MINISTRY OF HEALTH AND SOCIAL SERVICES

National Strategic Plan for Neglected Tropical Diseases

2015 - 2020

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Introduction

Namibia is one of the countries in Africa where communicable diseases are diseases of public health importance and the leading causes of morbidity and mortality. The Government of the Republic of Namibia through the Ministry of Health and Social Services has been addressing the major communicable diseases such as malaria, HIV/AIDS, TB, ARI, epidemic prone diseases, Diarrheal disease and other diseases of public health concern with the support of national and international partners and involvement of the community. As a result of this, the country has shown tremendous progress in controlling and decreasing their incidences and prevalence. Moreover, it has reduced malaria morbidity & mortality, HIV prevalence, TB incidence, and infant and child mortality rates.

However, some neglected tropical diseases (NTDs), despite being diseases of public importance with known and available preventive and control measures have not received enough attention and concerted efforts as bestowed to the major ones.

Understanding the morbidity caused by these diseases and its implication for achieving the MDGs the Ministry of and Social Services has established the Epidemiology Division within the Primary Health Care. The division main aim is to control morbidity and mortality due any communicable diseases of public health interest including Schistosomiasis, Soil Transmitted Helminthes to a level where they are no longer diseases of public health importance. The Ministry of Health and Social Services is also in a process to establish a Public Health laboratory in order to strengthen diagnostic and surveillance capacity and eventually contribute to improved response in the country.

Though partial mapping was done for some of the PCT-NTDs, the epidemiology and distribution of NTDs in Namibia is still unknown. As the burden and occurrence of the NTDs can be minimized with safe and effective prevention and treatment strategies such as preventive chemotherapy and vector control, for an effective intervention, understanding their distribution is of paramount importance since mapping is the first step that determines the distribution of NTDs prior to interventions.

1.1 Country Profile

1.1.1 Administrative, demographic and community structures

On March 21, 1990 Namibia achieved its independence after a century of colonial rule, first by Germany and then by South Africa, following the successful implementation of United Nations Resolution 435. With a constitution based on Roman-Dutch law, the country has a multi-party system and holds general elections every five years. A bicameral legislature consists of the National Council (two members chosen from each regional council) and the National Assembly.

Administratively, the country is divided into 13 regions, namely: Zambezi, Kavango east, Kavango West, Kunene, Ohangwena, Omusati, Oshana, and Oshikoto regions in the north; Omaheke, Otjozondjupa, Erongo, and Khomas regions in the central areas; and the Hardap and Karas regions in the south.

According to the 2001 Population and Housing Census, the Namibian population consists of 1,830,330 people, of which 942,572 are female and 887,721, are male (Table 1.1). The country has a relatively young population, with 43 percent under 15 years of age and less than 4 percent over age 65. Despite rapid urbanization, Namibia is still mainly rural, with one in three living in urban areas.

Overall, the population density is low (2 persons per square kilometer). Regional population densities vary substantially, with almost two-thirds of the population living in the four northern regions and less than one-tenth living in the south. Despite its small population, Namibia has a rich diversity of ethnic groups. English is the official language but there are more than 11 indigenous languages in Namibia.

Table1. National population data, Schools and health facilities at district level

Province or region	District	No. of villages or communities *	Total population	Under fives	5-14 years	No. of primary schools	No. of peripheral health facilities
Caprivi	Katima Mulilo		100,528	14,074	23,121		32
Erongo	Omaruru		19,415	2,718	4,465		6
Erongo	Swakopmund		42,590	5,963	9,796		14
Erongo	Usakos		16,499	2,310	3,795		9
Erongo	Walvis Bay		54,897	7,686	12,626		20
Hardap	Aranos		11,337	1,587	2,608		3
Hardap	Mariental		39,203	5,488	9,017		9
Hardap	Rehoboth		33,576	4,701	7,723		10
Karas	Karasburg		19,071	2,670	4,386		6
Karas	Keetmanshoop		38,465	5,385	8,847		10
Karas	Luderitz		27,324	3,825	6,285		12
Kavango	Andara		37,047	5,187	8,521		10
Kavango	Nankudu		62,471	8,746	14,368		13
Kavango	Nyangana		34,041	4,766	7,829		11
Kavango	Rundu		147,680	20,675	33,966		26
Khomas	Windhoek		316,508	44,311	72,797		41
Kunene	Khorixas		17,400	2,436	4,002		9
Kunene	Opuwo		54,768	7,668	12,597		16
Kunene	Outjo		19,264	2,697	4,431		4
Ohangwena	Eenhana		84,382	11,813	19,408		12
Ohangwena	Engela		196,126	27,458	45,109		19
Ohangwena	Okongo		28,052	3,927	6,452		5
Omaheke	Gobabis		95,010	13,301	21,852		16
Omusati	Okahao		35,511	4,972	8,168		11
Omusati	Oshikuku		124,673	17,454	28,675		19
Omusati	Outapi		83,320	11,665	19,164		13
Omusati	Tsandi		45,610	6,385	10,490		11
Oshana	Oshakati		211,031	29,544	48,537		21
Oshikoto	Onandjokwe		186,393	26,095	42,870		18
Oshikoto	Tsumeb		30,465	4,265	7,007		7
Otjozondjupa	Grootfontein		51,256	7,176	11,789		9
Otjozondjupa	Okahandja		35,527	4,974	8,171		4
Otjozondjupa	Okakarara		29,411	4,117	6,764		7
Otjozondjupa	Otjiwarongo		73,799	10,332	16,974		9

1.1.2 Geographical characteristics

Namibia is situated in South-Western Africa and covers approximately 824,000 square kilometers. It is bordered by the Atlantic Ocean in the west, Botswana and Zimbabwe in the east, South Africa in the south, and Angola and Zambia in the north. The Namib Desert, the oldest desert in the world, stretches along the whole west coast of the country,

while the Kalahari Desert runs along the southeastern border with Botswana. Namibia's name is derived from the Namib Desert, a unique geological feature renowned for the pristine and haunting quality of its landscape. The Namibian climate varies from arid and semi-arid to subtropical with temperatures between 5°C and 20°C. Fog sometimes occurs along the temperate desert coast. The central, southern, and coastal areas constitute some of the most arid landscapes south of the Sahara.

The hottest months of the year are January and February, with average daytime temperatures varying between 9°C and 30°C. During the winter months, May to September, temperatures can fluctuate between -6°C and 10°C at night to 20°C in the day. Frost occurs over large areas of the country during winter, but in general, winter days are clear, cloudless and sunny. Overall, Namibia is
a summer rainfall area with limited showers beginning in October and continuing until April.

