ERITREA NATIONAL NEGLECTED TROPICAL DISEASES

MASTER

PLAN 2022 - 2026



MINISTRY OF HEALTH

ERITREA

COMMUNICABLE DISEASES CONTROL PROGRAMME

NEGLECTED TROPICAL DISEASES



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|  | **Preface** |
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The Eritrea Neglected Tropical Diseases (NTD) Master Plan has been developed in line with the Ministry of Health’s vision to transform Eritrea into a nation free from preventable diseases in accordance Eritrea National Health Policy.

The master plan aims at guiding the implementation of the NTD in an integrated way to maximize on benefits. It is a product of Eritrea Ministry of Health with the support of World Health Organization (WHO).

In Eritrea, NTDs include Schistosomiasis, Intestinal Helminthiasis, Trachoma, Lymphatic Filariasis, Leprosy, Dengue Fever and Leishmaniasis . Exceptionally Eritrea was certified free of Guinea worm disease in 2011. The Neglected Tropical Diseases Programme(NTDP) focuses on an integrated control of the endemic 7 out of the 13 diseases that WHO has classified as common NTDs. Other NTD diseases such as Rabies, Brucellosis and Anthrax which are not on this priority list will be incorporated in the Zonal or sub-zonal activities where they are endemic. NTDP will use cost-effective interventions for prevention, control and elimination of these endemic NTDs. All these neglected diseases are an obstacle to socio-economic development and quality of life of the Eritrean people.

Under this plan, the country is aiming at the elimination of preventable NTDs based on Eritrea’s commitment at global and national level. The NTD Strategic Plan will be implemented during the period 2022 to 2026.

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|  | **Acknowledgements** |
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The Neglected Tropical Diseases (NTDs) National Master Plan is the main strategic dashboard for the NTD program prepared by the Ministry of Health in Eritrea. In preparing the National Master Plan for the Elimination of Neglected Tropical Diseases (NTDs), the Ministry of Health (MoH) seeks to provide strategic lenses for NTD programming as a guiding framework at the disposal of decision makers, health and education professionals, planners, development partners and all other stakeholders, a comprehensive plan and roadmap for taking action toward reducing the heavy burden of NTDs in the country. The Ministry of Health is appreciative of the government’s technical leadership and funding support that led to the development of this plan.

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Last but not least, special gratitude goes to all who participate in the consensus workshop from MOA, MOWL.MOE, MOI and delegates from Ministry of Health.

**---------------------------------------------------**

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| CM | Case management |
| CL | Cutaneous Leishmaniasis |
| FAO | Frequent Asked Questions |
| GDP | Gross Domestic Product |
| GNP | Gross National Product |
| GPW 13 | Thirteenth General Programme of Work 2019–2023 |
| HAT | Human African Trypanosomiasis |
| IRS | Indoor residual spraying |
| ITN | Insecticide-treated net |
| IVM | Integrated vector management |
| Leish | Leishmaniasis |
| LF | Lymphatic filariasis |
| MDA | Mass drug administration |
| MMDP | Morbidity management and disability prevention |
| NTD | Neglected tropical diseases |
| Oncho | Onchocerciasis |
| OIE |  |
| PCT | Preventive chemotherapy |
| PEST | Political, Economic, Social and Technological Analysis |
| PHC | Primary Health Care |
| SBCC | Social and Behaviour Change Communication |
| SCH | Schistosomiasis |
| SDGs | Sustainable Development Goals |
| STH | Soil-transmitted helminthiasis |
| SWOT | Strengths, weaknesses, opportunities, and threats |
| TAS | Transmission Assessment Survey |
| TIPAC | Tool for Integrated Planning and Costing |
| TOR | Terms of Reference |
| TRA | Trachoma |
| VL | Visceral Leishmaniasis |
| WASH | Water, sanitation, and hygiene |
| WHO | World Health Organization |
| WHO/AFRO | World Health Organization Regional Office for Africa |

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|  | **Abbreviations and Acronyms** |
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|  | **Key definitions** |
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**Control:** Reduction of disease incidence, prevalence, morbidity and/or mortality to a locally acceptable level as a result of deliberate efforts; continued interventions are required to maintain the reduction. Control may or may not be related to global targets set by WHO.

**Coordination**: Collaboration among adjacent sectors and programmes, within and beyond health, in the broader NTD network. Sectors such as vector control, animal health and WASH make critical contributions to progress against NTDs and working together more effectively will accelerate and sustain progress towards elimination and control of NTD.

**Elimination (interruption of transmission):** Reduction to zero of the incidences of infection caused by a specific pathogen in a defined geographical area, with minimal risk of reintroduction, as a result of deliberate efforts; continued action to prevent re-establishment of transmission may be required. Documentation of elimination of transmission is called verification.

**Elimination as a public health problem:** A term related to both infection and disease, defined by achievement of measurable targets set by WHO in relation to a specific disease. When reached, continued action is required to maintain the targets and/or to advance interruption of transmission. Documentation of elimination as a public health problem is called validation.

**Eradication:** Permanent reduction to zero of the worldwide incidences of infection caused by a specific pathogen, as a result of deliberate efforts, with no risk of reintroduction. Documentation of eradication is termed certification.

**Integration:** Grouping or “packaging” of several diseases, depending on their burden, to facilitate joint delivery of interventions through a common platform such as preventive chemotherapy and use of multiplex diagnostics, and integrated monitoring, evaluation and reporting for all relevant endemic NTDs.

**Integrated vector management:** A rational decision-making process to optimize the use of resources for vector control.

**Mainstreaming**: Planning and delivery of interventions against NTDs through the national health system infrastructure to build capacity and contribute to sustainable, efficient disease prevention and control.

**Mass drug administration:** Distribution of medicines to the entire population of a given administrative setting (for instance, state, region, province, district, sub district or village), irrespective of the presence of symptoms or infection; however, exclusion criteria may apply. (In this document, the terms mass drug administration and preventive chemotherapy are used interchangeably.)

**Morbidity:** Detectable, measurable clinical consequences of infections and disease that adversely affect the health of individuals. Evidence of morbidity may be overt (such as the presence of blood in the urine, anaemia, chronic pain, or fatigue) or subtle (such as stunted growth, impeded school or work performance or increased susceptibility to other diseases).

**Monitoring and evaluation:** Processes for improving performance and measuring results in order to improve management of outputs, outcomes and impact.

**Preventive chemotherapy:** Large-scale use of medicines, either alone or in combination, in public health interventions. Mass drug administration is one form of preventive chemotherapy; other forms could be limited to specific population groups such as school-aged children and women of childbearing age.

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|  | **Executive Summary** |
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Comprehensive multi-year plans for the control of Neglected Tropical Diseases (NTDs) are essential components for effective planning and implementation of sustainable NTD programmes in Eritrea. The national NTD programme’s comprehensive multiyear plan, more commonly known as the NTD Master plan, provides programme goals, objectives and a 3–5 year strategy based on extensive situation analysis, and addresses all components of the NTD programmes relevant to the country.

Most recently, Eritrea has spent the past 3-5 years implementing the plan created. Now, at the turn of the new decade, Eritrea has the opportunity to again shape the objectives of its respective NTDs in the fight for the control and elimination of NTDs. In need to take into account the *2021 – 2030 WHO NTD Global Roadmap,* just recently published, as well as considerations for safely undertaking NTD activities in a post COVID-19 era.

Building off the experience of previous iterations of country Master Plans, and taking into consideration what the shift that the new *2021 – 2030 WHO NTD Global Roadmap* represents,

The Master Plan is divided into four sections:

* **NTD Situation Analysis**, which describes the environment within which the NTD programme will be developed and implemented, including the national environmental and contextual factors that are critical in understanding the distribution of NTDs and their control.
* **Strategic Agenda: Purpose and Goals**, which provides an overview of the targets and milestones for all NTDs that are endemic in the countries, determined through consultation with stakeholders in the country including central and sub-national governments, scientific and research groups, nongovernmental organizations, implementing partners, donors and private sector organizations.
* **Implementing the Strategy: NTD Operational Framework,** which aims to ensure three fundamental shifts in the approach to tackling NTDs: an increased accountability for impact by using impact indicators instead of process indicators; a move away from siloed, disease-specific programmes by mainstreaming programmes into national health systems and intensifying cross-cutting approaches centred on the needs of people and communities; and a change in operating models and culture to facilitate greater ownership of programmes by countries.
* **Budgeting for Impact: Estimates and Justifications**, a key management tool in planning and implementing activities

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|  | **Introduction** |
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This comprehensive five-year Plan (Eritrea Neglected Tropical Diseases (NTD) Master Plan 2022-2026) for the control, elimination, and eradication of targeted NTDs that are relevant in the country is essential strategic document for the government to effectively plan and implement sustainable NTD programmes in collaboration with its national institutes, implementing partners and, donors. It enhances synergies among various NTD initiatives, provides the basis for integrated or linked NTD project plans and includes costing and financing requirements for effective NTD programme performance. The country NTD Master plan will also form the basis for harmonized implementation and performance monitoring of all NTD interventions.

The proposed Third NTD Master Plan (2022-2026) governs the prevention, control and, where feasible, elimination of neglected tropical diseases. It aligns with the new NTD Roadmap ‘*Ending the neglect to attain the Sustainable Development Goals A road map for neglected tropical diseases 2021–2030’[[1]](#footnote-1)*. The aim of this Master Plan is to be a tool to plan for all relevant NTD programmes in Eritrea and facilitate alignment among partners and stakeholders for a joint and complementary support to accelerate progress towards the prevention, control, elimination, and eradication of NTDs.

The Master Plan outlines specific, measurable targets for NTDs endemic in Eritrea, as well as cross-cutting targets aligned with WHO’s Thirteenth General Programme of Work 2019-2023[[2]](#footnote-2), and the SDGs. It also includes the strategies and approaches for achieving these targets, with cross-cutting themes for several diseases, and moves towards the prevention of infections and alleviation of the suffering of people affected by NTDs and as well as how this contributes to attaining the SDGs. Progress in implementing planned activities as well as the programme performance and outputs will be monitored regularly and evaluated at appropriate intervals.

NTDs of public health concerns in Eritrea include Anthrax, Brucellosis, Dengue Fever (DF), Echinococcosis, Foodborne trematodiases, Leishmaniasis (LEISH), Leprosy (LEP), Lymphatic filariasis (LF), Rabies, Scabies, Schistosomiasis (SCH), Snakebite Envenoming (SBE), Soil Transmitted Helminthiasis and Trachoma (TRA).

To better address these diseases, the Ministry of Health has established NTD unit under the communicable disease control division (CDCD) following the restructuring of the ministry. The goal is to improve the health and socio-economic status of Eritreans by significantly reducing the morbidity, disability and mortality caused by the Neglected Tropical Diseases through an integrated delivery of interventions, at a cost-effective approach, to control and eliminate all targeted NTDs”.

The integration of NTDs into the national health system is critical, therefore the NTD Master Plan should be integrated and reflected in the 2020-Eritrean National Health Policy document3: “Maximize the Health and Wellbeing for all Eritreans and Residents of Eritrea at All Ages!” and also included in the National health Plan: HEALTH SECTOR STRATEGIC DEVELOPMENT PLAN III (2022 – 2026 currently at draft stage). Integration and collaboration of the NTD programme within the NTD and with other programmes including WASH, Malaria, IDSR and etc. is very important.

