NIGERIA MASTER PLAN FOR NEGLECTED TROPICAL DISEASES (NTDs)

2013-2017

22 March 2012

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Acronyms

ACSM	Advocacy Communication Social Mobilization
APOC	African Programme for Onchocerciasis Control
AU-PATTEC	African Union- Pan African Tsetse and Trypanosomiasis Eradication campaign
BU	Buruli Ulcer
CATT	Card Agglutination Test for Trypanosomiasis
CBM	Christofel Blinden Mission
CDDs	Community Directed Distributors
CDI	Community Direct Intervention
CDTI	Community Directed Treatment with Ivermectin
CIFF	Children Investment Funds Foundation
CPSS	Community Participatory Surveillance Strategy
CWW	Children Without Worms
DFB	Damien Foundation of Belgium
DRF	Debt Relief Fund
EPI	Expanded Programme of Immunization
FCT	Federal Capital Territory
FGN	Federal Government of Nigeria
FIND	Foundation Innovative New Diagnostic Tests
FMoH	Federal Ministry of Health
GBUI	Global Buruli Ulcer Initiative
GLRA	German Leprosy Relief Association
GWD	Guinea Worm Disease
HAT	Human African Trypanosomiasis
HIV/AIDS	Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome
HKI	Hellen Keller International

HMM	Home Management of Malaria
HSAM	Health Education, Sensitization, Advocacy & Mobilization
IAEA	International Atomic Energy Agency
IEC	Information, Education & Communication
ILEP	International Federation of Anti-Leprosy Association
ITN	Insecticide Treated Nets
J & J	Johnson and Johnson Pharmaceuticals
LF	Lymphatic Filariasis
LGA	Local Government Authority
LLTN	Long Lasting Treated Nets
MDA	Mass Drug Administration
MDG	Millennium Development Goal
MDT	Multi-Drug Therapy
MITOSATH	Mission to Save the Helpless
NAFDAC	National Food and Drug Administration Law and Control
NECT	Nifurtimox-Eflornithine Combination Therapy
NGDOs	National Non Governmental Developmental Organizations
NGOs	Non Governmental Organizations
NIGEP	Nigerian Guinea Worm Eradication Programme
NITR	Nigeria Institute of Trypanosomiasis Research
NLCP	National Leprosy Control Program me
NLFEP	National Lymphatic Filariasis Elimination
NLR	Netherlands Leprosy Relief
NOCP	National Onchocerciasis Control Programme
NPC	Nigeria Population Census
NPHCDA	National Primary Health Care Development Agency
NSHDP	National Strategic Health Development Plan

NTBLCP	National Tuberculosis & Leprosy Control Programme
NTCP	National Trachoma Control Programme
NTD	Neglected Tropical Diseases
PCD	Partnership for Child Development
PHC	Primary Health Care
POD	Prevention of Disability
SDPs	Service Delivery Points
SMOH	State Ministry of Health
SSI	Sight Savers International
STBLCP	State Tuberculosis & Leprosy Control Programme
STHs	Soil Transmitted Helminthes
TCC	The Carter Center
THE	Total Health Expenditure
UNICEF	United Nations Children's Fund
VPF	Vitual Poverty Fund
WHO	World Health Organization
YGC	Yakubu Gowon Center

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Foreword

Neglected Tropical Diseases (NTDs) are communicable diseases linked with poverty and prevalent in areas with poor sanitation, inadequate safe water supply and substandard housing conditions.

The NTDs are estimated to affect over one billion people in the world, majority of who are in the developing countries. These diseases include Lymphatic Filariasis, Onchocerciasis, Schistosomiasis, Soil Transmitted Helminths (STH), Human African Trypanosomaisis, Guinea Worm Disease, Trachoma, Leishmaniasis, Leprosy, Buruli Ulcer, Dengue fever, Rabies among others. These NTDs have been confirmed to be endemic in Nigeria. Together, NTDs debilitate, blind or maim, permanently curtailing human potentials and impairing economic growth. They also impair childhood growth, intellectual development, and educational outcomes, thereby limiting national productivity.

Situation assessments have revealed that most of the NTDs targeted for control, elimination and eradication exhibit a high degree of geographical and social overlap. Evidence has shown that integration of interventions for the control of some of these diseases is technically feasible and cost effective. The control, elimination and eradication of the NTDs will be a major contribution to poverty alleviation and attainment of the Millennium Development Goals (MDGs).

The Federal Ministry of Health has established structures to control, eliminate and eradicate these neglected diseases in an integrated, cost-effective manner in collaboration with development partners and in line with relevant WHO Resolutions and Declarations.

This document describes operational mechanisms to integrate and co-implement interventions for the NTDs in Nigeria building on achievements already recorded such as the Community Directed Treatment with Ivermectin (CDTI) strategy, elimination of Guinea Worm Disease and elimination of leprosy at national level.

I wish to appreciate the contributions of all stakeholders to the development of this Multi-Year Strategic Plan and enjoin all partners to make concerted efforts to the successful implementation of this plan in a collaborative manner to achieve the goal of the NTDs Programme.

I hereby reaffirm the support and commitment of the Federal Government of Nigeria to NTDs Control.

Prof. C. O. Onyebuchi Chukwu

Honourable Minister for Health

June 2012

Acknowledgement

Preparing a Multi-Year Strategic Plan for Neglected Tropical Diseases (NTDs), though tasking, has been a rewarding experience. For the first time there is a document that clearly spells out mechanisms and processes for integrated control of NTDs. This will facilitate greater interaction among programme managers and set the pace for accelerated integrated control and management of these diseases.

We are grateful to Prof. Adenike Abiose, Chairperson of the NTDs Steering Committee and her team for commitment to providing technical support to the programme. Late Dr. Likezo Mubila of WHO/AFRO is appreciated for providing necessary information and technical guidance to the committee. Our appreciation also goes to Dr. Ngozi .A. Njepuome, Dr. Dorcas Alusaka, Mr. Bernard Kilembe and Dr. Adiele Onyeze who has been a good driving force WHO/AFRO Technical Advisers for their contributions and commitment towards the finalization of the document.

The Honourable Minister of Health, Prof. C. O. Onyebuchi Chukwu, the Honourable Minister of State for Health, and the Permanent Secretary, Federal Ministry of Health, are appreciated for their political commitment and immense support for the integrated approach to the development of this Multi-Year Strategic Plan.

We also appreciate the efforts of our partners who have contributed to the development of this strategic plan.

Dr. Mansur Kabir,

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June 2012

Executive Summary

Nigeria is the most populous country in Africa with a 2011 projected population of over 162 million (NPC 2006). It lies on the West Coast of Africa between latitude 4^0 and 14^0 N and longitude 5^0 and 14^0 E. It occupies a land mass of approximately 923,768 square kilometers sharing international borders with the Republics of Niger and Chad to the North, Cameroon to the East, Benin to the West and the Atlantic Ocean to the south.

Nigeria is made up of six geo-political zones comprising 36 States, a Federal Capital Territory (Abuja), and 774 Local Government Areas. There are about 350 ethnic groups with three predominant ones. The petroleum sector is the main stay of the Nigeria and contributes 36% to the annual GDP, 75% to government revenue and accounting for virtually all foreign exchange earnings. However, over 70% of Nigerians live below the poverty line without access to quality and affordable health services and other basic social services. The socioeconomic burden of the eleven endemic NTDs in Nigeria will aggravate the current situation if not managed in an integrated manner.

The health care delivery system in Nigeria consists of both orthodox and traditional health care delivery systems, and both systems operate side by side but with minimal collaboration. The goal of the National health policy is to bring about a comprehensive health care system based on PHC that is promotive, protective, preventive, restorative and rehabilitative to every citizen of the country. The Federal Ministry of Health has prioritized the NTDs and included them among the notifiable diseases and conditions.

The NTD programme of the Federal Ministry of Health currently addresses the following diseases: Lymphatic Filariasis, Onchocerciasis, Schistosomiaisis, Soil Transmitted Helminths, Trachoma, Leprosy, Buruli Ulcer, Human African Trypanosomiasis, and Guinea Worm Disease. The strategic goal of the NTD programme is to progressively reduce morbidity, disability and mortality due to NTDs using integrated and cost-effective approaches with the view to eliminate NTDs in Nigeria by the year 2020. The strategic priorities are to:

- Strengthen government ownership, advocacy, coordination and partnerships
- Enhance planning for results, resource mobilization and financial sustainability of national NTD programmes for NTD management, control and elimination
- Scale-up access to interventions, treatment and system capacity building
- Enhance NTD monitoring and evaluation, surveillance and operations research

The Nigerian NTD programme is an integrated package of the existing NTD disease-specific programmes. However, each programme will maintain the disease-specific focus goal, objectives and strategies in the integrated package, with the understanding that achieving its goals will contribute to the achievement of the overall national NTD goal.

The strategy for control, elimination and eradication of NTDs will be premised on integrated approaches. This will include community awareness creation, Mass Drug Administration (MDA) in all endemic communities using existing Community Directed Intervention, early case detection, case management and transmission control. Integration will produce such benefits as cost-effectiveness, improved coordination and programme management. The six NTD programmes that use preventive chemotherapy

interventions will utilize one or a combination of current delivery channels for mass drug administration. Such channels include: Community-Directed Intervention (CDI), School based treatment, and other Community-based approaches that target specific groups/populations. Case management will focus on surgical treatment, home-based disability management, and hospital-based or self-administered drug treatment. Vector control activities will be carried out in an integrated manner in accordance with World Health Assembly Resolution 50.13 (1997) which encourages Member States "to take steps to reduce reliance on insecticides for control of vector borne diseases through promotion of integrated pest management approaches".

The following disease-specific activities will be carried out through co-implementation / collaboration / integration with full involvement of communities.

Lymphatic Filariasis elimination: annual Ivermectin and Albendazole administration to all at risk, vector control with Roll Back Malaria, personal hygiene and exercises of affected limbs and hydrocelectomies.

Onchocerciasis control: annual treatment with Ivermectin to the population at risk and focal ground larviciding in established isolated vector breeding sites.

Schistosomiasis control: MDA in the school-aged children and high risk communities, health education, improvement in water supply and sanitation and Focal control of snail intermediate hosts in selected foci.

Soil transmitted helminths control: MDA with Albendazole/Mebendazole in the school-age children and high risk communities, Health education and improvement in water supply and sanitation.

Trachoma control: Surgery of trichiasis cases, MDA with Azithromycin of entire at risk identified communities, improved water supply for personal hygiene, personal hygiene reinforcing face washing, and. environmental management.

*Leprosy elimination: E*arly case detection, adequate treatment with MDT, provision of comprehensive patient care (access to free MDT, POD and rehabilitation services), integration of leprosy services into the general health services, re-organization of existing leprosy services, community involvement in leprosy control activities, Self Care (including self care groups), strengthening the referral system and strengthening referral centre.

Human African Trypanosomiasis Elimination: Surveillance and case reporting, case detection/ management protocols and integration of HAT surveillance and notification into IDSR.

*Buruli Ulcer control: E*arly and community based case detection, confirmation of cases, case management (antibiotics, surgery and prevention of disabilities) and strengthening health structures.

Guinea worm Eradication: Active surveillance activities in all endemic and recently freed villages, Community Participatory Surveillance Strategy (CPSS), cash reward scheme, rumour investigation, documentation / reporting, use of Monofilament filters (Pipe and cloth) to filter water before consumption and for domestic purposes, pprovision of safe water supply and rehabilitation of broken down sources in NIGEP target and at risk villages, case management / containment strategy and vector control with Abate.

Progress towards meeting the objectives will be measured against disease specific indicators. The NTDs secretariat, zonal NTDs offices and the NTDs Steering Committee will provide oversight for effective programme implementation.

A total of three hundred and twenty-two million, ninety-two thousand, eight hundred and thirty-three ($322, 092,833) Dollars only is budgeted for five years. The budget presented covers activities to be implemented and supported by the FMOH and partners nationwide. It is expected that States and LGAs will develop their NTDs Plans of Action within the framework of this strategic plan. Detailed budget break down is enclosed.

1 PART ONE: SITUATION ANALYSIS

1.1 COUNTRY PROFILE

1.1.1 Geography

Nigeria has a 2011 projected population of over 162 million (NPC 2006). It lies on the West Coast of Africa between latitude 4^0 and 14^0 N and longitude 5^0 and 14^0 E. It occupies a land mass of approximately 923,768 square kilometers sharing international borders with the Republics of Niger and Chad to the North, Cameroon to the East, Benin to the West and the Atlantic Ocean to the south (See Figure 1). Nigeria is the most populous country in Africa. The Federal Capital Territory is centrally located in Abuja.

There are two main seasons, rainy season from March to October and dry season from November to February. There are wide climatic variations in the different regions of the country. Near the coast, the seasons are not sharply defined. Temperatures rarely exceed 32° C (90° F), but humidity is very high and nights are hot. Inland, there are two distinct seasons: a wet season from April to October, with generally lower temperatures, and a dry season from November to March, with midday temperatures that surpass 38° C (100° F) but relatively cool nights, dropping as low as 12° C (54° F). On the Jos Plateau, temperatures are more moderate.

Average rainfall along the coast varies from about 180 cm (70 in) in the west to about 430 cm (170 in) in certain parts of the east. Inland, it decreases to around 130 cm (50 in) over most of central Nigeria and only 50 cm (20 in) in the extreme north.

Two principal wind currents affect Nigeria. The harmattan, from the northeast, is hot and dry and carries a reddish dust from the desert; it causes high temperatures during the day and cool nights. The southwest wind brings cloudy and rainy weather.

A greater part of the country consists of a low plateau intersected by two main rivers, the Niger and Benue. Along the coast is a belt of mangrove forests and the vegetation gradually thins into the Sahel savannah in the far north corresponding to average rainfall that ranges in the respective regions. Beyond the coast, lowlands follow the valleys of the Niger and Benue; otherwise the land gives way to a broad, hilly, forest belt that gradually rises to the rocky terrain of Jos and Bauchi plateaux. These plateaux are a region of savannah, which stretches to the semi-desert Sahel zone in the extreme north. In the east is the Adamawa Plateau, which borders Cameroon and in which is Nigeria's highest point, Dimlang (Vogel Peak), 2,042 m (6,699 ft) high.

Figure 1: Geographical Map of Nigeria

Source: File: Map of Nigeria vegetation.

Climate change, global warming caused by the greenhouse effect, and the resulting increase in global temperatures, are possibly causing tropical diseases and vectors to spread to higher altitudes in mountainous regions, and to higher latitudes that were previously spared.

In the context of NTDs, this is significant because the physiological activity of both vector and parasite are sensitive to climatic changes (McMichael A.J., 2006), (Patz J.A., 2000). For example, dengue and filariasis are transmitted by mosquitoes, which require standing water and a warm ambient temperature to breed. Global warming will be accompanied by alterations in the hydrologic cycle (Patz J.A., 2000), (Zhou X *et al,* 2008), which will impact upon rainfall and water availability. Similarly, *Onchocerca volvulus* is transmitted by the black fly, which breeds near bodies of water. Peak biting density is observed during the wet season Patz J.A. (2000), indicating that we should expect to see an increase in the density of transmission of certain NTDs during extreme rainfall.

Conversely, there is evidence to suggest that climate change may actually reduce transmission of NTDs in some regions. Heavy rainfall can reduce mosquito populations by flushing larvae from their habitat (McMichael A.J., 2006).

Ecological modifications have been recognized as major threats to the emergence and re-emergence of infectious diseases (Patz J.A., 2000), (McMichael A.J., 2004), because they facilitate the breeding of vectors and transmission of parasites. A recent study by Brou T. (2008) conducted in Côte d'Ivoire noted that the areas within a few kilometres of hydro-agricultural dams and irrigated rice fields contained the country's highest prevalence of Buruli ulcer. Assuming that confounding factors have little part to play, the continuing development of hydrological systems to advance agriculture may bring about an increase in Buruli ulcer as well as Schistosomiasis prevalence, if control measures are not put in place. Schistosomiasis transmission is usually

seasonal primarily due to the variation in temperature and irrigation cycle. Transmission can take place in large lakes, rivers, ponds and streams, and these are abundant in Nigeria. Also, man-made water bodies (dams, irrigation schemes and canals) are prevalent in the Nigeria agricultural sector which increase predisposition to Schistosomiasis.

Deforestation is carried out for a variety of reasons; these include road-building, human re-settlement and farming. Road-building enables non-immune populations, including loggers, construction workers and tourists, to come into contact with indigenous parasites against which they have no immunity, thereby becoming a reservoir for NTDS and facilitating their transmission (Patz J.A., 2000).

The world population is projected to increase from the present figure of 6.8 billion to beyond 9 billion by 2050. This threatens the control of NTDs because it creates conditions which are conducive to transmission of infectious disease (United Nations, 2008), as well as increasing the number of people at risk of contracting NTDs. Fertility rates remain highest in poor rural areas of developing countries (United Nations, 2007) which already carry the bulk of the disease burden attributable to NTDs, therefore the impact of population growth will be amplified here. This impact is mediated through a number of factors. For example, developing countries whose health systems are already stretched beyond capacity will be unable to scale up efforts to prevent and treat diseases. Population growth is an important driving force behind migration and outbreaks of civil conflict, which, themselves exacerbate the burden of NTDs (United Nations, 2007).

The urban centres in Nigeria are growing very fast. Abuja, the Federal Capital city, and some of the new State capitals have experienced phenomenal growth as a result of migration. Rapid urban growth have resulted in problems of urban congestion or overcrowding, poor housing, poor environmental sanitation, unemployment, crimes and other social vices. Urbanization secondary to population growth may increase the transmission of NTDs because of cross-country spread of parasites and the favourable conditions for transmission which ensue in cities. A projected rise in urbanization from 45% in 1995 to 61% by 2030 (McMichael A.J., 2006), threatens to increase the burden of NTDs, in particular because much of this will occur in developing countries like Nigeria where the populations of urban slums will swell disproportionately. Dengue is of particular concern here because it has been reported in the country and will add to the burden of the existing eleven NTDs. Dense habitation and pools of stagnant water (in car tyres and disused containers) provide additional opportunities for some vectors such as mosquitoes to breed and bite. Similarly, poor hygiene and overcrowding are conducive to the transmission of *Chlamydia trachomatis* (trachoma), a leading cause of blindness throughout the developing world (Wu P-C *et al*, 2009). Urbanization is closely and positively correlated to HIV prevalence (United Nations, 2007), thereby facilitating the spread of NTDs by increasing the immunocompromised population (WHO, 2010). Lastly, urban growth diverts public spending and resources away from rural areas (United Nations, 2007) therefore those suffering from NTDs who remain outside the cities are denied the healthcare they require to manage their condition.

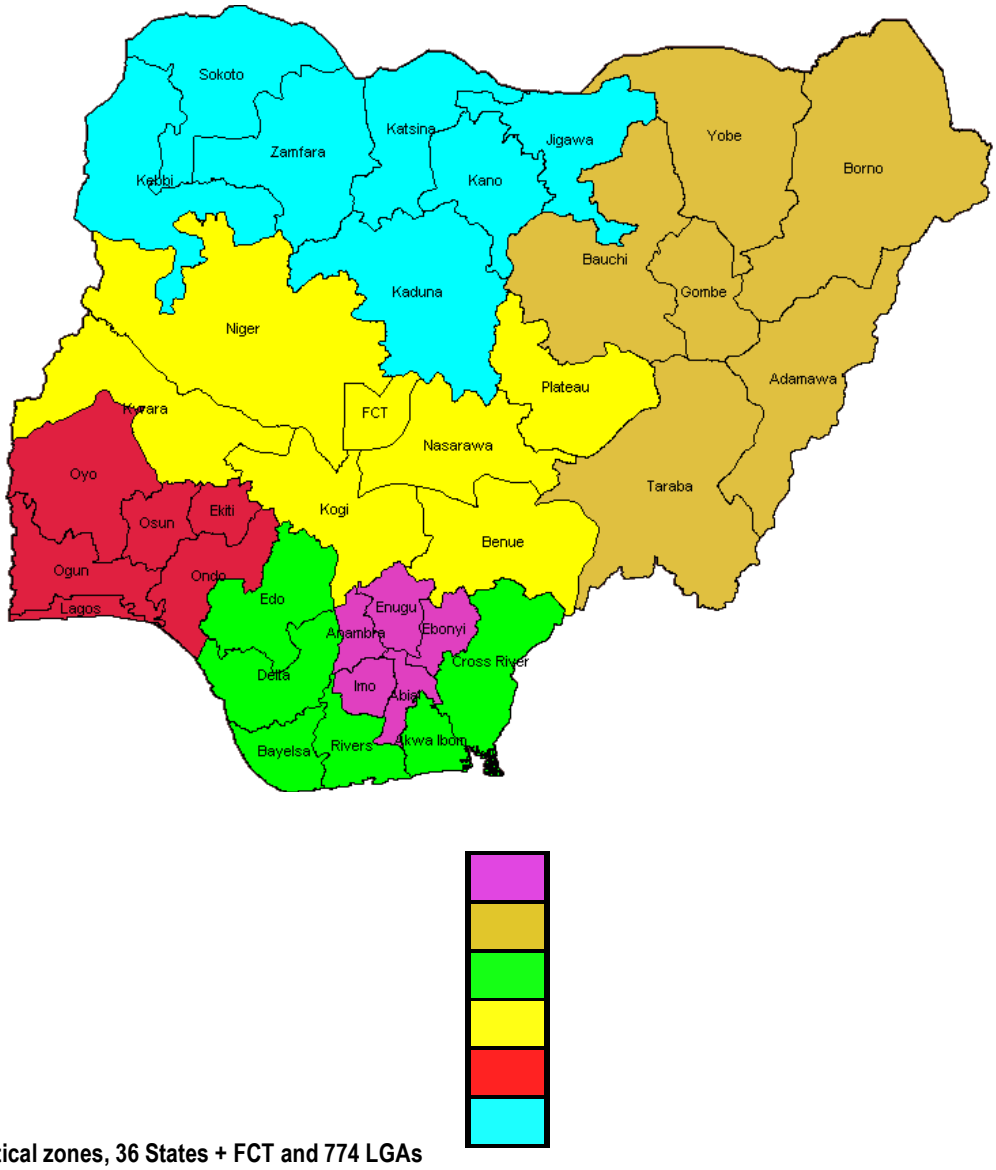
1.2 Administrative structure, demography and community structure

1.2.1 Administrative structure

Nigeria is made up of six geo-political zones comprising 36 States, a Federal Capital Territory (Abuja), and 774 Local Government Areas (LGAs). The country operates a Federal system of government with the Executive, Judiciary and a bicameral

Legislative arm (the Senate and House of Representatives). The Federal Government of Nigeria (FGN) is headed by an elected President. Each federating unit (State) has the Executive, Judiciary and a Legislative arm. The State Government is headed by an elected Governor. Each LGA is governed by an elected Chairman and a Legislative Council. The Federal structure as outlined in the Nigerian Constitution provides for some level of administrative as well as financial autonomy of each State in the federation. Most of the country's revenue is centrally generated and shared among the three tiers of government on an agreed revenue allocation formula. In addition, States and LGAs are autonomous and each generates independent internal revenues. Each tier of government prepares its own annual plan and budget.

Figure 2: Map of Nigeria Showing Six Geo Political Zones and States



6 Geo-political zones, 36 States + FCT and 774 LGAs

Table 1: Nigeria Demographics

***Population (2006)**	**140,431,790**
***Population growth rate**	3.2%
***Population density (pop./sq.km)**	150
Population Under 1	4%
Population Under 5	20%
Population Under 15	47.6%
Population Under 19	53.8%
†Crude birth rate (per 1000 population)	40.6
†Total fertility rate (TFR	5.7
Maternal mortality rate	545/100,000 live births
Infant mortality rate	75/1000 live births
Male/female Sex ratio	50:50
Urban: Rural population	45:55

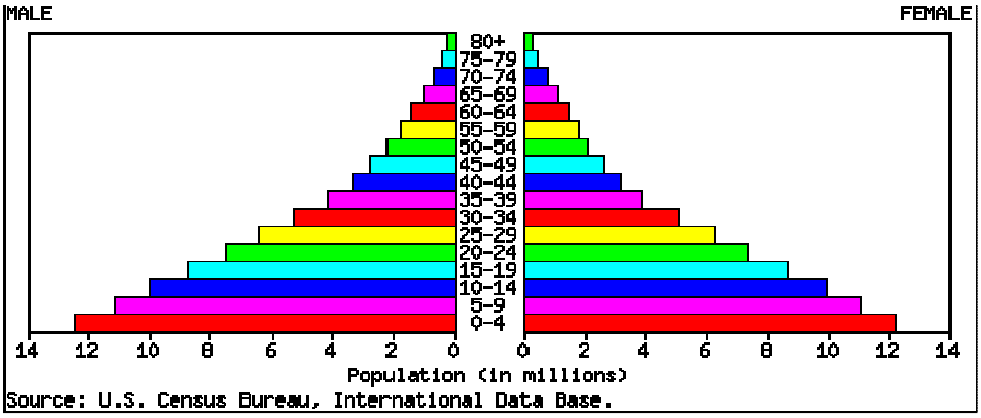
Source: *National Population Commission (Population Census 2006), †NDHS 2008

1.2.2 Population Structure

In 2006 Nigeria's population was 140,431,790 (NPC, 2006) with a projected population of over 162 million in 2011. The male: female ratio is 1:1. About 55% of the population resides in the rural areas (NDHS 2008). The Age and Sex distribution of Nigeria for the year 2010 is as shown below.

Figure 3: Age and Sex distribution for the year 2011

Nigeria: 2011



A detailed distribution of population by State with estimates for under-5 and school-aged children is provided in Annex 1

1.2.3 Community/Social Structure

Nigeria is a country with many ethnic groups; this is cardinal to understanding its pluralistic society. There are about 350 ethnic groups the predominant ones being the Hausa in the North, the Yoruba in the South West and the Ibo in the South East. There are three main languages Hausa, Igbo and Yoruba. Most communities have settlement pattern characterized by nucleated villages with satellite hamlets and dispersed settlements with generally large family compounds in which there may be many related families, with several hundred individuals.

In all the regions, an average community size is approximately 2,500-12,000 persons with one-third to one-half the population living in hamlet-sized farm settlements. The vast majority of the population of NTD-endemic communities is settled agriculturalist, fishermen as well as craft practitioners of various descriptions, including mat and basket weavers, potters, blacksmith as well as house building and repairs etc. However, during the months of reduced agricultural activities, many young men in most communities migrate to the towns and cities for dry season labour ventures.

The traditional leadership structure in most parts of the north is hierarchical in nature; large areas are under the authority of a District Head, who is responsible to the Emir. Under the District Head are Village Heads, and under them, the Ward Heads who relate directly to the head of households in the communities. In the southern part of Nigeria on the other hand, villages are run by Councils of respected Elders of the locality. Most communities have Village Development Committees (VDCs) and other types of self-help groups, such as town unions, farmers associations, women societies, traders' associations, vigilante groups and other occupational groups.

Communication channels are many and varied, some being the traditional methods of communication down to the households. Town announcers and musicians are mainly used to communicate information to the people on most issues, the radio is also a very wide spread medium, using local languages. Literacy in the local predominant languages is quite widespread, but English is hardly understood in many rural areas of most States.

Major activities in the communities are centred on key religious and cultural festivals. Some communities have festivals at the time of planting (at the beginning of the rains) and at harvest time (October-December). Marriages and other festivals generally

take place during the dry season, after the harvest. For the purpose of the implementation of NTDs programme activites, the timing needs to be carefully scheduled to avoid conflict with farming activities and some key feasting period.