1.1.3 Socio economic status and indicators

The positive global economic performance between 2002 and 2006 had a favorable impact on the Namibian economy mainly through high commodity prices and strong demand from the rest of the world. In real terms, the economy recorded a growth rate of 6 percent in 2004, above the 4.4 percent projected earlier. On average, the economy grew by 4.6 percent between 2001 and 2004, just above the target rate of 4.3 percent set in National Development Plan 2 (NDP2).
Taking into account the prospects of the world economy and that of Namibia's main trading partners, the outlook for the Namibian economy for the coming years points to moderate economic performance with a projected average annual growth rate of 3.7 percent (Ministry of Finance, 2007).

The economy of Namibia, which was formerly based on natural resources, is slowly becoming more diversified. This change is partly a result of the increased processing of minerals such as diamonds, zinc, copper, and marble. In addition, tourism sector has been expanding very rapidly in the past decade, e.g., preliminary amounts indicate that travel and tourism's contribution to GDP increased by 9.3 percent (real growth) in 2007 alone. Agricultural growth has a disproportionate effect on reducing poverty because 70 percent of the poor in developing countries, including Namibia, live in rural areas. Namibia, along with its developing-country partners, has long championed the reduction of trade barriers for agricultural products as one of the most important actions to reduce poverty.

The manufacturing sector in Namibia remains small, with fish and meat processing being the largest individual sub-sectors. Beverages, other food products, metal and

pre-cast concrete products, furniture, paints, detergents, and leather goods are also produced.
Namibia is ranked as a middle-income country but has one of the most skewed incomes per capita in the world. The disparities in per capita income among the population are as a result of lopsided development, which characterized the Namibian economy in the past. The country also has a high unemployment rate, which is estimated at 37 percent (Ministry of Labour and Social Welfare, 2004).

1.1.4 Transportation and communication

The Namibian transport system is extensive and reaches most parts of the country by road, rail, or air. The main North-South axis by road connects the central parts of Namibia including the capital Windhoek with the South African border in the South and the Angolan border in the North. The West-East direction is covered by the road links Walvis Bay - Windhoek - Botswana border at Buitepos (Trans-Kalahari Highway), Keetmanshoop - Lüderitz and Grootfontein - Caprivi (Trans-Caprivi Highway). The railway network covers 2 380 km connecting Windhoek and Gobabis with Tsumeb/Grootfontein/Outjo, Walvis Bay, Lüderitz, and RSA via Ariamsvlei in the South. Namibia's international airport is Hosea Kutako, other national airports includes Eros, Walvisbay, Rundu, Katima, Ondangwa, Luderitz and Keetmanshop.

In general, Namibia has good telephone, mobile and Internet coverage. Since 1996, Namibia has had access to the Internet, and digital connectivity now extends to all but the remotest areas. Mobile phone subscriptions amount to 70 phones per 100 persons, which in combination with fixed-lines amount to a total teledensity of 80%. A fiber-optic cable connects Namibia (international country code +264) to South Africa, and since 2012 it also connects to Botswana and other neighboring countries. The South African Far East (SAFE) is connected to Namibia via a submarine cable through South Africa; satellite earth stations and 4 Intelsat (2008).

Several Internet service providers currently offer broadband connectivity; in 2011, the fibre optic West African Cable System (WACS) landed on the west coast of Namibia, and with a national fiber optic backbone in place, there is immense potential for a nationwide surge in Internet usage, and consequently in eLearning activities. However, the relatively high cost of Internet connectivity in Namibia continues to constrain progress in this regard with hope for better rates in the near future.

Among the goals outlined in Namibia's Vision 2030 is the development of a knowledge-based society, which is built upon the information and communication technology (ICT) revolution underway throughout the world, the key target being the ICT sector becoming "the most important economic sector in Namibia" by 2030.

1.2 Health system situation analyses

1.2.1 Health system goal and priorities

Goal
Health and social well-being are fundamental human rights. Consequently, the ultimate goal of the Government of Namibia and the Ministry of Health and Social Services is the attainment of a level of health and social well-being by all Namibians, which will enable them to lead economically and socially productive lives.

This will be achieved through using a cost-effective developmental social welfare and Primary Health Care approach, which includes promotive, preventive, curative and rehabilitative services in collaboration with other sectors, communities, individuals and partners

Priorities set by the sector are thus guided by prevailing diseases incidences, and also the related public health importance they have to the people's health and the economy at large. Namibia's top ten health problems includes HIV/AIDS, stroke, coronary heart disease, influenza, pneumonia, diabetes mellitus, road traffic accidents, Hypertension, diarrheal diseases and tuberculosis

1.2.2 Analysis of the overall health system

Service delivery:
Namibia has a pluralistic health system with the public sector as the main actor. The private sector plays a substantial role divided up among for-profit and not-for-profit health services. The private sector is sizeable, in particular there are 844 private health facilities registered with MOHSS, among which are 13 hospitals, 75 clinics and 8 health centers, mainly in urban areas of Erongo and Khomas regions. Seventy-two percent of doctors in Namibia are in the private sector and a little less than 50% of the registered nurses. Faith-based organizations operate services on an outsourcing basis.

MoHSS is the main implementer and provider of public health services with a four tier system: outreach points (1150) clinics and health centre's (309), district hospitals (29) and intermediate and referral hospitals (4). Access to service is hampered by the vastness of the country with most of the country being thinly populated outside urban centers in the middle and the south of the country. Sixty percent of the population is concentrated in the north, where there is a concentration of health facilities. It is estimated that 21% of the population is living more than 10 km away from a health facility. The public health system is a unitary system managed by the MoHSS. The 13 regions have RMTs, who are responsible for the translation, implementation and management of the health system in the respective regions including the hospitals.

The Regional Director is a member of the Regional Development Committee assuring coordination between the Regional Council and the MoHSS. The Regional Council is responsible for environmental health in the regions although there is also MoHSS environmental health staff deployed in the regions. The health district has management responsibility coordinated by the DCC. In the health district, a range of PHC programme services are delivered at outreach, clinic, health centre level and to some extent at hospital level. General outpatient screening is a feature of the services with treatment of common ailments and referral of more complicated cases. Health in the community has been depending on volunteer health workers. The system has been reviewed (2006) and it was found that the system is not sustainable due to attrition of volunteer health workers.

Traditional medicine is widely used in the country and often the first port of call. However, there is no regulation of the practice. Further, more can be done to appreciate the contribution of traditional medicine.

Laboratory services are organized in the National Institute of Pathology (NIP), an autonomous entity with a mandate to provide laboratory services to the public health system and to sell services to the private sector.
Ambulance services is one of the health care services on the Ministry of Health and Social Services that provides emergency services to all those in need.