# Part 1: NTD Situation Analysis

# **Section 1.1. Re-assessment of National Priorities and the National, Regional and Global NTD Commitments**

The Neglected tropical diseases affect more 1 billion people living in extreme poverty worldwide and are known to affect humanity for centuries. They include 20 diseases or groups of diseases including: Buruli ulcer Chagas disease Dengue and chikungunya Dracunculiasis Echinococcosis Foodborne trematodiases Human African trypanosomiasis Leishmaniasis Leprosy Lymphatic filariasis Mycetoma, chromoblastomycosis and other deep mycoses Onchocerciasis Rabies Scabies and other ectoparasitoses Schistosomiasis Soil-transmitted helminthiases, Snakebite Envenoming, Taeniasis and cysticercosis Trachoma Yaws. They cause debilitating and disabling condition and are associated with intense stigma and promote the cycle of poverty.

Since the launch of the first NTD Road map in 2012, significant progress has been made in the prevention, control, elimination and eradication of NTDs. For example, today, 600 million fewer people require interventions against several NTDs as compared to 2010, and 42 countries, territories and areas have eliminated at least one disease. In addition, Dracunculiasis is on the verge of eradication with only 54 human cases reported; elimination of LF (17 countries) and trachoma (10 countries) as a public health problem has been achieved and onchocerciasis has been eliminated in four countries. The annual number of cases of human African trypanosomiasis (HAT) has fallen to fewer than 1000 cases (from more than 7000 in 2012) and the number of new leprosy cases reported globally has continued to decline.

Table 1: Showing the known endemic NTDs that are prioritized for interventions in Eritrea are:

|  |  |  |  |
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| **No** | **Preventive Chemotherapy (PCT) NTDs** | **No** | **Intensified Disease Management (IDM) NTDs** |
| 1 | Schistosomiasis | 5 | Leishmaniasis |
| 2 | Lymphatic Filariasis | 6 | Brucellosis |
| 3 | Soil Transmitted Helminthiasis | 7 | Leprosy |
| 4 | Trachoma | 8 | Anthrax |
|  |  | 9 | Rabies |
|  |  | 10 | Snakebite Envenoming (SBE) |
|  |  | 11 | Echinococcosis |
|  |  | 12 | Dengue Fever |
|  |  | 13 | Scabies |
|  |  | 14 | Food Borne trematodiases |

**Global and Regional commitments for NTDs**

In the last two decades, NTDs have received increased attention globally and significant achievements were seen in the implementation of NTDs in the member states due to the commitments of various actors. To mention few of these commitments:

* **WHA resolution on NTDs** at Sixty-sixth WHA in May 2013,
* The **London Declaration on NTDs** (January 2012),
* Drug donation programmes by pharmaceutical companies and donor funding for NTD programmes.
* The **Accra Urgent Call to Action on NTDs** (June 2012): all stakeholders were urged to accelerate efforts to eliminate targeted NTDs in the African Region.
* **Regional consultative meeting on NTD**s in Brazzaville (2013) which expressed the need for a strategy to accelerate the elimination of NTDs in the Region.
* Sixty-third session of the **African Regional Committee** (RC63, September 2013) adopted the **Regional strategy on neglected tropical diseases** (NTDs) which is in alignment with the resolution on NTDs adopted by the Sixty-sixth World Health Assembly in May 2013.
* **The Addis Ababa commitment on NTDs** (December 12, 2014) was a promise to increase domestic investment, strengthen NTD programme, work towards control and elimination targets, and use the NTD control work to strengthen the overall health systems.
* **Global NTD Road map** to help implementation of NTD programmes in countries

The first NTD Road map was published in January 2012 under the theme: *“****Accelerating Work to Overcome the Global Impact of Neglected Tropical Diseases: A Roadmap for Implementation****”.* This road map along with the commitments and supports from local, national and international actors contributed a lot in the control, elimination and eradication of NTDs in the member states.

Subsequently a new roadmap “**Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021−2030**” was prepared through an extensive global consultation and launched in January 2021. The 2030 NTD road map places people and communities at the centre of efforts to improve their health and welfare and highlights the need for innovative approaches to achieve maximum efficiency and scalability through enhanced capacity, increased national commitment including domestic funding. This road map sets targets and milestones on NTDs as well as cross-cutting targets aligned with the Sustainable Development Goals (SDGs). The three foundational pillars that support the efforts to achieve the targets are:

1. Pillar 1: accelerate programmatic action
2. Pillar 2: intensify cross-cutting approaches
3. Pillar 3: change operating models and culture to facilitate country ownership

**The place of NTDs in the national health plan and the commitment of national authorities to the control, elimination and eradication of NTDs**

Cognizant of the burden of NTDs in the country, MoH-Eritrea identified and prioritized 14 diseases (Anthrax, Brucellosis, Dengue fever, Echinococcosis, Food Borne trematodiases, Leishmaniasis, Leprosy, Lymphatic filariasis, Rabies, Scabies, Schistosomiasis, Snakebite Envenoming, Soil transmitted helminthiasis and Trachoma) and developed and implemented two generations of National NTD Master Plan (2012 – 2015 and 2015 – 2020 for the first and the second NTD master Plans respectively) which helped Eritrea to make significant progress in the implementation of the NTD prevention and control interventions. During this period, the programme got better attention with strong level of leadership of the programme by the MoH-Eritrea for the NTD programme demonstrated by recognizing NTD unit in the MoH, assigning dedicated staff as National Programme Manager, inclusion of NTDs in the **National Health Policy-2020** document and also in the **Third Health Sector Strategic Development Plan (2022-2026)**.

This is the third generation of the NTD master plan (2022-2026) for the country for Eritrea. It is aligned with the global NTD road map and other national international guides and manuals and used the AFRO guide for the development of NTD master plan. The current master plan also included the newly added NTDs (scabies and Snake bite envenoming) which are also relevant in Eritrea.

**Purpose of the master plan and the parts of The National NTD Master Plan (briefly describes).**

The NTD Master Plan forms the basis for harmonized implementation and performance monitoring and aims to provide that all the NTD partners and stakeholders use harmonized tools to facilitate integration, partnership, collaboration and therefore effectively manage available resources while reducing wastage. The Plan will also facilitate the achievement towards the 2030 NTDs targets and goals and guided by the following strategic priorities: scale up access to NTD-related interventions, enhance planning for results, resource mobilization and financial sustainability of national NTD programmes, strengthen advocacy, coordination and national ownership, enhance monitoring, evaluation, surveillance and research. The Master Plan is divided into four sections: first section deals on NTD Situation Analysis, which describes the environment within which the NTD programme will be developed and implemented, including the national environmental and contextual factors that are critical in understanding the distribution of NTDs and their control; second section is on Strategic Agenda and it provides an overview of the targets and milestones for all NTDs that are endemic in Eritrea. The third section is on Implementing the Strategy which aims to ensure the three fundamental shifts for the current NTD Road map in the approach to tackling NTDs (increased accountability measuring for impact indicators instead of process indicators; a move away from siloed, disease-specific programmes by mainstreaming programmes into national health systems and intensifying cross-cutting, people centred approaches; and change in the operating model and culture to facilitate greater ownership of programmes); the fourth section of the NTD Maser Plan is focusing on budgeting of the NTD Master plan.

# Section 1.2. National Context Analysis

# 1.2.1 Country analysis

**Country Profile**

Eritrea is located in the Horn of Africa, between latitudes 12 degrees 42’N and 18 degrees 2’N and longitudes 36 degrees 30’E to 43 degrees 20’E. It is bounded by the Sudan to the North and West, the Red Sea to the East, Ethiopia to the South and the Republic of Djibouti to the Southeast. The country has a surface area of about 124,320 square kilometres with four distinct topographic regions: central highlands (2000 meters above sea-level), western lowlands (1000 meters above sea level), eastern lowlands (500 meters above sea level) and coastal lands (500 meters above sea level).

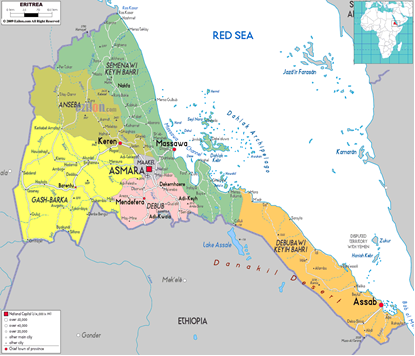


Figure 1: Administrative map of Eritrea

**Administrative, demographic and community structures**

Administratively the country is divided into six administrative zones (see figure1) known as Zobas, namely; GashBarka (GB), Anseba, Debub, DebubawiKeyhBahri (DKB), Maakel (Ma) and SemenawiKeyihBahri (SKB).The zones are further divided into 58 sub-zones, known as sub-Zobas, 669 administrative areas (called *MemhdarKebabi*) and \_\_\_ villages.Although, no population census has been carried out to date, the estimated population of the country at the end 2020 was 3.5 million **.** The population growth rate is 3.0% and total fertility rate was 4.8 children per woman in 2010. (EPHS, 2010). Life expectancy at birth is 61 years for both sexes (World Bank, 2010).

There are 347 health facilities and 75% of the population have access to health services at a radius of 10Kms (HMIS 2018). There are 1080 Primary/elementary schools in Eritrea, distributed 12-30 per sub-zoba and enrolment in 2018-2019 was 482,609 (Ministry of Education 2018).

Settlement patterns in Eritrea are in small communities’ villages (Adi) led by a community leader (Memhdar Adi) organized into MemhdarKebabi. A MemhdarKebabi consists of 3-4 villages on average. The people normally live in stable communities although there are a few nomadic populations in some ethnic groups whom the government is in the process of settling. There are 9 major ethnic groups namely, the Afar, Bilen, Hiedareb, Kunama, Nara, Rashaida, Saho, Tigre and Tigrigna .

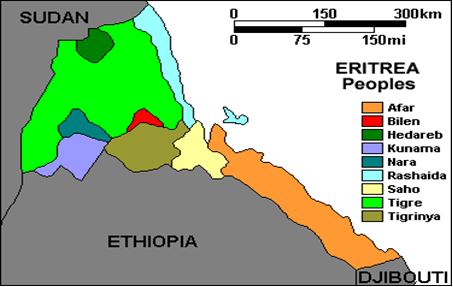


Figure 2: Geographic map of Eritrea

The main occupation is agriculture although there are people involved in fishing and trading. Women are mainly involved in farming like men, as well as domestic activities. Unemployment rates were last reported in 1984 as 14.5%. Communication channels are by postal and telephone. Youth and women associations are active at all levels of society. Only 4 main religions are registered in Eritrea. There is an established system for medicine distribution coordinated by the department of Pharmacy in the Ministry of Health. The country has had a long term experience with health and development projects such as the National Immunization Program, Global Fund for HIV, TB and Malaria, Family Planning and Nutrition etc.

**Geographic characteristics**

Eritrea is located at the highest landmass of the African continent. As a result, the highlands of Eritrea have ameliorating climate conditions. Resulting from these climatic conditions at higher altitudes we find vegetative cover and fertile soils which are suitable for agricultural purposes.Eritrea is marked by three geographical regions, namely the Western Lowlands, the Central and Northern Highlands and the Eastern Lowlands, also referred to as Coastal Plains. In general, rivers in Eritrea are classified in line to where they drain. Thus, there are 3 groups,

those that drain into Sudan, (Barka, Mereb/Gash, and Tekeze rivers), those that drain into the Red Sea (Anseba River), and those that drain into the Afar Depression. Most of these rivers are not perennial. Eritrea has many dams but the major ones include: Gerset, Fankok, Mai Nefhi, Mai Surwa, Badmait, Kerkebet and Tokor.