Most communities have previous experiences with developmental projects such as construction of health facilities, schools, maintenance of community roads and maintenance and provision of water points. Each community has a system for mobilizing the population, especially the youths, to actively participate in these activities. Movements to most NTD-endemic parts of the States requires the use of 4-wheel drive vehicles and motorcycles during both raining and dry season due to predominantly torturous natures of the road networks which is sandy in the north and flooding and muddy in the southern parts.

As with other aspects of society, women's roles were primarily governed by regional and ethnic differences. In the north, Islamic practices are common which means, generally, less formal education for the women; early teenage marriages, especially in rural areas; and confinement to the household, which is often polygamous, except for visits to kin, ceremonies, and the workplace, if employment is available and permitted by a girl's family or husband. It should be noted that women play few roles in the leadership structure of these communities. In the south, women traditionally have economically important positions in interregional trade and the markets, work on farms as major labour sources, and have influential positions in traditional systems of local organization.

1.3 Socio-economic situation and indicators

The petroleum sector is the main stay of the Nigeria economy being the 6th largest exporter of crude oil in the world, and contributes 36% to the annual GDP, 75% to government revenue and accounting for virtually all foreign exchange earnings. Recently, the country has begun to exploite the vast deposit of Liquefied Natural Gas. The West African gas pipeline, at an estimated cost of $260m (US) is planned which will supply natural gas from the Excarvos Field to Togo, Benin and Ghana. Other sources of income include agriculture, solid minerals and recently, tourism. Agriculture contributes about 33% of the GDP. The cash crops include cocoa, rubber, coffee, cotton and palm kernels. The crops include cassava, maize, sorghum, yam, millet, rice and wheat. Nigeria is blessed with arable land, although land cultivation is still mainly in the traditional methods while mechanized is gradually being introduced. Nigeria is also endowed with diverse mineral resources such as tin, coal, gold, lead, columbite, iron among others. Despite all these Nigeria is ranked the 158th poorest country out of 177 surveyed countries as it is yet to harness all available resources to create wealth and improve the socio-economic status of its citizenry. Over 70% of Nigerians live below the poverty line, particularly women and children in the rural areas, without access to quality and affordable health services and other basic social services.

The socioeconomic burden of the nine endemic NTDs in Nigeria will aggravate the current situation if not managed in an integrated manner. This is crucial considering that NTDs, an extremely diverse group of parasitic, viral and bacterial infections prevalent in conditions of extreme poverty with the majority of sufferers poor and voiceless. Table 2 below shows the socio-economic indices for the country.

Nigeria is ranked 142 in the UNDP Human Development Index. The GDP Per Capita (2008 PPP) is $2,289 with an HDI of 0.423 compared with the global HDI of 0.624.

Table 2: Health and Socio-economic Indicators for Nigeria

Health Indicator	National
*Total fertility rate (children per woman)	5.7
Population growth (annual %)	3.2
GDP per capita (current US$)	2, 289 (2008 PPP US$)
Life expectancy at birth, total (years)	48.1
Use of modern contraception (married women)	10%
*Infant Mortality Rate (per 1,000 live births)	75
Neonatal Mortality Rate (per 1000 live births)	40
*Under Five Mortality Rate (per 1,000 live births)	157
*Maternal Mortality Ratio (per 100,000 live births)	545
Children fully immunized	13.3%
Population with access to safe water	49.1%
% Stunting (Under 5)	41%
Population with access to sanitation	50%
Government Expenditure on Health (2007)	5.6% of total budget
Health Budget as % of GDP (2007)	4.78%
% of population below poverty line	70%
Adult Literacy rate (Both sexes) (% Aged 15 and above)	74.8%
Access to potable water	58.9%
Prevalence of HIV, total (% of population ages 15-49)	4.6%
Female Literacy Rate (2007)	58%

Sources: IMMCH Strategic Document 2007, *NDHS 2008, World Development Indicators, MDG Report 2010, UNGASS Country Report 2008

1.4 Transport and communication:

The main transport system in Nigeria is road transportation. Others include air transportation where there are airports (mainly in the State capitals), sea transportation in the riverine areas and less commonly, rail. There are several kilometers of paved roads in Nigeria, the rail system is broken and currently under rehabilitation while the major river that traverses the Northwest, Central to the South, the River Niger, is presently being dredged to improve transportation by water ways. NTD-endemic areas are widely distributed across the entire country and some of these areas are hard-to-reach because of the peculiar topography such as difficult terrains and creeks (See Table with major cities and joining distances in Annex 2). Implementation of NTD activities is at the community level many of which are in the rural, hard-to-reach areas with narrow, unpaved roads and swamps sometimes. In some remote communities only foot paths exist and can only be accessed by motorcycles or bicycles. In the riverine areas, canoes and boats are used to travel to the communities. At present, most of the project vehicles are worn out and are in desperate need of replacement or simply not available for project implementation leading to added expense and tedious task of hiring vehicles for project implementation in order to ensure that communities do not go without regular treatment.

The introduction Global System for Mobile communication (GSM) has greatly improved communication in Nigeria in most communities, utilizing different service providers such as MTN, Glo, Etisalat, Airtel, Starcomms, Visafone, Multilinks, Zoom, etc. Also, mobile pay phones are widely available in the urban areas. However, there are challenges with their services occasioned by weak and inconsistent signals and reception especially in some rural areas. This has complemented the long-standing analogue telephone system that has been in the country in the last fifty years. The number of GSM subscribers in 2008 is 41.66 per 100 people, internet users 15.86 per 100 people while telephone lines are 0.86 per 100 people. The country is yet to achieve full network coverages for mobile telephone with an overall teledensity of 45.93 per 100 people in 2008.

There are many public and private Television and Radio Stations and these can be accessed across the nation, especially the radio services. There are government-owned radio and television stations in all the States and the Federal Capital Territory. The accessibility of TV services is largely determined by supply of energy in the power sector. Currently, the country is underserved and experiences periodic power outages. For some remote communities, TV and radio network coverages are minimal.

Postal services are always available across the country and are improving in efficiency of service delivery. Courier services are provided by the public and private sectors.

The existing transport and communication systems, in the few areas where they are readily available, are moving in the right direction. With adequate planning and availability of funds, they can be relied upon for NTD programme implementation including disease surveillance. The National and Zonal NTD Offices will need to be equipped with communication facilities.

1.5 HEALTH SYSTEM SITUATION ANALYSIS

The health care delivery system in Nigeria consists of both orthodox and traditional health care delivery systems. Both systems operate side by side but with minimal collaboration. Orthodox health care services are provided by both the private and public sectors. The public health service is organized into primary, secondary and tertiary levels. While the Constitution is silent on the

roles of the different levels of government in health services provision, the National Health Policy and just recently, the Health Bill assign responsibilities for primary health care to local governments, secondary are to states and tertiary care to the federal level. The NPHCDA, a federal parastatal is currently engaged in primary health care services development and provision as part of its mandate. It is responsible for coordination and leadership, while the LGAs are responsible for implementation of the health programmes.

In 2005, the FMOH estimated a total of 23,640 health facilities in Nigeria of which 85.8% are primary health care facilities, 14% secondary and 0.2% tertiary. The private sector owns 38% of these facilities and they provide 60% of health care in the country

The 53 federal owned tertiary facilities provide specialist services which are mostly not available at the secondary and primary level, with the teaching hospitals also providing training for health workers and research.

However, the health system in Nigeria is in a deplorable state with an overall health system performance ranking of 187th out of 191 member States by the World Health Organization (WHO). Primary Health Care (PHC) is the bedrock of the national health system but it is in a prostrate state. It will require political will, funding capacity, skilled workforce and essential drugs to deliver quality services.

1.5.1 Health system goals and priorities

The goal of the National health policy is to bring about a comprehensive health care system based on PHC that is promotive, protective, preventive, restorative and rehabilitative to every citizen of the country within the available resources so that individuals and communities are assured of productivity, social well being and enjoyment of living.

The Federal Ministry of Health prioritized the NTDs and included them among the forty (40) communicable and non-communicable diseases and conditions for Integrated Disease Surveillance and Response (IDSR). These diseases were selected on the basis of one or more of the following:

Causes of high morbidity and mortality in the country (for example, malaria, pneumonia, tuberculosis, and HIV/AIDS, SARI);

Have epidemic potential (for example, CSM, measles, VHF and Cholera);

Surveillance required internationally (for example, plague, yellow fever, cholera, SARS, human influenza caused by a new subtype);

Have available effective control and prevention interventions for addressing the public health problem they pose (e.g., Onchocerciasis, Schistosomiasis. Trypanosomiasis);

Can easily be identified using simple case definitions; (e.g., Dracunculiasis)

Diseases targeted for elimination and eradication (e.g., leprosy, polio and guinea worm)

Top Ten Killer Disease Conditions

The WHO Statistical Information System identified the following disease as the main causes of morbidity and mortality in Nigeria:

HIV/AIDS, Lower Respiratory Disease (Pneumonia, bronchitis), Malaria, Diarhoeal diseases, Measles, Peri-natal Conditions, Tuberculosis, Cerebrovascular Diseases (including Stroke), Coronary Heart diseases, Whooping Cough. Source: WHO SIS, 2007.

The process of the development of the NTD Master Plan followed after the adoption of the National Policy on NTD by the National Council of Health which is the highest policy making organ for health in Nigeria. The preparation of the Master Plan therefore was a collaborative effort of stakeholders including the NTD Programme Officers of the three tiers of government, Development Partners, NGDOs and the NTD Steering Committee. It is envisaged that this document will provide the template for adaptation and implementation at the lower levels with effective coordination by the National NTD office.

1.5.2 Service Delivery:

The Nigerian health service delivery system is based on primary health care, it includes among other things:

- Education concerning prevailing health problems and the methods of preventing and controlling them
- Promotion of food supply and proper nutrition
- Maternal and child care, including family planning
- Immunization against the major infectious diseases
- Prevention and control of locally endemic and epidemic diseases
- Provision of essential drugs and supplies.

There is a three-tier system of health care, namely: Primary Health Care, Secondary Health Care, and Tertiary Health Care.

1.5.3 Primary Health Care:

Provision of health care at this level is largely the responsibility of Local Governments with the support of State Ministries of Health and within the overall National Health Policy. Private medical practitioners also provide health care at this level. The local government areas are thus responsible for managing the bulk of Service Delivery Points (SDPs).

1.5.4 Secondary Health Care:

This level of health care provides specialized services to patients referred from the primary health care level through out-patient and in-patient services of hospitals for general medical, surgical, pediatric patients and community health services. Secondary health care is available at the district, divisional and zonal levels of the States. Adequate supportive services such as laboratory, diagnostic, blood bank, rehabilitation and physiotherapy are also provided.

1.5.5 Tertiary Health Care:

This level consists of highly specialized services provided by teaching hospitals and other specialist hospitals which provide care for specific diseases such as orthopedic, eye, psychiatric, maternity and pediatric cases. Care is taken to ensure an even

distribution of these hospitals. Also, appropriate support services are incorporated into the development of these tertiary facilities to provide effective referral services. Similarly, selected centers are encouraged to develop special expertise in advantage modern technology to serve as a resource for evaluating and adapting these new developments in the context of local needs and opportunities.

To further the overall National Health Policy, governments of the Federation work closely with voluntary agencies, private practitioners and other non-governmental organizations to ensure that the services provided by these other agencies are in line with those of government.

1.6 Health Work Force:

Although Nigeria has one of the largest of human resources for health in Africa it is still inadequate to meet the country needs both in number, motivation, skills, and distribution. The main challenge for Human Resource for Health (HRH) in Nigeria is the distribution in terms of quantity and mix of health care workers with a skewed distribution towards urban and southern populations. To address the imbalance in HRH provisioning and development a national HRH policy and strategic plan was developed. Specific focus will be on building institutional capacities for HRH planning in order to cover issues of optimal distribution of the right quantity and mix of health care workers, performance management, continuing professional development, task shifting and an effective HR information system. Attention is also given to producing more community-focused health care workers and empowering communities to participate in health care delivery for sustainability.

There are 39,210 Doctors and dentists, 5887 Pharmacists, 124,629 registered Nurses as at 2006 and 40,491 registered Community Health Officers in 2009. This translates into 30 doctor and 100 nurses per 100,000 people and may not reflect the true current data on the health workforce strength due to factors such brain drain (Nigeria HSA, 2009).

With a large population of CDDs (120,000) already trained many communities in Nigeria are highly-experienced with participation in health care service delivery.

1.7 Health Information

The FMOH has a Health Management Information System (HMIS) located in the Health Planning Department which collects, collates, analyses and interprets routine data from the health facilities across the country. There is a national policy on HMIS whose goal is to strengthen the National Health System such that it will be able to provide effective, efficient, quality, accessible and affordable health services that will improve the health status of Nigerian through the achievement of the health related MDGs. Health information from the health facilities are captured using HMIS tools and forwarded from the Local Government Areas through the State Ministries of Health to the Planning Department of the FMOH. The findings form the basis for policy development, review and strategic planning for health intervention. Already most of the NTDs in Nigeria are captured in the HMIS but these are facility-based data at all levels. There is need to update the HMIS forms to include all the NTDs.

Another major source of information on health is from the Integrated Disease Surveillance and Response System (IDSR) which has forty priority diseases including epidemic-prone diseases and some NTDs. Through this system information on these diseases are reported using the different IDSR forms. The Epidemiology Division of the Public Health Department of the Ministry is responsible for the IDSR activities and carries out surveillance on the 40 priority diseases of public health importance and

provides weekly reports. The reporting channel also is from health facilities as in the HMIS. This is supplemented by surveys. However, information is often limited in scope and seldom includes data from the private sector. There is need to establish community surveillance.

1.8 Medical Products

The National Agency for Food and Drug Administration and Control (NAFDAC) is the primary regulatory body in charge of control of drug quality and standards in Nigeria and is charged with the mandate to regulate and control quality standards for Foods, Drugs, Cosmetics, Medical Devices, Chemicals, Detergents and packaged water imported, manufactured locally and distributed in Nigeria including those used for NTDs. The burden of these endemic NTDs resulting in situations of ill health provide the compelling need for drugs in order to modify the functioning of the body and restore it to normal. There is also a centralised procurement, supply storage, and distribution system in place for medical products in the country which ensure standardization.

1.9 Pharmaco-vigilance System

The Nigeria Pharmaco-vigilance Programme is coordinated by the National Pharmaco-vigilance Centre (NPC) which is located in NAFDAC and collaborates with the Uppsala Monitoring Centre (UMC) and other national centers worldwide. NPC is responsible for monitoring the safety of all medicines in Nigeria. The National Pharmaco-vigilance Centre will be assisted as the case requires by a National Advisory Committee comprising of experts from various fields of healthcare. The National Pharmaco-vigilance Centre is responsible for providing reporting forms, collecting, evaluating and communicating the findings from ADR reports to the management of NAFDAC, who may communicate same to council for ratification.

NAFDAC uses the findings from the reports for making regulatory decisions on how to prevent or minimize the risk of ADRs in Nigeria. NAFDAC, through the National Pharmaco-vigilance Centre, may communicate their findings, recommendations and directives to appropriate organizations or individuals. These include, but are not limited to health professionals, pharmaceutical manufacturers, public health programmes within the Federal and State Ministries of Health, other public and private health institutions, the media and the public.

On the integrated NTDs programme, the pharmacist ensures that drugs supplied to the programme are of good quality, safe and efficacious as well as serve as the programme's focal/contact point for every adverse drug reaction observed. The Pharmacist liaises with the National Pharmaco-vigilance Centre on feedbacks from the field on every adverse drug reaction or events as part of the programme's contribution to the National Pharmaco-vigilance Monitoring System.

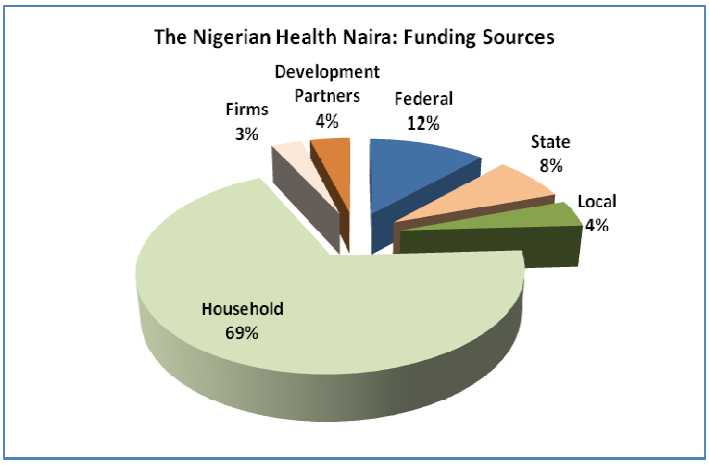
1.10 Health Financing

Health Financing in Nigeria is from a variety of sources that include budgetary allocations from Government at all levels (Federal, States and Local), Loans and grants, private sector contributions and out of pocket expenses. The National Health Accounts (NHA) for Nigeria over the period 2003 to 2005 estimated that the Total Health Expenditure (THE) in Nigeria grew from N661.662 billion in 2003 to N976.69 billion in 2005. Federal government health expenditure was estimated to have grown three fold from N47.02billion in 2003 to N130.76billion in 2005, while the estimated expenditures for the same period by states grew from N48billion to N78.8billion and that of LGAs nearly doubled from N28.63 billion to N44.64billion.

Household out of pocket expenditure remains by far the largest source of health expenditure in Nigeria (about 69%) and in absolute terms increased from N489.79 billion in 2003 to N656.55 billion in 2005. The estimated health expenditure of private firms grew from N20.32 billion in 2003 to N29.67billion in 2005. The contribution from the development partners to health sector in Nigeria is estimated to have increased from N48.02billion in 2003 to N78.78 billion in 2005.

In terms of contribution from different levels of Government, the NHA 2003-05 estimates that the Federal Government contributes above a tenth of the total sum (12.1%), State Governments, about 7.6%, and LGAs about 4.5%. The Household Out-Of-Pocket Expenditure (OOPE), by far remains the largest source contributing to over two thirds (68.6%) while Private Firms contribute (3.1%) and Development Partners (4.1%) as illustrated in Figures 4 and 5 below. This underscores the huge economic burden of health care expenditure on households, especially the poorer households who are mostly affected by the NTDs. The responsibility to lessen this burden therefore rests with the Government playing a stewardship role to ensure provision of quality and affordable health services to Nigerians in tackling the scourge of the NTDs. For the year 2011, government allocation to the NTDs in the Budget Appropriation is a mere N63 million.

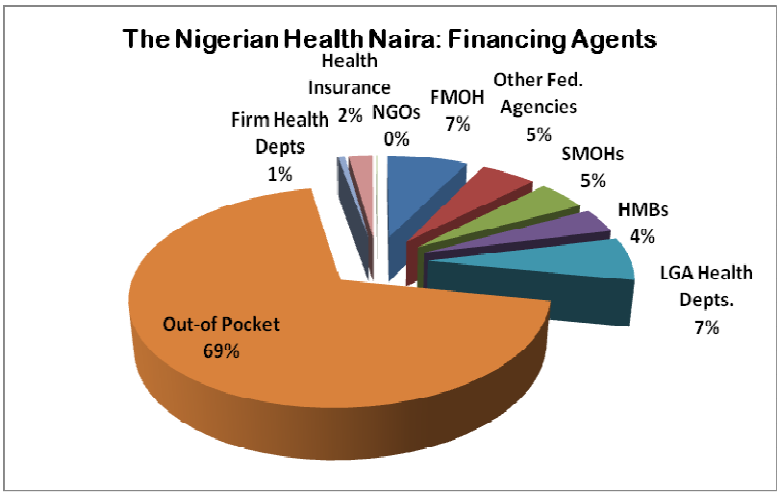
Figure 4. Funding Sources in the Nigerian Health system, 2003-2005



Source: 2003 – 2005 NHA Estimation, Final Report, 2009, Macroeconomics and Health background study, commissioned by the FMOH, 2009, 2003 – 2003 NHA Estimation, Final Report, 2009

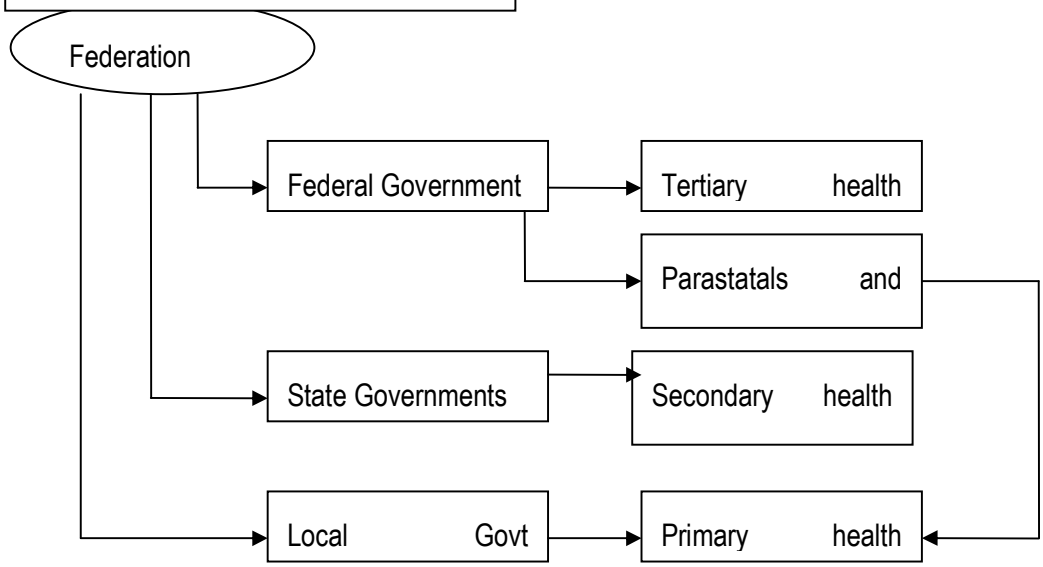
The financing agents of health care in Nigeria, through whom funds are channeled to providers include public agents (Federal ministries and agencies, SMOHs, Hospital management boards, LGAs health departments), National Health Insurance for the formal sector and pilot community health insurance schemes, NGOs and Faith based organizations, private firms' medical units and direct expenditure by households. Their financing contribution to providers is as illustrated in Figure below.

Figure 5: Financing Agents in the Nigerian health system, 2003 - 2005



Source: NSHDP 2011 – 2015

Figure 6:Flow of Health Resources



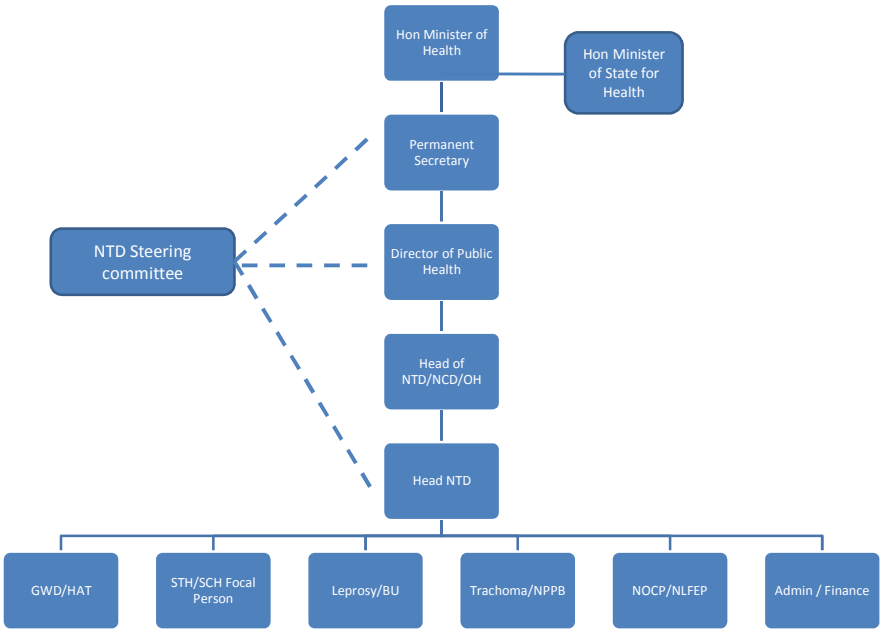
Fluctuating public funding, problems with management, political interference and poor coordination with state and local governments limit the effectiveness of federal Parastatals and programmes. Even when programmes are well supported, they can contribute to fragmentation and duplication, with different programmes operating in the same LGA under different administrative and reporting arrangements-all, making different demands on the same health staff.

1.11 Leadership and Governance

The Federal Ministry of Health, headed by the Minister who provides the leadership and direction for the implementation of the activities in the health sector. He is assisted by the Minster of State for Health. The Permanent Secretary is the accounting

officer and provides the administrative leadership in the Ministry. The Ministry consists of various departments headed by Directors. The NTD Division is domiciled in the Department of Public Health saddled with the responsibility in the implementation of activities for the control, elimination and eradication of the NTDs (see the organogram of the Federal Ministry of Health below). There is a National policy on NTDs in place which aims as development and implementation of programmes that will control/eradicate/eliminate/manage Neglected Tropical Disease. Its policy statement states that the Federal Ministry of Health will coordinate control of Neglected Tropical diseases (NTDs) in collaboration with NGDOs, UN agencies, other relevant stakeholders and the private sector. The National Strategic Health Development Plan (2010-2015) provides policy guidelines for effective health leadership and governance. It addresses issues relating to all building blocks of the health system and provides policy direction for improving the stewardship of the sector.

Figure 7: Organogram of the Neglected Tropical Diseases Programme



1.11.1 NEGLECTED TROPICAL DISEASES SITUATION ANALYSIS

The NTD programme of the Federal Ministry of Health addresses the following diseases:

Preventive Chemotherapy NTDs: Lymphatic Filariasis, Onchocerciasis, Schistosomiaisis, Soil Transmitted Helminths, and Trachoma.

Case-Management NTDs: Leprosy, Buruli Ulcer, HAT, GWD, Lymphoedema, Trachoma, Rabies and

Leishmaniasis

1.12 Epidemiology and Burden of Disease

1.12.1 Onchocerciasis

Onchocerciasis is prevalent in all States of Nigeria except Lagos, Katsina, Bayelsa and Rivers. It is estimated that about 31 million persons in about 36,000 communities in 32 States are at risk in Nigeria. Until recently, it was a major cause of blindness in many rural communities across the nation. The National Onchocerciasis Control Programme (NOCP) was established in 1987 with the mandate to reduce prevalence to levels to which it will no longer constitute a public health problem. In 1991, main chemotherapy of communities with Ivermectin (mectizan) was commenced. In 1997, the Community Directed Treatment with Ivermectin (CDTI) strategy was adopted as the main strategy of programme implementation.

1.12.2 Current situation: Onchocerciasis mapping has been completed in the country.

Over 15,000 health workers and 150,000 Community Directed Distributors (CDDs) have been trained or retrained between 1999 and 2011. All the 32 States and FCT have reached the minimum standard of therapeutic coverage (65%). Average treatment coverage during the last 5 years has been about 19 million (70%) annually. 31, 823, 350 (80%) people in 36,121 (99%) communities were treated in 2011. Many hard-to-reach communities are being covered.