Health Workforce
The workforce situation in Namibia is above the WHO benchmark of 2.5 health workers per 1000 population. In Namibia there are 3.0 health workers per 1000 population. Specific health worker-population ratios include 1:2,952 for doctors, 1:704 for registered nurses, 1:10,039 for pharmacists, 1:13,519 for social workers, and 1:28,562 for health inspectors, among others. This situation though conceals the fact that there is a very unequal distribution with most health workers concentrated in urban areas and a high percentage found in the private sector in particular in private clinics. Overall 26.9 percent of posts in the public sector are vacant, 36% for doctors, 21% for registered nurses, and 42% for social workers. The country depends very much on the recruitment of expatriate doctors.

Information and research
Health information is for management and policy change and development. Information is generated through routine data collection, analysis and reporting. Information systems do also cover human resources, infrastructures and other health resources. Adequately managed systems are essential for any service delivery. The international recommendation is 5% of the health budget if information systems are to function and deliver knowledge and information as required.

The Bamako Call to Action on Research for Health and The Algiers Declaration (2008) both emphasize the urgency of investing more in health research and knowledge generation for advancing national health development. There is a call to aim at spending 2% of the health budget on research activities. It is well recognized that the regular NDHS provide essential health status information and the addition of the first Health and Social Services System Review 2008 is an essential tool for health system review. The regular National Health Account survey adds useful information to the information pool as does the Annual Report on Essential Indicators.

The existing information system suffers from degrees of fragmentation where resource-strong programmes “push” their own information system agenda. The central information system is grossly understaffed. The electronic health information system (HIS) is slow to produce required reports and consequently annual reports have not been issued on a regular basis. There is a problem with the completeness of data with problems of collecting data from the private sector.

Healthcare Technologies
All issues pertaining to medicines in Namibia are guided by the National Drug Policy (2010). The legislation controlling medicines and related substances is Act 13 of 2003 that was implemented in August 2008. Under this Act the Namibian Medicines Regulatory Council has been mandated to control medicines and related substances in Namibia. A system of registration of medicines and inspection of manufacturers and facilities where medicines are kept is in place but is hampered by shortage of staff. In the public sector there is a centrally managed system for procurement, storage and distribution of medicines and related supplies and all medicines to be supplied in the public health facilities must first be included in the

Namibia Essential Medicines List (Nemlist). The Nemlist is currently in its fourth edition, printed in December 2008. In addition to specifying which medicines are available in the public health sector the Nemlist also divides medicines into different classes which determine at which level of care they can be available, or for which conditions they may be used. Various efforts have been made to address the critical shortage of trained pharmacy staff in Namibia. The MoHSS has recruited pharmacists using development partner funds to address the critical shortage of staff. Furthermore the intake for Pharmacist's Assistants Training Course at the National Health Training Centre has been increased from 10 to 25 per year, more Namibians are being sent to study pharmacy in other African countries.

The introduction of the Electronic Dispensing Tool into all main ART sites has also improved the efficiency of pharmacy staff by reducing the time they have to spend on manual record keeping. Improving rational use of medicines has been targeted since the mid 1990s. Relevant health workers have been trained on rational use of medicines, therapeutics committees have been strengthened, three national medicine use surveys have been conducted and a comprehensive Standard Treatment Guideline (STG) for Namibia is due to be launched soon. However, irrational use of medicines remains an area of major concern.
The main challenge at central level is that contracted suppliers do not supply on time. At operational level the main constraint experienced is shortage of qualified staff to provide pharmacy services. There are currently no posts in the MoHSS staff establishment for Pharmacists in a District Hospital. Other major constraints at operational level are shortage of appropriate space for providing pharmacy services, inappropriate use of medicines, and poor stock management.

Health financing:
Namibia is upper middle-income country with a very unequal distribution of wealth. Health inequalities are embedded in such wealth inequalities. The per capita spending on health is (1264 N$, 2005) comparing favorably with countries in the region. Health care financing in Namibia is mainly tax-based. Health care spending as a percentage as of total government spending is 13.5% - the highest in the region, but still short of the Abuja target of 15%. User charges (registration fee) in the public sector are in place as an instrument to discourage people to go directly to hospitals. International partners, although few, provide a substantial contribution targeting special programmes. Their contribution was 23% in 2007. Donor funds are included in forward public sector budgeting, but do not appear in the annual budget announcement by the MoF.

The private sector contribution is 25%. Faith based organizations receive grants from MOHSS for provision of health services according to agreed contractual arrangements.
There is an insurance scheme providing health insurance for public sector employees. Private insurance companies provide health insurance policies for private sector employees. Out-of-pocket payment is at this moment not a sizable percentage according to the latest National Health Account. Planning and budgeting are done in separate entities in the MoHSS and need to be brought together. The MTEF for the health sector requires definition of programmes.

The MoF has introduced an integrated financial management system (IFMS), which has the potential to de-concentrate access to this system but, unexpectedly, it has made it more cumbersome for the regions to access funds as the system is not yet established in the regions. FDC holders (regions and directorates at central MoHSS) control their budget allocations and are the key actors involved in planning and budgeting. The revenue collected in the MoHSS comes mainly from the sale of services (76%) in government hospitals to private patients and providers. All revenue goes into the public coffer in
the MoF including user fees. In the hospitals there is no proper billing system in place. Public finances for health are increasingly coming under stress in particular from expenses to special programmes.

Governance :
The MoHSS is the sole custodian of the health of the people in the country but not the sole custodian of responses and interventions. For social welfare the responsibility is shared with other ministries: Ministry of Gender Equality and Child Welfare, Ministry of Labour and Social Welfare, and Ministry for Veterans Affairs. Other ministries share responsibility for specific and general interventions for promotion and prevention. The MoHSS ensures universal coverage and access to health care through adequate policies such as emphasis on PHC.

The stewardship function delivers through formulation of policies, national as well as programme policies, planning and budgeting, and establishment of relevant technical programmes providing guidance and support. Facility planning is a central function with some overlapping responsibilities. A strategic plan has been developed for the period 2009 to 2013 with emphasis on service provision, human resource management, infrastructure development and management, financial management and governance as a reflection of the areas under scrutiny in the Health and Social Services System Review. The strategic plan will be an important instrument in providing two cycles of strategic planning in a policy cycle of 10 years.