Two rainy seasons occur across the year in various zones during June-September (long) and October-March (short). In general, rains are scarce and the country is prone to recurrent droughts.

Eritrea has a variety of climatic conditions. Asmara at 2,350 meters has a pleasant climate all year (average temperature of 16° Celsius and receives 508 mm of rainfall annually. The eastern coastal areas receive the unpredictable, "little rains" during October to March, while the other areas get "main rains" (kiremti) from June to September. The river Setit and the red sea are the bodies of water along the length of the country. The country has the Danakil Desert.

In the highlands, further inland, with an elevation between 1,800 and 2,100 meters the hottest month is usually May (around 30°C) and in winter (December to February) temperatures are near freezing point at night. The highest Point is AmbaSoira (3018 meters above sea level). At sea level along the coast (Massawa, Assab), the period from June to September is very hot (40-50°C). In the period December to February (rainy season) the temperature varies from 20 to 35°C. Massawa at sea level has an average annual temperature of 30° C and an annual precipitation of 205 mm (80 inches).In the western lowlands (Agordat, Barentu), the temperatures and the rainy seasons are comparable to those on the coast.

Dams predispose the country to schistosomiasis, while Lymphatic Filariasis thrives in the lowlands where there are water bodies. Inadequate sanitation and lack of water contribute to high prevalence of STH and Trachoma.

**Socio-economic status and indicators**

The majority of the population (65%) resides in rural areas (EPHS, 2010). Agriculture and pastoralism are the main sources of livelihood. Other natural resources such as marine resources, energy resources (oil and gas) and minerals are relatively unexploited. Eritrea is one of the poorest countries in the world. Agriculture is the mainstay of the economy, accounting for 20% of Gross Domestic Product (GDP) which stands at 2117.0 with a growth rate of 2.2%(Eritrea Country Report, BTI 2012). Fisheries, tourism, construction and manufacturing are the other major contributors.

The Population health Survey (2010) findings indicate that infant mortality rate (IMR) was 42 per 1000 live births; under -5 mortality rate 63 per 1000 live births and maternal mortality rate (MMR) at 480 per 100,000 making Eritrea one of the countries in Africa that are on track to reach MDG goal 4.

In Eritrea nearly 72.9% in urban areas and 50% in rural areas have access to an improved source of drinking water. The most common source of improved drinking water is piped water with 47.7% of households in rural area have direct access to piped water. With the establishment of dams, many farmers are increasingly using irrigation for farming, which has intern increased the exposure risk to many NTDs.

**Transportation and communication**

In general, Eritrea has improved significantly its transportation infrastructure connecting all the major Zones with Asphalt. The construction of this infrastructure goes down to the sub-zones making easy access through motor vehicles .

Transport Network e.g. accessibility to peripheral areas has shown marked improvements in the last years. There are also two international airports in Asmara and Massawa and 2 local ones in Assab and Gash Barka. Transportation by sea is not a major method of transportation but is used for the Dahlak Islands which are inhabited.

Remarkable effort has been undergone by the government telephone services Eritrean Telecommunication Services Corporation (EriTel) to connect all the Zones through mobile phones.   
Postal, radio, and television are common means of communication provided by the government which cover the entire country.

# 1.2.2. Health Systems Analysis

***Health systems goals and priorities***

The health sector will endeavor to respond to the Eritrean vision which is “to become a nation that is economically, politically, socially, culturally and psychologically well developed

**Vision:** Improved health status, well-being, productivity, and quality of life of the Eritrean people with an enabling and empowering environment for the provision of sustainable quality health care that is effective, efficient, acceptable, affordable, and accessible to all citizens.

**Mission:**  To promote and provide high quality promotive, preventive, curative, and rehabilitative health care services to the Eritrean people

**Motto :**  “Healthier Eritreans”

**Strategic Objectives**

1. Significantly reduce the burden of early childhood illnesses and improve maternal and Child health development.
2. Control communicable diseases with the aim of reducing them to a non-public health Problem.
3. Prevent, control, and manage non-communicable diseases.
4. Develop and strengthen environmental health, personal hygiene, and sanitation.
5. Strengthen Health education (IEC) and health promotion to enhance health awareness, discourage harmful practices and promote healthy lifestyle.
6. Strengthen and periodically review health information management system.
7. Establish a mechanism for disaster preparedness and response.
8. Improve effectiveness of governance of the health system.
9. Establish effective and efficient health management systems.
10. Strengthen and promote applied health research on major health problems.
11. Strengthen inter-sectoral collaboration with all relevant government and non-government bodies to implement multi-sectoral components of the national health strategies.
12. Promote and strengthen cooperation with all neighboring countries, the countries of the region, and international organizations.
13. Introduce a health-financing scheme that protects people from Catastrophic expenditures and ensures sustainability of the system.
14. Strengthen sector planning and monitoring capability

***Analysis of the overall health system***

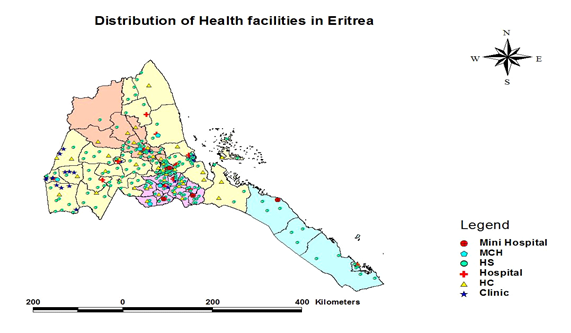
|  |  |
| --- | --- |
| Table 2. Six Health System Building Blocks | |
| **Service delivery** | Provision of health services in Eritrea has been provided through a three-tier system, which include primary, secondary, and tertiary level of service. Primary level of service consists of (i) Community-based health services with coverage of an estimated 2,000 to 3,000 peoples. This level provides BHCP based services by empowering communities, mobilizing, and maximizing resources. The key delivery agent is the Community Health Worker under the leadership of the Village Health Committee. (ii) Health Stations offer facility-based primary health care services to a catchment population of approximately 5,000-10,000. (iii) Community Hospital is the referral facility for the primary health care level of service delivery serving a community of approximately 50,000-100,000 people. Community hospitals provide all services as the lower level facilities and additionally obstetric and general surgical services nearest with an aim of providing vital lifesaving surgical intervention closest to the people.  Secondary level of services is provided by the regional (Zonal) referral hospitals and 2nd contact hospitals. They serve as referral facilities for the lower level facilities as well as teaching/training institutions for middle and operational level professionals and provide facilities for operational/applied research. Tertiary level of service is be provided by the national referral hospitals which are situated in the capital city-Asmara. They not only serve as national referral facilities but as centers of excellence for specialized training/ education, research, and continuing education for acquisition of specialized health body of knowledge.  As of December 2020, 347 health facilities reported to NHMIS including government and non-government health facilities excluding Military Health Facilities. From the total health facilities, MOH owns 298 (85.9%), , private 8(2.3%), Industry 32(9.2%) and the remaining others 9 (2.6%).  Laboratory Services: Eritrea has three levels of laboratory services located at health centers, hospitals, and the central health laboratory. A total of542, 006 patients had laboratory tests in all health facilities in 2020excluding NHL. Hematology, urinalysis, Clinical Chemistry, and stool were the most common laboratory tests performed in most health facilities. The NHL performs more complicated tests and serves as a referral center for all health facilities in the country. There are three departments: hematology, microbiology, and immunology. |
| **Health workforce** | The total number of clinicians in the country as of December 2020 was: 221 medical doctors, 1531(degree and diploma)nurses, 2641 associate nurses and 512(MLT+CLS)laboratory technicians (HMIS2020).The doctors, nurse and associate nurses population ratio is 1:15914 nurses 1:2297 and 1:1332 respectively. Pharmacy tech. 1:10,514, sanitarian 1:164785, laboratory science (MLT+CLS) 1:10,076, public health tech. 1:48,684, and other health professionals (oph. Tech + dental + physio.) 1:33,945. from those actively working in the health facilities, 2191 (59.7%) were working in hospitals, 666 (18.2%) health centers, 593 (16.2%) in health stations, 541(5%) in Mother and Child Health Clinics and 166(4.5%) other clinics, indicating that only one third of the health workers work in primary health facility settings. However, it is also equally important to give attention to primary level care in health center and health stations as most of the health problems in Eritrea are easily preventable and could be handled in those health facilities. These facilities are also found within short distance from the villages compared to the hospitals as a result they are the first entry point to health services. The proportion of health workers deployed to Zobas usually depends on the number of health facilities in the Zoba which also depend on the number of residents in the Zoba. Access to basic health services within 5 km radius is 60% (HHSDP, 2012-2016).  Medical laboratory servicesin Eritrea are an integral part of the health care provision. This implies that medical laboratories are usually attached to health facilities. The capacity of the laboratory is dependent on the level of health service. Like the health system, therefore, the laboratory network follows a pyramidal structure supervised technically by NHL. With four other levels, as follows:-   * **Level 5**: National Health Laboratory (NHL ……………………………01 * **Level 4**: National Referral Hospital (RH) Laboratories ……………...04 * **Level 3**: Zonal Referral Hospitals Laboratories ……………………...06 * **Level 2**: 2nd Contact Hospital Laboratories …………………………..20 * **Level 1**: Community Hospital/Health Center Laboratories …………43 |
| **Health information** | The Ministry of Health developed the Health Management Information System (HMIS) in 1997 and selected disease and health service indicators through the participation of health workers and concerned partners and stakeholders. Data collection manual was developed, and health workers were trained on how to use the data collection and reporting tools. At the initial establishment of the HMIS, the computerized system was developed on Dos-based access operating system and the data entry at Zoba level started in February 1998. The reported data can be disaggregated by Zoba, Sub-Zoba and facility levels. The outpatient and inpatient morbidity and mortality report is used to be disaggregated by two age categories (under 5 (U5) and above 5) until the third category (<1) was included in 2004. The reports from Zoba to the centre have been made with floppy disks. After two years it was updated to window based which is more friendly decision support system (DSS). DSS database was installed in various program managers which helps them to follow the progress of their specific program. The data was updated manually on monthly bases. DSS was having good features of analysis mainly by tables, graphs and maps at different levels. However, as information system is dynamic in nature, it has some limitation and gaps and these holes were sorted out by the introduction of a new web-based software, District Health Information Software version 2 (DHIS2). After testing DHIS2 for 6 months in two Zoba (Maakel and SemenawiKeihBahri) it was officially launched on 21 November, 2017 and in January, 2018 data collection and reporting using Dhis2 started in all Zobas. Close monitoring of the timely reception of the data is conducted at central level and all data is received within 20 days of the following month.  The system is working with high efficacy, timeliness and with an integrated approach.  The implementation of the disease surveillance and response (IDSR), which has integrated reporting of 19 priority communicable diseases in the country, was done in 2002 |
| **Medical products** | The National Medicine and Food Administration (NMFA) is the primary regulatory body in charge of control of drug quality and standards in Eritrea. As a regulatory and administrative body, of the Ministry of Health, for drugs and other medical supplies, NMFA regulates the quality of pharmaceuticals and medical supplies that are imported, and those that are produced in the country. This is to ensure that pharmaceutical products conform to acceptable standards of quality, safety, and efficacy before they are registered. There is a centralised procurement, supply storage, and distribution system in place for medical products in the country which ensure standardization. The sector has also aimed at developing a harmonized, sustainable, and efficient procurement and supplies management system through the establishment of PHARMECOR - Eritrea. Pharmaceutical sub-sector management is guided by the National Medicines Policy under the stewardship role of the division of medicines and medical supplies of MOH. PHARMECOR plans and procures once a year for supplies funded by government and 3 times a year for externally funded supplies that are included in the “Essential medical list” (which is regularly revised) to respond to program specific requirements.  Including that for NTDs using appropriate internationally acceptable tendering procedures. The NMFA ensures a patient-focused service by introducing a functional pharmaceutical care at all levels of service by establishing standard formulary and procedures for use in all hospitals and primary level health facilities, regulate and control advertisement of drugs, medical supplies and health services in the mass media. Each zone has adequately equipped medical store with staff that include a chief pharmacist. Zonal and hospitals stores requisition quantified supplies on a “pull-basis” determined by facility/zonal budgetary ceiling. The orders are filled by PHARMECOR and collected by zonal stores for health stations and health centres and separately by hospitals. Zones pay directly for received items to PHARMECOR, and when a justified need arises to requisition beyond the set budgetary ceiling, MOH absorbs the difference in expenditure. Each unit in the MOH is responsible for tracking the ADRs that occur within its mandate; and hence pharmacovigilance for NTD related adverse drug reactions (ADR) will be the role of the NTD Program in collaboration with the NMFA. Forms are adapted from WHO for tracking and reporting ADRs related to NTD drugs |
| **Health financing** | The health sector in Eritrea relied significantly on government financing, programmatic donor support and out of pocket (OOP) expenditure. There is need of moving forward for developing more reliable and sustainable financing models that shall ensure universal health access for all citizens while safeguarding the population against catastrophic expenditure.  MOH updated its national health financial policy in 2020 in recognition of the evolving national, regional, and global health context and consistent to maximize the health and wellbeing of all Eritreans and Residents of Eritrea and to achieve the 2030 SDG. The NHP-2020 shall guide the country in strengthening its health systems towards the attainment of Universal Health Coverage and the health sector SDGs. The NHP-2020 renewed government’s commitment towards the Primary Health Care (PHC) as the health policy’s overall orientation and overarching strategy. One of the targets for the current policy is to increase the total health expenditure by Government as a percentage of GDP from the existing level (?4.5%) to 10.0 % by 2030 (Increasing Zonal health sector spending to > 80% of their budget by 2030, eliminate user fees through the use of a fully pre-financed model by 2030, and eliminate households facing catastrophic health expenditure by 2030). The government will be responsible for the implementation of the NTDs in Eritrea with the aim of achieving and maintaining elimination status of neglected tropical diseases by 2030. Resource mobilization will be conducted and partners interest for funding the national NTD programmes is expected to improve to help the implementation of NTDs in line with the 3rd National NTD Master Plan. |
| **Leadership and governance** | The Government of Eritrea accords health a prominent place in its priorities, and it is committed to the attainment of health-related SDGs. The Government fully appreciates and continuously emphasizes the decisive role of the people in this endeavour. The Government is determined to create the requisite social and political conditions conductive to their realization. The MoH is highly committed in the control of communicable disease and has developed the 5-year health sector strategic development plan that includes NTDs. Pharmacovigilance for NTD related adverse drug reactions is the role of the NTD Program in collaboration with the NMFA.  Effort has to be made to improve the collaboration and coordination among various departments, sectors and partners; and strengthen leadership at zone and sub-zone levels. The involvement of Ministry of education, Ministry of Agriculture (veterinary department) and Ministry of Finance is crucial.  Restructuring in the health system was made and helped the inclusion of a Neglected Tropical Diseases Unit under the Division of Communicable Diseases (CDC) within the Department of Public Health. Even though NTDs do not feature among the top 10 priority diseases, existing conditions within the current health system are supportive of plans to scale up PCT and CM-IDM services in the country and NTD structure has also been established by the MoH by assigning dedicated staffs for the programme. Eritrea developed and implemented two generation of NTD Master Plans (2013 to 2016 and 2015 to 2020). |