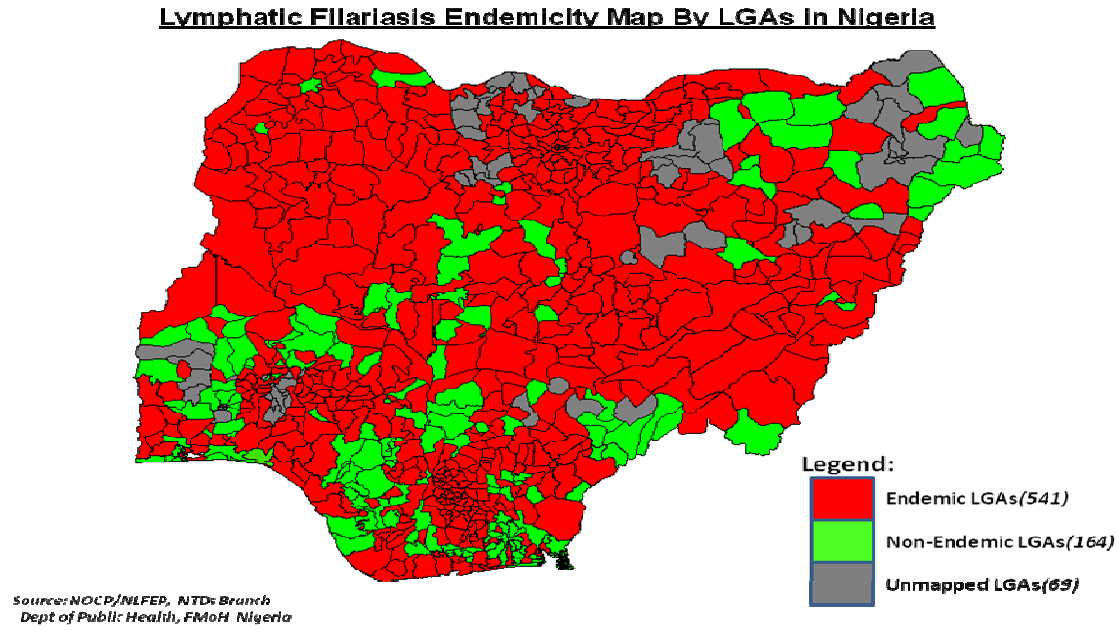
The CDTI has provided entry points for other community-based interventions such as Vitamin A supplementation, Guinea worm disease and Measles surveillance, elimination of Lymphatic Filariasis and Control of Schistosomiasis.

Impact studies have shown improvement in Ophthalmological, Dermatological and Entomological indicators of treated populations.

1.12.3 Lymphatic Filariasis

The National Lymphatic Filariasis Elimination Programme (NLFEP) was established in 1997 in response to World Health Assembly Resolution (May, 1997) urging member States to eliminate Lymphatic Filariasis (LF) as a Public Health problem. NLFEP was merged with NOCP in 2007 in order to harmonise implementation of MDA in co- endemic areas.

Figure 8:Lymphatic filariasis endemicity map by LGA in Nigeria



1.13 Current Situation:

Globally, Nigeria is ranked 3rd highest with LF disease burden, though it is one of the endemic countries that are yet to complete the mapping of the disease. About 106 million Nigerians are at risk of the disease (2011 NLFEP Annual Report). In 2003, the NLFEP started LF mapping in the country and so far 30 States and Federal Capital Territory (FCT) have completed mapping in all their LGAs using Immuno Chromatographic Test (ICT) cards.

LF prevalence has been determined in 704 out of 774 LGAs of 36 States and FCT. Out of the mapped LGAs, 541 LGAs are endemic and 164 LGAs are non-endemic.

Baseline survey has been done in 40% of the sentinel sites (senatorial districts)(Dec. 2011).

Presently, 21.6% of endemic LGAs are under Mass drug administration (MDA) with free donated Ivermectin and Albendazole tablets.

As at 2010, 241 lymphodema and 205 hydrocele cases have been reported from mapping survey carried out in the country.

There are plans to complete LF mapping in the remaining 69 LGAs of 6 States by 2012 and baseline data will be collected in the remaining 60% sentinel sites (Senatorial District) by 2013. Capacity will be developed for lymphoedema and hydrocele case management.

The Partners of NLFEP include: WHO, MDP, GSK, APOC and NGDOs (SSI, CBM, TCC, MITOSATH, HKI etc)

1.13.1 Schistosomiasis

Nigeria has the highest burden of this disease in Africa, about 116 million out of the estimated 555 million Africans are at risk as at 2006 (WHO 2008). The National Schistosomiasis Control Programme was initiated in 1988 and the goal of the program is to deliver regular anti-helminthic treatment to at least 75% of school-age children in endemic areas in the country in line with WHO recommendation. Schistosomiasis (or blood fluke infection) is caused by trematodes belonging to the genus *Schistosoma*. Three types of this worm cause human schistosomiasis, two of which occur in Nigeria. These are *S. haematobium* which causes urinary Schistosomiasis and *S. mansoni* that causes intestinal Schistosomiasis.

In Nigeria, Schistosomiasis is a disease of considerable and growing importance due to inadequate potable water and activities related to water resource development schemes for irrigation, fishing and hydro-electricity. Intestinal Schistosomiasis is mainly due to infection by *S. mansoni*. Generally, the disease mainly affects rural poor and the vulnerable age group, school children are the victims of the disease. Schistosomiasis can cause diseases such as cancer of the bladder, anaemia, liver dysfunction etc.

Control strategy: The strategies include:

- Morbidity control using chemotherapy i.e. Praziquantel , targeted at school aged children and other at risk populations.
- Health education and promotion.
- Collaboration with appropriate stakeholders for the provision of adequate sanitation and portable water and
- Snail control.

In Nigeria there is paucity of data on the number of people affected or at risk for Schistosomiasis and STHs infections. Little is known about the distribution of endemic foci within the Local Government areas in the various states of the federation and this poses a big problem for the National control programme. Control efforts are hampered by under-funding.

1.13.2 Current Situation

Though there is a National Programme in place, Schistosomiasis has not witnessed large-scale control efforts in Nigeria. Control to date has been small scale and limited in geographic and therapeutic coverages. The Carter Center is the only Non-Governmental Development Organization (NGDO) implementing integrated control of Schistosomiasis and other Neglected Tropical Diseases in Plateau, Nassarawa and Delta States. The TCC support is for three States out of the 36 states and FCT which only translates to 5.3 percent coverage of the total population of Nigerians at risk of Schistosomiasis in Nigeria.

Integrated Mapping/baseline surveys have been conducted in a total of nineteen States. The States are: Plateau (17 LGAs)/Nassarawa(13 LGAs), supported by TCC, Taraba(11 LGAs) and Lagos state (7 LGAS) supported by MITOSATH, Ekiti (16 LGAs) supported by Ekiti SMOH, Ondo state 18 LGAs supported by SMOH/MITOSATH, Federal Capital Territory (6 LGAs) supported by the Federal Capital Territory Development Authority, Sokotob (23 LGAs) supported by Sightsavers, Niger (3 LGAs), Benue (8 LGAs), Anambra (13 LGAs), Ogun and Zamfara, Enugu (6 LGAs), Ebonyi (5 LGAs), Cross River (9 LGAs) and Gombe (11) states supported by FMOH, Jigawa (15 LGAS) supported by SMOH and Kwara (15 LGAs) supported by Sightsavers. Currently Zamfara, Ekiti, Kwara, Sokoto, Federal Capital Territory, Ondo, Ogun, Enugu (18 LGAs) and Gombe (11 LGAs) are the only states where Schistosomiasis has been completely mapped. Prevalence ranged from 0%- 84% in the LGAs mapped.

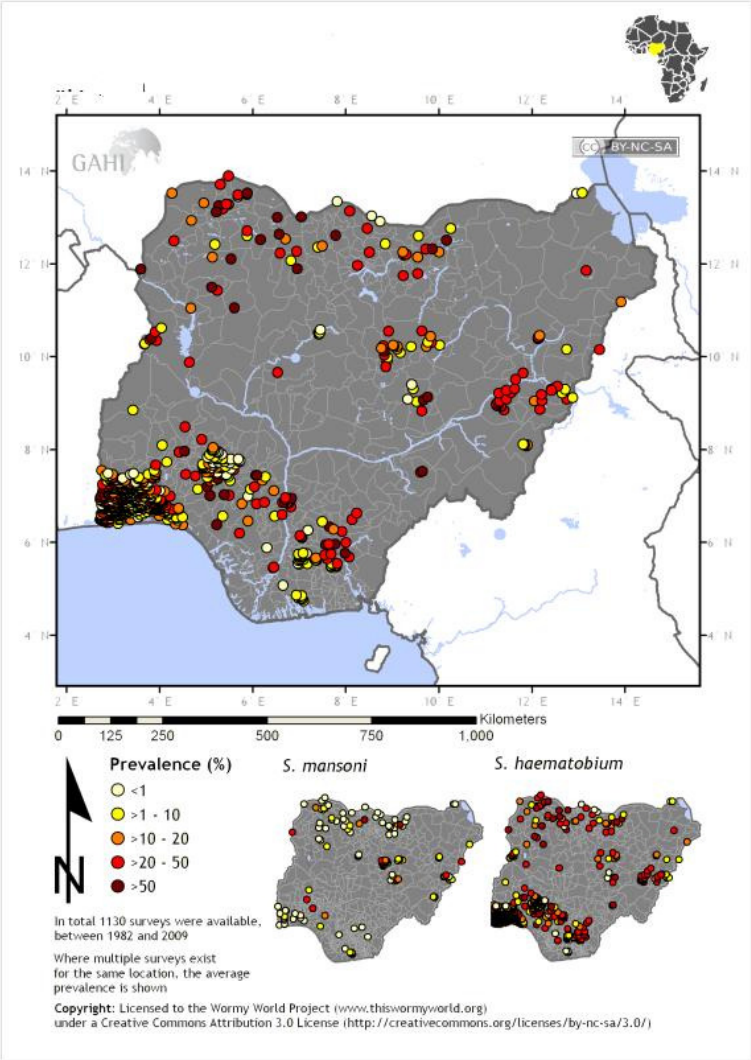
The National Programme got the first donation of 3,366,000 tablets of Praziquantel from Merck Germany for Ekiti and Ondo states through the World Health Organization in July 2009. Thereafter, there have been donations of 2,500,000 and 3,204,000 tablets of Praziquantel by Merck for 2010 and 2011 treatment years respectively. Mass Drug Administration of Praziquantel tablets is currently going on in Plateau, Nasarawa, Edo, Delta, Taraba, Ogun, Zamfara, Jigawa, Sokoto , Ondo, Niger, Ekiti and Kwara states. A total of 8, 066, 414 persons have been treated out of about 26, 248,814 persons targeted from the 11 states where MDA is currently going on.

Questions on urinary Schistosomiasis were successfully included in the final household questionnaire for the 2008 National Demographic Health Survey (NDHS) in April 2008.

3.1.4 Soil Transmitted Helminthiasis

The Soil Transmitted Helminths (STH) control programme was initiated in 2007. In line with WHO recommendation, the programme has set a target of regular administration of antihelminthic drugs to at least 75% of school-age children in endemic areas in the country at risk of morbidity.

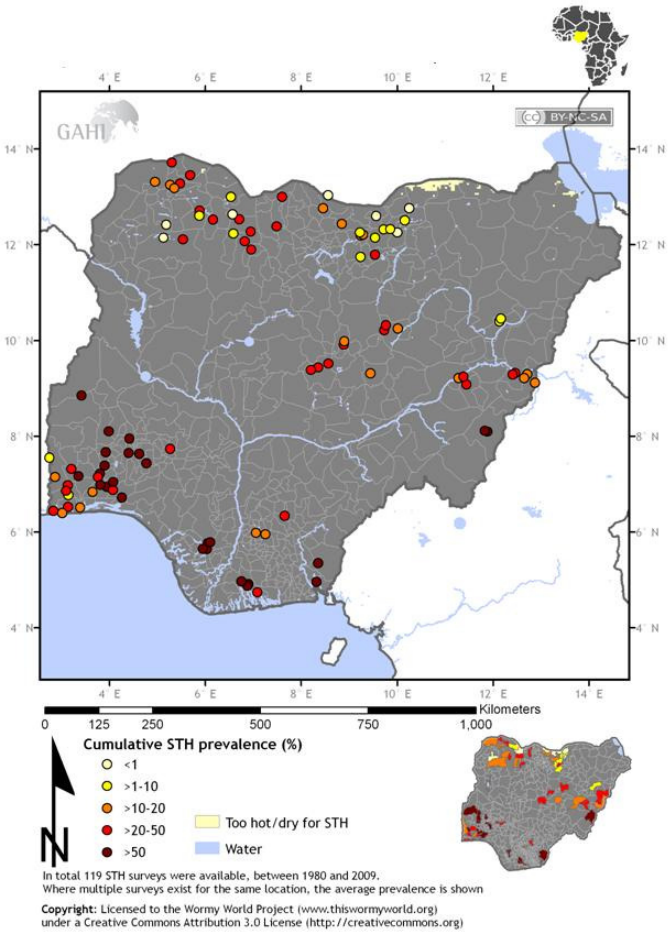
Figure 9:Maximum Points Prevalence of Schistosomiasis infection and location of S. Mansonia and S.Matobia Surveys in Nigeria



STH's are among the Neglected Tropical Diseases which are endemic in Nigeria and the country has one of the highest burden of this disease in Africa. The causative agent of soil transmitted helminths is any of the following worms; *Ascaris lumbricoides, Trichuris trichiuria, Ancylostoma duodenale and Necator americanus.* It affects mainly children-causing Anemia, Vitamin A deficiency, malnutrition, loss of appetite, retarded growth, reduced ability to learn, etc in them. STH have been mapped in a total of 190 LGAs in 16 states.

The programme is collaborating with the Federal Ministry of Education, TCC, Sight savers, Christofell Blindenmission, Partnership for Child Development/De-Worm The World, Children Without Worms, Children Investment Funds Foundation UK, Grace Outreach Coalition, WHO, UNICEF and MITOSATH in carrying out de-worming programme in schools and communities. The programme is also collaborating with WHO, Merck Pharmaceutical Company Germany, Partnership for Child Development (PCD) and De-Worm the World organizations UK for Praziquantel and Mebendazole tablets donation.

Figure 10:Distribution of Soil Transmitted Helminthes Survey Data for Nigeria and the Average District Prevalence Data



Control strategy: The strategies include:

- Morbidity control using chemotherapy i.e. Mebendazole/albendazole for the STHs targeted at school aged children; The aim is morbidity control through periodic treatment of at risk population to reduce intensity of infection and protect infected individuals from morbidity due to STH's
- Health education and promotion;
- Collaboration with appropriate stakeholders for the provision of adequate sanitary facilities, potable water supply and improved environmental sanitation.

Control strategy: the strategies include:

1.13.3 Current situation:

Integrated mapping for Soil Transmitted Helminths have been conducted in Taraba(11 LGAs) and Lagos state (7 LGAS) supported by MITOSATH, Ondo state 18 LGAs supported by SMOH/MITOSATH, Federal Capital Territory (6 LGAs) supported by the Federal Capital Territory Development Authority, Sokoto (23 LGAs), Kwara (15 LGAs), supported by Sightsavers, Niger (3 LGAs), Benue (8 LGAs), Anambra (13 LGAs), Ogun (15 LGAs) and Zamfara (15 LGAs), Enugu (18 LGAs), Ebonyi (5 LGAs), Cross River (9 LGAS) and Gombe (11 LGAs) states supported by FMOH and Jigawa (15 LGAS) supported by SMOH. Currently Zamfara, Sokoto, Kwara, Federal Capital Territory, Ondo, Ogun, Enugu and Gombe states are the only states where STH have been completely mapped. Prevalence ranged from 0%- 78% in the LGAs mapped.

The National Programme got the first donation of 2,222,428 tablets from De-worm The World through the Partnership for Child Development in 2010. Thereafter, there has been donation of 1,800,000 from Johnson and Johnson through WHO and Children Without Worms in 2011. The National Programme commenced implementation of mass de-worming using Mebendazole tablets in three LGAs (Remo North, Abeokuta North and Odeda) in Ogun state in December 2010. A total of about 1,500,137 school aged children were treated in six (Ogun, Ondo, Jigawa, Taraba, Sokoto and Kwara) states out of about 4, 768,258 persons targeted in 16 states already mapped for STH.

Some other partners have been implementing school based de-worming programmes using Mebendazole tablets in the country. The data from such campaigns are not fed into the National Programme data base. The National Programme is making efforts to strengthen linkages between the various stake holders so as to have data from other sources fed into the National data base.

Partners of the National Schistosomiasis/Soil Transmitted Helminths Control Programme include WHO, Partnership for Child Development (PCD)/De-Worm The World (DWT), Children Investment Funds Foundation (CIFF), Children Without Worms (CWW), Johnson and Johnson (JJ) and NGDOs-(MITOSATH, Sight Savers, TCC).

1.13.4 Human African Trypanosomiasis

In 1960 HAT cases were reported from several endemic foci across the country. As a result of interventions by the Nigeria Institute of Trypanosomiasis Research (NITR), the number of cases from these foci declined considerably. Between 1989 and 1996, 3,583 persons were screened in Abraka, (HAT endemic focus of Delta state) out of which 359 were sero-positive and 104 were parasitologically positive. Confirmed cases were treated with 7 fatalities recorded. In another study, a total of 4,966 persons were screened, 497 persons (10%) were sero positive and 30 (6%) of the seropositive individuals had the disease.

More recent studies in 2006 confirmed that HAT transmission is still active in the Abraka endemic focus and the same may well be the situation in many other parts of Nigeria.

1.13.5 Current Situation:

On-going passive (hospital based) surveillance over the years in three sentinel sites for HAT control and management as follows: Obiaruku General Hospital – zero case out of 43 persons tested using ICT method.

Eku Baptist Medical Centre – 4 positive cases out of 8 persons tested.

Kwale General Hospital – 1 positive case out of 72 persons tested.

Last year there were two confirmed cases of HAT in Delta state and one case in Niger state. There were 51 CATT positive cases in Jigawa state. Confirmatory diagnosis is ongoing. These results are an indication that HAT is still endemic in Nigeria and there is an urgent need to determine this current level of endemicity.

1.13.6 Dracunculiasis

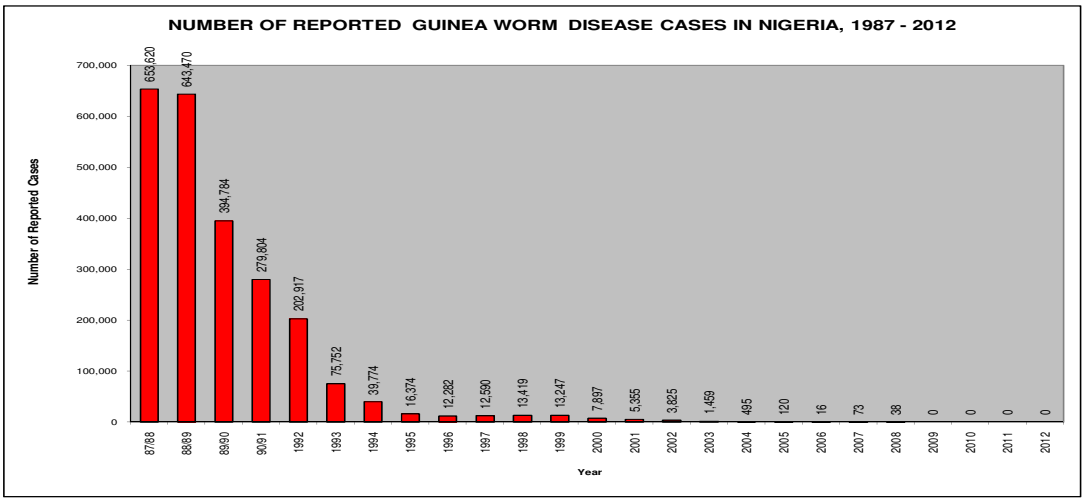
Nigeria was among the top three endemic countries in the world at the time Guinea Worm Eradication Programme was launched in the country in 1988. The global campaign to eradicate GWD was enunciated within the framework of the United Nations International Drinking Water Supply and Sanitation Decade (1981 – 1990). It is in this context that Nigeria launched the Nigeria Guinea worm Eradication Programme (NIGEP).

Nigeria reported over 653,000 cases of Dracunculiasis (Guinea worm disease (GWD)) during the case search in 1988/1989. Since then, there has been sustained case reduction with less than 500 cases reported yearly since 2004. In anticipation that it will soon enter the pre-certification phase and in order to fulfill one of the WHO criteria for certification, Nigeria inaugurated the National Certification Committee on Guinea worm Disease Eradication (NCC-GWDE) in May 2005 with the following Terms of Reference: examine the veracity of periodic NIGEP Country Reports and recommend actions needed to be taken for Nigeria to

qualify for certification. In 2008, 37 GWD cases have been reported in 5 villages showing a 99.9% case reduction rate. Transmission has since been interrupted with no cases reported after November 2008.

NIGEP is a partnership comprising principally of these institutions: The Carter Center (TCC), UNICEF, Yakubu Gowon Center (YGC), WHO. Although NIGEP target elimination dates have inevitably shifted several times since the first target date of 1995, the concerted collaborative efforts of the NIGEP partnership at all levels has resulted in very significant reduction in cases and number of villages reporting cases in Nigeria in the 20 years of the programme since 1988 as shown in Figs 11 and 12. Peak GWD transmission season in the south is during the dry season (November to February) while, transmission season in the north is June to October when stagnant ponds are formed from the rain water.

Figure 11: NO OF REPORTED GUINEA WORM DISEASES IN NIGERIA 1987-2012



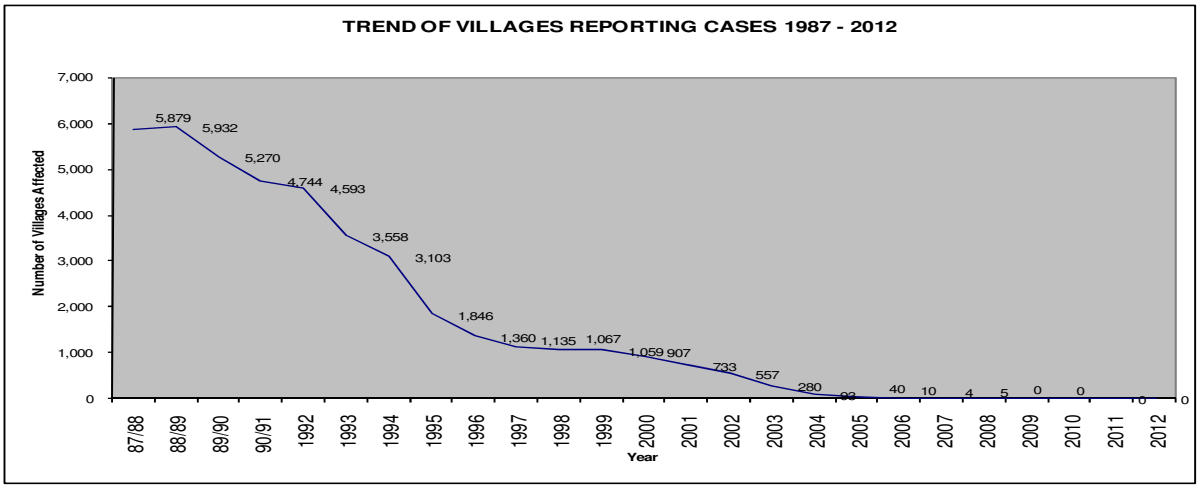


Figure 12: TREND OF VILLAGES REPORTING CASES 1987-2012

Strategies: the strategies adopted over time included:

Capacity building, Health Education using key messages for prevention of GWD, Surveillance, Case Management and Containment, Filter distribution, Chemical Treatment of eligible ponds, Safe water provision, Monitoring and Supervision, Data Management, and Advocacy

Pre-certification activities are currently being carried out and include:

- Ensuring establishment and maintenance of a sensitive, comprehensive and verifiable Guinea worm disease (GWD) surveillance system nationwide.
- Ensuring adequate GWD surveillance data management including record keeping and reporting at all levels – village, LGA, State and National.
- Strengthen NIGEP advocacy, partnership and collaboration with other disease control programmes for GWD surveillance and for maintenance of current tempo of interventions to achieve zero indigenous case report from 2009.
- Ensuring adequate safe water supply to all target villages and villages at risk as well as establish an effective and functional village level operations and maintenance system for safe water supply.
- Ensuring the NCC-GWDE achieves its mandate.

1.13.7 Current situation:

Nigeria has maintained a zero case status for Guinea worm disease (GWD) since 2009. Nationwide integrated GWD surveillance activities especially at the borders are maintained. Also nationwide awareness creation for GWD eradication and the cash reward are carried out.

1.13.8 Trachoma

The Northern half of Nigeria lies in the WHO identified 'Trachoma belt' and trachoma is the 2nd major cause of avoidable blindness in the northern Nigeria. Population of current intervention area is 12.5 million, and the population believed at risk of trachoma is 8.7 million (based on available prevalence survey estimates). A National blindness survey was completed in 2007. The finalized technical report is still being awaited. This will provide a more accurate data in due course. Figures on population of intervention areas should be reviewed

In line with the Global initiative, there is a plan to eliminate Trachoma in Nigeria by the year 2020. The Trachoma control plan is designed to take a few States for a start and gradually expand to the remaining parts of the country desiring similar attention. Selection of the initial pilot project State is based on the following criteria: prevalence of trachoma endemicity, resource availability, political commitment of the governments of the affected areas, and the needed experience in programme implementation.

The NTCP is a partnership comprising principally of these NGOs: TCC, SSI, HKI, CBM, UNICEF, WHO and MITOSATH. The programme plan duration is 6 years (2007-2012) in three equal phases of 2 years.

1.13.9 Current situation:

1.13.10 The project areas are: 10 endemic Local Government Areas (LGA) of Borno State; 6 endemic LGAs of Kebbi State; 13 endemic LGAs of Sokoto State; 6 endemic LGAs of Zamfara State; 3 endemic LGAs of Plateau State; 8 endemic LGAs of Nasarawa State; 17 endemic LGAs of Yobe State; 10 endemic LGAs of Adamawa State; 10

1.13.11 endemic LGAs of Katsina State; 26 endemic LGAs of Jigawa State; 24 endemic LGAs of Kano State, 2 endemic LGAs of Taraba..

Strategies:

The implementation of trachoma control in Nigeria is based on the comprehensive SAFE strategy:

S – Surgery; **A** - Antibiotic use; **F** - Face washing; **E** - Environmental improvements.

Surgery: To address the backlog of Trichiasis, facility and camp based surgeries are conducted. Details and implementation of these surgeries and their outcomes are contained in trachoma programme documents.

Antibiotics Distribution: Distribution of antibiotics is done from house to house and is community directed under the supervision of the health workers.

Facial cleanliness: Public health education for prevention of disease is carried out in schools and community centers. People are told about face washing, personal hygiene, water supply, latrines and the need to keep animals separate from living rooms. This is done using IEC materials.

Environmental Improvement: The NTCP is working in conjunction with the NGOs to support local communities to build latrines. The house hold and school latrines are promoted. The processes of latrine promotion start with the selection and training of masons and provision of cement by the supporting partners. The community supply materials and labour on their part. The mid-term achievement of implementing the SAFE strategy has led to increased uptake of services.

