, such mechanisms covered 200 specialists for a total annual cost of \$ 3.4 million (Vio 2006). The country's health worker pool includes community health care workers who are not formally employed by the National Health Service, but who do receive basic training in curative and preventive care, and receive supplies from their district health directorate. Finally, traditional healers are cited as an alternative provider by 70% of consumers.

FIGURE 3: PHYSICIAN DENSITY FOR MOZAMBIQUE AND SUB-SAHARAN AFRICA

RECOMMENDED BEST BUYS

The influx of external health resources is expected to continue, with PEPFAR and PMI alone injecting more than \$100 million into the sector in 2006-07. Rising levels of US Government (USG) funding and ambitious targets for HIV/AIDS and malaria point to the need to eliminate bottlenecks and expand population coverage in order to achieve health outcomes commensurate with USG investments. Expanding access to and improving the quality of care at the peripheral level, where the majority of patient encounters occur, will increase utilization and consequently population exposure to HIV/AIDS and malarial interventions at the primary care level.

Population access to health services can be expanded through public-private partnerships, building on the National AIDS Council's experience with grant awards, and introducing performance-based financing into subagreements.

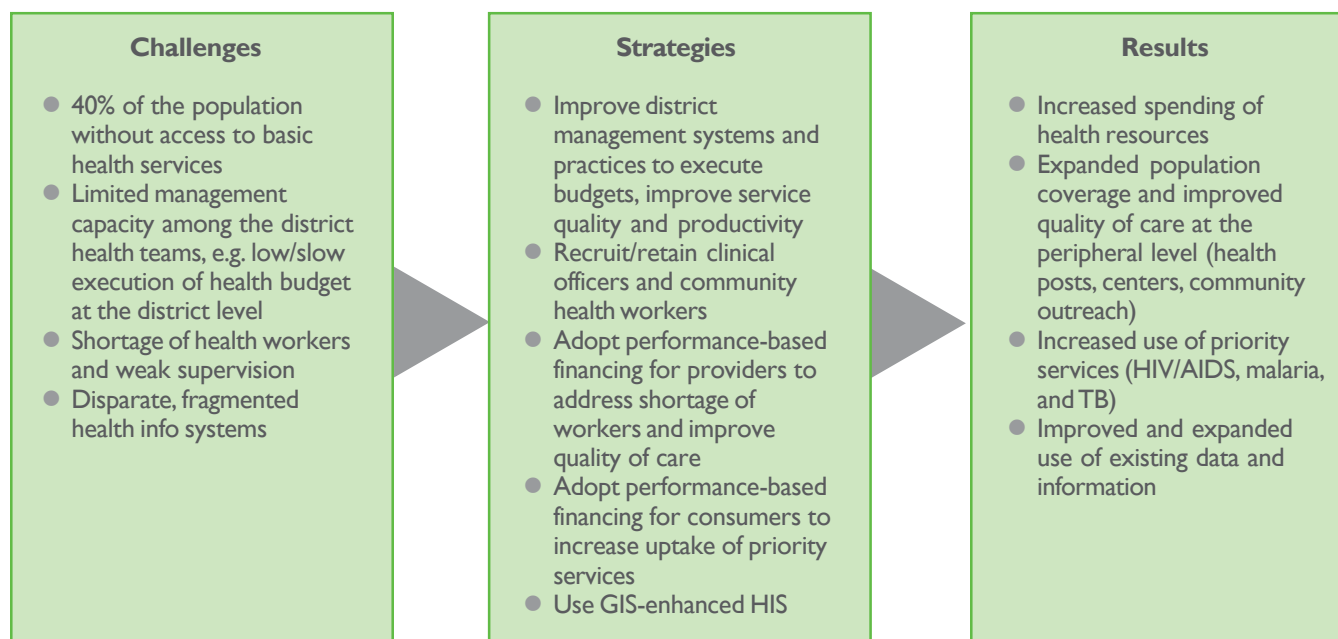
Performance-based financing should be introduced to recruit and retain health workers (physicians, nurses, clinical officers, and community health workers) to do outreach and referral for HIV/AIDS, malaria, and TB. Fixed salaries with raises are not necessarily tied to performance, thus acquiescing to low productivity, absenteeism, poor quality, and lack of innovation. Performance-based financing aligns resource use with the motivational factors that promote hard work, innovation, and results.