Table 3: Distribution of Health facilities by Zoba and type as of December, 2020

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **ZOBA** | **Hospital** | **Community Hospital** | **Health Center** | **MCH Clinic** | **Health Station** | **Clinic** | **Total** | **% of Total** |
|  |
| **AN** | 1 | 0 | 8 | 1 | 25 | 7 | **42** | **12** |  |
| **DE** | 1 | 6 | 9 | 2 | 42 | 1 | **61** | **18** |  |
| **DKB** | 1 | 1 | 1 | 1 | 12 | 2 | **18** | **5** |  |
| **GB** | 1 | 2 | 15 | 3 | 59 | 0 | **80** | **23** |  |
| **MA** | 1 | 2 | 9 | 0 | 26 | 45 | **83** | **24** |  |
| **National Referral** | 10 | 0 | 1 | 0 | 0 | 0 | **11** | **3** |  |
| **SKB** | 1 | 3 | 11 | 2 | 30 | 5 | **52** | **15** |  |
| **Eritrea** | **16** | **14** | **54** | **9** | **194** | **60** | **347** |  |  |
| **% of Total** | **4.6** | **4** | **15.6** | **2.6** | **55.9** | **17.3** |  |  |  |

Source HMIS 2020

Figure 3: Distribution of Health Facilities in Eritrea



# Section 1.3. Gap Assessment

This section provides information on the current status of the NTDs in the country identifying the areas requiring concerted action as well as the assessing the disease-specific gap assessment across the various dimensions identified in the NTD Roadmap

To achieve the national target towards the control, elimination, and eradication of priority NTDs in Eritrea, emphasis is needed on the following areas:

1. Coordination
2. Implementation capacity
3. Integration and multisectoral collaboration
4. Advocacy and resource mobilization

# Section 1.4. Programme Context Analysis

***1.4.1. Current NTD Programme Organization and Status***

Mapping survey was conducted in two phases in 345 schools covering 18,075 students for SCH and STH and 6,787 people for LF by the Communicable Diseases Control Division (CDCD) of the Ministry of Health in collaboration with Asmara College of Health Sciences and with the technical and financial support of WHO. The first phase was conducted in May/June 2014 and covered Anseba, Debub & Maekel zones; whereas the second phase was conducted in March/April 2015 covered the remaining three zones (Gash Barka, Semenawi Keih Bahri & Debubawi Keih Bahri).

Table 4: Endemicity of PCT NTDs by Zone and Sub zone from 2014 and 2015 mapping result.

|  |  |  |  |
| --- | --- | --- | --- |
| **Zone** | **Number of Sub-zobas affected by PCT NTDs** | | |
| **SCH** | **STH** | **LF** |
| **Anseba** | 2 | 1 | 0 |
| **Debub** | 12 | 0 | 0 |
| **Gash Barka** | 5 | 1 | 1 |
| **Maekel** | 5 | 0 | 0 |
| **NRS** | 4 | 1 | 0 |
| **SRS** | 0 | 0 | 1 |

**Schistosomiasis**

***Epidemiology and disease burden***

Schistosomiasis, an ancient disease of man which was first detected in Egyptian mummies from 1198-1150 BC (Deelder et al., 1990) is caused by Trematodes of the genus *Schistosoma*. In sub-Saharan Africa, most cases of human schistosomiasis are caused by infections with either *S. haematobium* or *S. mansoni*, which cause urinary or intestinal schistosomiasis respectively. Schistosomiasis affects the poorest of the poor and infections are particularly abundant among people living in rural or deprived urban or peri-urban settings. These populations typically have low socio-economic status with limited access to clean water and with poor sanitation. Fishing, farming and collection of water from snail infested sources are the major exposing factors. Women doing domestic chores in infested water, such as washing clothes, are also at risk. Inadequate hygiene and contact with infected water make children especially vulnerable to infection.

The morbidity caused by schistosomiasis is commonly associated with moderate to heavy egg infection intensities. School age children are the most vulnerable groups to developing overt disease and to harbor heavy intensities of infection. Intestinal schistosomiasis can result in abdominal pain, diarrhoea, and blood in stool. Hepatosplenic disease caused by inflammatory responses due to eggs deposited in the liver is common in advanced cases and is frequently associated with ascites, engorgement of collateral vein, portal hypertension and hematemesis due to bleeding of esophageal varices.

The classic sign of urogenital schistosomiasis is haematuria (blood in urine). Fibrosis of the bladder and ureter, and kidney damage are sometimes diagnosed in advanced cases. Bladder cancer is another possible complication in the later stages. In women, urogenital schistosomiasis may present with genital lesions, vaginal bleeding, pain during sexual intercourse, and nodules in the vulva. In men, urogenital schistosomiasis can induce pathology of the seminal vesicles, prostate, and other organs including other long-term irreversible consequences, such as infertility.

Schistosomiasis has considerable economic and health effects, and the disease disables more than it kills. Chronic schistosomiasis may affect people’s ability to work and, in some cases, can result in death. In children, schistosomiasis can cause anaemia, stunting and a reduced ability to learn, though the effects are usually reversible with treatment. The number of deaths due to schistosomiasis is difficult to estimate because of hidden pathologies such as liver and kidney failure, bladder cancer and ectopic pregnancies due to female genital schistosomiasis.

Eritrea is endemic for intestinal schistosomiasis caused by *Schistosoma mansoni* and the presence of the disease was noted since 1930 (references). S. mansoni currently remains endemic in the regions of Gash Barka, Anseba, Debub, Maekel, and Northern Red Sea, especially around irrigation projects. *Biomphalaria tenagophilia* and *Biomphalaria sudanica* are known snail intermediate hosts [2]. Cases of *Schistosoma haematobium* are very low in the country (references). Precision mapping of intestinal schistosomiasis showed the disease is endemic all the zones in Eritrea except Debubawi Keih-Bahri with overall prevalence of below 10% (see tablesbelow).

***Status of programme implementation of Schistosomiasis***

Mapping of intestinal schistosomiasis in 2015 reveled that the disease was endemic in five out of six zobas (region) of the country. The Debubawi Keih-Bahri region was noted to be non-endemic. The disease was noted to be present in 66 schools out of the 176 schools involved in the survey (references). The overall prevalence of intestinal schistosomiasis was below 10% and Figure 1 show prevalence of schistosomiasis by zones (references). The cases of S. haematobium were very low, at 0.8% observed only at Goluj sub-zone and the two cases had heavy intensity of infection. Table XX show the categorization of sub-zones (districts) into various categories of infection intensities as per WHO criteria.Considering the sub-zones (districts), the table below distributions of *S. mansoni* in sub-zones which had prevalence > 5%.

Table 5: Distribution of intestinal schistosomiasis in surveyed areas in Eritrea, 2015

|  |  |  |  |
| --- | --- | --- | --- |
| **S/No** | **Name of the sub-zone** | **Zone** | **Prevalence** |
| 1 | Dekemhare | Debub | 15.35% |
| 2 | Maiaini | Debub | 15.22% |
| 3 | Adi-tekelezan | Anseba | 15,1% |
| 4 | Adequala | Debub | 12.10% |
| 5 | Mulki | Gash Barka | 10.25 |
| 6 | Dbarwa | Debub | 9.48% |
| 7 | Segeneiti | Debub | 8.02% |
| 8 | Mendefera | Debub | 7.25% |

The report from the national HMIS also indicated that Debub Zone has the highest prevalence of Schistosomiasis.