1.13.12 Leprosy

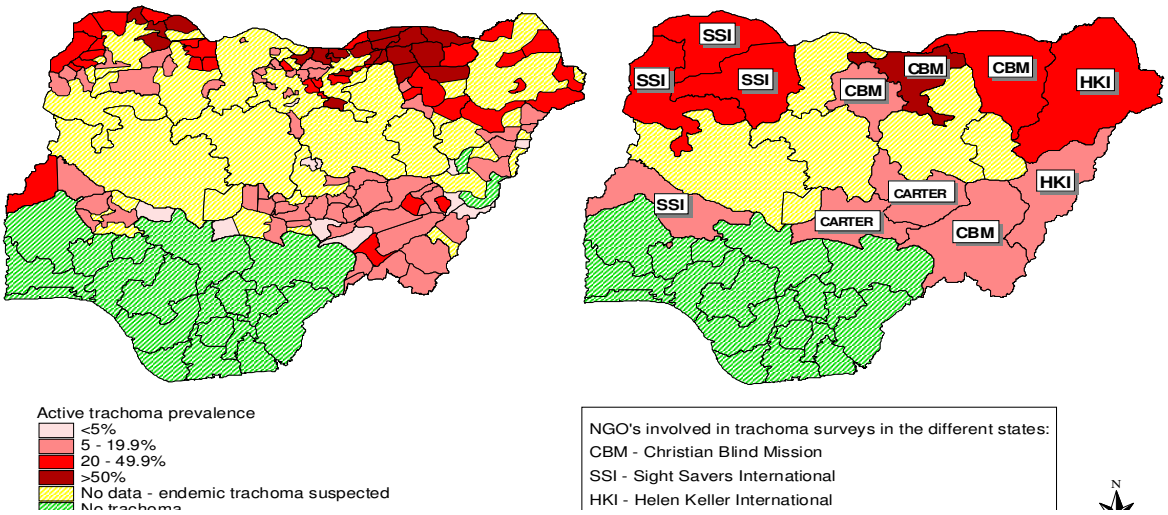
Nigeria is still one of the leprosy endemic countries in the world. Presently, Nigeria has a combined TB and Leprosy programme (NTBLCP) whose implementation was launched in 1989 but became fully operational in1991. Since then, a total of 111,788 leprosy patients have been successfully treated with MDT and in 1999, the country achieved the WHO elimination target of less than 1 case per 10,000 populations NTBLCP is saddled with formulating policies on the control of the two diseases. It incorporated Buruli ulcer in 2005. The implementation of these policies is done at the State and LGA levels by Various STBLCP.

Each of the 36 States and FCT has a State TBL Control Programme Manager called the Control Officer. The Control officer is the head of the State team that is mainly responsible for programme management and technical guidance to the LGAs. The LGA is the operational level of the programme. The LGA TBL supervisor is responsible for programme management at LGA level. Leprosy and TB services have been integrated into the general health care services.

All registered patients are treated with Multi-Drug Therapy (MDT) which was introduced to the programme in 1989 and country wide 100% patient coverage achieved in 1995. The implementation of the MDT as the strategic intervention for Leprosy

Figure 13: Map 1 Distribution of active trachoma in children in Nigeria by L.G.A.

Map 2 Distribution of implementing partners for trachoma control in Nigeria.

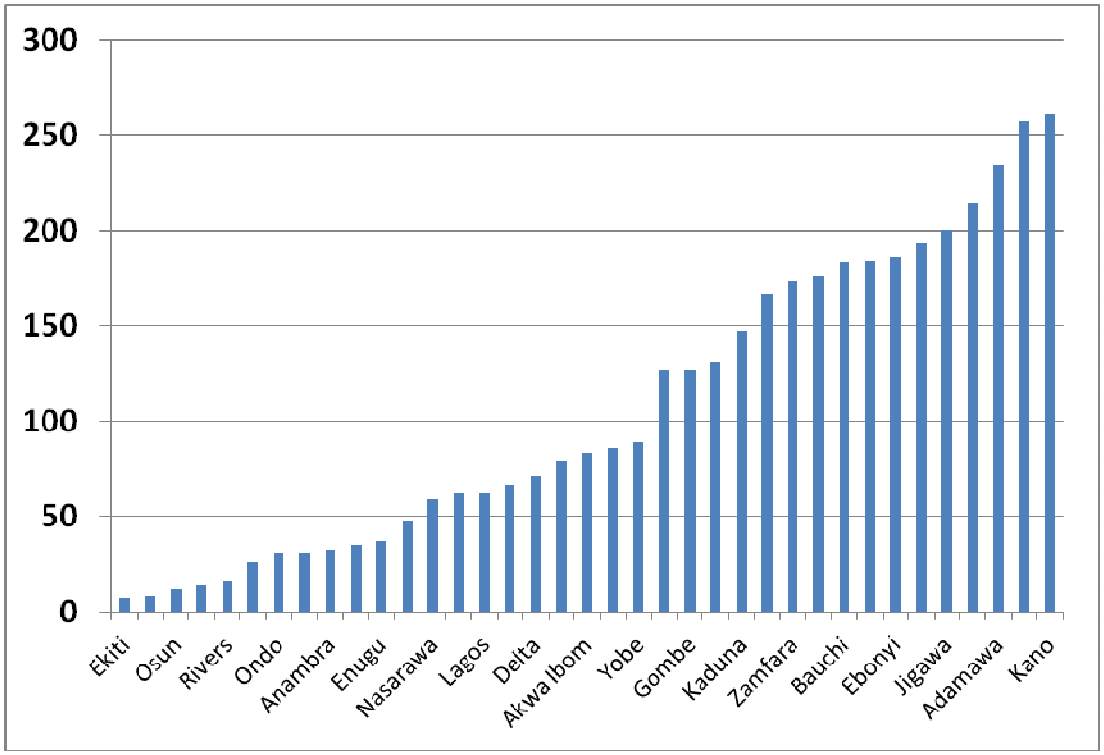


elimination has resulted in a rapid decline of the number of registered leprosy cases from nearly 200,000 cases in 1989.

The WHO elimination target of 1 case per 10,000 population has been achieved at the national level and in all Zones. With both prevalence rate and case detection rate below 0.5 per 10,000, Nigeria may well be described as low endemic for leprosy

Despite the fact that Nigeria has reached the elimination target, the number of new cases reported yearly in the last five years continues to be high (more than 5,000 cases per year) and there still exists backlog of grade 2 disabilities. About 12% of new cases have grade two deformities, which indicate late reporting. The proportion of children with the disease is also high (9.4% in 2005) indicating ongoing transmission of the disease in the communities. It is pertinent to note that at sub-National level some states are yet to attain the elimination target. In addition, substantial numbers of persons affected by leprosy require physical and socioeconomic rehabilitation. A total of 6,906 cases remained on the leprosy registers nationally at the end of 2008. . Leprosy cases are reported from all states in the federation including FCT.

Figure 14: Chart of New Leprosy Cases in States (2010)



A total of 3,913 cases were detected in 2010, 92%of them were classified the infectious MB cases and 42.5% were females. This gives a case detection rate of 0.30 per 10,000 population or 3 cases in every 100,000 Nigerians. The proportion of children among new cases detected is 9.7% nationally in 2010 (see figure 10). Despite improvement seen in case finding of leprosy cases over the years, many new cases already with visible deformities (WHO Grade 2 disabilities) continue to report for treatment. Compared to the target of 5%, the national grade 2 disability rate of 12% at the end of 2010 shows the disability rate of new cases is high and new case detection occurs relatively late.

1.13.13 Buruli Ulcer

Buruli ulcer (BU) is a chronic, indolent, necrotizing infectious disease of the skin caused by *Mycobacterium ulcerans*. Even though the disease is curable, it still disables, deforms, debilitates and stigmatizes due to late diagnosis and case management. The distribution of the disease is patchy often in relatively inaccessible areas especially aquatic environments. About 70% of those affected are children below 15 years of age. There is no sex or race preference. The exact mode of transmission is still unknown.

Buruli ulcer was first reported in Nigeria in 1967 by Gray, Kingama and Kok among the Tiv in Benue and Bambur in Adamawa States. The disease was also reported among Caucasians living on the campus of University of Ibadan who were swimming in artificial lake. Another set of 10-15 cases were reported yearly in TB and Leprosy Hospital, Ogoja in Cross River State. Prof.Onuigbo (1970 – 1990) reported 43 cases that came from Enugu in Enugu State and Afikpo in Ebonyi State. Many Nigerians from Ogun, Edo, Oyo and Cross River States have been treated in neighbouring countries.

Nigeria is a Buruli ulcer endemic country and is located between two confirmed Buruli ulcer endemic countries (Benin and Cameroon and sharing the same BU favouring factors like the environment in terms of weather, latitudes, rivers and marshy areas and same rural activities as farming, mining and forestry. However, only few cases were reported in medical and scientific papers. Buruli ulcer control programme is still in the emerging phase. It was created and merged with Tuberculosis and leprosy control programme in 2005.

The overall goal of BU control is to reduce the morbidity, disabilities and socio-economic consequences caused by the disease.

The specific objectives are as follows:

- To detect and treat early active cases of BU
- To provide appropriate care (antibiotics, surgery and prevention of disabilities) including referrals according to standardized guidelines.
- To ensure BU patients with disabilities receive appropriate rehabilitative care
- To include BU as part of the integrated disease surveillance system
- To promote relevant research on the epidemiology, diagnosis, treatment and prevention of BU
- To advocate and mobilize resources for the programme

Strategies: Adopted from the Global Buruli Ulcer Initiative (GBUI)

- Advocacy, social mobilization and partnership
- Staff training on early identification and diagnosis
- Early and community-based case detection
- Confirmation of cases
- Case management (antibiotics, surgery and prevention of disabilities)
- Strengthening health structures
- Supervision, monitoring and evaluation

1.13.14 Current situation

At the moment there is no vibrant Buruli ulcer control programme in Nigeria. In November 2006, a joint WHO and FMOH team was in the field for assessment of BU situation in Akwa Ibom, Anambra, Cross River, Ebonyi and Enugu States. The exercise was after: Sensitization of TBL Programme Managers (2005 and 2006)

Advocacy and IEC campaigns in the selected states in June 2006

Sensitization of Health workers in selected states (June –August 2006)

Identification of suspected cases by health staff (June-November 2006)

Assessment was done in November 2006 to confirm the suspected cases whose specimens were sent to Institute of Tropical Medicine, Antwerp, Belgium.

There were 37 suspected cases examined; 9 active and 5 inactive cases confirmed; 4 out of 9 active cases confirmed by PCR at Institute of Tropical Medicine, Antwerp, Belgium. Advocacy and assessment visit to Ogun State was carried out in January, 2009 2 Communities were visited and a number of suspected cases were identified. 4 cases confirmed by PCR in Ogun State. BU has been reported from the following states-Ogun, Akwa Ibom, Anambra, Cross River, Ebonyi, Benue, and Enugu.

Sensitization training for GHWs was done in Akwa Ibom, Benue, and Ebonyi in 2011.

GLRA is doing a pilot project on case detection and management in Ogoja, Cross River State.

WHO supplied Streptomycin and Rifampicin in December 2009. The drugs were distributed to the Ogun, Anambra, Ebonyi, Cross River, Akwa-Ibom and Kwara states

There is evidence that Buruli ulcer is gradually increasing in incidence. The disease can suddenly appear in a new area which has previously been free of disease. But most cases of Buruli ulcer occur in poor rural communities. There is need for basic data to help plan effective Buruli ulcer control in Nigeria and thus a vital necessity to conduct mapping of this disabling but curable disease.

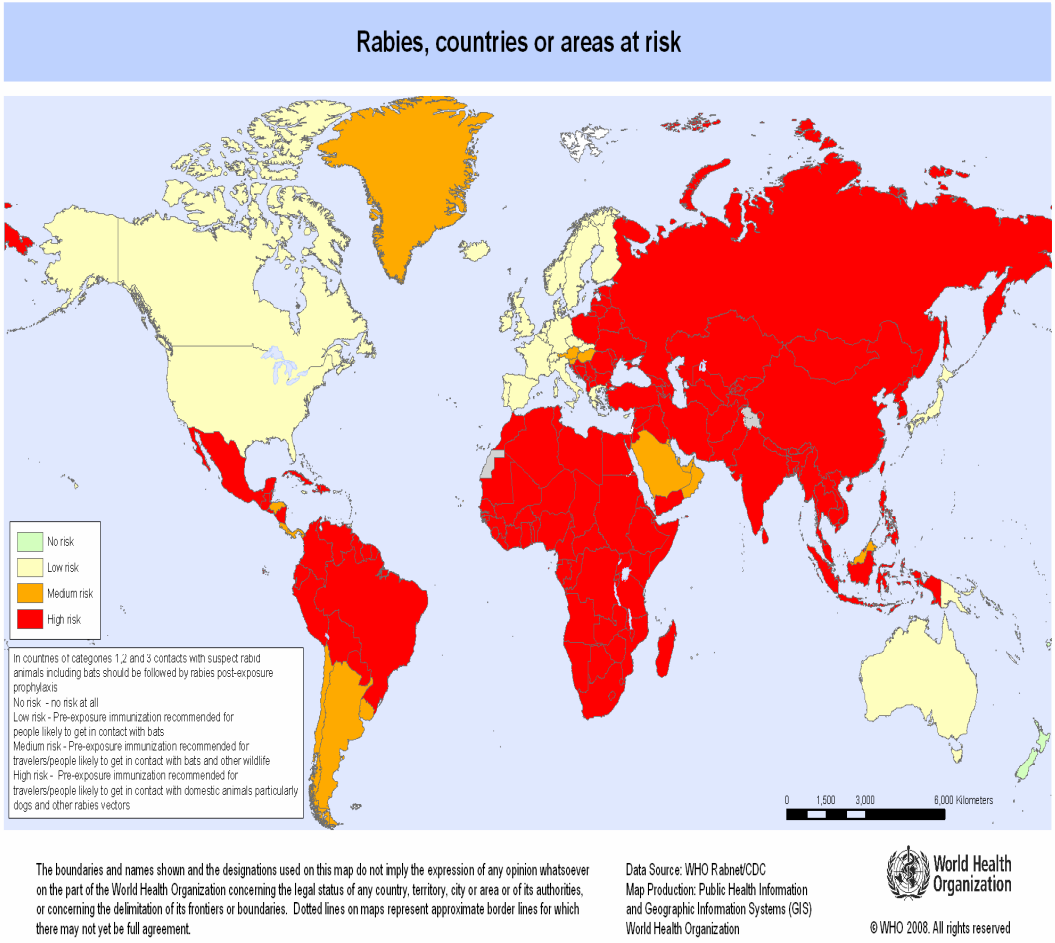
1.13.15 Rabies

Rabies is a zoonotic disease that results from bites of rabid animals. It is widely distributed across the globe, with only a few countries (mainly islands and peninsulas) being free of the disease. Many animal species are involved in the maintenance and transmission of the disease in nature. Infected wildlife species, including bats, can transmit rabies to humans, but the total number of such cases remains limited compared with the annual number of human deaths caused by dog-transmitted rabies.
By contrast, canine rabies predominates in most of the developing countries of central and South America, Africa and Asia, where the greater burden of human rabies falls. More than 90% of cases of human rabies are transmitted by dogs; most deaths occur in Asia and Africa.

Map production: Neglected Zoonotic Diseases (NZD), Department of Neglected Tropical Diseases (NTD), World Health Organization, 2009

Globally, rabies is the tenth leading cause of death due to infections in humans. More than 99% of all human deaths from rabies occur in the developing countries and almost half of those dying from rabies and requiring rabies immunoglobulin are children less than 15 years old.

Figure 15: Rabies, Countries or areas at risk



Strategies:

Strategies employed in rabies control include:

i. Preventive measures through the elimination of rabid animals using vaccination techniques
ii. Early clinical diagnosis (as there are no laboratory tests to diagnose rabies infection in humans before the onset of clinical disease
iii. Treatment: All cases of suspected exposure to rabies should be treated as soon as possible to prevent the onset of symptoms and death.

1.13.16 Current situation

In Nigeria there is paucity of data on the number of people affected or at risk for Rabies infection. Little is known about the distribution of endemic foci within the Local Government areas in the various states of the federation especially as there is no focused control programme for the disease as well as a very low suspicion index among clinicians and perception of risk in the

general public. Mapping for Rabies needs to be conducted across the entire country as a measure of obtaining baseline data on its burden and spread in the country.

1.13.17 Leishmaniasis

This disease is caused by any of a number of species of protozoa in the genus *Leishmania*. There are several major clinical types of this infection including cutaneous, diffuse cutaneous, muco-cutaneous and visceral leishmaniasis. *In Nigeria the type that is common is cutaneous leishmaniasis*, with evidence of Cutaneous leishmaniasis (CL) being available. CL, also known as oriental or tropical sore, occurs in various parts of the world, mainly in tropical and subtropical regions. In the African continent, CL due to *L. major, L tropica* and *L. aethiopica* is unevenly distributed from the northern to the southern areas of the continent.

A common estimate of the worldwide annual incidence is 600,000 newly reported clinical cases, an overall prevalence of 12 million cases and an estimated population at risk of about 350 million in 88 countries. There is probably an even greater difference between the number of cases actually occurring and the number usually reported due to factors such as discontinuous distribution of transmission sites, numerous cases that are undiagnosed, some misdiagnosed and the number of asymptomatic cases.

Current situation: In Nigeria the endemicity of Leishmaniasis is not known, except a few articles by researchers. There is presently no focused control programme for the disease. Mapping for the disease needs to be conducted across the entire country to obtain baseline data on its burden and spread in the country.

1.13.18 Loasis

Loa loa is a filarial parasite transmitted by the vector *Chrysops* which is mainly found in the rain forest zones of West and Central Africa. Serious adverse events have been reported, sometimes fatal, in areas where there are high levels of microfilaremia and in which Ivermectin is being distributed for the control of Onchocerciasis. This informed the decision by the Mectizan Expert Committee (MEC) of the Mectizan Donation Program (MDP) in collaboration with the Technical Consultative Committee of the African Programme for Onchocerciasis Control (APOC) to issue guidelines for the treatment of Onchocerciasis-endemic areas that are co-endemic for loaisis.

Prior to this, under the auspices of a World Health Organization/TDR multi-site study, a tool for the rapid assessment of Loaisis was developed based on the clinical symptoms of the disease. This tool is based on a restricted definition of eye worm i.e. history of eye worm confirmed by photograph and duration of last episode (1-7 days). By the analysis, if more than 40% of respondents in a village have a history of eye worm, the level of *Loa loa* endemicity and the risk of adverse drug reactions is predicted to be too high for routine treatment with Ivermectin. Such villages are classified as those at high risk of Loa-loa-related adverse reactions to Ivermectin and should be excluded from mass administration programme until the specified *special provisions* are in place to quickly detect and manage SAEs.

Rapid assessment using this tool has been done in over 400 communities in 35 LGAs in Akwa Ibom, Benue, Cross River, Edo, Ekiti, Kwara, Niger, Ogun, Ondo, Osun, and Oyo States of Nigeria. The results indicated about 40 communities, most of which already covered by Ivermectin treatment, having a prevalence of more than 40%. So far, there have been no reports of SAEs associated with *Loa-loa* co-endemicity.

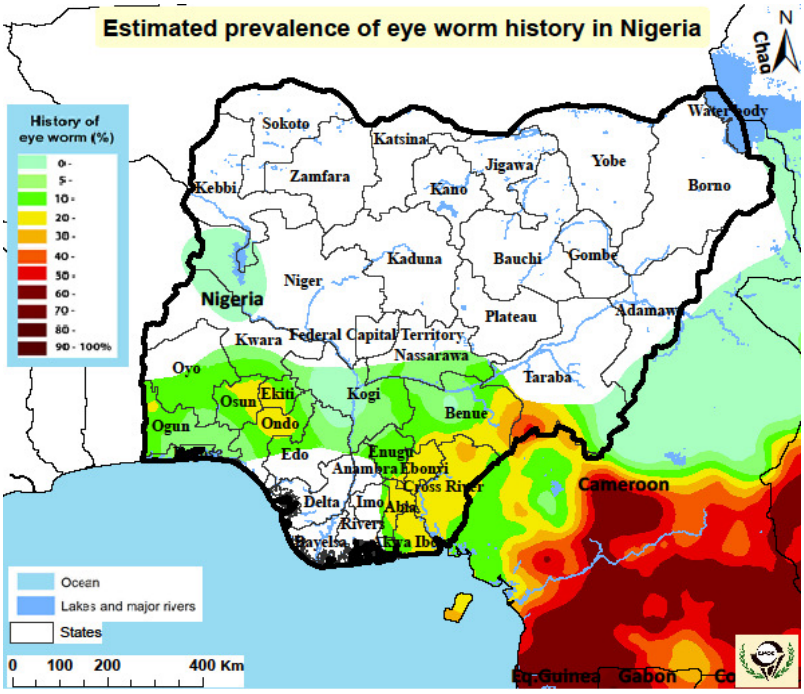
Nigeria is one of the countries in Sub- Sahara African countries with the highest burden of most of the Neglected Tropical Diseases. A review of the NTDs co-endemic map showed that most of the Neglected Tropical diseases are found to be endemic in almost all the States in Nigeria. Refer to

and annex 6 for more details. The situation analysis of NTDs in Nigeria is shown in Table 3.

Most of the States in Nigeria are co-endemic for three or more of the Neglected Tropical Diseases (NTDs) (see table 3). Only three of the NTDs have been fully mapped; Onchocerciasis, Guinea Worm Disease and Leprosy. Endemicity of Lymphatic Filariasis has not been fully established. The endemic situation of the disease will be established before the end of the year when its epidemiological mapping using Immunochromatographic Test (ICT) would have been concluded. Currently, there is little epidemiological data available for Buruli Ulcer, Human African Trypanosomiasis (HAT) and Soil Transmitted Helminthiasis (STH). The available information on Schistosomiasis and STH is based on research reports/studies.

The National Steering Committee on NTDs at its fifth meeting recommended integrated mapping of some of the NTDs as imperative before the commencement of Mass drug Administration

Figure 16: Estimated prevalence of eye worm history in Nigeria



1.13.19 Co-endemicity of Neglected Tropical Diseases in Nigeria

Figure 17: NTDs Co endemicity Map – Nigeria

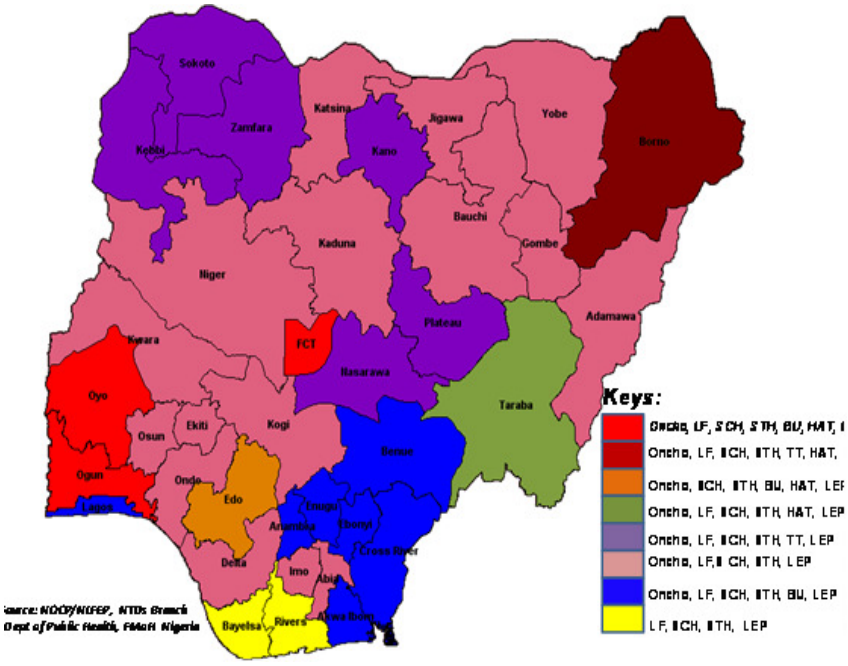


Table 3 SITUATION ANALYSIS OF NEGLECTED TROPICAL DISEASES (AS OF MARCH 2012)

S/N	State	ENDEMIC NTDS									
		Oncho	LF	SCHISTO	STH	Trachoma	BU	HAT	Leprosy	GWD	Malaria
1	Abia	+	+	+	+				+		+
2	Adamawa	+	+	+	+	+			+		+
3	Akwa Ibom	+	+	+	+		+		+		+
4	Anambra	+	+	+	+		+		+		+
5	Bauchi	+	+	+	+				+		+
6	Bayelsa	-	+	+	+				+		+
7	Benue	+	+	+	+				+		+
8	Borno	+	+	+	+	+	+		+		+
9	Cross River	+	+	+	+		+		+		+
10	Delta	+	+	+	+		+	+	+		+
11	Ebonyi	+	+	+	+		+		+		+
12	Edo	+	+	+	+				+		+
13	Ekiti	+	+	+	+				+		+

S/N	State	ENDEMIC NTDS									
		Oncho	LF	SCHISTO	STH	Trachoma	BU	HAT	Leprosy	GWD	Malaria
14	Enugu	+	+	+	+				+		+
15	Gombe	+	+	+	+				+		+
16	Imo	+	+	+	+		+		+		+
17	Jigawa	+	+	+	+	+			+		+
18	Kaduna	+	+	+	+				+		+
19	Kano	+	+	+	+	+			+		+
20	Katsina	-	+	+	+	+			+		+
21	Kebbi	+	+	+	+	+			+		+
22	Kogi	+	+	+	+		+		+		+
23	Kwara	+	+	+	+		+		+		+
24	Lagos	-	+	+	+				+		+
25	Nassarawa	+	+	+	+	+	+	+	+		+

S/N	State	ENDEMIC NTDS									
		Oncho	LF	SCHISTO	STH	Trachoma	BU	HAT	Leprosy	GWD	Malaria
26	Niger	+	+	+	+			+	+		+
27	Ogun	+	+	+	+		+		+		+
28	Ondo	+	+	+	+				+		+
29	Osun	+	+	+	+				+		+
30	Oyo	+	+	+	+		+		+		+
31	Plateau	+	+	+	+	+			+		+
32	Rivers	-	+	+	+				+		+
33	Sokoto	+	+	+	+	+			+		+
34	Taraba	+	+	+	+	+		+	+		+
35	Yobe	+	+	+	+	+			+		+
36	Zamfara	+	+	+	+	+			+		+
37	FCT, Abuja	+	+	+	+			+	+		+

Key: **+ =** Endemic
- = Not Endemic

LF = Lymphatic Filariasis
Oncho = Onchocerciasis
STH = Soil Transmitted Helminthiasis

HAT= Human African Trypanosomiasis
Schisto = Schistosomiasis
BU = Buruli ulcer

Table 4:NTDs mapping status

S/No.	Name of endemic NTD	No. of LGAs suspected to be endemic	No. of LGAs mapped or known endemicity status	No. of LGAs remaining to be mapped
1	Oncho	0	430	0
2	LF	541	705	69
3	Schistosomiasis	215	220	578
4	STH	181	190	596
5	Trachoma	774	156	618
6	Guinea worm disease	0	774	0
7	Leprosy	774	250	524
8	Buruli ulcer	155	0	155
9	*HAT	774	2	774
10	Leishmaniasis	774	0	774
11	Rabies	774	0	774

*Pilot screening in selected areas in 2 LGAs in Delta State

NTD programme implementation

Table 5: Summary information on exiting preventive chemotherapy programmes

NTD	Date programme or intervention started	Total No. of LGAs targeted	No. of LGAs covered *(Geographic coverage)	Total population in target district	No. of (percentage) Population Covered	Types of interventions	Key partners
LF	1997	541	175(32.3%)	106,124,877	(17.5%) 18,591,932	IVM+ALB	**WHO,MDP,GSK,TCC,SSI,CBM,MITOSATH, HKI**
Oncho	1992	430	430 (100%)	38,332,140	(80%) 30,477,580	MDA (IVM)	**APOC, NGDOs Coalition in Nigeria**
SCH	2009	500	49 (9.8%)	43,033.387	1,322,861	MDA	**WHO, MERCK Germany, De Worm The World/PCD, CIFF, CWW, J & J Pharmaceuticals, NGDOs**
STH	2010	500	20 (2%)	34,566,184	85,153	MDA	**WHO, PCD/ Deworm The World, NGDOs**
Trachoma	2001	156	10 (1.6%)	14,395,593	1,100,197	MDA	**Sightsavers, TCF, HKI, CBM, V2020 Support Programme, MITOSATH**

1.14 Case management:

Table 6: Summary information on exiting case management programmes

NTD	Date programe or intervention started	Total No. of LGAs targeted	No. of LGAs covered *(Geographic coverage)	Types of interventions	Key partners
HAT	2006	200	21 (10%)	Active case detection and facility management	WHO, FIND, AU-PATTEC, NITR, Federal Ministry of Science and Tech., Federal Ministry of Agric., Federal Ministry of Environment, Academia
Buruli Ulcer	2008	60	3 (5%)	Active case detection and facility management	ILEP, WHO
Leprosy	1989	250	150 (60%)	Active case detection and facility management	ILEP, WHO
Lymphatic filariasis	2000/2011	541	103 (19%)	Cleaning of lymphoedema and use of anti-bacterial and anti-fungal creams for secondary infection, hydrocele surgery	WHO, MDP, GSK, TCC, SSI, CBM, MITOSATH, HKI
Leishmaniasis	Not started	774	0 (0%)	Active case detection and facility management	
Trachoma	2001/2009	156	10 (1.6%)	Triachiasis surgery, tetracycline, Azithromycin	Sightsavers, TCF, HKI, CBM, V2020 Support Programme, MITOSATH
Schistosomiasis	1988/2009	500	49 (9.8%)	Active case detection and facility management	Sightsavers, TCC, WHO, MITOSATH, Merck Pharmaceutical Germany
Rabies	1988	774	0 (0%)	Active case detection and facility management	

*Geographical Coverage = No. of districts covered by the programme. Total No. of endemic districts in the country

1.15 Gaps and Priorities

From the table of the SWOT analysis below, the obvious gaps identified include bureaucratic bottle necks in the process of policy development, late or non release of counterpart funds at all levels of government, inadequate structures on ground at the National office, non functional Zonal Offices, inadequate motivation for personnel and no focal data collation officer for NTDs. The priorities of NTD Programme should include high level advocacy to policy makers for release of counterpart funds and increased funding of the NTDs, complete the mapping of the NTDs, capacity development in case management especially at the health facility level, ensure functionality of the National and zonal officers with budgetary allocations, identify focal data collation officer for NTD, strengthen collaboration with partners, NGDOs, Universities & relevant Ministries.