Given the country's high rates of poverty and poor physical access to health facilities, households may forgo health care or prioritize urgent curative services over essential preventive care. Incentives can be introduced for households to promote use of priority services.

Bottlenecks to spending health budgets at the district level to cover supplies, drugs, fuel, and other inputs to improve service quality should be eliminated. The 144 district health directorates are a key but weak link in the operation of the service delivery system affecting both public and NGO/FBO providers. The district directorates are staffed by health workers who lack management skills, training, and easy, practical systems. District-level strengthening is happening in some districts through bilateral assistance. Development of a national strategy and simple, practical systems to improve the effectiveness of district directorates on a faster, wider scale is recommended.

Geographic information system (GIS)-enhanced HIS are highly visual presentations of data overlaid on publicly available maps. Mozambique has accumulated numerous survey and program datasets, but the information is not easily accessible to central or district health officials or civil society. Mozambique can leverage existing GIS applications to implement a GIS-enhanced HIS relatively cheaply. For example, visit www.moh.gov.mz (Maps and Data), and see Annex 2 for an illustrative "smart map" of HIV/AIDS subprojects and HIV prevalence in one district of Mozambique.

FIGURE 4: KEY HEALTH SYSTEMS CHALLENGES IN MOZAMBIQUE AND RECOMMENDED STRATEGIES



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ANNEX I: KEY HEALTH SYSTEM INDICATORS FOR MOZAMBIQUE AND PEER COUNTRIES