Table 6: Schistosomiasis reported cases, 2011-2020, (reference: HMIS/MOH-Eritrea)

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Zoba** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
| Anseba | 14 | 35 | 30 | 41 | 25 | 29 | 9 | 50 | 12 | 3 |
| Debub | 235 | 294 | 251 | 234 | 154 | 152 | 105 | 76 | 100 | 43 |
| Debubawi Keyhi Bahri |  | 1 |  |  |  |  |  |  |  |  |
| Gash-barka | 1 |  |  |  | 34 | 1 | 6 | 2 | 8 | 5 |
| Maakel | 16 | 1 | 3 | 3 |  | 5 | 8 | 3 | 14 | 2 |
| National Referral | 7 | 9 | 1 | 3 | 9 | 1 | 2 | 4 | 22 | 4 |
| Semenawi Keyhi Bahri | 1 |  |  |  |  | 1 |  | 2 |  |  |
| **Total** | **274** | **340** | **285** | **281** | **222** | **189** | **130** | **137** | **156** | **57** |

Figure 4: Graph showing progress of SCH from 2011 – 2020 with the implementation of SCH control activities

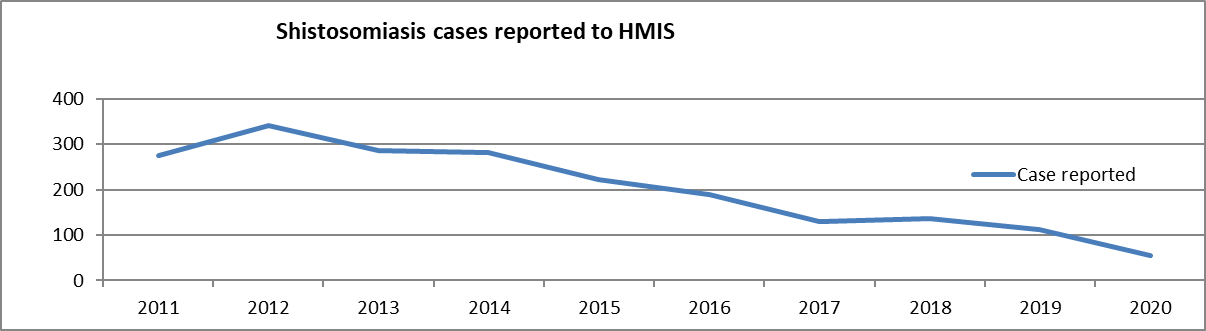
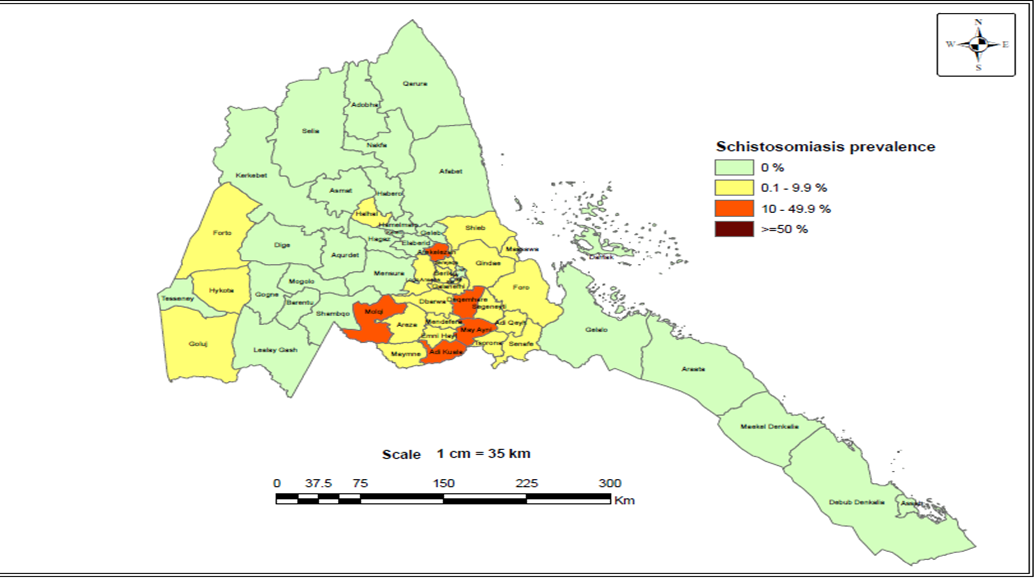


Table 7: Categorization of Sub-zones by risk category for schistosomiasis and soil-transmitted helminths (source: National mapping 2014/15)

|  |  |  |
| --- | --- | --- |
| **Risk category** | **SCHISTOMIASIS** | **STH** |
| **# of sub-zones** | **# of sub-zones** |
| High risk | 0 | 0 |
| Moderate risk | 5 (8.6%) | 0 |
| Low risk | 23 (39.7%) | **3** |
| Non-endemic | 30 (51.7%) | 55 |
| **Total** | **58** | **58** |

Figure 5: Prevalence map for S. Mansoni by Sub-zone, 2014/15 mapping data, Eritrea.



***Mass drug administration***

In Eritrea, mass drug administration is done using praziquantel drug according to the WHO guidelines for treatment of schistosomiasis. Mass drug administration is done primarily in schools targeting school aged children (SAC) from 5-14 years. Because of the transmission intensity of schistosomiasis is low to moderate, the mass drug administration is done every other year. For areas with low prevalence, two rounds of MDA using praziquantel has been conducted and for areas with moderate transmission, three rounds of MDA have been conducted. Sentinel sites assessment was done to assess the impact of MDA in 2019 and indicated a decline in prevalence and intensity of infection.

***Monitoring and Evaluation***

Baseline mapping surveys were conducted in 2014/2015 prior to first round of MDA in 2016. Sentinel sites assessment in selected schools as part of the monitoring process was conducted in 2019 and indicated a decline in prevalence and intensity of schistosomiasis in school aged children. For the first round of MDA in 2016, the coverage survey indicated that the treatment coverage increased from 15% in 2015 to 52% in 2016, but this remained below the WHO recommendation of 75% for SAC.

The recent sentinel sites assessment in 2019 indicated significant reduction in the burden of schistosomiasis. For the sentinel surveillance, 29 schools were included in the survey, more than half of the schools 16/29 (55%) being from Debub Zone which is the most endemic zone. A total of 1595 students (50.6% male and 49.4% female) with age group of 10-14 years old were included in the survey.

The result of the schistosomiasis survey in these 29 schools showed no prevalence in 10 of the schools, reduced prevalence in 15 schools and increased prevalence in 4 schools. The prevalence by age distribution showed prevalence is higher in those students with age of 10 years old (2.1%). The survey also showed males were more infected than females (75.2% vs 24.8%) (see table below for SCH sentinel survey).

Table 8: Sentinel sites mapping and current Prevalence of Schistosomiasis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S/No** | **Name of School** | **Number of Students** | **Prevalence % (2014/15 mapping)** | **Current prevalence % (Dec 2019)** |
| 1 | Halibo Elementary | 57 | 43.76 | 5.3 |
| 2 | Meadin Elementary & Junior | 52 | 34.9 | 3.8 |
| 3 | Warsay Junior Gurae | 54 | 31.56 | 20.4 |
| 4 | Kinafina Elementary | 52 | 31.56 | 36.5 |
| 5 | Quaetit Elementary | 54 | 27.86 | 0 |
| 6 | Mihiram Geido Elementary | 58 | 26.98 | 6.9 |
| 7 | Embakakat Elementary & Junior | 54 | 22.9 | 11.1 |
| 8 | M.Tsion Hebo Elementary &Junior | 54 | 21.73 | 3.7 |
| 9 | Kudo Felasi Elementary | 54 | 19.5 | 3.7 |
| 10 | Tsinat Elementary &Junior | 54 | 16.1 | 0 |
| 11 | Shketi Elementary &Junior | 54 | 12.9 | 11.1 |
| 12 | Adi-Wisk Elementary | 53 | 12.6 | 3.8 |
| 13 | Adinala | 55 | 5.56 | 12.7 |
| 14 | Azmach Mekete Adikala | 54 | 5.56 | 0 |
| 15 | Drko Emni Hayli | 54 | 8 | 13 |
| 16 | May edaga Dekemhare | 54 | 12.6 | 31.5 |
| 17 | Rahwa Junior Adikala | 53 | 42.3 | 3.8 |
| 18 | Johan elementary Mulki | 54 | 14.3 | 0 |
| 19 | Dubarwa Junior | 53 | 6 | 15.1 |
| 20 | Akrur EL. Segentyi | 54 | 11.53 | 1.9 |
| 21 | Rahyet El Shieb | 50 | 3.75 | 0 |
| 22 | Alwahda el. Ghindae | 52 | 7.14 | 1.9 |
| 23 | May Awald Hahal | 52 | 5.9 | 5.8 |
| 24 | Awet Senafe | 54 | 1.9 | 1.9 |
| 25 | Tsaeda kristian | 52 | 2 | 0 |
| 26 | Aditekelzan | 54 | 8.78 | 0 |
| 27 | Adinfas | 54 | 2 | 0 |
| 28 | Serejeka | 54 | 3.92 | 0 |
| 29 | Golig for hematobim | 54 | 2.75 | 0 |

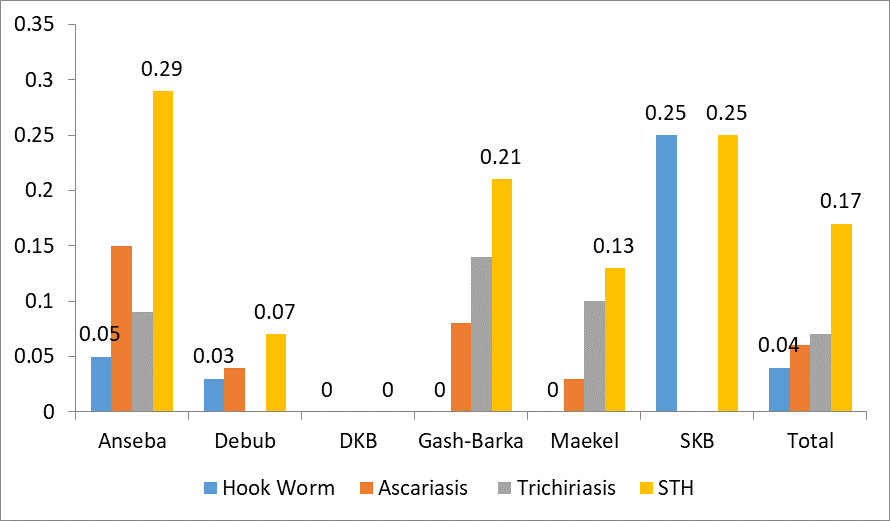
**Soil-Transmitted Helminth**

***Epidemiology and disease burden***

Soil-transmitted helminths/geohelminths represent a group of intestinal nematodes transmitted to human being through contaminated soil. There are four nematode species of public health importance: Ascaris lumbricoides (roundworm), Trichuris trichiura (whipworm), Ancylostoma duodenale and Necator americanus (hookworms). Their eggs are released through the feaces of infected individuals into the environment, hence the collective name of Soil Transmitted Helminths (STH). Both A. lumbricoides and T. trichiura eggs are ingested by humans through contaminated hands or food. Hookworm infections occur through penetration of human skin by infective larvae stage that develop in the soil.