Table 7: SWOT Analysis of NTDs Programme

Strengths	Weakness	Strengths counteracting weaknesses	Opportunities	Threats	Opportunities counteracting threats
Advocacy, coordination and partnerships					
Strong legislative arm of government to make policies. Available advocacy personnel and tools to solicit for required financial and administrative support. Implementation coinciding with newly elected government in the country.	There are fewer advocacy champions to make significant impact. Slow policy development process.	Identify NTD Advocacy champions from the corporate world. Provide enabling environment to speed up policy development and implementation	Nigeria has new elected political officers that are eager to achieve. Availability of great past leaders that can serve as ambassadors to advocate for support. Availability of National Health Bill Availability of the National Health Development Strategic Plan 2011-2015	Policy inconsistencies Apathy of political leaders, general public and community leaders Difficult and slow policy development process.	Adoption of the NHDSP & National Health Bill would give policy direction for the implementation of NTD activities. Identification of past leaders, opinion leaders would greatly assist in mobilization of resources for NTDs activities. Implementation of the National Health Bill and NHDSP would fast track NTD policy development process.
Planning for results, resource mobilization and financial sustainability					

Availability of capable and adequate manpower to plan activities. There are defined policies backed by laws. Available potential local donors for programme support.	Late or non release of counterpart funds at all levels. Lack of motivation of personnel to perform tasks. Poor resource mobilization skills.	Utilization of available manpower to implement planned activities Provision of enabling environment and tools / funds that will ensure motivation of funds Mobilization of potential local donors and ensuring adequate budgetary provision and release by Government.	Integration of activities provide good basis for adequate and comprehensive planning. Available potential donors of planned activities. Availability of Multi-national organization funding for Health Sector like HIV, TB & Malaria	Bureaucratic bottle necks. Poor leadership.	A well integrated and well equipped NTD programme would reduce or eliminate the present bureaucratic bottle necks and also provide the requisite leadership.
Scale up access to interventions, including treatment & service delivery, drug supply, logistics & capacity building					
Availability of defined structures for programme Implementation. Availability of clear strategies, protocols, and guidelines for successful programme delivery. Adequate technical and logistic support from supporting NGDO partners and other stakeholders. Availability of technical facilitation skills and manpower for NTD.	Attitude of some personnel who promote parallel implementation of activities. Poor knowledge and inadequate staff for case detection and in the management of cases of NTD morbidity among health workers Inadequate utilization of logistics for activities. Competition for scarce government resources	Capacity building for various Programme Managers to understand the concept of NTD collaboration. Provision of adequate personnel trained on case detection and management. Strengthening of National and zonal NTD offices with adequate personnel and logistics. Provision of adequate resources for National and Zonal NTDs offices.	The success of ongoing CDTI activities will boast other NTD integration. Some activities of NTDs could be incorporated into other public health interventions for leverage in funding. Implementation of activities cut across different ministries that can foster better collaboration. Integration of NTD activities. Availability of technical support from partners Availability of local Drug	Insecurity from ethnic and political upheavals. Natural disasters The sustainability question after the withdrawal of external support. Brain drain of capable	New Transformative Government has promised secured and peaceful Nigeria. Available multinational funding support if properly harnessed will sustain NTD after Donor withdrawal.

Effective and Integrated utilization of logistics for already existing activities to further NTD, The advantage of inter-sectoral collaboration between ministries, departments and agencies. Availability of experienced Technical Officers and in-country Consultants who have been involved in epidemiological assessment for the various NTDs. Existence of structure on successful NTDs Programmes such as Guinea Worm Eradication and Onchocerciasis Elimination Programmes.	for performance. National and Zonal structures not adequately empowered to perform. Lack of comprehensive epidemiological data on most of the NTDs in Nigeria. Poor collaboration between individual NTDs Programmes. .Therapeutic and Geographic coverage for most of the NTDs are still unacceptable. Lack of implementation funds.	Identify and mobilization of resources needed to complete mapping of most of the NTDs so as to fill the mapping void. Availability of partners who are ready to support mapping/baseline survey of the NTDs. Identify and mobilization resources needed to scale up Mass Drugs Administrations in endemic communities and LGAs. Availability of partners who are ready to support scale up of programmes interventions. Increased government commitment to NTDs by inclusion of NTDs in accessing MDGs funds.	manufacturers New elected Government in place. Availability of experienced Technical Officers and in-country Consultants. Global Commitment for NTDs elimination and eradication. Global Commitment for NTDs Elimination. Recent increases in NTDs drugs donations. Availability of MDGs funds	personnel. Lack of motivation to perform tasks. Insecurity in some parts of the country. Lack of incentive for Community Drugs Distributors (CDDs) and School teachers	Government addressing the current security challenges in some parts of the country. Provision of incentives to CDDs and school teachers.

NTDs monitoring, evaluation, surveillance & operations research					
Different MIS materials for individual disease activities exist to guide implementation. Most NTDs are captured in the HMIS & IDSR	Integrated MIS for NTD is absent. Absence of functional community based surveillance system	Harmonized all MIS to an integrated MIS for NTD	FMOH emphasis on integration for all NTD activity implementation and policy development.	Poor communication network. In many rural communities. Too many forms to be filled at the lower levels by the health worker	

1.16 The gaps identified can be addressed in the following areas to strengthen the control of NTDs.

- Planning
- Coordination and management
- Partnerships
- Implementation of interventions
- Surveillance, monitoring and evaluation.

1.17 Planning

Adequate planning is critical to a successful NTDs programme management, the Nigeria NTD master plan was developed with the input of the entire Programme through a collaborative effort. This plan is in line with the national health policy, NTDs policy and the new NSHDP (2011-2015).

1.18 Coordination and management

The Implementation of NTDs programmes have been vertical and improperly coordinated. This has resulted in inefficient use of the limited resources. With the current integrated approach, advocacy and coordination will be done simultaneously. The National NTDs office will coordinate all activity while the disease specific goal will be the focus. The recently passed health bill has clearly defined the roles of the three tiers of government in the health sector.

1.19 Partnerships

The development of this master plan was a collaborative effort of all partners from their areas of comparative advantage. The partners in health have supported Nigeria over the years and have participated in the development of this master plan. It is envisaged that they would support the implementation of activities and build structures that would ensure sustainability.

1.20 Implementation of Interventions

Implementation of interventions will largely be community based in addition to school based for Schistosomiasis and STH Programme . The health system will be strengthened to promote community participation which is already being practiced by some programmes. Protocols and guidelines for NTDs will replace disease specific tools and the line ministries, and other implementing partners will cooperate and collaborate at all stages of operation. It is hoped that the required drugs will continue to be provided by partners including local production of essential drugs to compliment donor effort.

1.21 Surveillance, Monitoring and Evaluation

The IDSR and the HMIS will be strengthened to provide unified data on NTDs and especially to make functional community-base disease surveillance. However the Programme also plans to conduct self-monitoring of the progress of implementation through an in-built M&E system.

2 PART TWO: NTD STRATEGIC AGENDA

2.1 Mission and Goals:

2.1.1 Mission:

To implement NTD policy and plan in order to deliver effective, efficient, quality and affordable health services to strengthen the national health system and achieve improved health status of Nigerians for accelerated national economic growth and sustainable development.

2.1.2 Vision:

To have a country free of the Neglected Tropical Diseases.

2.1.3 Strategic Goal:

To eliminate NTDs, achieve global targets and significantly improve the life expectancy and quality of life of Nigerians.

2.1.4 Programme focus

To progressively reduce morbidity, disability and mortality due to NTDs using integrated and cost-effective approaches with the view to eliminating NTDs in Nigeria by the year 2020.

2.1.5 Strategic Milestones:

Quarterly monitoring and evaluation of input and output indicators and final evaluation of programme impact.

2.1.6 Strategic Priorities:

- Strengthen government ownership, advocacy, coordination and partnerships.
- Enhance planning for results, resource mobilization and financial sustainability of national NTD programmes for NTD management, control and elimination..
- Scale-up access to interventions, treatment and system capacity building.
- Enhance NTD monitoring and evaluation, surveillance and operations research.

Table 8: Strategic Objectives

Strategic Priorities	
Strengthen Government, Ownership, Coordination and Partnerships	Strengthen coordination mechanisms for the NTD control at national and sub-national levels
	Strengthen and foster partnerships for NTDs at all levels.
	Enhance NTD programme performance reviews for decision making
	Strengthen advocacy, visibility and profile of NTD control programmes
Enhance Planning for Results, resource mobilization and financial sustainability of National NTDs Programme	Develop integrated multi-year strategic plan and annual operational plans
	Enhance resource mobilization approaches and strategies at national and sub-national 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 & Service Delivery Capacities	Scale up integrated preventive chemotherapy packages
	Scale up integrated case-management-based diseases interventions, especially for leprosy, Guinea worm disease, HAT, Buruli Ulcer and endemic Loasis, Leishmaniasis and human rabies prevention.
	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, Evaluation, Surveillance and Operations Research	Enhance monitoring of national NTD programme performance and outcome
	Strengthen the surveillance of NTDs and response to epidemic-prone NTDs.
	Support operational research, documentation and evidence
	Establish integrated data management system and support impact analysis for NTD in the States and LGAs as part of the National NTD Plan.

3 PART THREE: OPERATIONAL FRAMEWORK

The Nigerian NTD programme is an integrated package of the existing NTD disease-specific programmes. Each programme will maintain the disease-specific focus goal, objectives and strategies in the integrated package. The tables below show the different NTDs and their objectives, interventions, delivery channels that will enable the achievement of their individual disease-specific national goal as well as the global programme goal.

3.1 NTD Programme Focus

It is important to note that the individual disease programme shall focus on achieving its goals and therefore contribute to the achievement of the overall national NTD goal.

Table 9: Programme Summary Components of WHO Recommended Strategies for Control of Endemic NTDs

PROGRAMME AND GLOBAL GOALS	NATIONAL GOAL	OBJECTIVES	STRATEGIES/INTERVENTIONS	DELIVERY CHANNELS	TARGET POPULATION	KEY PERFORMANCE INDICATORS
1.Lymphatic Filariasis Elimination Goal: Eliminate as a global public health problem by 2020.	To eliminate LF as a public health problem by 2016	To complete mapping by 2013 To interrupt transmission of LF in 60 LGAs by 2014 To reduce the morbidity and disability due to LF by 25%. To implement MDA in 100% of endemic LGAs by 2014 To achieve 80% therapeutic coverage during the annual MDA in treated IUs.	Annual Ivermectin and Albendazole administration to all at risk Vector control with RBM Personal hygiene and exercises of affected limbs Hydrocelectomies Health education and promotion of behavioural change	Use of CDI Structure	Age ≥ 5 years in endemic communities	1..Number of LGAs completely mapped for LF 2. Number of endemic LGAs implementing MDA or PCT interventions. 3. Number of hydrocele surgeries in endemic LGAs. 4. Number of Health facilities, LGAs and States reporting timely and monthly using the IDSR 003

						Form 5.Reduction of disease transmission 6. Number of LLINS jointly distributed with the Malaria Control Programme.
2.Onchocerciasis Elimination Goal: Control and elimination where feasible with CDTI and other effective interventions 2020	To eliminate onchocerciasis as a public health problem by 2016	To achieve 100% geographical coverage and maintain 84% therapeutic coverage in hyper and mesoendemic areas To eliminate transmission of onchocerciasis in 3 States by 2014	Annual treatment with Ivermectin to the population at risk. Focal ground larviciding in established isolated vector breeding sites. Health education and promotion of behavioural change	Use of CDI Structure	(i) age ≥5years in meso, hypo and hyper-endemic areas (ii)Target isolated foci	1. Number of endemic LGAs attaining a minimum of 80% therapeutic coverage. 2.Number of LGAs with 100% geographical coverage 3.Number of Health facilities, LGAs and States reporting timely and monthly using

						the IDSR 003 Form 4.Reduction of disease transmission
3.Schistosomiasis Elimination Goal: Treat at least 75% of all school aged children at risk by 2020	To eliminate Schistosomiasis as a public health problem by 2016	To complete mapping by 2014 To establish implementation structures in all 36 States and FCT To achieve at least 75% therapeutic coverage in implementing LGAs by 2020	Mass Drug Administration in the school-aged children Health education and promotion of behavioural change Improvement in water supply and sanitation Foci control of snail intermediate hosts Training and re-training of health workers and school teachers on integrated control of Schistosomiasis and STH	School Health programme, Community structures (CDI) for non-enrolled schooled children	School-age children and other at risk populations	1. Number of LGAs completely mapped for Schistosomiasis. 2.Number of symptomatic cases of Schistosomiasis managed using IMCI Strategy 3.. Number of school aged children and other at risk population reached with de-worming tablets in all endemic LGAs 4. Number of Health facilities LGAs and States

						reporting timely and monthly using the IDSR 003 Form 5.Reduction of disease transmission
4. Soil Transmitted Helminths Elimination Goal: Treat at least 75% of all school aged children at risk by 2020	To eliminate Soil Transmitted Helminths as a public health problem by 2016	To complete mapping by 2014 To establish implementation structures in all 36 States and FCT To achieve at least 75% therapeutic coverage in implementing LGAs by 2020	MDA with Albendazole/Mebendazole in the school age and high risk communities Health education and promotion of behavioural change Training and re-training of health workers and school teachers on integrated control of Schistosomiasis and STH	School Health Programme, Community structures (CDI) for non-enrolled schooled children	School-age children and other at risk populations	1.Number of LGAs completely mapped for STH 2. Number of school aged children and other at risk population reached with de-worming tablets in all endemic LGAs Number of symptomatic cases of STH managed using IMCI Strategy Number of Health facilities, LGAs and States

						reporting timely and monthly using the IDSR 003 Form
5.T rachoma Elimination Goal: Eliminate as blinding disease by 2020.	To control blinding trachoma through the SAFE strategy by the year 2020	To eliminate blinding trachoma through SAFE strategy by 2020	Health education and promotion of behavioural change Improved water supply for personal hygiene Personal hygiene reinforcing face washing Mass Drug Administration with Azithromycin of entire identified at risk communities Surgery of trichiasis cases	Use of CDI Structure	All age groups in endemic communities	Number of LGAs completely mapped for Trachoma Number of trichiasis surgeries in endemic LGAs. Number of communities that have access to surgery Number of persons treated with Azithromycin. Number of Health facilities, LGAs and States reporting timely and monthly using the IDSR 003

						Form. 5. Reduction of disease transmission
6.Leprosy elimination Goal: Early diagnosis and treatment with MDT, elimination of leprosy as a public health problem at national by 2005, and then	To reduce the rates of new cases of leprosy to 1 in 10,000 by 2016	To improve the current effort on early case detection such that disability grade 2 among new cases is not more than 5% by 2014. To maintain 100% MDT coverage of all registered leprosy patients To maintain MDT completion rate of at least 85% for MB	Early case detection Adequate treatment with MDT Provision of comprehensive patient care (access to free MDT, POD and Rehabilitation services) Advocacy, Communication and Social Mobilization Integration of leprosy services into the general health services Re-organization of existing leprosy	Hospital-Based Facility	All age groups within endemic communities	Number of LGAs completely mapped for Leprosy. Number of cases treated with rifampicin, Dapsone and

elimination at sub-national levels		and 95% for PB To prevent new impairments in patients on MDT such that the proportion that have an increase in Eyes, Hands and Feet (EHF) score at RFT is not more than 5% by 2014. To improve access to care after cure services through putting in place functional care registers in 80% of LGAs by 2014. To prevent new impairments in patients registered for care after cure such that the proportion with an increase in EHF score annually is not more than 20% by 2014. To improve access to rehabilitation services such that the number of people affected by leprosy assisted annually increases by 5% each year from 2007 - 2014. To promote behavioural change about leprosy such	services Community involvement in leprosy control activities Training and re-training of programme staff and general health workers Self Care (including self care groups) Strengthening the referral system Strengthening referral centres Supervision, Monitoring and evaluation of leprosy services			Clorfazimine. Number of plastic surgeries and rehabilitation services for Leprosy in endemic LGAs. Number of Health facilities, LGAs and States reporting timely and monthly using the IDSR 003 Form. Reduction of disease transmission

		that at least 70% of adults population are reached				
7.Human African Trypanosomiasis Elimination Goal: Eliminate as a public health problem by 2015	Elimination of HAT from Nigeria by 2016.	To develop and implement systematic surveillance activities as well as integrated intervention packages for Trypanosomiasis prevention and control and ensure that HAT is eliminated from Nigeria by 2015.	100% mapping for HAT in all target states Surveillance and case reporting. Health promotion and Education. Case detection and management protocols. Integration of HAT surveillance and notification into IDSR. Training and re-training of HAT focal persons and medical personnel on case detection and management	Hospital-Based Facility	Communities within the endemic foci of target states	Number of LGAs completely mapped for HAT Number of cases of HAT detected and effectively managed. Number of cases treated with Nifurtimox and Eflornithine. Number of Health facilities, LGAs and States reporting timely and monthly using the IDSR 003 Form. Reduction of disease

						transmission
8.Buruli Ulcer Control *Goal:* Early detection and early treatment for effective control; increasing surveillance and control	To reduce the morbidity, disabilities and socio-economic consequences caused by the disease by 2016	To increase case detection rate of non ulcerative form to 80% To provide treatment for all active cases of Buruli ulcer detected by passive case detection by 2014 To provide rehabilitation for 10% of patients with disabilities caused by Buruli ulcer detected by 2014 To train 80% of health workers operating in areas where the disease is endemic To encourage scientific research focusing on epidemiology, diagnosis, treatment and prevention of Buruli ulcer by 2014	Early and community based case detection Confirmation of cases Case management (antibiotics, surgery and prevention of disabilities) Advocacy, social mobilization and partnership Strengthening health structures Supervision, monitoring and evaluation Staff training	Hospital-Based Facility	All age groups within endemic communities	Number of LGAs completely mapped for BU Number of cases of BU detected and effectively managed. Number of cases treated with Rifampicin and Ciprofloxacin. Number of plastic surgeries and rehabilitation services for BU in endemic LGAs. Number of Health facilities, LGAs and States reporting timely

						and monthly using the IDSR 003 Form. Reduction of disease transmission
9.Guinea Worm Eradication Goal: Eradicate by 2009	To achieve certification as a GWD-free country by 2013	To get Nigeria certified by WHO as a GWD free nation by 2012. To establish mechanisms for containing transmission	Active surveillance activities in all endemic and recently freed villages. Community participatory surveillance strategy (CPSS) Cash reward scheme. Rumour investigation, documentation and reporting. Use of Monofilament filters (Pipe and cloth) to filter water before consumption and for domestic purposes. HSAM (health education, advocacy and social mobilization) Provision of safe water supply and rehabilitation of broken down sources in NIGEP target and at risk villages. Case management and containment strategy. Vector control with Abate.	Village Based Health Workers (VBHW) through the LGA Coordinators	100% of the entire country	100% Rumour report investigation within 24 hours of receiving report. 100% nationwide surveillance and reporting through IDSR strategy. Minimum of 80% nationwide general public awareness about guinea worm disease eradication strategy and cash reward.

Table 10: Programme Objectives and key Indicators of performance

NTD Programme	Objective	Key Indicator	Baseline (No. LGAs)	Target (No. LGAs)	Milestones				
					Year1	Year2	Year3	Year 4	Year 5
Preventive Chemotherapy NTDs: Lymphatic Filariasis Elimination; Onchocerciasis, Schistosomiasis, Soil Transmitted Helminths, Trachoma	To complete mapping of 4 of these NTDs by 2013 To carry out annual preventive chemotherapy interventions in all endemic LGAs and communities	Number of LGAs completely mapped for these NTDs Number of endemic LGAs implementing MDA or PCT interventions	LF (103)	541	30%	40%	60%	80%	100 %
			Oncho (430)	430					
			Schisto (49)	500					
			STH (20)	500					
			Trachoma (10)	156					
Case Management NTDs: Lymphatic Filariasis, Trachoma, Buruli Ulcer, Leprosy, GWD, Schistosomiasis and Human African Trypanosomiasis (HAT)	To reduce the morbidity, disability and mortality due to some of these NTDs	Number of treated cases in all endemic LGAs Number of hydrocele and trichiasis surgeries in endemic LGAs Number of plastic surgeries and rehabilitation services for	LF (103)	541	30%	40%	60%	80%	100 %
			Trachoma (10)	156					
			BU (3)	60					
			Leprosy (150)	250					

		BU and Leprosy respectively in endemic LGAs Number of symptomatic cases of schistosomiasis managed using IMCI Strategy	GWD (774) HAT (21) Schsito (49)	774 200 500					
Surveillance NTDs: Guinea worm Disease (GWD), HAT, Schistosomiasis, LF, STH, Onchocerciasis, Trachoma, Leprosy, Buruli Ulcer	To maintain active and routine surveillance across the country using the IDSR strategy To reduce transmission of NTDs To ensure Nigeria's certification as a GWD-free country	Number of Health facilities, LGAs and States reporting timely and monthly using the IDSR 003 Form Reduction of transmission	Leish (0) Rabies (No data)	774 774	30%	40%	60%	80%	100 %

3.2 STRENGTHENING GOVERNMENT OWNERSHIP, ADVOCACY, COORDINATION AND PARTNERSHIPS

The Nigerian National Strategic Health Development Plan (2010 – 2015) lumps Neglected Tropical Diseases as part of the communicable diseases whose incidence would have been halted and reversed by 2015, to be addressed using available human resources and strengthened health systems. Efforts will be made for increased focus and emphasis on NTDs in service delivery and collaboration with partners. These efforts will be championed by the NTD National Steering Committee that is already in place, whose mandate is as follows:

- Support programme development for implementation of control/ elimination / eradication /management of Neglected Tropical Diseases. (Technical support for work plan development)
- Facilitate collaboration between Federal Ministry of Health, Partners, NGOs, and stakeholders in the control / elimination / eradication / management of Neglected Tropical Diseases (Enhance NTDs partnership)
- Provide technical advice to Programme Managers.
- Facilitate resource mobilization for NTDs Programme.
- Carryout and facilitate operational research in Neglected Tropical Diseases (Advocacy)

The Steering Committee meetings bring together periodically for assessment and review of NTD activities of the various partners – professionals in the academia, technical staff in the Ministry of Health and relevant line Ministries, as well as NGDO representatives and other developmental partners. This Committee will maintain oversight of NTD implementation in the country. However, there is an NTD Secretariat that is responsible for overall coordination of NTD activities nationwide. The NTDs secretariat is situated at Neglected Tropical Diseases Branch with the focal person for NTDs as the rallying point. He/She coordinates all activities of all other programmes in an integrated manner and interacts with zonal focal persons who in turn coordinate the implementation of programmes at the state level. Though there are a number of partners already supporting NTDs implementation, a critical focus of the NTD Secretariat will be to create greater awareness of the programmes and to mobilize more partners to support control, prevention and management of NTDs. This will necessitate engagement with all sections of the mass media.

Together, Neglected Tropical Diseases present tremendous disease burden, but can be treated collectively and inexpensively through large scale integrated programmes that use safe and effective drugs. Also a multi sectoral approach will be maintained from planning through implementation, monitoring and evaluation.

Going by the experience in CDI studies (CDI Study Group, 2009) in Nigeria, integration of control interventions for several related diseases and other health conditions is technically feasible, economically attractive and in line with principles of right to health.

An integrated approach will be a powerful tool in terms of its ability to improve health and several other outcomes associated with better prospects for development at minimal costs to health system.

As a working definition in the context of this policy, integration is defined as the inclusion of programme activities in the broader health system with strong community involvement. It is important within this concept that the outcome of creation of linkages

should lead to better performance by the individual programmes than if each programme was operating separately. It is also very important that the goals and objectives of the individual programmes are not compromised by integration.

The process of integration has begun at the Federal level with the creation of an NTD branch in the department of Public Health with the responsibility of coordinating all NTD programme activities. Most of the programmes have been merged under a single Coordinator – GWD with HAT; Onchocerciasis with LF, Buruli Ulcer with Leprosy, Schistosomiasis with Soil Transmitted Helminths and Trachoma with Trichiasis. In addition to this, a budget line has been created for NTD Programme within the Federal Ministry of Health budget appropriation to facilitate programmes implementation.

Table 11: Activities for Strengthening government ownership, advocacy, coordination and partnership

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
Strategic objective 1: Strengthen coordination mechanism for the NTD control programme at national and sub-national levels.			
Establish, equip and manage NTD Focal Points at Zonal, State & LGA Levels	Advocacy Meetings with State Policy Makers, Identification & briefing of focal points	Annually	Secretariat and logistic support
Equip NTD Secretariat at National level with necessary tools and equipment for work.	Identification of training and resource gaps; Procurement of relevant logistics; Re-orientation of NTD staff	2014 – 2017	Vehicles, Generators & Office equipment (desktop computer laptop, computer Laser Jet Printers Photocopiers, Scanners, multimedia projectors, Computer accessories, stationery, fax machine, Telephone services & Maintenance, Internet services & maintenance)
Hold bi-annual NTD Partners and Steering Committee Meetings	Holding meetings of NTD Steering Committee & ad-hoc sub-committees; Production of guidelines; Distribution of guidelines to States/LGAs	Twice annually	Secretariat and logistic support; printing
Hold periodicl Technical Advisory Steering Committee Meetings	Development of Programme-Specific work Plans; Holding of NTD Branch Meetings; Integration of Programmes' Work plans	Quarterly	Secretariat and logistic support
Ensure the smooth running of the NTD coordination office			
Strategic Objective 2: Strengthen and foster partnerships for the control, elimination and eradication of targeted NTDs at national, LGAs and community levels.			