The MoHSS has been mandated by Cabinet to manage and Coordinate the National response to HIV and AIDS, through the establishment of the National AIDS Coordination Program (NACOP) and the five yearly National Strategic Plans/Frameworks. The MoHSS assures overall sector management including the private sector. It regulates a number of areas with various legal instruments. Such legal instruments need to be updated in particular the Public Health Act (1919). Also the Mental Health Bill needs to be enacted to provide the necessary protection of people with mental health problems, while various other policy and legal instruments need to be completed, updated, developed and/or enacted. The MoHSS enters into contractual arrangements through outsourcing arrangement with Faith-based organizations and other contractual partners. There is a problem with inadequate management of the contracts with service providers.

The independent Health Professionals Council of Namibia is responsible for assuring that all health professionals operating in the country have a recognized formal training. The MoHSS is responsible for defining scope of practice and for providing the requisite institutional and legal protection of its workforce.

Table2. Distribution of population, Village/communities and health facilities in district and regions

Region/Province	Districts	Total Population	No. of villages/communities	Number of health facilities		
Caprivi	Katima Mulilo	100,528		Referral Hospitals	District Hospital	Health Centers
Erongo	Omaruru	19,415		0	1	4
Erongo	Swakopmund	42,590		0	2	1
Erongo	Usakos	16,499		0	2	1
Erongo	Walvis Bay	54,897		0	2	2
Hardap	Aranos	11,337		0	1	1
Hardap	Mariental	39,203		0	1	1
Hardap	Rehoboth	33,576		0	1	2
Karas	Karasburg	19,071		0	1	1
Karas	Keetmanshoop	38,465		0	1	2
Karas	Luderitz	27,324		0	2	0
Kavango	Andara	37,047		0	1	0
Kavango	Nankudu	62,471		0	1	4
Kavango	Nyangana	34,041		0	1	0
Kavango	Rundu	147,680		0	1	3
Khomas	Windhoek	316,508		2	5	2
Kunene	Khorixas	17,400		0	1	0
Kunene	Opuwo	54,768		0	1	2
Kunene	Outjo	19,264		0	1	1
Ohangwena	Eenhana	84,382		0	1	0
Ohangwena	Engela	196,126		0	1	2
Ohangwena	Okongo	28,052		0	1	0
Omaheke	Gobabis	95,010		0	1	2
Omusati	Okahao	35,511		0	1	1
Omusati	Oshikuku	124,673		0	1	2

Omusati	Outapi	83,320		0	1	3
Omusati	Tsandi	45,610		0	1	1
Oshana	Oshakati	211,031		0	2	6
Oshikoto	Onandjokwe	186,393		0	1	3
Oshikoto	Tsumeb	30,465		0	2	0
Otjozondjupa	Grootfontein	51,256		0	2	1
Otjozondjupa	Okahandja	35,527		0	1	0
Otjozondjupa	Okakarara	29,411		0	1	0
Otjozondjupa	Otjiwarongo	73,799		0	2	2

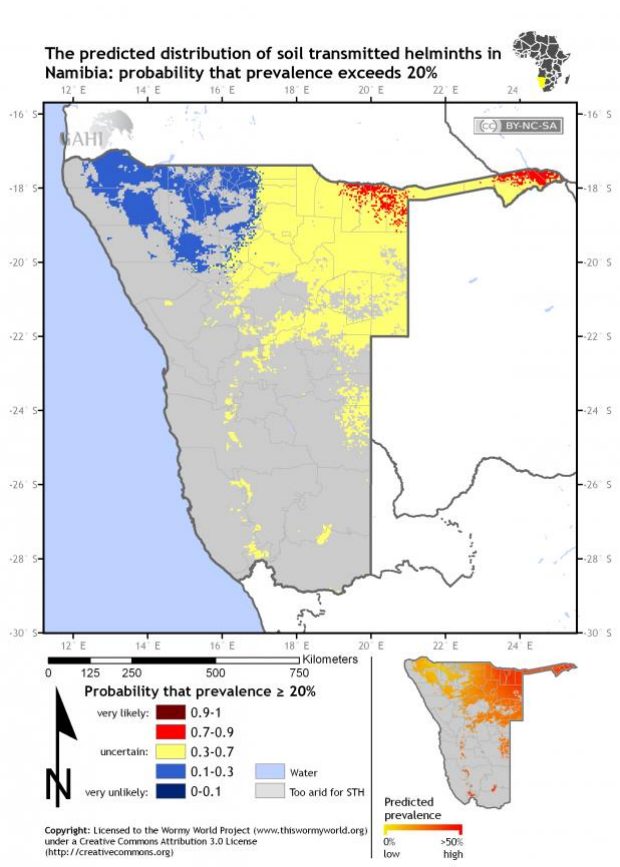
1.3 NDT Situation analysis

1.3.1 Epidemiology and Burden of disease

This section provides the current known status of NTDs endemicity and current control interventions for the common neglected tropical diseases in Namibia. Activity plans have been put in place to finalize areas that still need baseline information for the diseases that are reported here.

Schistosomiasis and Soil Transmitted Helminthes,

Schistosomiasis and soil-transmitted helminthes (STH) are believed to be endemic in Namibia. The WHO estimates that all Namibia children are at risk for STH (i.e. 750,000) and that 275,000 children are at risk for schistosomiasis. However, recent data, graphically depicted in the map below from the Global Atlas of Helminthes Infections (GAHI), depict that endemicity may be more localized. Data from the Namibian Government states that approximately 200,000 (about 11-14%) of all Namibians were infected with schistosomiasis in 1999.1 The majority of infections (Schistosoma spp. and STH) are believed to occur mainly in Oshana, Omusati, Kavango and Caprivi, mainly due to population density and climatic conditions. Schistosomiasis did not exist in Omusati and Oshana before the Olushandja Dam and the canals were built in the 1970s.



These estimates are based on few epidemiological surveys and not based on accurate and systematically gathered data. Therefore, there is still a need for Mapping; i.e. to gather baseline epidemiological.

Although Namibia is a dry country, seasonal flooding in the north of the country has become an annual event.

This not only leads to closure of schools for extended periods, but affects hygiene conditions at schools and hostels. Therefore in order to estimate more accurate prevalence of Schistosomiasis and Soil Transmitted helminthes and provide the appropriate preventive chemotherapy according with WHO algorithm, the ministry with financial and technical support from the ENDFUND embarked on a phased approach mapping.
The aim was to identify communities at risk of the disease and ensure that available resources are targeted to treat all affected communities while excluding non-endemic communities where treatment is not required.