In Eretria, soil-transmitted helminths are not public health problem. The result of integrated STH and SCH mapping survey which was conducted in 2014/2015 showed the national prevalence for STH below 2%. STH infections were recorded at prevalence below 1% in Anseba, SKB, Gash Barka, Maekel and Debub (refer table 5 and 6 for the prevalence of STH). In the baseline school survey, the overall prevalence of any STH in children age 10-14 years was 0.17. Relatively high prevalence (0.29%) was recorded in Anseba followed by SKB (0.25%) and Gash Barka (0.21%). Out of 345 surveyed schools STH was prevalent only in 31 schools. Abdella Degol Elementary, Alnejah Elementary & Junior, Gerger Elementary & Junior, Erdi Elementary & Junior, and Alnahda Elementary schools had the highest prevalence rates of 10.03%, 9.37%, 6.73%, 5.26% and 5.12%, respectively. The remaining 21 schools have prevalence in the range of 4.13% and 0.22%. Hook Worm was prevalent in 10 schools, Ascariasis in 11 schools and Trichiriasis in 10 schools. The presence of STH in scattered places indicates that STH infection is almost insignificant as a public health problem in Eritrea. And hence according to the WHO standard classification on the risk level of infection for STH, none of the schools were located in low or high-risk areas.

Figure 6: Baseline survey showing the prevalence of STH, Eritrea, 2014/15.



***Status of programme implementation of Soil Transmitted Helminthiasis***

***Mass Drug Administration***

Eritrea does not require mass treatment for soil-transmitted helminths. Mass treatment using albendazole are integrated within the lymphatic filariasis mass drug administration also takes care of soil-transmitted infections in co-endemic areas.

Table 9: STH MDA by sub-zoba and age-group, 2016 report

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Age group** | **2-4** | | **5-14** | | **15-40** | | **TOTAL** | | **GRAND TOTAL** |
| **SUB ZONE** | **M** | **F** | **M** | **F** | **M** | **F** | **M** | **F** |
|  |
| Mendefera | 2,360 | 2,441 | 9,196 | 10,599 | 8,984 | 16,508 | 20,540 | 29,680 | 50,048 |  |
| Debarwa | 5,026 | 5,310 | 14,726 | 14,938 | 0 | 0 | 19,752 | 20,248 | 40,000 |  |
| Adi Quala | 0 | 0 | 5,600 | 5,400 | 0 | 0 | 5,600 | 5,400 | 11,000 |  |
| Adi Teklizan | 1,166 | 1,175 | 0 | 0 | 0 | 0 | 1,166 | 1,575 | 2,741 |  |
| **TOTAL** | **8,552** | **9,326** | **24,482** | **26,077** | **8,984** | **16,568** | **42,018** | **51,971** | **103,789** |  |

Table 10: Integrated MDA for SCH and STH (community), 2017 national programme report

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S/No** | **Name sub zone** | **5 -14 years** | | **> 15 years** | | **Total** | |
| **M** | **F** | **M** | **F** | **M** | **F** |
| 1 | Ghindae | 7,585 | 6,942 | 10,905 | 10,497 | 17,714 | 17,775 |
| 2 | Segeneyti | 4,777 | 4,674 | 4,390 | 7,923 | 9,167 | 12,597 |
| 3 | Kudbuor | 6,828 | 6,681 | 6,518 | 10,326 | 13,346 | 17,007 |
| 4 | Defense in sub Ghindae | 0 | 0 | 1,675 | 127 | 1,675 | 127 |
| 5 | Dekemhare | 8,521 | 9,132 | 8,126 | 7,258 | 16,647 | 16,390 |
| 6 | Mai Mine | 5,972 | 5,742 | 8,521 | 7,755 | 14,493 | 13,497 |
| 7 | Mai Aini | 3,942 | 4,024 | 3,779 | 3,799 | 7,721 | 7,823 |

Table 11: Integrated MDA for SCH and STH (School), 2017 national programme report

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **No** | **Name sub zone** | **5 -14 years** | | **> 15 years** | | **Total** | |
| **M** | **F** | **M** | **F** | **M** | **F** |
| 1 | Berik | 5,332 | 5,162 | 1,349 | 1,280 | 6,681 | 6,442 |
| 2 | Mai Nefhi | 0 | 0 | 2,304 | 1,756 | 2,304 | 1,756 |
| 3 | Gala Nefhi | 7,382 | 6,764 | 1,708 | 1,839 | 9,090 | 8,603 |
| 4 | NWA (Adi Nfas, Derfo) | 1,029 | 837 | 132 | 49 | 1,161 | 886 |
| 5 | Serejeka | 5,643 | 5,166 | 1,436 | 1,452 | 7,079 | 6,618 |
| 6 | Adi Keih | 6,570 | 6,521 | 1,215 | 1,153 | 7,785 | 7,674 |
| 7 | Areza | 7,105 | 7,185 | 1,452 | 1,548 | 8,557 | 8,633 |
| 8 | senafe | 6,848 | 6,772 | 875 | 1,175 | 7,723 | 8,947 |

***Monitoring and Evaluation***

Currently STHs are not being regularly assessed but are included in the sentinel sites assessment to monitor their prevalence and intensity of infection.

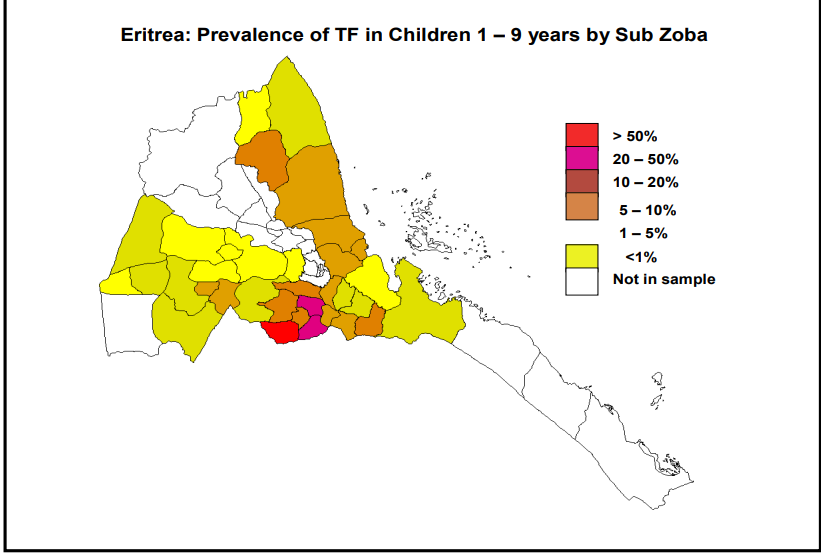
**Trachoma**

***Epidemiology and disease burden***

Two national surveys on Trachoma were conducted, in 2005 and 2012 to determine the prevalence of trachoma in 3 separate Zones. The cross -sectional survey was conducted in May 2005, in Gash-Barka, Debub and Northern Red Sea Zones, in children 1 - 9 years of age and adults above 15 years of age. Trachoma in children was more prevalent in Debub followed by Northern Red Sea (SKB) and was least prevalent in Gash Barka. Prevalence of TF in children 1 – 9 years was 14.9% in Debub. In SKB it was 5.5% and Gash Barka it was 2.4%. Prevalence of TT was higher in older age groups and in persons with no schooling. The highest prevalence in the country is in Mai mine sub-zone in Debub with over 69% prevalence of TF in children 1–9 years of age. Other sub-zones in Debub with high prevalence include Adi Quala with 26.4%. Areza, Dubarwa, Emni Hayli, Senafe and Mendefera have prevalence between 10 and 20%. In Northern Red Sea, Nakfa has prevalence of 11.1%, while Afabet, Ghindae, Massawa and Shieb have more than 5% but less than 10%. In Gash Barka, only Barentu and Shambuqo have more than 5% but less than 10%. All Sub-zones with high prevalence of TF in children also have high prevalence of TT in adults except Massawa, Mendefera and Nakfa. In addition, some sub-Zones with relatively lower prevalence of TF in children have higher prevalence of TT in adults. These include Logo Anseba, Molqui and Omhajer in Gash Barka, Dige-Adobha in SKB and Adi Keyh in Debub. Implementation of MDAs for 8 sub-zones found to be endemic for Trachoma was started in 2011.

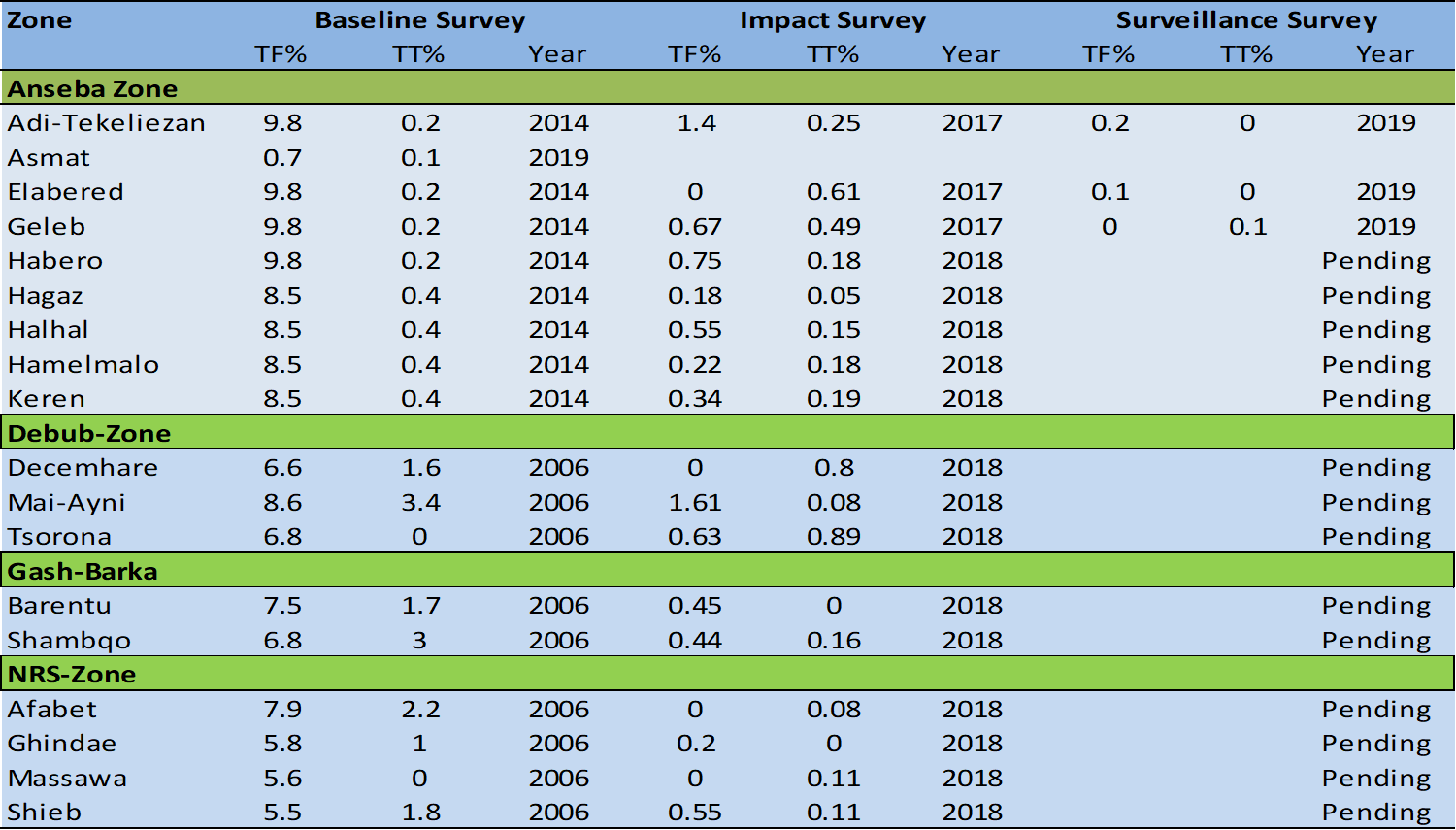
Figure 7.: map showing prevalence of TF in children 1-9years by sub-zoba level, Eritrea, (2012 survey

Table 12: TF prevalence data, 2006 Trachoma survey



|  |  |  |
| --- | --- | --- |
| Prevalence Summary (2006) | | |
| Districts with TF1-9 ≥ 50% | 1 |
| Districts with TF1-9 ≥ 30% | 0 |
| Districts with TF1-9 10-29.9% | 7 |
| Districts with TF1-9 5 – 9.9% | 9 |
| Districts with TF1-9 < 5% | 18 |
| Districts with TF1-9 ≥ 10% | 8 |
| Population with TF1-9 ≥ 10% | 694,543 |

Table 13: Trachoma prevalence distribution and impact survey result, Eritrea (source: Programme report, National prevention of Blindness).