| Service Delivery Module | | | | | | | | |
|--|---|-------|------|-------|------|-------|------|---|
| Indicator 1 | Number of hospital beds (per 10 000 population) | NA | NA | 6 | - | 26 | - | WHO. 2006. The World Health Report. |
| Indicator 2 | Percentage of births attended by skilled health personnel per year | 48.00 | 2003 | 51.74 | - | 47.57 | - | The World Bank. 2006. World Development Indicators. |
| Indicator 3 | DTP3 immunization coverage: one-year-olds immunized with three doses of diphtheria, tetanus toxoid (DTP3) and pertussis (%) | 72.00 | 2004 | 71.48 | 2004 | 73.40 | 2004 | WHO. 2006. The World Health Report. |
| Indicator 4 | Contraceptive prevalence (% of women ages 15-49) | 17.00 | 2003 | 23.36 | - | 26.25 | - | The World Bank. 2006. World Development Indicators. |
| Indicator 5 | Pregnant women who received 1+ antenatal care visits (%) | 71.00 | 1997 | 79.71 | - | 74.25 | - | WHO. 2006. The World Health Report. |
| Indicator 6 | Life expectancy at birth, total (years) | 41.83 | 2004 | 49.07 | - | 53.27 | - | The World Bank. 2006. World Development Indicators. |
| Indicator 7 | Mortality rate, infant (per 1,000 live births) | 104 | 2004 | 93 | 2004 | 84 | 2004 | The World Bank. 2006. World Development Indicators. |
| Indicator 8 | Maternal mortality ratio (per 100,000 live births) ³ | 1,000 | 2000 | 855 | 2000 | 738 | 2000 | WHO. 2006. The World Health Report. |
| Indicator 9 | Prevalence of HIV, total (% of population aged 15-49) ⁴ | 12.20 | 2003 | 8.55 | 2003 | 4.86 | 2003 | The World Bank. 2006. World Development Indicators. |
| Human Resources Module | | | | | | | | |
| Indicator 1 | Physicians (density per 1,000 population) | 0.03 | 2004 | 0.19 | - | 0.42 | - | WHO. 2006. The World Health Report. |
| Indicator 2 | Nurses (density per 1,000 population) | 0.21 | 2004 | 1.21 | - | 1.14 | - | WHO. 2006. The World Health Report. |
| Indicator 3 | Midwives (density per 1,000 population) | 0.12 | 2004 | 0.09 | - | 0.22 | - | WHO. 2006. The World Health Report. |
| Indicator 4 | Pharmacists (density per 1,000 population) | 0.03 | 2004 | 0.09 | - | 0.08 | - | WHO. 2006. The World Health Report. |
| Indicator 5 | Lab technicians (density per 1,000 population) | 0.05 | 2004 | 0.10 | - | 0.07 | - | WHO. 2006. The World Health Report. |
| Pharmaceutical Management Module | | | | | | | | |
| Indicator 1 | Total expenditure on pharmaceuticals (% total expenditure on health) | 18.60 | 2000 | 27.53 | 2000 | 27.04 | 2000 | WHO. 2004. The World Medicines Situation. |
| Indicator 2 | Total expenditure on pharmaceuticals (per capita at average exchange rate) in US\$ | 2 | 2000 | 9 | 2000 | 5 | 2000 | WHO. 2004. The World Medicines Situation. |
| Indicator 3 | Government expenditure on pharmaceuticals (per capita at average exchange rate) in US\$ | 1 | 2000 | 6 | 2000 | 2 | 2000 | WHO. 2004. The World Medicines Situation. |
| Indicator 4 | Private expenditure on pharmaceuticals (per capita at average exchange rate) in US\$ | 1 | 2000 | 6 | 2000 | 4 | 2000 | WHO. 2004. The World Medicines Situation. |
| Health Information System (HIS) Module | | | | | | | | |
| Indicator 1 | Maternal mortality ratio reported by national authorities ⁹ | 410 | 2001 | 560 | 2001 | 518 | 2001 | UNICEF. 2006. The State of the World's Children 2006. |
| Indicator 2 | Mortality rate, under-5 (per 1,000) | 152 | 2004 | 151 | 2004 | 131 | 2004 | The World Bank. 2006. World Development Indicators. |
| Indicator 3 | HIV prevalence among pregnant women aged 15-24 | 15 | 2002 | 12 | - | 10 | - | UNICEF. 2006. The State of the World's Children 2006. |
| Indicator 4 | Proportion of children under 5 years who are underweight for age | 24 | 2003 | 25 | - | 29 | - | WHO. 2006. The World Health Report. |
| Indicator 5 | Number of hospital beds (per 10,000 population) | NA | NA | 6 | - | 26 | - | WHO. 2006. The World Health Report. |
| Indicator 6 | Contraceptive prevalence (% of women ages 15-49) | 17.00 | 2003 | 23.36 | - | 26.25 | - | The World Bank. 2006. World Development Indicators. |
| Indicator 7 | Percentage of surveillance reports received at the national level from districts compared to number of reports expected | 91.26 | 2005 | 91.90 | 2005 | 92.35 | 2005 | WHO. 2005. Annual WHO/UNICEF Joint Reporting Form. |

NOTES:

NC: Not Calculated because the regional comparator includes both high income countries as well as some countries that have a population of less than 30,000, which are not classified by the World Bank.

NA: Data Not Available

- : No specific year is noted here since the average is calculated across different countries, where the data is reported in different years

1- The geographic classifications used by the World Bank are for low-income and middle-income economies only. Low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. The countries are divided into 6 regions: East Asia and Pacific (EAP), Europe and Central Asia (ECA), Latin America and the Caribbean (LAC), Middle East and North Africa (MENA), South Asia (SA), Sub-Saharan Africa (SSA). Countries noted with * in the spreadsheets indicate high-income countries (with the exception of South Africa classified as an Upper-middle income country) which are not part of the World Bank geographic classification.

2- The classification of countries by income group is based on the World Bank classification which classifies member economies, and all other economies with populations of more than 30,000. The countries which are not in a category have a population of less than 30,000.