Methodology

Design of mapping
Due to the country's large size, sparsely located population and since this is a new type of activity by the Government, mapping of Namibia should be conducted in four phases. These phases have been established according to epidemiological and demographic data in order to maximize cost-effectiveness (see Figure 1 below):

Phase 1 – Caprivi and Kavango regions
Phase 2 – Omusati, Oshana, Oshikoto and Ohangwena regions
Phase 3 – Kunene, Otjozondjupa and Khomas regions
Phase 4 – Erongo, Omaheke, Hardap and Karas regions

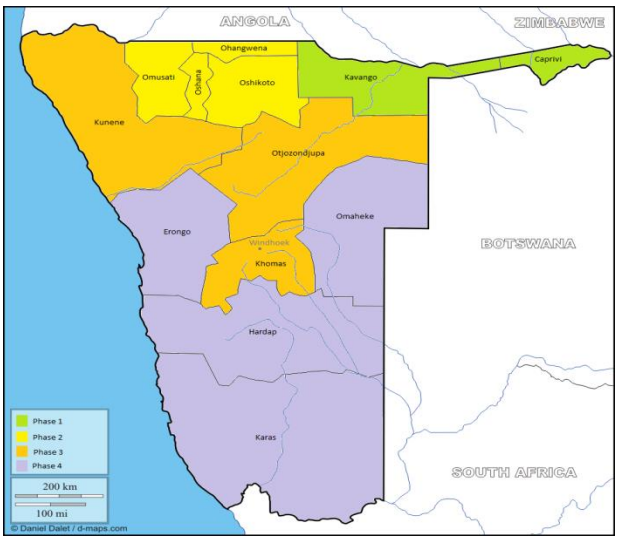


Figure 1 – Map of Namibia's governmental regions, mapping phases and hydrographic details

Sample size justification

Schistosomiasis and STH infections have different distribution characteristics; while schistosomiasis transmission depends on the presence of two hosts and water (meaning transmission is more focal), transmission of STH infections is far less restricted, meaning it is more homogeneously distributed along a map. Therefore, mapping approaches and "resolutions" must differ to accurately identify the distribution of both diseases.

STH mapping

Namibia has eight ecological zones, namely: Central plateau, Damaraland landscapes, Ekuma plains and Etosha pan, Escarpment, Kalahari sands plateau, Kalkveld, Kaokoland landscapes, Namib sand seas and desert plains. Of these, only one falls exists in the Caprivi and Kavango regions (the Kalahari sands plateau).

According to WHO recommendations, surveying 5 to 10 schools per ecological zone is sufficient, resulting in a sample size varying between 40 and 80 schools country-wide mapped for STH infections. Our sample will be 75 schools (30 children aged 10-14 years per school), which is a conservative approach.

Schistosomiasis mapping

Under the assumption that the population of school-attending school-aged children was 408,804 in 2011, we estimate that the target population in 2012 will be 1.8% larger (i.e. 416,162 children attending schools). The expected frequency of schistosomiasis in Namibia according to WHO is 11%. This is likely a conservative number as prevalence in school-aged children (whom are at higher risk of infection) and in certain regions (northern regions) will be higher. We estimated that a total sample size of 10,600 school-aged children (both sexes) nation-wide is required for a precision of ±5% with a confidence level of 99.9%, and design effect of 2.5. Sample size calculation was corrected for a cluster design assuming the existence of 1497 clusters. Computations conducted using Epi Info v. 7.1.0.6 (CDC, Atlanta, USA).

Sampling method

According to data from the MoE, there are a total of 1497 schools for primary level, with 408804 students enrolled nation-wide (2011 census data). Due to the low population density of Namibia and non-normal distribution along its regions, we have opted for a sampling method that is representative of population density. I.e. the number of schools per region and constituency will not be equal for all but a proportion of the total available. Other mapping initiatives in Africa have used a different approach, whereby a given number of schools is selected per district independent of population density. This would not be applicable to Namibia as many constituencies would not have enough schools (or population).

Therefore, and to ease field-applicability of the sample size calculated (10,600 children), we have opted to sample 30 children (10-14 years of age) per school in 374 schools (of the 1497 available), giving us an actual sample size target of 11,220 children.

Mapping of schistosomiasis will largely be conducted through a rapid mapping approach. This means that rapid diagnostic tests will replace common microscopy methodologies, therefore speeding up the process for a much lower cost. Mapping of STH will still rely on microscopy since no rapid diagnostic tests are available. In

schools where a microscopy team is deployed, schistosomiasis diagnosis will be confirmed by normal microscopy methodologies, therefore allowing to estimate diagnostic performance of rapid diagnostic tests. So, in more detail:

Rapid (R) mapping
Our "mapping resolution" will be 1 in every 4 schools available in the regions. Schistosomiasis diagnosis will be conducted by rapid diagnostic tests only. No diagnosis of STH infections. Meaning 374 schools will be mapped using rapid diagnostic tests for intestinal (circulating cathodic antigen, or CCA test) and urogenital schistosomiasis (microhaematuria as measure by the Hemastix test)
Microscopy + Rapid (M+R) mapping
Our "mapping resolution" will be 1 in every 20 schools. Of the 374 schools indicated above, 75 will be mapped using a microscopy team by standard microscopy to detect STH infections and schistosomiasis along with the rapid diagnostic tests for schistosomiasis (as above).

Early and Late-primary students

As demanded by the funding body, this initial map should serve as a good baseline map against which future monitoring and surveillance activities can be judged. For this reason, and given new findings that preschool-aged children are at risk of schistosomiasis and STH infections, we decided to investigate the prevalence of these diseases upon school entry (first grade) as a proxy for disease dynamics in preschool-aged children.

Table 3A. Prevalence of schistosomiasis by constituency (Addd year)

Region	Constituency	Prevalence (%)	Study method	Year of survey and reference
Caprivi	Kabe	26	Urine filtration, CCA, Haematuria	Mapping Report
Caprivi	Katima Mulilo Rural	7	Urine filtration, CCA, Haematuria	Mapping Report
Caprivi	Katima Mulilo Urban	14	Urine filtration, CCA, Haematuria	Mapping Report
Caprivi	Kongola	48	Urine filtration, CCA, Haematuria	Mapping Report
Caprivi	Linyanti	18	Urine filtration, CCA, Haematuria	Mapping Report
Caprivi	Sibinda	9	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Kahenge	22	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Kapako	23	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Mashare	16	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Mpungu	22	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Mukwe	13	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Ndiyona	13	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Rundu Rural East	13	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Rundu Rural West	7	Urine filtration, CCA, Haematuria	Mapping Report
Kavango	Rundu Urban	28	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Eenhana	5.3	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Endola	6.3	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Engela	4	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Epembe	2.5	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Ohangwena	3.3	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Okongo	2.6	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Omundaungilo	1.7	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Omulonga	6.9	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Ondombe	4.5	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Ongenga	5.6	Urine filtration, CCA, Haematuria	Mapping Report
Ohangwena	Oshikango	1.7	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Anamulenge	4.6	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Elim	6.7	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Etayi	2.9	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Ogongo	7.1	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Okahao	3.9	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Okalongo	4.2	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Onesi	5.8	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Oshikuku	3.9	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Otamanzi	5.8	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Outapi	4.4	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Ruacana	7.7	Urine filtration, CCA, Haematuria	Mapping Report
Omusati	Tsandi	5.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Okaku	4.4	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Okatana	4.6	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Okatjali	5	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Ompundja	5.6	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Ondangwa	9.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Ongwediva	11.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Oshakati East	8.9	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Oshakati West	2.5	Urine filtration, CCA, Haematuria	Mapping Report
Oshana	Uukwiyu	1.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Eengodi	1.3	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Guinas	11.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Okankolo	2.9	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Olukonda	2.8	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Omuntele	1.4	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Omuthiyagwiipundi	4.4	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Onayena	3.7	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Oniipa	3	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Onyaanya	4	Urine filtration, CCA, Haematuria	Mapping Report
Oshikoto	Tsumeb	4.4	Urine filtration, CCA, Haematuria	Mapping Report