***Status of Trachoma programme implementation***

In general, the WHO SAFE Strategy is recommended for the elimination of Trachoma. Implementation of the SAFE strategy began in 2011 in Eritrea with the MDA Phase I focusing on these 8 sub-zobas based on the treatment guideline. Of these, three recommended MDA rounds have been completed in six sub-zobas, Nakfa had two rounds and one (Mai Mne) had 6 MDA rounds due to a high prevalence of TF (69%). After rounds of MDA intervention, three sub-zobas namely: Senafe (1.8%), Nakfa (2.8%) and Adi-Quala (3.0%) were achieved below the treatment threshold. However, Areza (10.7%) and Dubarwa (10.4) remained border to cut-point; Mendefera (7.4%) and Emni-Haili (7.8%) were also achieved a prevalence of < 10%, hence further rounds of MDAs intervention were needed for these sub-zones.

Resurveying of the four sub-zobas and first post MDA Impact Assessment for Mai-Mine was planned for 2017. Accordingly, Areza, Dubarwa, Emni-Haili and Mendefera achieved TF prevalence 1.3%, 3%, 0.7% and 1.9% respectively. Also the high prevalent district Mai-Mine achieved a prevalence of 4.53%. In 2018 and 2019, TSS have been conducted in all these 8 sub-zones. As a result, Areza, Dubarwa, Emni-Haili, Mai-Mine, Mendefera, Nakfa, and Senafe achieved TF prevalence of 1.1%, 2.3%, 2.0%, 3.2%, 0.3% and 0.7% respectively. However, Adi-Quala sub-zone indicated prevalence of 10.56%, thus it needed further three rounds of MDA of which two rounds are implemented in the year 2019 and 2020.

Table 14: No.of sub-zobas conducted MDA and impact assessment.

|  |  |  |  |
| --- | --- | --- | --- |
| **Progress on MDAs, Impact Assessment & Surveillance survey** | | **Progress on Impact Assessment and survey** | |
| **Year of MDA** | **No. of Sub-zobas conducted MDA** | **Year of impact survey** | **No. of sub-zobas** |
| 2011 | 8 Sub zobas | 2014 | 7 sub zoba |
| 2012 | 8 Sub zobas | 2016 (December) | 1 sub zoba |
| 2013 | 7 Sub zobas | 2017 | 7 sub zobas |
| 2014 | 1 Sub zobas | 2018 | 18 sub zobas |
| 2015 | 3 Sub zobas | 2018 Surveillance Survey | 2 Sub-zobas |
| 2016 | 5 Sub zobas |  |  |
| 2017 | 17 sub zobas |  |  |

Table 15: Showing prevalence of TF, Eritrea (2021)

|  |  |
| --- | --- |
| **Prevalence Summary (2021)** | |
| Districts with TF1-9 ≥ 30% (Baseline) | 0 |
| Districts with TF1-9 10-29.9% (Baseline) | 0 |
| Districts with TF1-9 5 – 9.9% (Baselines 2006 & 2014 2019) | 0 |
| Districts with TF1-9 ≥ 30% (Impact) | 0 |
| Districts with TF1-9 10-29.9% (Impact) | 0 |
| Districts with TF1-9 5 – 9.9% (Impact ) | 0 |
| Districts with TF1-9 ≥ 30% ( Surveillance) | 0 |
| Districts with TF1-9 10-29.9% (Surveillance) | 1 |
| Districts with TF1-9 5 – 9.9% (Surveillance) | 0 |
| Districts with TF1-9 < 5% | 57 |

***Trachomatous Trichiasis***

30 sub-zobas are endemic for Trichiasis with a range of prevalence between 0.1% and 6.8%. 9,9,8 and 4 from Debub, Gash-Barka, Anseba and NRS respectively.16,524 TT backlog (2006,2014,2017 and 2018 surveys).

Table 16: Results of baseline and impact survey for TT.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sub-zone** | **Baseline Survey** | | **Impact survey 1** | | **Impact survey 2** | | **Surveillance Survey** | |
| **TT%** | **Year** | **TT%** | **Year** | **TT%** | **Year** | **TT%** | **Year** |
| Adi-Qula | 3.1 | 2006 | 0.8 | 2014 | - |  | 0.2 | 2018 |
| Areza | 2.8 | 2006 | 0.7 | 2014 | 0.04 | 2017 | 0.2 | 2019 |
| Dubarwa | 2.2 | 2006 | 0.7 | 2014 | 0.19 | 2017 | 0.1 | 2019 |
| Emni-Haili | 0.8 | 2006 | 0.7 | 2014 | 0.49 | 2017 | 0.8 | 2019 |
| Mai-Mine | 3.8 | 2006 | 0.65 | 2014 | - | 2017 | 0.6 | 2019 |
| Mendefera | 0 | 2006 | 1.1 | 2014 | 0.5 | 2017 | 0.1 | 2019 |
| Nakfa | 0 | 2006 | 0.1 | 2014 | - | 2017 | 0 | 2018 |
| Senafe | 3.4 | 2006 | 1.1 | 2014 | - | 2017 | 0.3 | 2018 |

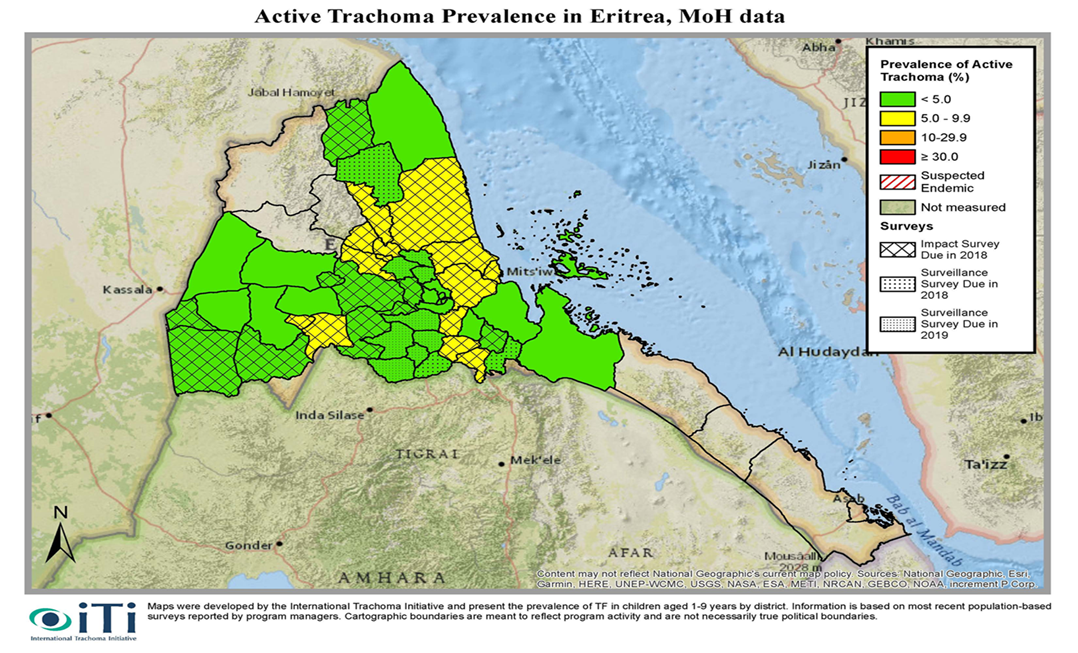
***TT Surgery***

As per the result of the surveys conducted, the prevalence of TT in Eritrea is very low (see table 13), however surgery is being done by trained TT surgeons at the health facilities in the endemic localities. The TT service is available at sub-zoba level especially in the endemic areas.

**Gaps and challenges for trachoma programme**: Inadequate level of collaboration with the Prevention of Blindness unit and lack of data (TF data by sub-zoba lebel ,MDA coverage by IU, etc.)

**Planned activities**: Improve collaboration, strengthen data management, Trachoma impact survey in preparation for validation of Trachoma as public Health Problem in Eritrea.

Figure 8: Showing TF prevalence after interventions,) source: Impact survey in 2018/2019)



**Lymphatic Filariasis**

Lymphatic Filariasis is a debilitating disease that is estimated to affect 856 million people in 52 countries worldwide. It is caused by the filarial worm Wuchereria bancrofti and transmitted by mosquitoes of the genus Culex and Anopheles. Once infected the disease may not manifest for several years (up to 20 years) and causes debilitating tragic morbidity namely: -

• Lymphedema: swelling of the extremities; it can affect the breasts, legs and/or arms of both men and women. Once the damage has been caused, it is not possible to fix the damaged tissue.

• Hydrocele (scrotal swelling): inflammation is found around the genitals

Between 1998-2011, a total of 142 cases of Lymphatic filariasis were reported from different health facilities in all zones of the country (source: HMIS). In 2014, a total of 69 villages were mapped for LF using the Immunochromatographic Test cards and included a total of 6,787 individuals. Table XX shows the number of people participated in the survey. The study population was any resident adult, defined as being over or equal to 15 years old and having lived in his/her village for more than 10 years. Out of these villages, only seven (7) individuals tested positive using the ICT card. The positive results were found in two villages, Abaalega village in Forto sub-zoba of Zoba Gash Barka bordering Sudan and Tio village in Araata sub-Zoba of Debubawi Keih Bahri (DKB) along the coastal area. The overall prevalence of lymphatic filariasis was 0.1% (7/6,778). All the reported positive cases were males, and the age range of the cases was between 40-65 years but only one positive cases (aged 17 years old) was found in Abbalega village.