3- Economies are divided according to 2004 GNI per capita, calculated using the World Bank Atlas method. The groups are: LI (low income), \$825 or less; LMI (lower middle income), \$826 - \$3,255; UMI (upper middle income), \$3,256 - \$10,065; and (HI) high income.

4- The following countries report "<0.1": Azerbaijan, Bosnia and Herzegovina, Brunei Darussalam, Bulgaria, Croatia, Egypt, Iraq, Japan, Jordan, Mongolia, Philippines, Republic of Korea., Romania, Slovakia, Slovenia, Sri Lanka, Syrian Arab Republic, Tajikistan, The former Yugoslav Republic of Macedonia, Tunisia, Turkmenistan

5- Estimates derived by regression and similar estimation methods for the following countries: Afghanistan, Albania, Algeria, Angola, Armenia, Bhutan, Bolivia, Botswana, Burundi, Cape Verde, Comoros, Congo, Cote d'Ivoire, Democratic Republic of Korea, Democratic Republic of Congo, Djibouti, Dominican Republic, El Salvador, Equatorial Guinea, Fiji, Gambia, Georgia, Ghana, Guinea Bissan, Indonesia, Iraq, Kazakhstan, Kyrgyzstan, Lao People's Democratic Republic, Lebanon, Lesotho, Liberia, Libyan Arab Jamahiriyah, Maldives, Mozambique, Myanmar, Namibia, Nicaragua, Niger, Nigeria, Oman, Pakistan, Papua New Guinea, Senegal, Sierra Leone, Solomon Islands, Somalia, South Africa, Sudan, Swaziland, Syrian Arab Republic, Tajikistan, Timor-Leste, Turkey, Turkmenistan, United Arab Emirates, Uzbekistan, Viet Nam.

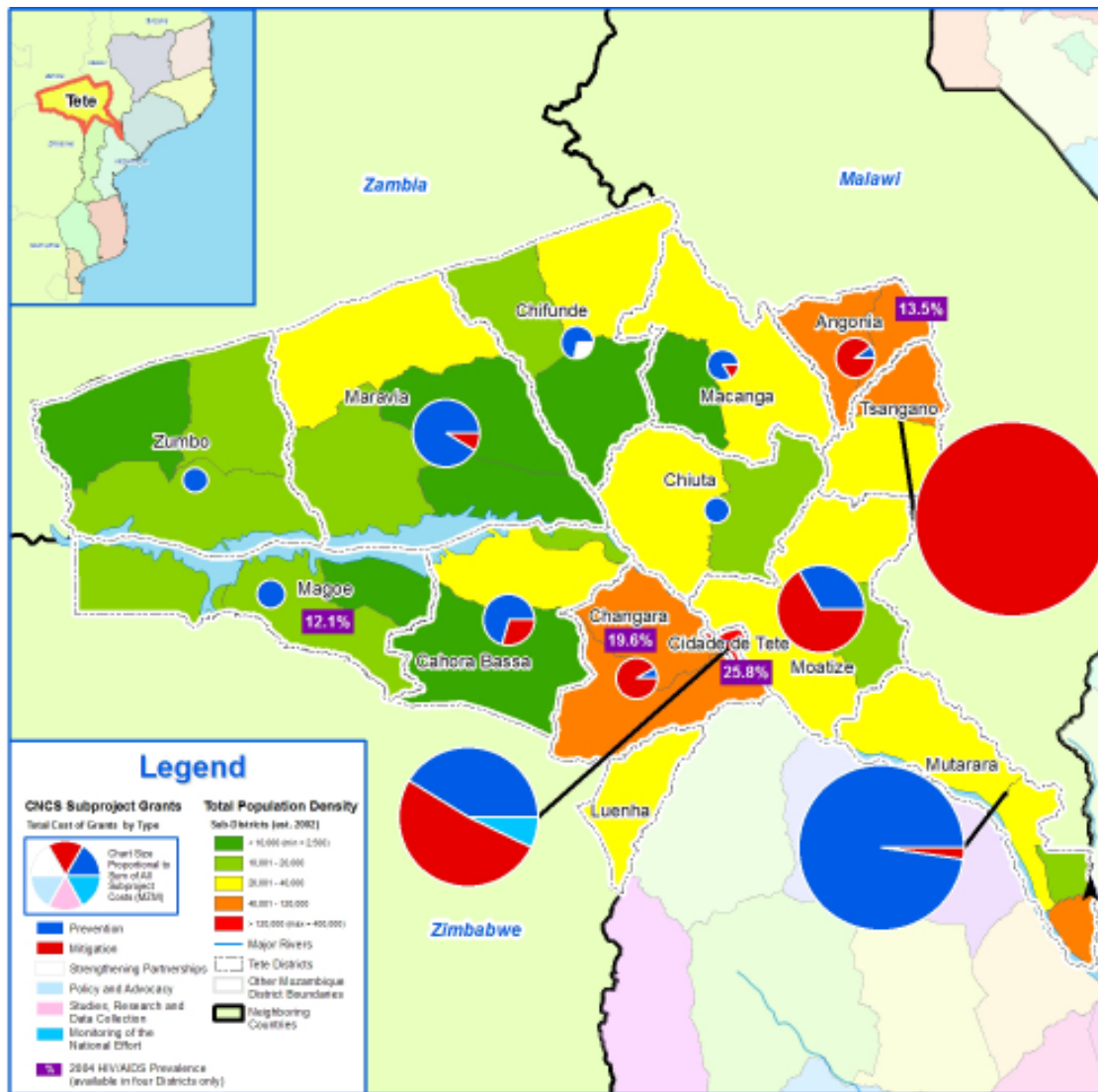
6- Ranges from -2.5 to 2.5. Higher values indicate better governance ratings.