Table 3B. Prevalence of Soil Transmitted Helminthes (STH) by constituency

Region	Constituency	Prevalence (%)	Study method	Year of survey and reference
Caprivi	Kabe	3	Microscopy	Mapping Report
Caprivi	Katima Mulilo Rural	0	Microscopy	Mapping Report
Caprivi	Kongola	10	Microscopy	Mapping Report
Caprivi	Linyanti	3	Microscopy	Mapping Report
Caprivi	Sibinda	2	Microscopy	Mapping Report
Kavango	Kahenge	42	Microscopy	Mapping Report
Kavango	Kapako	12	Microscopy	Mapping Report
Kavango	Mashare	16	Microscopy	Mapping Report
Kavango	Mpungu	64	Microscopy	Mapping Report
Kavango	Mukwe	17	Microscopy	Mapping Report
Kavango	Ndiyona	25	Microscopy	Mapping Report
Kavango	Rundu Rural East	13	Microscopy	Mapping Report
Ohangwena	Eenhana	40	Microscopy	Mapping Report
Ohangwena	Engela	3.3	Microscopy	Mapping Report
Ohangwena	Epembe	10	Microscopy	Mapping Report
Ohangwena	Ohangwena	11.7	Microscopy	Mapping Report
Ohangwena	Okongo	11.1	Microscopy	Mapping Report
Ohangwena	Omundaungilo	55	Microscopy	Mapping Report
Ohangwena	Omulonga	20	Microscopy	Mapping Report
Ohangwena	Ondombe	1.7	Microscopy	Mapping Report
Ohangwena	Ongenga	0	Microscopy	Mapping Report
Ohangwena	Oshikango	25	Microscopy	Mapping Report
Omusati	Anamulenge	0	Microscopy	Mapping Report
Omusati	Elim	1.7	Microscopy	Mapping Report
Omusati	Etayi	3.3	Microscopy	Mapping Report
Omusati	Ogongo	0	Microscopy	Mapping Report
Omusati	Okahao	6.7	Microscopy	Mapping Report
Omusati	Okalongo	0	Microscopy	Mapping Report
Omusati	Onesi	5	Microscopy	Mapping Report
Omusati	Oshikuku	5	Microscopy	Mapping Report
Omusati	Otamanzi	5	Microscopy	Mapping Report
Omusati	Outapi	1.7	Microscopy	Mapping Report
Omusati	Ruacana	0	Microscopy	Mapping Report
Omusati	Tsandi	0	Microscopy	Mapping Report
Oshana	Okaku	0	Microscopy	Mapping Report
Oshana	Okatana	0	Microscopy	Mapping Report
Oshana	Ondangwa	10.2	Microscopy	Mapping Report
Oshana	Ongwediva	8.3	Microscopy	Mapping Report
Oshana	Oshakati East	0	Microscopy	Mapping Report
Oshana	Uukwiyu	10	Microscopy	Mapping Report
Oshikoto	Eengodi	10	Microscopy	Mapping Report
Oshikoto	Okankolo	6.7	Microscopy	Mapping Report
Oshikoto	Olukonda	0	Microscopy	Mapping Report
Oshikoto	Omuntele	8.3	Microscopy	Mapping Report
Oshikoto	Omuthiyagwiipundi	3.3	Microscopy	Mapping Report
Oshikoto	Oniipa	0	Microscopy	Mapping Report
Oshikoto	Onyaanya	16.7	Microscopy	Mapping Report
Oshikoto	Tsumeb	3.3	Microscopy	Mapping Report

Table 4

District	Preventive Chemotherapy Diseases			Case management diseases
	SCHISTO	STH	TRACOMA	Leprosy
Katima Mulilo	+	+	M	_
Omaruru	M	M	M	_
Swakopmund	M	M	M	_
Usakos	M	M	M	_
Walvis Bay	M	M	M	_
Aranos	M	M	M	_
Mariental	M	M	M	_
Rehoboth	M	M	M	_
Karasburg	M	M	M	_
Keetmanshoop	M	M	M	_
Luderitz	M	M	M	_
Andara	+	+	M	_
Nankudu	+	+	M	_
Nyangana	+	+	M	_
Rundu	+	+	M	+
Windhoek	M	M	M	_
Khorixas	M	M	M	_
Opuwo	M	M	M	_
Outjo	M	M	M	_
Eenhana	+	+	M	_
Engela	+	+	M	_
Okongo	+	+	M	_
Gobabis	M	M	M	_
Okahao	+	+	M	_
Oshikuku	+	+	M	_
Outapi	+	+	M	_
Tsandi	+	+	M	_
Oshakati	+	+	M	_
Onandjokwe	+	+	M	_
Tsumeb	+	+	M	_
Grootfontein	M	M	M	_
Okahandja	M	M	M	_
Okakarara	M	M	M	_
Otjiwarongo	M	M	M	_

Table 5.

Endemic NTD	No. of districts suspected to be endemic	No. of districts mapped or known endemicity status	No. of districts remaining to be mapped or assessed for endemicity status
Schistosomiasis	34	19	15
Soil Transmitted Helminthes	34	19	15
HAT	0	0	0

TRACHOMA

Trachoma is believed to be endemic in some of the regions in Namibia, with the highest levels of endemicity in the north west and north east of the country. No mapping done…….