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
Mobilize additional Partners at National & Zonal levels	Sourcing for Funds; Identification of Venue; Invitation of Participants; Holding of Meeting	2013 – 2017	Secretariat and logistic support
Strengthen collaboration with other community based health programmes like RBM, EPI, School Feeding programme	Identification of partners; production of Invitation letters; sensitization meeting with partners	2013 – 2017	Secretariat and logistic support
Strategic Objective 3: Enhance high level reviews of NTD programme performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation.			
Hold National Annual review and planning meetings of NTDs programme managers.	Sourcing for Funds; Identification of Venue; Invitation of Participants; Holding of Meeting	Annually	Secretariat and logistic support
Hold State Policy Makers Meeting annually	Sensitization briefs production; Visits to Policy makers; holding of assessment meetings with policy makers	Annually	Secretariat and logistic support
Strategic Objective 4: Strengthen advocacy, visibility and profile of NTD control elimination and eradication interventions at all levels.			
a. Development and production of advocacy kits on NTDs	Holding of Meetings for development of Kits, Field-testing of kits; production & distribution of finalized copies	2013, 2015, 2017	Secretariat and logistic support; printing
b. Sensitization meetings with policy makers, line ministries, and other stakeholders on the beneficial synergy of integration at the federal, state, LGAs and community	Identification of key line Ministries/agencies; sensitization visits; mobilization meetings; production of materials	2013 – 2015	Secretariat and logistic support; printing

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
levels (including Village health Committees)			
c. Presentation for adoption of the national policy, guidelines (Resource Mobilization, Standard Operating Procedure for school and community based de-worming, Case Management/Preventive Chemotherapy NTDs, Management of Severe Adverse Events, Monitoring and Evaluation, Integrated Mapping of NTDs) and workplan on NTDs by the National Council on Health	Production of policy & guidelines; Submission to FMOH policy makers; Presentation at National Council on Health	December 2013	Secretariat and logistic support; printing
d. Sensitization meetings with NAFDAC (registration of donated drugs) and Nigerian Custom Services	Production of briefs; advocacy & sensitization visits	January – December 2013	Secretariat and logistic support
e. Teachers' sensitization meetings at State and LGA levels	Production of Briefs; Advocacy Meetings with NUT Executive Committee; Identification of suitable venues & funding sources; holding of meetings	Annually	Secretariat and logistic support
f. Media advocacy and sensitization : Press briefing, talk shows on NTDs (TV & Radio)	Production of Media Briefs; Talk shows; Media Briefing; Press Releases; Media dinner; Sensitization visits to Media Houses	Quarterly	Secretariat and logistic support; printing

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
g. Production of quarterly newsletter on NTDs	Development of Articles; Production & distribution of newsletter	Every Quarter	Secretariat and logistic support; printing
h. Partnership for Development.	Identification of key development partners/agencies; sensitization visits; mobilization meetings	Annually	Secretariat and logistic support
Develop integrated IEC Materials on NTD PCT		2013 – 2017	Secretariat, logistic support and printing

3.2.1 ENHANCE PLANNING FOR RESULTS, RESOURCE MOBILIZATION, AND FINANCIAL SUSTAINABILITY

Much attention has not been paid to the Neglected Tropical Diseases because of the overriding effect of the big three, HIV-AIDS, Malaria and Tuberculosis. These are the primary focus of the government with little or no budgetary allocation for NTDs. APOC has spearheaded the concept of integration in the country and has sponsored trainings of NTDs programme managers abroad and their exposure to discourse on the concept at international fora, other forms of trainings, meetings, CDI multi-country study etc. However, APOC is exiting and has just developed an exit planned strategy for 4 CDTI states. Other NGDOs like CBM, TCC, SSI, HKI, MITOSATH are supporting elimination of blinding trachoma with Onchocerciasis control while UNICEF, YGC, WHO are on hand to stamp out Guinea Worm Disease out of the country. But, these efforts are not cost-effective and does not allow for efficient use of available resources. This provides a great opportunity for other international NGDOs to support a national control programme in Nigeria in a cost-effective manner. Efforts will be made to expand the partnership base by sensitizing and mobilizing new NGDOs (local and international) to support NTDs control.

Table 12: Activities for Enhance planning for results, resource mobilization and financial sustainability of national NTD programmes.

Activity	Details (Sub-activities)	Timeframe/ Frequency	Resources needed
Strategic Objective 1: Support States to develop integrated multi-year strategic plans and develop gender-sensitive annual operational plans for the control, elimination and eradication of targeted NTDs.			
Conduct State-level meetings on adaptation of guidelines & tools(Resource mobilization, Standard operating procedure for Schistosomiasis/Soil Transmitted Helminths school and community based de-worming activities, Case management, Preventive Chemotheraphy, Management of Severe Adverse Events (SAEs) and Monitoring and Evaluation).	Venue identification; Mobilize resources; Identify Facilitators; Hold training meeting	January – December 2013	Secretariat and logistic support
Holding meetings with states and LGAs to develo strategic plans for effective NTD implementation.	identification of key stakeholders; Venue Identification; Hold meeting	Annually	Secretariat and logistic support
Hold national training on development of State NTD plans	Identification of gaps; Holding of meeting	January – December 2013	Secretariat and logistic support
Hold State training on development of LGA NTD plans		January – December 2013	
Conduct Stakeholders' Meetings in States for adoption of State NTD plans		Q2 2013	
Revise annual operational plan for NTDs control to make it gender-		Annually	

sensitive			
Strategic Objective 2: Enhance resource mobilization approaches and strategies at national and sub-national levels for NTD interventions.			
Develop an NTD Resource Mobilization Guide	Identification of Facilitators & Resource; Development of Guide; Production of Guide	January – December 2013	Secretariat and logistic support; printing
Conduct training workshop on resource mobilization & management for NTD management teams	Venue identification; Mobilize resources; Identify Facilitators; Hold training meeting	January – December 2013	Secretariat and logistic support
Hold sensitization and resource mobilization workshop for identified prospective funders	identification of key partners; Venue Identification; Hold meeting; Follow up visits on pledges	2013 – 2014	Secretariat and logistic support
Conduct advocacy Visits to State Policy Makers	Develop plans for advocacy Visits; Secure needed logistics; Meet with Policy Makers; Follow up on commitment secured	Annually	Secretariat and logistic support
Conduct visits to Banks, Oil Companies & Multi-national Companies	Identify & select Orgs to be Visited; Develop plans for Visits; Secure needed logistics; Meet with key Managers; Follow up on commitment secured	2013 – 2014	Secretariat and logistic support
Strategic Objective 3: Strengthen the integration and linkages of NTD programme and financial plans into sector-wide and national budgetary and financing mechanisms.			
Sensitize FMoH Policy Makers on strengthening linkages & enhancing integration with other divisions & departments	Develop Memos; Sensitize Policy Makers at Routine Meetings; Make & Share Reports	January – December 2013	Secretariat and logistic support
Visit Line Ministries & Agencies to buy into the NTD Master Plan	Identify & select Ministries/Agencies to be Visited; Develop plans for Visits; Secure needed logistics; Meet with key Policy Makers; Follow up on commitment secured	2013 – 2014	Secretariat and logistic support

Hold Meeting with Other Community-Based Programmes	Contact Reps of Programmes identified; Hold meeting; follow up on recommendations	2013 – 2014	Secretariat and logistic support
Strategic Objective 4: Ensure development and update of national NTD policies and elaborate guidelines and tools to guide effective policy and programme implementation.			
Develop Tools for NTD implementation	Collect existing Programme-specific tools; Identify Gaps; develop integrated tools; produce tools	Q1 2013	Secretariat and logistic support; printing
Develop and produce NTD guidelines (Resource Mobilization, Standard Operating Procedure for school and community based de-worming, Case Management/Preventive Chemotherapy NTDs, Management of Severe Adverse Events, Monitoring and Evaluation, Integrated Mapping of NTDs) for Implementation	Plan for distribution; distribute documents to States	Q1 2013	Secretariat and logistic support
Circulate NTD Policy, Guidelines & Tools to States(Resource mobilization, Standard operating procedure for Schistosomiasis/Soil Transmitted Helminths school and community based de-worming activities, Case management, Preventive Chemotheraphy, Management of Severe Adverse Events (SAEs) and Monitoring and Evaluation).	Venue identification; Mobilize resources; Identify Facilitators; Hold workshops	Jan – Dec 2013	Secretariat and logistic support
Revise National Guideline & Tools	Assess Guideline & Tools; Identify Gaps; Revise Documents; Field-test Documents; Produce Documents & Share with Partners	Q2-2015 Q4 2017	Secretariat and logistic support; printing

3.3 SCALING UP ACCESS TO NTD INTERVENTIONS, TREATMENT AND SERVICE DELIVERY

3.3.1 Capacities

Together, Neglected Tropical Diseases present tremendous disease burden, but can be treated collectively and inexpensively through large scale integrated programmes that use safe and effective drugs.

Going by the experience in CDI studies (The CDI Study Group, 2009) in Nigeria, integration of control interventions for several related diseases and other health conditions is technically feasible, economically attractive and in line with principles of right to health.

An integrated approach will be a powerful tool in terms of its ability to improve health and several other outcomes associated with better prospects for development at minimal costs to health system.

As a working definition in the context of this policy, integration is defined as the inclusion of programme activities in the broader health system with strong community involvement. It is important within this concept that the outcome of creation of linkages should lead to better performance by the individual programmes than if each programme was operating separately. It is also very important that the goals and objectives of the individual programmes are not compromised by integration.

The process of integration has begun at the federal level with the creation of an NTD branch in the department of Public Health with the responsibility of coordinating all NTD programme activities. Already most of the programmes have been merged under a single Coordinator – GWD with HAT; Onchocerciasis with LF, Schistosomiasis with STH, Buruli Ulcer with Leprosy and Trachoma with Trichiasis.

3.3.2 Perceived benefits of integration in NTD control programmes

The perceived benefits of integration are:

- Cost-effectiveness (planning, training, ACSM, use of facilities and other resources, including operational cost)
- Better coordination between the collaborating sectors (agreed Organogram, regular meetings, Steering Committees at all levels)
- Common use of technical support
- Harmonization and improvement of monitoring, supervision and evaluation
- Improvement of the quality of life index (poverty reduction, improvement on nutrition, education, health, etc)

3.3.3 PREVENTIVE CHEMOTHERAPY INTERVENTIONS

The six NTD programmes that use mass drug administration as their (major) strategy use five different drugs. In an integrated approach, the aim is to reduce the cost of delivering these drugs at all possible stages. However, co-administration of all the types of drugs is not the ultimate goal as it has implications of safety of drug combinations and also acceptability of by the recipients. Based on current knowledge (summarized in WHO manual on preventive chemotherapy), the combinations that are recommended are: ivermectin and albendazole, praziquantel and albendazole or mebendazole. Zithromax will be used for MDA

for trachoma control. The triple therapy with ivermectin, albendazole and praziquantel has been carried out under special conditions but is not yet an open option for use.

The available delivery channels for mass drug administration include those used:

(i) In NTD programmes, viz:

Community-Directed Intervention (CDI) with ivermectin for Onchocerciasis control, albendazole for LF elimination and Zithromax for trachoma elimination.

School based treatment as main channel for Schistosomiasis and STH control,

Community-based approach as used to target adult populations in Schistosomiasis and STH control.

Community based approach as used to target at risk population in trachoma control

(ii) Opportunities arising from Neglected Tropical Diseases, Non-communicable Diseases and Occupational Health Division (NNO-NTD) disease control interventions and other interventions targeting the same populations, viz:

EPI delivery channels

LLTN/ITN distribution in malaria control

School feeding programmes

3.3.4 Disease mapping

Apart from Onchocerciasis and Guinea Worm Disease which have been fully mapped in Nigeria, all the other PCT NTDs are still being mapped in some parts of the country with varying levels of completion. With many of these NTDs yet to be completely mapped in Nigeria, there is cogent need to fill in this critical gap. Scaling up mapping activities of these NTDs, particularly of those infections that could be controlled/eliminated through mass chemotherapy, are imperative in enabling the identification/classification of high endemic areas, populations at risk, planning of Preventive Chemotherapy (PCT) activities through mass drug administration (MDA) of various drugs (Ivermectin, Albendazole/Mebendazole and Azithromycin) and estimation of resources needs for MDA. Hence there is the need to conduct integrated mapping/baseline surveys of these NTDs so that mass drugs administration (MDA) of these diseases can be co-implemented in an integrated and cost effective manner.

The proposed integrated mapping/baseline surveys of these NTDs will provide a unique opportunity to collect a more comprehensive epidemiological data on distribution of these NTDs in Nigeria. The focus will be on those infections that can be controlled or eliminated through community chemotherapy and health education, and control activities are easy to integrate. Specific information on the prevalence, distribution, and diseases burden resulting from the NTDs in Nigeria would provide a basis for prioritizing control strategies as a means to address the MDGs. The number of LGAs remaining to be mapped for these other disease is listed below in Table 5.

Table 13: Estimation of Needs for completion mapping of PCT NTD

Name of endemic NTD	No of LGAs suspected to be endemic	No of LGAs mapped or known endemicity status	No of LGAs remaining to be mapped	No of diagnostic kits and other inputs required
Lymphatic filariasis	451	705	69	7,000 ICT Cards, Medical consumables and personnel
Schistosomiasis	603	218	385	180,900 Tins of Haemastix
STH	644	218	426	192,300 Kato-Katz Kits
Onchocerciasis	0	430	0	0
Trachoma	306	133	306	Methylated spirit, x2.5 loupe (4 Nos.), cotton wool, 4 Ophthalmoscope, 20 Pen lights, 4,000 tubes of Tetracycline ointment, 6 GPS, Dry Cell batteries
HAT	200	10	200	20000 CATT Kits

3.3.5 Mass Drug Administration

Table 14 Populations at risk targeted by preventive chemotherapy interventions

Name of NTD	Total No LGAs above threshold for intervention	Total number of implementation units in the LGAs above threshold for intervention*	Number Total population at risk	Population at risk broken down by age-category (for NTD programmes where this is applicable)		
				No Adults (15 and year-old and above)	No. School age Children (5-14 year-old)	No. in special targeted age-category (specify e.g. for trachoma)
Schistosomiasis	109	N/A	43,033,387	31,156,172	11,877,215	
LF	541	NA	106,124,877	76,834,411	29,290,466	
Onchocerciasis	430	N/A	37,110,922	26,868,308	10,242,614	
STH	104	N/A	34,566,184	25,025,917	9,540,267	
Trachoma	156	N/A	14,395,593	10,422,409	3,973,184	

* Note: These are LGAs/communities or villages according to disease programme

Table 15: Packages of Mass Drug Administration types

Intervention Package No.	Target Disease combination	MDA Types	Delivery Channels	Timing of delivery	No. of LGAs (List names in footnote)	Requirements	Other mass disease control interventions in the districts
I	Lymphatic Filariasis, Onchocerciasis, Schistosomiasis, STH (high prevalence), Trachoma	MDA 1	Community based campaigns/ CDTI	Annually,		-Training of Health Personnel -Training of teachers & community volunteers. -Social Mobilization. -Supervision. -Production of tools - Logistics for drug distribution and management	EPI campaigns, ITN distribution and re-treatment, Home management of malaria and vitamin A supplementation
		MDA 4, T1	Community based	2 weeks later			
		T3	School based	6 Months later			
II	LF, Schistosomiasis Onchocerciasis, STH (low prevalence)	MDA 1	Community based campaigns/ CDTI	Annually			
		T1	School based	2 weeks later			
III	LF, oncho, STH (low prevalence)	MDA 1,	Community based	Annually			
			School based				

Legend

MDA1 = Ivermectin + Albendazole

MDA2 = DEC + Albendazole

MDA3 = Ivermectin only

MDA4 = Azithromycin only

T1 = Praziquantel + Albendazole or Praziquantel + mebendazole

T2 = Praziquantel only

T3 = Albendazole or mebendazole only

Figure 18: Nigeria Preventive Chemotherapy NTDs Algorithm

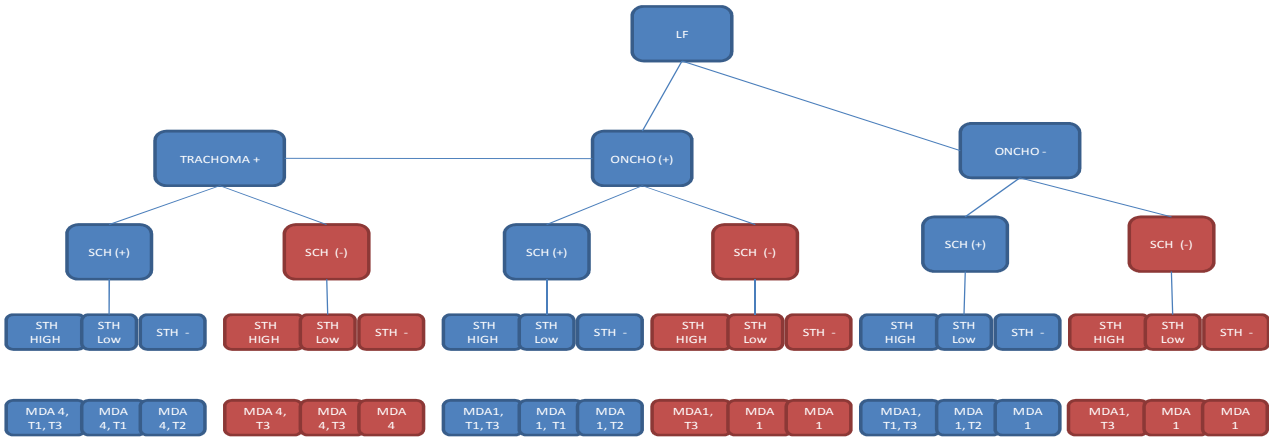


Table 16: COORDINATED IMPLEMENTATION OF MASS TREATMENT IN TARGET POPULATIONS FOR VARIOUS PREVENTIVE CHEMOTHERAPY PROGRAMMES

DISEASE CO-ENDEMICITY	TIMING OF INTERVENTIONS	TARGET POPULATION
LF + STH + Trachoma	One annual round of MDA using ivermectin and albendazole. Two weeks later one annual round of MDA using azithroymycin. A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	Whole communities in LGAs† Whole communities in identified villages school-age Children
LF + STH + Onchocerciasis	One annual round of MDA using ivermectin and albendazole. A 2nd round of MDA of ivermectin for onchocerciasis 6 months later A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	Whole communities in LGAs† Whole communities in identified villages† School age Children
LF + Schistosomiasis + STH	One annual round of MDA using ivermectin and albendazole. Two weeks later one annual round of MDA with praziquantel A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	Whole communities in LGAs† School-aged children and high risk communities
LF + Schistosomiasis + STH + Trachoma	One annual round of MDA using ivermectin and albendazole. Two weeks later one annual round of MDA with praziquantel Four weeks (after IVM & ALB) treatment one annual round of MDA using Azithroymycin A 2nd annual round of mass treatment with albendazole for STH control through CDP	Whole communities in LGAs† School-aged children and high risk communities Whole communities in identified villages
LF + Schistosomiasis + STH + Onchocerciasis	One annual round of MDA using ivermectin and albendazole Two weeks later one annual round of MDA with praziquantel A 2nd round of MDA of ivermectin for onchocerciasis six months later A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	-Whole communities in LGAs† -School-aged children and high risk communities -Whole communities in identified villages†

DISEASE CO-ENDEMICITY	TIMING OF INTERVENTIONS	TARGET POPULATION
LF + STH	One annual round of MDA using ivermectin and albendazole. A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	Whole communities in LGAs† School-age Children
Schistosomiasis + STH + Onchocerciasis	One annual round of MDA using ivermectin and albendazole. Two weeks later one annual round of MDA with praziquantel A 2nd round of MDA of ivermectin for onchocerciasis six months later A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	-Whole communities in identified villages† -School-aged children and high risk communities -Whole communities in identified villages†
Onchocerciasis +STH	One annual round of MDA using ivermectin and albendazole A 2nd round of MDA of ivermectin for onchocerciasis six months later A 2nd annual round of mass treatment with albendazole for STH control through CDP six months later	Whole communities in identified villages† Whole communities in identified villages† School-age children
Schistosomiasis + STH	One annual round of MDA using praziquantel and albendazole A 2nd annual round of mass treatment with albendazole for STH control through CDP	School-aged children and high risk communities

Table 17: Activities for PCT interventions

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
Strategic Objective 1: Scale up an integrated preventive chemotherapy, including access to LF, STH, Onchocerciasis, Schistosomiasis and trachoma interventions.			
Conduct sensitization and mobilization to improve participation	-Advocate for inclusion of all NTDs control in curricula of health training schools - Identify major training needs for NTDs control in Nigeria - Develop integrated training manuals for the different levels of implementation - Training of NTDs personnel at all levels of implementation and surveillance - Conduct refresher training for health workers for management of NTDs disabilities -Training of school Teachers for School-based De-worming Campaigns	First and second Quarter of 2013 Annually subsequently	Training modules, Personnel, Transport, Equipment/Materials.
Conduct mapping of NTDs	Training of Community Directed Implementers.	First and second Quarter of 2013 Annually subsequently	Training Modules, Personnel, Transport, Equipment/Materials
Build capacity for PCT interventions at all levels	-Estimation of drug requirement at the LGA, State and Federal levels by disease programmes - Identify reliable sources of NTDs control drugs and apply / purchase - Strengthen the existing drugs stock management system at all levels - Develop an efficient and sustainable drug clearance, storage and distribution system	Fourth Quarter 2013 Fourth Quarter 2013 First Quarter 2013 Second Quarter 2013 Annually subsequently	Personnel, Transport, Equipment/Materials
Procure Drugs for PCT	Delivery to States, LGAs and Communities.	First quarter of 2013 Annually subsequently	Personnel, Transport, Equipment
Conduct MDA for PCT			

Report & Record PCT activities			

3.4 Progression Plan for Preventive Chemotherapy Interventions

3.4.1 Scaling up and scaling down (regression plan)

Table 18: Lymphatic filariasis Annual Needs for scaling-up and scaling-down (drugs and supplies)

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
LF elimination	LF MDA	No. of LGAs	536	516	503	487	429	
		No. population at risk targeted	81,915,399	81,392,573	82,233,104	82,486,199	74,688,299	
		Albendazole	94,633,262	97,661,527	95,283,068	95,778,264	85,675,924	
	Baseline Surveys	No. of LGAs	20	70	20	-	-	110
	Transmission Assessment surveys	No. of LGAs	10	20	10	50	40	130
		ICT cards NB: 1,700 per IU or EU	17,000	34,000	17,000	85,000	68,000	221,000
	Post-MDA Surveillance	No. of LGAs	-	-	10	100	390	500

NB: Scaling down will be on account of LGAs that have reached maximum number of treatment rounds. All communities meso or hyper-endemic for onchocerciasis have been receiving Ivermectin treatment, and therefore all LF communities co-endemic for onchocerciasis that reached the maximum number of treatment rounds (six years) will be scaled down, but we have to follow WHO guideline before finally stopping treatment

Table 19: Schistosomiasis Control Programme Annual Needs for scaling-up and scaling-down (drugs and supplies)

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
Schistosomiaisis elimination	Schisto MDA	No. of LGAs (500)	150	200	300	400	500	
		No. population at risk targeted	16,873,923	20,876,671	26,589,667	33,434,399	43,033,387	
		Praziquantel	50,621,769	62,630,013	79,769,001	100,303,197	129,100,161	
	Baseline Surveys	No. of LGAs	6	300	353	-	-	659
	Impact Evaluation surveys	No. of LGAs	6	9	12	15	18	60
	Post-MDA Surveillance	No. of LGAs (500)	500 LGAs by routine and active reporting using the IDSR strategy as well as special surveys in selected LGAs					

Table 20: Soil Transmitted Helminths Annual Needs for scaling-up and scaling-down (drugs and supplies)

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
Soil Transmitted Helminths Control	STH MDA	No. of LGAs (500)	150	200	300	400	500	
		No. population at risk targeted	8,998,459	12,354,082	16,936,453	25,248,719	34,566,184	
		Mebendazole	13,497,689	18,531,123	25,404,680	37,873,079	51,849,276	
	Baseline Surveys	No. of LGAs	6	300	335	-	-	641
	Impact Evaluation surveys	No. of LGAs	6	9	12	15	18	60
	Post-MDA Surveillance	No. of LGAs (500)	500 LGAs by routine and active reporting using the IDSR strategy as well as special surveys in selected LGAs					

Table 21: Onchocerciasis Annual Needs for scaling-up and scaling-down (drugs and supplies)

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
Onchocerciasis Control	MDA	No. of LGAs	404	404	404	329	329	
		No. population at risk targeted	37,110,922	38,333,012	39,559,669	40,825,578	42,131,997	

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
		Ivermectin	69,137,293	71,349,685	73,632,875	63,849,685	65,890,938	
	Baseline Surveys	No. of LGAs						
	Impact Evaluation surveys	No. of LGAs	65	56	46	40	66	
	Post-MDA Surveillance	No. of LGAs	Surveillance will continue in 75 LGAs where treatment may be stopped by Year 4.					

Table 22: Trachoma Annual Needs for scaling-up and scaling-down (drugs and supplies)

NTD Programme	ACTIVITY	Units	Annual Requirements/ number of units/population					TOTALS
			YR 1	YR 2	YR 3	YR4	Yr5	
Trachoma Control	Trachoma MDA	No. of LGAs	22	65	66	69	59	
		Population at risk targeted	4,310,164	14,460,417	15,110,189	16,113,605	14,395,593	
		Azythromycin						
	Baseline Surveys	No. of LGAs						
	Impact Evaluation surveys	No. of LGAs	10	12	14	20	30	
	Post-MDA Surveillance	No. of LGAs	Surveillance will continue in 10 LGAs where treatment will be stopped					

3.5 CASE MANAGEMENT AND CHRONIC CARE INTERVENTIONS

In case management programmes, cross-cutting indicators also measure the coverage of the specific intervention as the proportion of the identified cases that have received the interventions. This is specifically surgical treatment, home based disability management package and hospital based or self-administered drug treatment.

Cost-effectiveness in the management of NTDs can be improved if common strategies between the disease conditions or programmes are extended to more than one condition or disease wherever possible. This implies that the resources to provide the desired services will be shared and will provide for a wider target population. Assessing the burden of these conditions and their distribution, needs to be conducted.

Amongst the case management NTDs, only GWD has been fully mapped as shown in the table below.