7- Percentile rank indicates the percentage of countries worldwide that rate below the selected country (subject to margin of error)

8- Democratic People's Republic of Korea reports "<1000" for the per capita total expenditure on health at average exchange rate (US\$)

9- Data refer to the most recent year available during the period 1990-2004. Several countries either have data that refer to years or periods other than 1990-2004, differ from the standard definition, or refer to only part of a country. These countries are Dominican Republic, Ghana, Lebanon, Papua New Guinea, Solomon Islands, Syrian Arab Republic, Turkey.

ANNEX 2: ILLUSTRATIVE “SMART MAP” FROM A GIS-ENHANCED HEALTH INFORMATION SYSTEM



Health Systems 20/20

Health Systems 20/20, a five-year (2006-2011) cooperative agreement funded by the U.S. Agency for International Development (USAID), offers USAID-supported countries help in solving problems in health governance, finance, operations, and capacity building. By working on these dimensions of strengthening health systems, the project will help people in developing countries gain access to and use priority population, health, and nutrition (PHN) services. Health Systems 20/20 integrates health financing with governance and operations initiatives. This integrated approach focuses on building capacity for long-term sustainability of system strengthening efforts. The project acts through global leadership, technical assistance, brokering and grant making, research, professional networking, and information dissemination.

Why Health Systems?

The delivery of all health services, including the priority PHN services, depends on the underlying health system. To combat malaria, TB, HIV, and maternal and child health problems, the health system needs adequate and appropriately allocated financing, inclusive decision making and accountability, and financial and human resource management systems that deliver inputs where and when needed. A smoothly functioning health system maximizes the delivery of effective and life-saving technical interventions.

How to Access Health Systems 20/20

USAID missions and bureaus can access Health Systems 20/20 by obligating funds to cooperative agreement No. GHS-A-00-06-00010-00. The project can accept all types of USAID funding, including PEPFAR, POP, CS, EFS, as well as funds through EGAT and D&G. As a Leader with Associate mechanism, missions and bureaus can also negotiate and manage separate Associate Awards for which they will designate a CTO.

Health Systems 20/20 is funded by the U.S. Agency for International Development, cooperative agreement GHS-A-00-06-00010-00.

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