1.3.2 NDT Programme implementation

The major diseases requiring preventive chemotherapy in Namibia include: Schistosomiasis, Soil Transmitted Helminthes and Trachoma. Schistosomiasis is highly focalized while STH is distributed homogeneously. The prevalence and distribution of trachoma need to be mapped for proper planning and resource allocation

Interventions for Preventive Chemotherapy

NDT programmes in Namibia are co-implemented with other public health programmes such as Mother and Child Health days and National Immunization Days (NID), recently replaced by African Vaccination Week. Although these programmes mainly target children under the age of five and women of child bearing age, school going children (7-15 yrs) benefited intermittently with the last campaign completed in …….(2012). These programmes targeted STHs and nothing added for schistosomiasis and trachoma. Mass preventive chemotherapy for schistosomiasis was last done in 1990.. in selected districts of Omusati, Zambezi, Kavango East and West regions.

Table 6…Summaries of interventions, information on existing PCT programmes

NDT	Date programme started	Total District targeted	No of district covered	Total Population in targeted district	No (%) covered	Key strategies used	Key partners
Schistosomiasis	2012	15	5			MDA, Health Education	END FUND
STH	2012	15	5			MDA, Health Education	END FUND
Tracoma	No programme	0	0	0	0	0	0

Interventions for Case management

The Namibia Standard Treatment Guidelines indicate Albendazole as the current drug of choice for STH and Praziquantel for the treatment of schistosomiasis. These drugs are registered in Namibia. These drugs are registered in Namibia and are available at all level of health care were incidences are well taken care of. Mass Preventive Chemotherapy was initiated in 2014 following phased mapping of regions for schistosomiasis and STHs.

Table 7…Summaries of interventions, information on existing CM programme

NDT	Date programme started	Total District targeted	No of district covered	No (%) covered	Key strategies used	Key partners
Schistosomiasis						
STH						
Tracoma						

1.3.3 Gaps and priorities

1.3.4

The table below gives a detailed SWOT analysis of the national NTD programme.

Strengths	Weaknesses	Strengths counteracting weaknesses	Opportunities	Threats	Opportunities counteracting threats
1.Existence of an NTD steering committee **2.Existence of political will towards prevention and management of NTDs** **3.Availability of funds from GRN and funding partners (ENDFUND)** **4. Availability of free PC drugs**	1.Inadequate staffing at all levels 2.Lack of policies and guidelines on NTDs. 3.NDTs integrated in different other Public Health programmes. 4.No budget line specific for NDTs 5.Poor / inadequate stakeholder / partners coordination 6.Lack of IEC materials 7.No historical data on trachoma 8.STH data collection not included in the HIS	1.Major GRN Restructuring in progress 2.Generic guidelines and UN agencies Technical support. 3.HIS review in progress to include data indicators for NDTs	1. Development partner support (UN agencies, ENDFUND) 2. International meetings and conferences for sharing practical solutions and experiences. 3. Advocacy with Parliamentary Committee on Health (NAFINA) 4. Academic institutions (UNAM, Polytechnic) and local laboratories (NIP) 5. Implementation of WASH project by stakeholders.	1. Sustainability of Funding 2. Lack of NDTs focal persons at region and district level 3. Poor surveillance of NDTs 4. Stakeholders commitment 5.	International support toward elimination of NDTs GRN contribution and commitment toward control and elimination of NDTs

PART 2: NTD STRATEGIC AGENDA

The Master Plan for Neglected Tropical Diseases in Namibia 2015 – 2020 is aligned to the Regional Strategy on NDTs in the African region 2014 – 2020 and aims to call into action the World Health Assembly resolution to eliminate NDTs.

2.1 Overall NTD Program Mission and Goals

Goal

Accelerate the reduction of the targeted NDTs disease burden through prevention, control and elimination by 2020

Vision

Namibia free of Neglected tropical diseases

Mission:

To initiate and sustain integrated NTD elimination and / or control measure in all endemic districts in Namibia.

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2.2 Guiding Principles and Strategic Priorities

The Namibia NTD Master Plan was developed through a joint collaboration between the Government of Namibia (National, Regional and District level), the Development partners and other stakeholders who critically worked using the relevant national documents resulting in a successful completion of the Master Plan for the National NTD Programme.

The control of NTDs will be managed in accordance with the four strategic priorities as outlined in the table below:

Table 8: Strategic framework Summary

STRATEGIC PRIORITIES	STRATEGIC OBJECTIVES
Strengthen Government Ownership, Advocacy, Coordination and Partnership	• Strengthen coordination mechanisms for the NTD control at national, regional and district levels • Strengthen partnerships for NTDs at all levels. • Enhance NTD programme performance reviews and use for decision making • Strengthen advocacy, visibility and profile of NTD control programmes
Enhance planning for results, Resource mobilization and Financial sustainability .	• Support regions and districts to develop integrated annual plans for NTD control • Enhance resource mobilization approaches and strategies at regional, national and district levels • Strengthen the integration and linkages of NTD programme and financial plans into sector-wide and national budgetary and financing mechanisms • Develop and update national NTD policies and elaborate guidelines and tools
Scale up access to interventions, treatment and system capacity building	• Scale up integrated preventive chemotherapy packages • Scale up integrated case-management-based diseases interventions, especially for schistosomiasis, STH and Tracoma. • Strengthening integrated vector management for targeted NTDs • Strengthen capacity for NTD programme management and implementation & accelerate disease burden assessments and integrated mapping of NTDs
Enhance NTD monitoring and evaluation, surveillance and operational research	• Enhance monitoring of national NTD programme performance and outcome • Strengthen surveillance of NTDs. • Support operational research, documentation and evidence • Establish integrated data management system and support impact analysis for NTD.

PART THREE: OPERATIONAL FRAME WORK

This section will describe the implementation of the planed activities. Various diseases has specific focus goals, objectives and strategies. We foresee integration as the most cost effective approach to minimize the limited resources available in our country. **Error! Reference source not found.** below provides a summary of disease specific goals, objectives, Strategies, national targets, and indicators for the targeted NTDs. Contents of this table have been used to guide activity implementation in the subsequent sections.

NDTs in Namibia include Schistosomiasis, STH and Trachoma. Schistosomiasis is highly focalised and affects the northern regions were men made canals and perennial rivers are present. STHs are homogeneously distributed in northern and central parts of Namibia. The burden of Trachoma is not well documented, but cases have been reported in Kavango and Zambezi regions.