3.6 Disease Assessment

Table 23: Assessment of the situation (identifying endemic foci) of case management NTD

Name of endemic NTD	No of LGAs suspected to be endemic (at risk)	No of LGAs assessed or known endemicity status	No of LGAs remaining to be assessed	Requirements (e.g. diagnostic kits, supplies, reagents)
Lymphatic filariasis	541	705	69	7,000 ICT Cards, Medical Consumables
Leprosy	150	0	150	Funds, Drugs, Awareness creation
Buruli Ulcer	160	5	155	Funds, Drugs, Human Resources
HAT	200	10	190	20,000 CATT Kits, microscopes, capillary tubes, dry cell batteries, cotton wool,
Trachoma	306	156	150	Methylated spirit, 2.5 loupe, cotton wool, Ophthal microscope, Penlight
GWD	0	774	0	Methylated spirit, cottonwool, anti biotics, analgesics

3.6.1 Interventions for individual Disease

Table 24: Populations at risk targeted by case management

Name of NTD	Total No LGAs targeted for intervention	Total number of endemic foci/communities in the LGAs selected for intervention*	Estimated Number Total population at risk	Types of interventions to be delivered and requirements (needs)
Human African Trypanosomiais	200	Yet to be determined	4,500,000	Health education, clinical case management, active and routine surveillance
Buruli Ulcer	155	450	67,500,000	Surgery, Drugs, Awareness Creation
Leprosy	150	400	60,000,000	Surgery, Drugs, Awareness creation
Trachoma	156	10	28,065,244	Preventive chemotherapy and case management
Lymphatic Filariasis	476	476	88,211,929	Preventive chemotherapy, morbidity control and surgery
GWD	774	0	0	Internal and Cross border surveillance, rumour report investigations, awareness creation, health education

3.6.2 Intervention Packages for Group of Diseases

Table 25: Intervention Packages for Group of Case management and chronic care

INTERVENTION PACKAGE	NTDS TARGETED	METHOD OF INTERVENTION DELIVERY	REQUIREMENTS	OTHER NON-NTD OPPORTUNITIES FOR INTEGRATION
SURGERY Hydrocoele surgery (hydrocoelectomies) Trichiasis surgery Skin grafting Management of active trachoma, HAT, Buruli Ulcer, Lymphodema	Lymphatic Filariasis hydrocoele, Trachoma trichiasis Buruli Ulcer late condition Active trachoma, lymphodema, Buruli Ulcer, HAT	Hospital based Elective surgery Mobile Surgery Camps Hospital Based	-Training of Medical Doctors, nurses - Surgery kits, dermatome and mesh graft (for skin grafting) -hospitals facilities or appropriate basic facilities with good surgical facilities -Follow up/supervision -Training of Health Workers, Community Volunteers. -Health Education and Promotion. -Rehabilitation Services -Follow up/supervision	Capacity building for basic surgery at the LGAs level Availability of experienced Surgeons and Nurses at Secondary and Tertiary Health Facilities in states/zones.

Table 26: Activities for case management and interventions

Activity	Details (Sub-activities)	Timeframe	Resources needed
Strategic Objective 2: Scale up integrated case-management-based diseases interventions.(LF, Trachoma, Buruli Ulcer, Leprosy, HAT)			
Conduct of Case search for zoonotic diseases	Training of doctors to perform hydrocele and cataract surgeries as well as diagnosis of HAT	Third Quarter of 2013	Training modules, Personnel
Develop integrated IEC materials on case management	Training of Nurses, community Health Extension Workers for lymphodema, Buruli Ulcer and HAT Management	Third Quarter of 2013	Training modules, Personnel
Build capacity for case management for Buruli Ulcer, HAT, Leprosy, lymphoedema, as well as surgery for Trachoma and hydrocele	Training of laboratory technologists on HAT diagnosis	Third Quarter, 2013	Training modules, personnel
Procure Drugs for case management	Carryout TT, Hydrocele, skin grafting, through camp/ routine clinics	Second, Third and Fourth Quarter of 2013	-Training of Medical Doctors and nurses - Surgery kits, dermatome and meshgraft (for skin grafting) -hospitals facilities or appropriate basic facilities with good surgical facilities -Follow up/supervision
Manage LF complications & conduct surgeries for trachoma and hydrocele	Hospitalized treatment (HAT) Drug treatment (hospitalized or ambulatory) Self administering MDT treatment (leprosy)	2013, 2014, 2015	-Specific drugs (tablets and injectables) -Hospitalization facilities -close monitoring during treatment (in case of HAT and also BU) -Training of nurses Follow up/ supervision

Activity	Details (Sub-activities)	Timeframe	Resources needed
Case Management for Leprosy, HAT, GW, Lechmaniasis, Buruli Ulcer, Rabies and other zoonotic diseases	Establishment of sentinel sites for HAT detection, eye camps for trachoma	2013, 2014, 2015	-Specific drugs (tablets and injectables) -Hospitalization facilities -close monitoring during treatment (in case of HAT and also BU) -Training of nurses Follow up/ supervision

3.7 TRANSMISSION CONTROL INTERVENTIONS

Integration of Transmission Control Activities in Neglected Tropical Diseases Programmes

World Health Assembly Resolution 50.13 (1997) encouraged Member States "to take steps to reduce reliance on insecticides for control of vector borne diseases through promotion of integrated pest management approaches in accordance with WHO guidelines…" Integrated Vector Management is defined: "targeted use of different vector control methods alone or in combination to prevent or reduce human-vector contact cost-effectively, while addressing sustainability issues" (AFRO regional workshop of policy makers and experts, 2001). Table 16 below shows possible interventions for different packages of Neglected Tropical Diseases Programmes

Table 27: Intervention packages for Transmission Control

INTERVENTIONS PACKAGE	TARGETED NTDS	METHODS OF INTERVENTION DELIVERY	REQUIREMENTS	OTHER NON-NTD OPPORTUNITIES FOR INTEGRATION
Vector Control	Lymphatic Filariasis Leishmaniasis Dengue Malaria	- insecticide treated nets -In-door residual spraying -Environmental management	- ITNs, - DDT, -plastering of walls	Malaria vector control Integrated Vector Management (IVM).
	HAT – Onchocerciasis	Tse-tse fly and black fly control using: -radiation treatment to sterilize flies -environment	-Radiation equipment -DDT	-Radiation equipment -DDT

INTERVENTIONS PACKAGE	TARGETED NTDS	METHODS OF INTERVENTION DELIVERY	REQUIREMENTS	OTHER NON-NTD OPPORTUNITIES FOR INTEGRATION
		management -aerial spraying		
Mapping of water bodies in selected states/communities	Schistosomiasis	Survey of water bodies	-GPS -Survey forms -Personnel -Logistics (transport)	Malaria vector control Integrated Vector Management (IVM).
Focal control of snail vectors in selected states and LGAs using safe molluscicides	Schistosomiasis	Treatment of water bodies with molluscicides	-Molluscicides -Personnel -logistics	Malaria vector control Integrated Vector Management (IVM).

Table 28: Activities for transmission control

Activity	Details (Sub-activities)	Timeframe	Resources needed
Strategic Objective 3: Strengthening integrated vector management and environment measures			
Mapping of Water Bodies for SCH	Training of Trainers for health workers, FLHW, LGA Coordinators, CDDs on transmission control, use of outdoor and indoor sprays, environment management, identification of snail intermediate hosts, treatment of water bodies	Quarter 1, 2013	Training modules, transport and allowances,
Focal control of snail vectors using molusicides	Outdoor and indoor residual spraying; application of radiation treatment of flies	Quarters 2 and 4, 2013	Personnel, spraying equipments, Aeroplane (Jet)/Helicopter, transport, out of station allowances
Develop IEC Materials on vector control & environmental measures for SCH, STH and LF	Training of health workers, survey of water bodies, purchase of molluscicides, spraying equipment, spraying of water bodies with safe molluscicides,	2013 - 2014	Personnel, spraying equipment, molluscicides, transport, out of station allowances, training materials

Activity	Details (Sub-activities)	Timeframe	Resources needed
Focal control of Tse-tse fly vectors using aerial spraying, and sterilization of the male population	House-to-house sensitization on environment management by health workers,	2013-2014	Training modules, IEC materials, transport
Capacity building on environmental measures for NTDs			
Community Sensitization on environmental management for NTDs			

3.8 STRENGTHEN CAPACITY AT NATIONAL LEVEL FOR NTD PROGRAMME MANAGEMENT AND IMPLEMENTATION

Progress towards or achievement of goals and targets of the individual NTDs programme as described in section 3 are measured by disease specific indicators and each programme has specific methods to do so. In the integrated approach, the supervision, monitoring and evaluation of common and key indicators of success for all programmes are planned for joint implementation. For programmes that involve mass drug administration, it is recognized that consistent high drug coverage of the target populations will translate to designed impact as measured by disease specific indicators.

3.8.1 Supervision

Supervisory visits geared towards ensuring that activities being implemented are being carried out as planned will be conducted at various levels. The responsibility for supervision at each level will be that of the immediate higher level. See Figure. Below. Simple but comprehensive integrated checklists will be developed for each level of supervision.

It is the responsibility of the FMOH to develop a comprehensive integrated checklist and guidelines that capture input, process and output of interventions. The State will ensure that the guidelines are adhered to and the checklist used as specified while the LGAs are to supervise the implementation of the integrated intervention at the FLHF and community levels. The FLHFs are to supervise the activities and the implementation of the integrated intervention.

Figure 19: Flow chart of Supervision

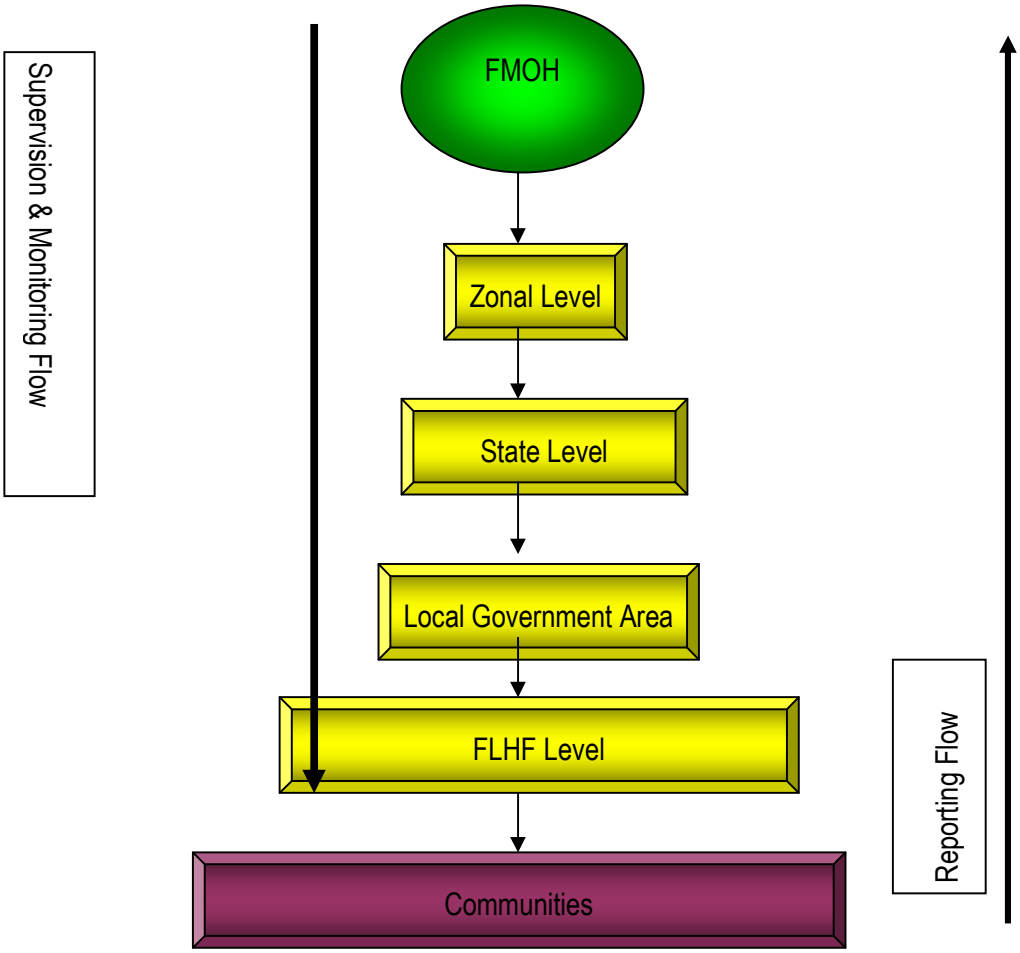


Table 29: Activities for strengthening capacity at national level and programme management

Activity	Details (Sub-activities)	Timeframe	Resources needed
Strategic Objective 1: Strengthen capacity at national level for NTD programme management and implementation.			
Capacity building at national & zonal levels on PCTs	Advocacy Meetings with State Policy Makers, Identification & briefing of focal points	Jan – July 2013	Secretariat and logistic support
Capacity building at national & zonal levels on case management of NTDs	Identification of training and resource gaps; Procurement of relevant logistics; Re-orientation of NTD staff	2013 – 2015	Vehicles, Generators & Office equipment (desktop computer laptop, computer Laser Jet Printers Photocopiers, Scanners, multimedia projectors, Computer accessories, stationery, fax machine, Telephone services & Maintenance, Internet services & maintenance)
Capacity building at national & zonal levels on integrated mapping of NTDs	Holding meetings of NTD Steering Committee & ad-hoc sub-committees; Production of guidelines; Distribution of guidelines to States/LGAs	January – December 2013	Secretariat and logistic support; printing
Capacity building at national & zonal levels on NTD data Management/disease mapping using GIS and other software tools	Development of Programme-Specific work Plans; Holding of NTD Branch Meetings; Integration of Programmes' Work plans	Annually	Secretariat and logistic support
Capacity building at national & zonal levels on resource mobilization & programme management			
Communication			

3.9 ENHANCE MONITORING, EVALUATION, SURVEILLANCE AND OPERATIONAL RESEARCH

3.10 Monitoring and Evaluation

Monitoring is the process of continuous observation and collection of data on the NTD programme to ensure that the programme is progressing as planned.

Evaluation is the systematic and critical analysis of the adequacy, efficiency and effectiveness of the programme, its strategies as well as progress. Evaluation refers to long, mid-term and annual analysis of performance in relation to the goals, objectives and target sets.

3.10.1 Monitoring

- The essence of monitoring is to ensure that activities have been implemented and outcomes achieved as planned. Monitoring looks at inputs, processes, outputs and relates all three to the objectives.
- Monitoring of NTDs activities will focus on:
- Development of management information systems that captures relevant data at each level
- Collection of data routinely and reporting of same to the next higher level (table on reporting routine/time frame)
- Analysis of data collected
- Field visits that will involve household surveys to validate reported coverage rates
- Review meetings where reports are presented and analyzed, etc
- A vital component of monitoring will be pharmaco-vigilance. This is necessary in order to monitor for adverse events due to drug interactions during mass drug administration at the community level. Special adverse reaction forms will be developed and placed at health care facilities for monitoring, referral and reporting of such adverse events.

3.10.2 Generic indicators that will be monitored will include but not limited to the following–

- Geographic coverage
- Therapeutic coverage
- Population coverage
- Prevalence of infection and intensity
- Degree of political/financial support
- Community involvement and participation
- Extent of community contributions
- Degree of integration
- Special focus will be on how activities at all levels have been integrated. Some of the indicators on integration that will be monitored will include:
- Integrated plans availability

- Integrated training sessions
- Joint supervision (shared transport, integrated schedules, integrated checklist)
- Integrated review meetings
- Joint task forces
- Integrated reporting forms/management information systems

3.10.3 Monitoring

However, specific programme indicators will also be monitored. Outcomes of monitoring exercises will be fed back into the system to achieve desired goals during reviews and planning. Overall, the responsibility of the FMOH is to monitor the adherence to the supervisory guideline. The SMOH will develop monitoring work plan that is based on FMOH POA. The LGAs will develop work plan that is based on the state work plan while the FLHF should develop a schedule for Monitoring. Communities will do community self-monitoring. Retraining of the LGAs disease Notification Officers(DSNO) for proper reporting of the NTDs in the IDSR reporting format.

3.10.4 Evaluation

Impact assessment studies will be conducted periodically to measure long-term effects of NTDs activities in relation to the set objectives. Outcomes of the studies will be measured against baseline data that have been collected and analyzed. The different aspects that will be measured will include ophthalmologic, entomological, parasitological, epidemiological as well as socio-economic indices.

To ensure that evaluation activities are properly conducted, the FMOH is to develop a comprehensive integrated evaluation tool and guideline and generate baseline data on all interventions. These have to be done before commencement of intervention to assess the impact of the interventions. Specific sentinel sites for the evaluation of impact of interventions on the NTDs will be established

.

Table 30: Activities to enhance NTD monitoring and evaluation, surveillance and operations research

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
Strategic Objective 1: Enhance monitoring of National NTDs programme and outcomes.			
Develop an integrated NTD M&E framework Conduct annual supportive monitoring and evaluation of NTDs programme	Assess PCT NTDs mapping status to identify areas to be mapped: -Develop guide and plan for integrated mapping	Second Quarter 2013	Personnel, Transport, Equipment, CATT Kits, reagents, microscopes, generators, dry cell batteries, capillary tubes, test tubes, Kato-Katz Kits, Urine reagent strips, other consumables
	- Source tools for PCT NTDs mapping - Conduct integrated mapping of LF-Trachoma-HAT - Conduct integrated mapping of Schistosomiasis, STHs, BU - Conduct 5 yearly assessment of NTDs using the Nigeria Demographic Health Survey	Second Quarter 2013 third Quarter 2013 – 1st Quarter 2014 second quarter 2013- 2014	
Conduct impact assessment for NTDs Develop integrated protocol for impact assessment 2013, 2015 Secretariat and logistic support Develop an integrated NTD M&E framework Conduct annual supportive monitoring and evaluation of NTDs programme	Assess existing programme-specific frameworks for M & E	January – December 2013	Secretariat and logistic support
	Develop integrated M & E guidelines for all levels	January – December 2013	Secretariat and logistic support
	Produce & circulate M & E guidelines	January – December 2013	Secretariat and logistic support; printing
Conduct impact	Produce integrated monitoring and evaluation	January – December 2013	Secretariat and logistic support; printing

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
assessment for NTDs Develop integrated protocol for impact assessment 2013, 2015 Secretariat and logistic support	checklist at federal, state, LGA and community levels		
	Collection, collation and analysis of treatment data	Annually	Secretariat and logistic support
	Validate Data by spot checks	Annually	Secretariat and logistic support
	Conduct periodic M & E of integrated NTDs programme	Annually	Secretariat and logistic support; printing
	Evaluate fund utilization for NTDs programme	Annually	Secretariat and logistic support; printing
Strategic Objective 2: Strengthen the surveillance of NTDs and strengthen the response and control of epidemic-prone NTDs, in particular for dengue and Leishmanaisis.			
Develop Guidelines & Forms for Management of Adverse Events Include all NTDs in IDSR	Develop guidelines for management and referral systems of Adverse Events	January – December 2013	Secretariat and logistic support
	Develop forms for reporting of Adverse Events	January – December 2013	Secretariat and logistic support; printing
Strengthen surveillance structures & mechanisms Ensure certification of diseases targeted for eradication and elimination	Hold Meeting on inclusion of all NTDs in IDSR	January – December 2013	Secretariat and logistic support
	Follow Up Visits to Epid Division & WHO Country Office	January – December 2013	Secretariat and logistic support
Conduct Cross-border Meetings			
Develop Guidelines &			

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
Forms for Management of Adverse Events			
Include all NTDs in IDSR			
Strategic Objective 3: Support operational research, documentation and evidence to guide innovative approaches to NTD programme interventions			
Conduct operational research on problems identified as they arise; Identify and conduct operational research on NTDs for effective programme implementation	Identify priority areas for and carry out operational research	Annually	Secretariat and logistic support
	Document and disseminate experiences on innovative approaches to integrated NTDs mapping and programme implementation	Annually	Secretariat and logistic support; printing
Strategic Objective 4: Establish integrated data management systems and support impact analysis for NTD at the national level, as part of the global NTD data management system and Global NTD Plan			
Establish integrated data management systems	Assess Programme-specific recording and reporting forms & systems	January – December 2013	Secretariat and logistic support
	Develop Integrated NTDs recording and reporting forms	January – December 2013	Secretariat and logistic support
	Produce Integrated NTDs recording and reporting forms	January – December 2013	Secretariat and logistic support; printing
	Develop user-friendly software for integrated NTDs data management	January – December 2014	Secretariat and logistic support
	Field test software for integrated NTDs data	January – December 2014	Secretariat and logistic support

Activity	Details (Sub-activities)	Timeframe/Frequency	Resources needed
	management		
	Finalize software for integrated NTDs data management	January – December 2014	Secretariat and logistic support; printing
	Conduct training on software for integrated NTDs data management	Annually	Secretariat and logistic support
Develop Radio/TV messages for GWD Surveillance			
Establish NTD Reference Laboratory			

3.11 PHARMACOVIGILANCE IN NTD CONTROL ACTIVITIES

The Nigeria Pharmaco-vigilance Programme was established in 2003. It is coordinated by the National Pharmaco-vigilance Centre (NPC) which is located in NAFDAC and collaborates with the Uppsala Monitoring Centre (UMC) and other national centers worldwide. NPC is responsible for monitoring the safety of all medicines in Nigeria. The National Pharmaco-vigilance Centre will be assisted as the case requires by a National Advisory Committee comprising of experts from various fields of health care. The National Pharmaco-vigilance Centre is responsible for providing reporting forms, collecting, evaluating and communicating the findings from ADR reports to the management of NAFDAC, who may communicate same to council for ratification.

NAFDAC uses the findings from the reports for making regulatory decisions on how to prevent or minimize the risk of ADRs in Nigeria. NAFDAC, through the National Pharmaco-vigilance Centre, may communicate their findings, recommendations and directives to appropriate organisations or individuals. These include, but are not limited to health professionals, pharmaceutical manufacturers, public health programmes within the Federal and State Ministries of Health, other public and private health institutions, the media and the public.

3.11.1 Aims of Pharmaco-vigilance

- Early detection of increases in frequency of previously unknown adverse reactions and interactions and other noxious drug induced problems.
- Detection of increase in known adverse reactions.
- Identification of predisposing risk factors and possible mechanisms underlying adverse reactions.

- Estimation of quantitative aspects of risk benefits analysis and dissemination of information needed to improve drug prescribing, use and regulation.

On the integrated NTDs programme, the pharmacist occupies the unique position as the drug logistician to ensure that accurate forecasts are received from the various NTD specific programmes. He/she prepares the ordering and bidding of tenders for drug supplies to the various NTD programmes as well as ascertaining that drugs supplied to are of good quality, safe and efficacious as well as serve as the programme's focal/contact point for every adverse drug reaction observed. Reports of adverse drug reaction and events are submitted using the standardized forms through appropriate national channels. The pharmacist liaises with the National Pharmaco-vigilance Centre on feedbacks from the field as part of the programme's contribution to the National Pharmaco-vigilance Monitoring System. He requires appropriate training to function effectively and serve as a trainer for programme officers at lower levels of operation.

Table 31: Activities for strengthening pharmaco-vigilance in NTD programmes.

Activity	**Details (Sub-activities)**	**Timing/ Frequency**	**Resources needed**
Strategic Objective : Strengthening the reporting and response to severe adverse events (SAEs) by leveraging on-going efforts to strengthen pharmacy-vigilance systems in States			
Develop Guidelines & Forms for Management of Adverse Drug Reaction/ Events	-Develop guidelines for management and referral systems of Adverse Events	January – December, 2013	Secretariat and logistic support; printing
	-Develop forms for reporting of Adverse Events	January – December, 2013	Secretariat and logistic support; printing
Hold consultative meetings with, Food and Drugs Services Dept., NAFDAC and other key stakeholders for the inclusion of NTDs in the Pharmaco-vigilance system	Introduction of and harmonization of ADR&E reporting forms	Fourth Quarter 2013	Secretariat and logistic support; printing
	Dissemination of Guidelines and Reporting Forms to all levels of operation	Fourth Quarter 2013	Secretariat and logistic support; printing, transport

3.12 POST INTERVENTION SURVEILANCE AND INTEGRATION WITHIN PRIMARY HEALTH CARE

The success in maintaining the disease levels below thresholds where they are not of public health significant following intense period of interventions depending on strong post-intervention surveillance and ability by the primary health care to incorporate the surveillance and residual control activities within routine health care delivery. There is need to strengthen IDSR in Nigeria by retaining of the DSNOs for proper reporting of the NTDs in the IDSR format.

Cross-Border Collaboration

There has been little cross-border collaboration between Nigeria and neighbouring countries for NTDs management and control. However, two cross-border meetings have been held between Nigeria and the Republic of Benin on onchocerciasis control. There are also regional meetings that have focused on some or most of the NTDs. Such meetings include the Joint Action Forum (JAF) and other regional meetings of the African Programme for Onchocerciasis Control, as well as the meetings organized by the Global Alliance for the Elimination of Lymphatic Filariasis (GAELF). In these later meetings, there has been exchange of information on various aspects of NTDs mapping and management. It is planned that on-coming cross-border meetings, even if primarily for onchocerciasis control, will also be utilized to share data on NTDs and plan for cross-border collaboration.

Table 32: Activities for surveillance and sustainability

;Activity	Details (Sub-activities)	Timeframe/ Frequency	Resources needed
Strategic Objective: Strengthen the surveillance of NTDs and strengthen the response and control of epidemic-prone NTDs, in particular for dengue and Leishmaniasis.			
Include all NTDs in IDSR	Hold Meeting on inclusion of all NTDs in IDSR	January – December 2013	Secretariat and logistic support
	Follow Up Visits to Epid Division & WHO Country Office	January – December 2013	Secretariat and logistic support

ANNEXES

Annex 1: Nigeria Population by State

S/N	STATE	POP	MALE	FEMALE	UNDER 5	No. of LGAs	No. of communities	0-6 months	6-59months	SCHOOL AGED (5-14)	NO. PRIMARY SCHOOLS‡	NO.HEALTH CENTRES
1	Abia	3285377	166262	162275	657075	17	??	65707	591367	906764	958	738
2	Adama	3672694	186193	181075	734538	21	??	73453	661084	101366	1,668	326
3	Akwalb	4544590	237014	217444	908918	31	??	90891	818026	125430	1,318	515
4	Anambr	4848117	252100	232711	969623	21	??	96962	872661	133808	1,260	793
5	Bauchi	5421300	281264	260865	108426	20	??	10842	975834	149627	1,908	619
6	Bayelsa	2574654	164641	928240	514930	8	??	51493	463437	710604	559	122
7	Benue	4891254	250873	238252	978250	23	??	97825	880425	134998	2,713	1169
8	Borno	4812367	250537	230699	962473	27	??	96247	866226	132821	1,476	428
9	C /River	3349099	173017	161892	669819	18	??	66981	602837	924351	1,043	542
10	Delta	4751154	240468	234646	950230	25	??	95023	855207	131131	1,509	535
11	Ebonyi	2519678	120678	131289	503935	13	??	50393	453542	695431	957	?
12	Edo	3730924	190174	182918	746184	18	??	74618	671566	102973	1,263	653
13	Ekiti	2763951	140574	135820	552790	16	??	55279	497511	762850	878	282
14	Enugu	3776095	188289	189320	755219	17	??	75521	679697	104220	1,159	704
15	Gombe	2728786	142674	130204	545757	11	??	54575	491181	753144	1,314	247
16	Imo	4561622	235597	220564	912324	27	??	91232	821091	125900	1,466	880
17	Jigawa	5041271	256884	247243	100825	27	??	10082	907428	139139	1,683	423
18	Kaduna	7032825	360769	342513	140656	23	??	14065	126590	194105	3,409	1138
19	Kano	1087825	561567	526258	217565	44	??	21756	195808	300239	3,450	676
20	Katsina	6715180	345310	326207	134303	34	??	13430	120873	185338	2,025	708
21	Kebbi	3754451	187512	187933	750890	21	??	75089	675801	103622	1,421	557
22	Kogi	3800660	196118	183947	760132	21	??	76013	684118	104898	2,007	850
23	Kwara	2748738	141498	133375	549747	16	??	54974	494772	758651	1,521	567
24	Lagos	1044915	542310	502604	208983	20	??	20898	188084	288396	2,158	1209
25	Nasara	2160042	109615	106388	432008	13	??	43200	388807	596171	1,276	711
26	Niger	4579416	235648	222293	915883	25	??	91588	824294	126391	2,805	850
27	Ogun	4321882	214145	218042	864376	20	??	86437	777938	119283	1,873	663
28	Ondo	3989084	204178	194730	797816	18	??	79781	718035	110098	1,650	634
29	Osun	3968812	201785	195096	793762	30	??	79376	714386	109539	1,686	854

S/N	STATE	POP	MALE	FEMALE	UNDER 5	No. of LGAs	No. of communities	0-6 months	6-59months	SCHOOL AGED (5-14)	NO. PRIMARY SCHOOLS‡	NO.HEALTH CENTRES
30	Oyo	6482180	325737	322480	129643	33	??	12964	116679	178908	2,618	1243
31	Plateau	3691550	185331	183823	738310	17	??	73831	664479	101886	1,837	948
32	Rivers	6011297	314240	286889	120225	23	??	12022	108203	165911	1,080	671
33	Sokoto	4285830	217023	211559	857166	23	??	85716	771449	118288	2,118	407
34	Taraba	2667179	139095	127622	533435	16	??	53343	480092	736141	1,679	610
35	Yobe	2691356	139808	129327	538271	17	??	53827	484444	742814	950	212
36	Zamfar	3758791	189001	186877	751758	14	??	75175	676582	103742	1,058	327
37	FCT	1628996	858417	770579	325799	6	??	32579	293219	449602	435	233
	TOTAL	**162888608**	**83737838**	**79150770**	**32577709**	**774**	**??**	**3257755**	**2931993**	**4495739**		**23,044**

Source: NPC 2006, Health Facilities Data Base in Nigeria by State, LGA, type and ownership 2000 DHPRS, ‡: Basic and Senior Secondary Education Key Indicators for Nigeria, National. Projected to 2011 from the 2006 NPC figure.

NB:

0-6 MONTHS 2% OF THE POPULATION, 6-59 MONTHS 18% OF THE POPULATION, UNDER 5 20% OF THE POPULATION, SCHOOL AGED 27.6% OF THE POPULATION.

Annex 2: NIGERIA KILOMETER CHART (STATE CAPITAL)

Abeokuta	Abeokuta														
Abuja	740	Abuja													
Akure	277	700	Akure												
Asaba	468	404	310	Asaba											
Awka	444	440	320	44	Awka										
Bauchi	1072	445	835	824	803	Bauchi									
Benin City	329	450	171	139	166	893	Benin City								
Birnin Kebbi	756	573	711	1027	1245	962	882	Birnin Kebbi							
Calabar	765	857	607	297	257	998	436	1318	Calabar						
Damaturu	1384	757	1147	1136	1115	312	1274	1181	988	Damaturu					
Dutse	1140	512	1070	1080	976	318	880	660	1050	288	Dutse				
Enugu	577	595	389	109	62	741	248	1120	283	1099	910	Enugu			
Ibadan	77	659	200	430	457	995	291	679	727	1274	190	539	Ibadan		
Ikeja	81	879	312	467	494	1147	328	826	748	1421	1110	526	147	Ikeja	
Ilorin	236	500	191	507	528	913	362	520	755	1292	846	498	159	306	Ilorin

Jalingo	1312	691	880	859	815	410	998	1266	624	364	542	735	1117	1264	958	Jalingo																	
Jos	940	313	703	692	671	132	761	830	866	444	438	609	863	1015	781	542	Jos																
Kaduna	836	180	761	745	724	412	791	550	921	724	338	662	759	906	600	822	280	Kaduna															
Kano	1086	442	1023	1007	986	321	1057	751	1183	430	136	924	1009	1156	850	731	421	262	Kano													
Katsina	1129	533	1084	1098	1077	494	1148	596	1274	603	296	1015	1052	1199	893	1080	512	353	173	Katsina												
Lokoja	469	138	232	362	456	603	290	832	610	895	650	353	392	539	310	648	471	505	767	858	Lokoja												
Maiduguri	1536	908	1299	1288	1245	464	1357	1404	1462	130	418	1179	1459	1605	1377	416	596	876	614	776	1067	Maiduguri											
Makurdi	821	323	551	353	332	471	492	898	529	783	708	270	711	820	651	368	339	502	760	851	319	935	Makurdi										
Minna	673	117	543	673	726	591	601	456	860	874	558	664	596	743	497	808	459	300	550	533	311	1055	442	Minna									
Oshogbo	167	428	118	398	425	908	259	635	695	1407	985	462	90	237	115	1073	776	715	965	1008	305	1372	618	552	Oshogbo								
Owerri	565	733	407	97	141	889	236	1124	184	1273	1076	174	527	564	604	808	757	812	1074	1163	459	1353	418	751	495	Owerri							
Port-harcout	693	830	535	225	255	996	364	1222	184	1172	1150	281	625	662	732	808	864	917	1179	1270	557	1460	525	849	623	98	Port-harcout						
Sokoto	969	793	924	1232	1211	778	1095	168	1408	1013	520	1149	892	1050	732	1188	648	487	583	428	938	1204	985	627	848	1299	1404	Sokoto					
Umuahia	634	498	476	166	126	867	305	1272	131	1251	1030	152	596	642	624	755	735	790	1052	1143	479	1331	398	729	564	83	129	1257	Umuahia				
Uyo	715	828	557	247	207	948	386	1353	50	1038	1150	233	677	698	705	674	816	871	1133	1224	560	1412	479	810	645	134	134	1358	81	Uyo		
Yola	1428	855	1166	960	746	436	1099	1408	1136	322	558	877	1366	1427	1236	142	568	848	447	868	926	409	691	1027	1225	1025	1132	1214	1005	1086	Yola	

Annex 3: Packages of NTD interventions

Package 1: Mass drug administration

Activity		LF	Oncho	Schisto	STH	Trachoma
Programme coordination		X	X	X	X	X
Advocacy		X	X	X	X	X
Resource mobilization		X	X	X	X	X
Social mobilization		X	X	X	X	X
Training		X	X	X	X	X
Mapping		X	X	X	X	X
Drug distribution	CDI	X	X	X	X	X
	School			X	X	
	MDA campaign	X		X	X	X
	Child Health Day				X	X
	Immunization campaign			X	X	X
	Health &Nutrition Day	X		X		
HSAM		X	X	X	X	X
M&E		X	X	X	X	X

Package 2: Case management and chronic care

Key interventions	Diseases / conditions										
	GW	LEPROSY	YAWS	HAT	LEISH	BU	Complications LF	TRICHIASIS	RABIES	ECCH	CYST
Advocacy /Resource Mobilisation	X	X	X	X	X	X	X	X	X	X	X
Strengthening Partnership	X	X	X	X	X	X	X	X	X	X	X
Intersectoral collaboration	X	X	X	X	X	X	X	X	X	X	X
Health Promotion	X	X	X	X	X	X	X	X	X	X	X
Capacity building	X	X	X	X	X	X	X	X	X	X	X
Mapping	X	X	X	X	X	X	X	X	X	X	X
Passive case finding	X	X	X	X	X	X	X	X	X	X	X
Active case finding				X	X	X	X				
Medical Treatment	X	X	X	X	X	X	X	X	X		
Surgery		X				X	X	X			
Prevention of disability		X				X	X				
Integrated Vector Management/Reservoir control	X			X	X				X		
Surveillance	X	X	X	X	X	X	X	X	X	X	X

Annex 4: Package 3: Transmission Control

A. Vector/reservoir Control

Activity	Vectors and Associated NTDs						
	Mosquitoes			Other Vectors			
				Snails	Black fly	Sand fly	Tsetse fly
	LF	Dengue	Malaria	Schisto	Oncho	Leish	HAT
ITN	X	X	X			X	-
IRS	X	X	X			X	
Space-spraying					X		X
Larviciding	X	X	X		X		
SIT							X
Traps							X
Prevention /Treatment of breeding sites	X	X	X	x	x	X	X

Annex 5: Improvement of water/sanitation and operational research

Activity	LF	Oncho	SCH	STH	Trach	LEP	Leish	HAT	GW	BU	Rabies	Dengue
Partnership for water supply improvement			X	X	X			X	X			
Partnership for sanitation improvement			X	X	X			X	X		X	
Social mobilization	X	X	X	X	X	X	X	X	X	X	X	X
Health Promotion	X	X	X	X	X	X	X	X	X	X	X	X
Operational Research	X	X	X	X	X	X	X	X	X	X	X	X

Annex 6: Drug Forecasting and Logistics - Drug Estimates and Logistics

NTD Programme	Name of Drug	Source Drug	Status of procurement (donated/purchased)	Minimum lead time before delivery	In-country Consignee
LF, ONCHO	IVM/ALB	MDP/GSK	Donated	Once a year	
LFE	DEC				
HAT	Pentamidine/ Melarsoprol NECT DFMO	WHO	Donated	Yearly	
GWD	-	-	-	-	
SCH	PRAZIQUANTEL	MERCK , WHO	Donated	Yearly	
STH	MEBENDAZOLE	WHO, JOHNSON AND JOHNSON, FEED THE CHILDREN /DE-WORM THE WORLD	Donated	Yearly	
TRACHOMA	AZITROMYCIN	ITI	Donated	Yearly	
LEPROSY/ BU	MDT(RIFAMPICIN AND DAPSIN)STREPTOMICIN	WHO	Donated	Yearly	
LEISHMANIASIS	**FLUCONAZOLE** **TOPICAL PAROMYCIN**	**WHO**	**Donated**	**Yearly**	

Annex 7: Nigeria Primary School enrolment

S/N	State	No of schools	No of Classrooms	Enrolment Pre-Primary				Enrolment Primary				Teachers				PTR	PCR
				M	F	Total	%F	M	F	Total	%F	M	F	Total	%F Tc		
1	Abia	958	7760	47,517	47,082	94,599	49.77	202,998	193,360	396,358	48.78	1,994	11,064	13,058	84.73	33.27	55.94
2	Adamawa	1,668	4,520	10,809	10,108	20,917	48.32	237,928	189,044	426,972	44.28	12,041	5,421	17,462	31.04	22.60	88.83
3	Akwa Ibom	1,318	10,746	30,866	32,097	62,963	50.98	727,122	766,759	1,493,881	51.33	6,141	13,135	19,276	68.14	75.67	135.93
4	Anambra	1,260	8,855	58,610	58,863	115,473	49.24	253,843	262,764	516,607	50.86	1,519	14,384	15,903	90.45	34.22	61.41
5	Bauchi	1,908	4,564	14,973	12,715	27,688	45.92	782,317	511,388	1,293,705	39.53	11,354	3,066	14,420	21.26	82.19	265.61
6	Bayelsa	559	2,475	4,625	4,523	9,148	49.44	244,099	237,242	481,341	49.29	2,826	2,353	5,179	45.43	83.74	171.02
7	Benue	2,713	9,790	17,867	17,010	34,877	48.77	498,154	429,249	927,403	46.29	15,116	7,959	23,075	34.49	36.75	87.52
8	Borno	1,476	3,678	13,926	10,728	24,654	43.51	466,501	325,301	791,802	41.08	9,999	4,893	14,892	32.86	43.88	170.41
9	Cross River	1,043	7,165	48,865	49,463	98,328	50.30	232,566	225,368	457,934	49.21	7,737	9,459	17,196	55.01	25.31	62.37
10	Delta	1,509	10,661	31,896	30,821	62,717	49.14	195,136	188,255	383,391	49.10	5,946	13,389	19,335	69.25	19.98	36.38

S/N	State	No of schools	No of Classrooms	Enrolment Pre-Primary				Enrolment Primary				Teachers				PTR	PCR
				M	F	Total	%F	M	F	Total	%F	M	F	Total	%F Tc		
11	Ebonyi	957	6,063	7,931	7,700	15,631	49.26	222,525	226,573	449,098	50.45	4,970	5,152	10,122	50.90	35.70	59.61
12	Edo	1,263	5,268	19,701	19,294	38,995	49.48	148,919	144,291	293,210	49.21	3,426	8,719	12,145	71.79	24.70	55.26
13	Ekiti	878	5,305	11,967	11,825	23,792	49.70	93,630	98,792	192,422	51.34	3,056	7,102	10,158	69.92	14.33	27.57
14	Enugu	1,159	5,496	32,855	32,104	64,959	49.42	145,606	142,499	288,105	49.46	4,452	9,080	13,532	67.10	24.18	59.69
15	FCT	435	2,047	1,465	1,340	2,805	47.77	102,667	94,086	196,753	47.82	2,518	2,527	5,045	50.09	29.56	74.19
16	Gombe	1,314	2,442	11,159	10,780	21,939	49.14	207,275	159,592	366,867	43.50	7,107	3,755	10,862	34.57	28.01	124.58
17	Imo	1,466	10,049	57,685	56,129	113,814	49.32	337,341	334,264	671,605	49.77	3,070	14,571	17,641	82.60	39.63	69.40
18	Jigawa	1,683	3,843	5,551	4,328	9,879	43.81	359,091	217,121	576,212	37.68	10,612	923	11,535	8.00	44.63	133.08
19	Kaduna	3,409	10,067	37,781	35,549	73,330	48.48	524,689	410,566	935,255	43.90	16,927	12,844	29,771	43.14	27.62	86.45
20	Kano	3,450	9,609	22,327	21,675	43,912	49.36	796,649	598,077	1,394,726	42.88	24,505	5,249	29,754	17.64	39.27	124.00
21	Katsina	2,025	5,458	5,545	4,695	10,240	45.85	630,282	348,162	978,444	35.58	10,511	3,379	13,890	24.33	59.16	154.36
22	Kebbi	1,421	3,031	5,946	4,624	10,570	43.75	215,090	110,364	325,454	33.91	7,930	2,268	10,198	22.24	24.50	84.03
23	Kogi	2,007	8,184	15,972	14,927	30,899	48.3	426,224	444,580	870,804	51.0	8,147	9,173	17,320	52.9	47.4	101.0

S/N	State	No of schools	No of Classrooms	Enrolment Pre-Primary				Enrolment Primary				Teachers				PTR	PCR
				M	F	Total	%F	M	F	Total	%F	M	F	Total	%F Tc		
							1				5				6	5	2
24	Kwara	1,521	7,922	18,803	16,929	35,232	48.05	199,838	163,952	363,790	45.07	6,563	9,603	16,166	59.40	21.12	42.39
25	Lagos	2,158	22,940	71,038	69,192	140,230	49.34	260,372	269,181	529,553	50.83	7,814	25,781	33,595	76.74	16.75	24.49
26	Nasarawa	1,276	4,347	13,419	12,282	25,701	47.79	258,386	192,982	451,368	42.75	7,867	3,987	11,854	33.63	31.51	91.34
27	Niger	2,805	5,658	30,035	25,764	55,799	46.17	368,663	218,150	586,813	37.18	14,751	8,140	22,891	35.56	22.30	88.99
28	Ogun	1,873	10,892	50,992	49,143	100,135	49.08	226,865	218,766	445,631	49.09	6,766	15,946	22,712	70.21	17.99	37.90
29	Ondo	1,650	9,059	41,138	41,037	82,175	49.94	322,627	331,006	653,633	50.64	6,187	12,705	18,892	67.25	26.61	54.71
30	Osun	1,686	9,839	33,595	32,837	66,432	49.43	207,584	208,329	415,913	50.09	5,869	11,634	17,503	66.47	20.87	37.24
31	Oyo	2,618	14,060	96,903	96,719	193,622	49.95	439,374	446,178	885,552	50.38	9,743	23,503	33,246	70.69	26.32	61.47
32	Plateau	1,837	6,618	15,859	15,476	31,335	49.39	379,156	341,484	720,640	47.39	11,611	7,932	19,543	40.59	32.75	98.61
33	Rivers	1,080	5,261	6.380	6,056	12,436	48.70	171,163	176,020	347,183	50.70	4,063	4,975	9,038	55.05	36.35	63.02
34	Sokoto	2,118	3,514	41,095	24,046	65,141	36.91	447,840	186,189	634,029	29.37	9,112	1,342	10,454	12.84	48.47	145.81
35	Taraba	1,679	3,468	12,595	10,854	23,449	46.29	391,774	287,293	679,067	42.31	12,428	4,491	16,919	26.54	31.71	157.62

S/N	State	No of schools	No of Classrooms	Enrolment Pre-Primary				Enrolment Primary				Teachers				PTR	PCR
				M	F	Total	%F	M	F	Total	%F	M	F	Total	%F Tc		
36	Yobe	950	1,871	5,105	4,319	9,424	45.83	294,540	196,781	491,321	40.05	5,312	1,787	7,099	25.17	54.18	214.54
37	Zamfara	1,058	1,794	4,269	2,762	7,031	39.28	254,212	100,353	354,565	28.30	5,357	703	6,060	11.60	43.86	164.36
	Total	60,188	254,319	956,475	903,796	1,860,271	48.58	12,273,046	9,994,361	22,267,407	44.88	295,347	302,394	597,741	50.59	35.87	96.52

Source: Basic and Senior Secondary Education Key Indicators for Nigeria, National and by state 2005

Annex 8: NTD Co-endemicity by State

State	Total LGA	Diseases											
		Preventive Chemotherapy Diseases						Case management Diseases					
		Number of LGAs Endemic											
		LF	Oncho	SCH	STH	Trachoma	Loa loa	HAT	BU	Leprosy	GWD	NTD10	NTD11
Abia	17	17	8										
Adamawa	21	18	17			8							
Akwa Ibom	31	11	2										
Anambra	21	21	18	7	11								
Bauchi	20	10	11										
Bayelsa	8	7											
Benue	23	13	22	8	8								
Borno	27	6	12										
Cross River	18	10	15	12	12								
Delta	25	16	9										
Ebonyi	13	9	10	3	3								
Edo	18	7	12										
Ekiti	16	16	16	15									
Enugu	17	14	17	16	17								
FCT	6	4	5	6	6								
Gombe	11	10	10	11	11								
Imo	27	27	16										
Jigawa	27	27	8	14	15	19							
Kaduna	23	18	16										
Kano	44	44	18			21							
Katsina	34	17				8							
Kebbi	21	20	6			5							
Kogi	21	11	21										

State	Total LGA	Diseases											
		Preventive Chemotherapy Diseases						Case management Diseases					
		Number of LGAs Endemic											
		LF	Oncho	SCH	STH	Trachoma	Loa loa	HAT	BU	Leprosy	GWD	NTD10	NTD11
Kwara	16	11	16	15	15								
Lagos	20	6		4	7								
Nassarawa	13	12	7	13									
Niger	25	19	21	3	1	2							
Ogun	20	14	7	18	16								
Ondo	18	17	13	12	16								
Osun	30	16	13										
Oyo	33	5	23										
Plateau	17	17	5	17		10							
Rivers	23	13											
Sokoto	23	20	10	16	18	13							
Taraba	16	13	11	11	11	3							
Yobe	17	11	12			17							
Zamfara	14	14	5	14	14	6							

Annex 9: Epidemiology and Burden of Diseases

Onchocerciasis

S/N	State	No. of LGAs Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
1	ABIA	13	37	1-66%	REA/REMO	1995 & 2002
2	AKWA-IBOM	19	46	0-42%	REA/REMO	1995 & 2002
3	ANAMBRA	11	26	0-82%	REA/REMO	1995 & 2002
4	BAUCHI	7	20	1-56%	REA/REMO	1995 & 2002
5	BENUE	17	99	0-86%	REA/REMO	1995 & 2002
6	BORNO	5	30	0-36%	REA/REMO	1995 & 2002
7	CROSS/RIVER	11	27	0-56%	REA/REMO	1995 & 2002
8	DELTA	14	39	0-60%	REA/REMO	1995 & 2002
9	EBONYI	7	46	0-70%	REA/REMO/Parasitological	1995, 2002 & 2011
10	EDO	15	39	22-165%	REA/REMO	1995 & 2002
11	EKITI	16	71	0-77%	PARASITOLOGICAL	2008
12	ENUGU	11	56	2-38%	REA/REMO/Parasitological	1995, 2002 & 2010
13	FCT	5	242	0-80%	REA/REMO/Parasitological	1995, 2002 & 2010
14	GOMBE	10	28	1-42%	REA/REMO	1995 & 2002
15	IMO	22	56	2-56%	REA/REMO	1995 & 2002
16	JIGAWA	15	77	0-63%	REA/REMO/Parasitological	1995, 2002 & 2009
17	KADUNA		102	0-56%	REA/REMO	1995 & 2002
18	KANO	14	76	0-46%	REA/REMO	1995 & 2002
19	KATSINA		16	2-38%	REA/REMO	1995 & 2002
20	KEBBI		25	1-30%	REA/REMO	1995 & 2002
21	KOGI		91	0-92%	REA/REMO	1995 & 2002

S/N	State	No. of LGAs Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
22	KWARA	13	155	0-80%	REA/REMO	1995 & 2002
23	NASARAWA	6	25	0-40%	REA/REMO	1995 & 2002
24	NIGER	13	284	0-51%	REA/REMO/Parasitological	1995, 2002 & 2009
25	OGUN	15	15	0-84%	PARASITOLOGICAL	2009
26	ONDO	2	11	5-89%	PARASITOLOGICAL	2008 & 2011
27	PLATEAU	12	66	0-83%	REA/REMO	1995 & 2002
28	SOKOTO	3	13	0-50%	PARASITOLOGICAL	2010
29	TARABA	13	96	0-88%	REA/REMO/Parasitological	1995, 2002 & 2010
30	YOBE	13	75	0-34%	REA/REMO	1995 & 2002
31	ZAMFARA	14	49	0-90%	PARASITOLOGICAL	2010

Annex 10:Lymphatic Filariasis

S/N	State	No. Of LGAS Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
1	ABIA	17	17	6-28%	ICT	2008
2	ADAMAWA	18	18	2-20%	ICT	2008 & 2010
3	AKWA-IBOM	11	11	2-20%	ICT	2009
4	ANAMBRA	21	21	2-28%	ICT	2008
5	BAUCHI	10	10	1-34%	ICT	2008
6	BAYELSA	7	7	2-10%	ICT	2009
7	BENUE	13	13	1-66%	ICT	2004 & 2007
8	BORNO	6	6	1-4%	ICT	2008
9	CROSS/RIVER	10	10	1-45%	ICT	2009 & 2010
10	DELTA	2	2	1%	ICT	2003
11	EBONYI	9	9	1-40%	ICT	2005 & 2008
12	EKITI	16	16	1-26%	ICT	2003 & 2011
13	ENUGU	13	13	1-58%	ICT	2005 & 2008
14	FCT	4	4	1-4%	ICT	2008 & 2010
15	GOMBE	10	10	1-17%	ICT	2008 & 2009
16	IMO	27	27	1-53%	ICT	2007 & 2009
17	JIGAWA	27	27	1-49%	ICT	2008 & 2010
18	KADUNA	18	18	2-14%	ICT	2008 & 2011
19	KANO	43	43	2-14%	ICT	2008 & 2010
20	KATSINA	17	17	1-46%	ICT	2008
21	KEBBI	20	20	2-58%	ICT	2008 & 2010

22	KOGI	11	11	1-8%	ICT	2008 & 2010
23	KWARA	13	13	1-16%	ICT	2003 & 2010
24	NASARAWA	12	12	5-54%	ICT	2000
25	NIGER	11	11	1-60%	ICT	2008 & 2009
26	OGUN	9	9	1-4%	ICT	2003
27	ONDO	17	17	2-15%	ICT	2003 & 2009
28	OSUN	16	16	2-22%	ICT	2003
29	OYO	5	5	1-2%	ICT	2003
30	PLATEAU	17	17	10-62%	ICT	2000
31	RIVERS	14	14	1-6%	ICT	2011
32	SOKOTO	10	10	3-35%	ICT	2008
33	TARABA	13	13	1-45%	ICT	2008
34	YOBE	11	11	1-24%	ICT	2008 & 2010
35	ZAMFARA	14	14	4-60%	ICT	2008 & 2010

Annex 11:Trachoma

S/N	State	No. of LGAs Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
1	YOBE	17		2-75%	CLUSTER RANDOM SAMPLING	2006
2	BORNO	10		5-415	CLUSTER RANDOM SAMPLING	2000
3	SOKOTO	14		13-49%	CLUSTER RANDOM SAMPLING	2000
4	ZAMFARA	6		4-32%	CLUSTER RANDOM SAMPLING	2003
5	KEBBI	6		5-21%	CLUSTER RANDOM SAMPLING	2003 & 2004
6	PLATEAU	6		0-15%	CLUSTER RANDOM SAMPLING	2007
7	NASARAWA	11		4-13%	CLUSTER RANDOM SAMPLING	2007
8	KATSINA	10		5-24%	CLUSTER RANDOM SAMPLING	2005
9	JIGAWA	23		0-26	CLUSTER RANDOM SAMPLING	2007
10	KANO	25		1-17%	CLUSTER RANDOM SAMPLING	2008
11	ADAMAWA	9		0-13%	CLUSTER RANDOM SAMPLING	2001
12	TARABA	3		0-6%	CLUSTER RANDOM SAMPLING	2009

Annex 12:Schistosomiasis

S/N	State	No. of LGAs Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
1	ANAMBRA	13	65	0-6.2	HAEMASTIX	2011, 2012
2	BENUE	8	40	9.9 – 47.8	HAEMASTIX	2011
3	CROSS/RIVER	18	15	0-73.2	HAEMASTIX	2010
4	EBONYI	3	15	5 - 34	HAEMASTIX	2010
5	ENUGU	18	90	1.1-14	HAEMASTIX	2010
6	FCT	6	30	3-52	HAEMASTIX	2010
7	JIGAWA	15	15	0.1-67	HAEMASTIX	2010
8	LAGOS	7	20	0-7	HAEMASTIX	2011
9	SOKOTO	23	115	0.03-56.1	HAEMASTIX	2011
10	NIGER	3	3	20-51	HAEMASTIX	2009
11	EKITI	16	80	0-76.1	HAEMASTIX	2008
12	TARABA	11	43	1-40	HAEMASTIX	2009, 2010
13	ZAMFARA	14	70	1.6-82	HAEMASTIX	2009, 2010
14	ONDO	18	90	0-58	HAEMASTIX	2009, 2011
15	OGUN	15	15	2-84	HAEMASTIX	2009
16	GOMBE	11	55	2.4 – 38.1	HAEMASTIX	2013
17	PLATEAU	17			HAEMASTIX	
18	NASARAWA	13			HAEMASTIX	
19	KWARA	15	75	0.3 – 38.3	HAEMASTIX	2012

Annex 13:STH

S/N	State	No. of LGAs Surveyed	Locations/ Sites	Prevalence (Range)	Method Used	Year of Survey
1	ANAMBRA	13	65	3.3-52	KATO KATZ	2011, 2012
2	BENUE	8	40	13 – 26.4	KATO KATZ	2011
3	EBONYI	3	15	14 – 24	KATO KATZ	2010
4	ENUGU	18	90	0-76	KATO KATZ	2010
5	FCT	6	30	0-6	KATO KATZ	2010
6	JIGAWA	15	15	21.2-73	KATO KATZ	2010
7	LAGOS	7	20	21.1-47.4	KATO KATZ	2011
8	SOKOTO	23	115	3.2-38.4	KATO KATZ	2011
9	NIGER	3	3	0-6	KATO KATZ	2009
10	TARABA	11	43	21.2-73	KATO KATZ	2009, 2010
11	ZAMFARA	14	70	3.3-54	KATO KATZ	2009, 2010
12	ONDO	16	80	20-82.2	KATO KATZ	2009, 2011
13	OGUN	15	15	7-78	KATO KATZ	2009
14	GOMBE	11	55	2.4 – 10.8	KATO KATZ	2013
15	KWARA	15	75	8.3 - 57	KATO KATZ	2012
16	CROSS RIVER	12	60	8 - 30	KATO KATZ	2012