3.1 National NDT Programme goals, objectives, strategies and targets

Table 9 Program Summary components of Strategies for control endemic NTDs

PROGRAMME AND GLOBAL GOAL	NATIONAL GOALS	OBJECTIVES	INTERVENTIONS	DELIVERY CHANNELS	TARGET POPULATION (at Risk)
Schistosomiasis Eliminate Schistosomiasis by 2025	To eliminate schistosomiasis as public health problem by 2025	1. To treat all school age children and high risk population regularly in all endemic areas 2. Increase awareness on schistosomiasis prevention and control 2. Complete mapping of schistosomiasis and establish sentinel sites for morbidity monitoring	1. School and community (High risk population) based Mass Preventive Chemotherapy 2. Health Education 3. Conduct mapping in the remaining 7 regions 4. Improve access to save drinking water and sanitation 5. Monitoring and Evaluation 6.Implement WASH	Community and School based	**1.5 mil**
STH To reach at least 75% of school-age children at risk of soil-transmitted helminthiasis with anthelminthic treatment by 2020	To eliminate soil transmitted Helminthes as public health problem by 2020	1. To treat all school age children and high risk population regularly in all endemic areas 2. Increase awareness on STH prevention and control 2. Complete mapping of STH and establish sentinel sites for morbidity monitoring	1. School and community (High risk population) based Mass Preventive Chemotherapy 2. Health Education 3. Conduct mapping in the remaining 7 regions 4. Improve access to save drinking water and sanitation 5. Monitoring and Evaluation 6. Implement WASH?	Community and School based	**1.5 mil**

PROGRAMME AND GLOBAL GOAL	NATIONAL GOALS	OBJECTIVES	INTERVENTIONS	DELIVERY CHANNELS	TARGET POPULATION (at Risk)
Trachoma Elimination of blinding trachoma by 2020 as a public health problem	To eliminate trachoma as blinding disease by 2025	1. map trachoma 2. Increase awareness 3. 3. Conduct T T Surgery?	1. Conduct mapping / Survey 2. Health Education 3. Conduct T T Surgery? 4. MDA (Zinthromax)	Community based, facility based	?

Table 9.2: PROGRAMME OBJECTIVES AND KEY INDICATORS OF PERFOMANCE

NTD Programme	Objective	Key Indictor	Baseline	Target	Milestones				
					2015	2016	2017	2018	2019
Schistosomiasis **To eliminate schistosomiasis as public health problem by 2025**	1. To treat all school age children and high risk population regularly in all endemic areas	Geographical coverage in SCH endemic district (Proportion of targeted districts Treated)		100%	80%	100%	100%	100%	100%
STH **To eliminate soil transmitted Helminthes as public health problem by 2020**	1. To treat all school age children and high risk population regularly in all endemic areas	Geographical coverage in SCH endemic district (Proportion of targeted districts Treated)		100%	80%	100%	100%	100%	100%
TRACHOMA **To eliminate trachoma as blinding disease by 2025**	1.Conduct Surveillance of trachoma	Prevalence	?	?	?	?	?	?	?

3.2 Strengthen government ownership, advocacy, coordination and partnership

Table 1: Strategic Priority 1: Strengthen government ownership, advocacy, coordination and partnership

Activity	Details (Sub-activities)	Timeframe	Resources needed
Strategic Objective 1: Strengthen coordination mechanism for the NTD control programme at national, regional and District level.			
Set up and strengthen the Coordination systems for the MOHSS, NTD Units at National. Regional and District levels	Establish a NDT TWG (Include stake holders) Establish focal points at National, Region and District levels Propose that NAFIN serves as steering committee??? Prepare TORs for the steering committee	2015	Office space, personnel
	Conduct meeting s to guide establishment of coordination mechanisms at regional and District levels	2015	Venue, personnel, transport, stationery, refreshments
Establish and conduct NTD secretariat meetings	Conduct NTD Monthly Secretariat meetings at National level	Monthly 2015- 2019	Refreshments
	Conduct Advocacy sessions for involvement of more partners in NTD control at different levels	Bi annually, 2015-2019	Venue, media, personnel, transport, stationery, refreshments
Strategic Objective 2: Strengthen and foster partnerships for the control, elimination and eradication of targeted NTDs at national, district and community levels.			
Strengthen Country Partnership in NTD control	Conduct annual partners and stakeholders meetings	Annually : 2015-2019	Conference package, allowances, personnel, transport, stationery, refreshments
	Disseminate reports and relevant documents to all partners and stakeholders	Biannually 2015-2019	Tickets, Venue, Allowances, Refreshments
	Conduct NTD Steering committee annual meetings	Biannually	Venue, personnel, transport, stationary, refreshment, allowance
Strategic Objective 3: Enhance high level reviews of NTD programme performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation.			
	Conduct NTD steering committee bi annual meetings	Biannually	Venue, personnel, transport, stationery, refreshments, allowance
	Conduct program Review Meetings at all levels	Annually 2015-2019	Venue, personnel, transport, stationery, refreshments, allowance
Take part in high level policy/decision making meetings at	Senior MOHSS management meeting	Adhoc 2015 - 2019	

Activity	Details (Sub-activities)	Timeframe	Resources needed
national and international fora	Participate in international fora, e.g. GAELF meetings, ITI, Global health meetings, NTD TEC, etc.	Annualy 2015 - 2019	Travel expenses, conference reg. fees,
Strategic Objective 4: Strengthen IEC and BCC, visibility and profile of NTD control elimination and eradication interventions at all levels.			
Strengthen IEC and BCC fora for the NTD programme	Develop and implement appropriate integrated NTDs communication strategy	2016	Venue, personnel, transport, stationery, refreshments, allowance, Consultancy
	Conduct KAP studies on integrated NTD at various levels	2017	Personnel, transport, stationery, refreshments/conference package, allowance, FGD-tape recorders, Video Cameras
	Production and distribution of IEC material	2016	In-house, allowances,
	Conduct sensitization and social mobilization meetings for MDA	2015-2019	Consultancy-for high level, Venue, personnel, transport, stationery, refreshments, allowance,
Conduct IEC & BCC Activities for the NTD Programme			
	Conduct mass media campaign to raise awareness and sensitization (radio programs, documentary, TV, print media and social marketing)	2015-2019	Air time, IECs, stationery, Video tapes, consultancies, Printing
	Commemoration National NTD day-	Annually, 2015-2019	IECs, Fuel, personnel, Entertainment, Chairs, tents consultancy, Refreshments,
	Conduct School NTD competition	Every NTD Day	Prize money, certificates,
	Preparation of radio/TV programmes on NTDs for public health education	2011-2019	Refreshments, Funds, personnel, air time, venue,
Community Sensitization and Mobilization on NTD control and elimination	Launching of NTD National Strategic Plan 2015 - 20120	2016	IECs, Fuel, personnel, Entertainment, Refreshments,
	Development, Production and dissemination of integrated NTD IEC materials	2015-2019	Conference package, Printing, funds, transport, allowances
	Organize and participate in various Exhibitions	2015-2019	Exhibition posts, Personnel, Transport, Fuel, printing