Figure 9: LF endemicity map in Eritrea (2014)

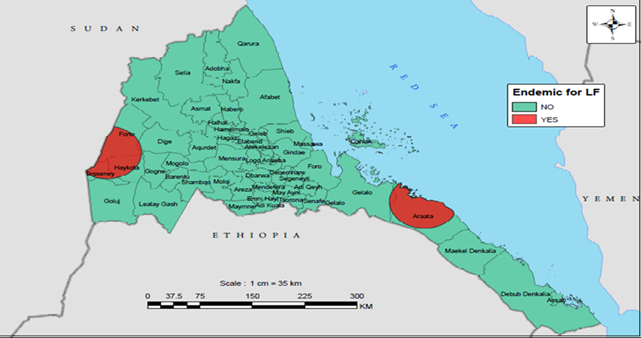


Table 17: Distribution of study subjection by zone and sex (National survey, 2014)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **Sub-Zone** | | **Villages** | | **Number of study subjects** | | | |
| **Male** | | **Female** | |
| **Number** | **%** | **Number** | **%** | **Number** | **%** | **Number** | **%** |
| Maekel | 1 | 2 | 1 | 2 | 48 | 1 | 52 | 2 |
| DKB | 3 | 6 | 7 | 10 | 376 | 11 | 324 | 9 |
| SKB | 10 | 21 | 15 | 22 | 739 | 22 | 754 | 22 |
| Anseba | 9 | 19 | 12 | 17 | 557 | 17 | 632 | 18 |
| Debub | 11 | 23 | 12 | 17 | 559 | 17 | 621 | 18 |
| Gash Barka | 14 | 29 | 22 | 32 | 1,065 | 32 | 1,060 | 31 |
| **Total** | **48** | **100** | **69** | **100** | **3,344** | **100** | **3,443** | **100** |

***Status of programme implementation***

In 2000, WHO launched the Global Programme to Eliminate Lymphatic Filariasis (GPELF). The elimination strategy has two aims:

* To interrupt transmission through mass drug administration (MDA)
* To alleviate the suffering of clinically affected populations through morbidity management and disability prevention (MMDP)

***Mass Drug Administration***

The drugs used for Mass Drug Administration (MDA) are Albendazole (ALB) and Diethylcarbamazine (DEC), as the country is not classed as endemic for onchocerciasis. Anyone suspected of having onchocerciasis should not be given DEC as this will cause adverse reactions.

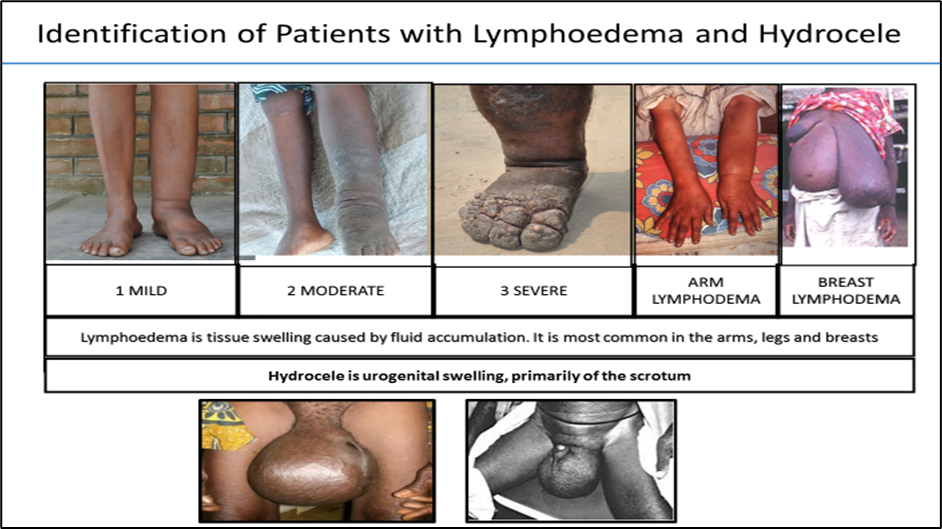
The MDA is carried out via a mixture of distribution points and door-to-door distribution. It follows directly observed treatment method and is carried out by healthcare workers. A summary of the LF treatment coverage is provided (**Table XX** under section 1.4.2. NTD Programme Performance) and the coverage is consistently above the WHO recommendation.

***Morbidity Management and Disability Prevention (MMDP)***

The development of a Morbidity Management Plan is an essential element of LF elimination. In 2018, the country developed the Neglected Tropical Diseases management guidelines, which includes lymphatic filariasis. For LF the guideline includes mapping of morbidity case confirmation via clinical verification, training on morbidity management and facilities assessments

Integrated MMDP developed and being used though the burden for lymphedema and hydrocele due to LF is very low.; hydrocele surgery is being done at the Zoba referral hospitals in the country.

Figure 10: Identification of patients with lymphoedema and hydrocele



***Monitoring and Evaluation for LF***

Eritrea planned to carry out Transmission Assessment Survey (TAS 1) in 2020 and received the kits for use but it was delayed because of the COVID-19 pandemic. It is now planned to be conducted in 2022. Planning for ongoing surveillance of LF during the TAS period and post elimination will also begin based on the result of TAS.

***Gaps and Challenges***

* TAS was planned for 2020 but delayed due to the COVID19 pandemic

***Plans: conduct TAS1 and TAS2***

* Conduct TAS
* Continue intervention
* Strengthen surveillance

**Leprosy**

***Epidemiology and disease burden***

Eritrea has achieved a prevalence below 1/100,000 population at national and sub-national level. Leprosy is endemic in Eritrea and the country is among the low burden countries. Leprosy cases are treated currently at central level in the Leprosy Hospital in Asmara. In recent times the cases are reported mostly from Debub and Southern Red Sea zone. Annually the country notifies between 3-6 cases and in 2020, only one new case was reported (weekly epidemiological record, September 2021).. Notably is that all the cases are diagnosed with disability grade 2 pointing to late diagnosis. Majority are multibacillary (MB) with the risk of continued transmission in the community (National TB and Leprosy Strategic document, 2021-2026).

***Status of programme implementation***

Leprosy control program is one of the oldest programme in Eritrea. The Leprosy control program is with the National TB control program and hence most activities are jointly performed. The Hansonian Hospital in the central zone is the only hospital that is designated to initiate treatments and follow some of them. All suspected cases from the sub zones are referred to the central level for confirmation and treatment of the cases. The hospital provides treatment and adjuvant treatment for coexisting conditions. Currently the case finding management has been confined to passive one where patients seek medical attention. There are no children cases reported though there has not been any active case finding activities.

The capacity building particularly in case management of leprosy has been sub-optimal. However, packages of trainings have been given together with TB. The program collects data on case notification and treatment outcome every quarter. In Eritrea, the level of stigma towards leprosy Is still high and this results in poor health seeking behaviour and cause late presentation of cases.

Table 18: Trend of notified leprosy 2015-2019 (source: programme report and TBL Strategy)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Year** | **# Leprosy cases** | **MB** | **PB** | **G2D** | **M** | **F** | **<51yr** | **>=15yr** |
| 2015 | 5 | 4 | 1 | 5 | 5 | 0 | 0 | 5 |
| 2016 | 2 | 2 | 0 | 2 | 1 | 1 | 0 | 2 |
| 2017 | 3 | 3 | 0 | 3 | 3 | 0 | 0 | 3 |
| 2018 | 6 | 3 | 3 | 6 | 4 | 2 | 0 | 6 |
| 2019 | 3 | 1 | 2 | 3 | 2 | 1 | 0 | 3 |
| 2020 | 1 | 1 | 0 | 1 | 1 | 0 | 0 | 1 |
| **Total** | **20** | **13** | **7** | **20** | **17** | **3** | **0** | **20** |

***Gaps and priorities for Leprosy:***

The main challenges faced by the national programme for leprosy are lack of active surveillance, delay in case notification with G2D due to low awareness and high level of stigma, lack of contact tracing and management, lack of funding and lack of implementation of PEP

With the new target of interruption of transmission of leprosy, the priority areas are active case detection, contact tracing and management, enhance early case finding and treatment of leprosy patients and capacity building of health care providers.

**Dengue Fever**

Dengue fever is one of the epidemic prone diseases that is rapidly expanding in many parts of the world. Dengue haemorrhagic fever has been common in the West African countries. In recent years, outbreaks of dengue fever have occurred in the east coast of Africa expanding from Ethiopia to Mozambique. There are four sera-types of the virus and the disease can manifest itself in one of the three forms (Dengue Fever (DF), Dengue Haemorrhagic Fever (DHF) or Dengue Shock Syndrome (DSS).

From 2005 to 2008, there were reports of Dengue fever-like outbreaks in the Western part of Eritrea, in the Gash-Barka region (MOH Reports). In the years 2006 – 2008, although the trend was low, there was almost a continuous transmission throughout the year. One expects an increase in the incidence of the DF outbreak following the rainy season which is usually between the period November – January. This was mainly because of the presence of various water bodies such as open public pipe water that continually leak into their surroundings, open tankers, swamps, disposed tires, open water barrels at homes that served for the free reproduction of the mosquitoes, Aedes Egyptian. HMIS report from the seven zonal hospitals is shown in the table below, showing consistently more than 10,000 cases annually with increasing trend for the period from 2012 to 2015.

Table 19: HMIS reported cases of Dengue Fever, Eritrea, 2012 - 2015

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Zonal Referral Hospital** | **2012** | **2013** | **2014** | **2015** |
| Anseba | 948 | 695 | 852 | 1,363 |
| Debub | 46 | 38 | 54 | 299 |
| Debubawi Keyh Bahri | 953 | 1,008 | 711 | 645 |
| Gash Barka | 4,343 | 6,777 | 5,550 | 7,634 |
| Maekel | 545 | 424 | 56 | 375 |
| Semenawi Keyh Bahri Hospital | 5,960 | 3,256 | 3,581 | 4,525 |
| National Referal | 318 | 305 | 185 | 333 |
| **Total** | **13,113** | **12,503** | **10,989** | **15,174** |

***Control interventions for Dengue Fever***

The following interventions and priority actions are recommended for Dengue feverprevention and control:

* Vector control by implementing the IVM strategy
* Environmental management to prevent mosquito breeding
* Covering, emptying, and cleaning of water storage containers
* Personal household protection including window screens
* Vector surveillance
* Social mobilization and community participation

**Leishmaniasis**

***Epidemiology and disease burden***

Leishmaniasis is a parasitic disease caused by different species of leishmania parasite transmitted by infected sand fly. Leishmaniasis has different forms but cutaneous (CL) and visceral (VL) forms are the common ones. VL is fatal illness if left untreated while CL can cause permanent scar and disability and social exclusion.

Leishmaniasis is reported from health facilities in different parts of the country but mainly from Gash Barka Northern Red Sea, Debub, Anseba and Maekel. Even though both forms of the disease are prevalent in Eritrea, the true burden is not known neither the leishmania species.

***Status of Programme implementation***

Leishmaniasis was included in the previous National NTD Master Plan (2015-2020) of Eritrea. There was no funding to support implementation of the leishmaniasis control activities and no mapping was done in the country and hence the burden of the disease is not known. VL case diagnosis is done mainly clinically, Formolgel test (non-sensitive and currently not recommended for VL diagnosis) due to the lack of RDT and DAT test. Few referral hospitals are able to do parasitological test for VL diagnosis. Despite these efforts, there is no medicine available in the country for the past five years for VL treatment until recently the country received donation of RDT kits and antileishmanial medicines for VL case management from WHO. Medical Doctors and laboratory professionals were trained virtually on VL case management and cascade training is planned by the national programme to be made for health care providers at zoba and sub-zoba level to enable them early cases detection and prompt treatment.

Table 20: Showing VL annual report by Zoba level (HMIS data), 2011 – 2020.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Zoba** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **Total** |
| Anseba | 5 | 9 | 19 | 10 | 23 | 7 | 13 | 29 | 10 | 16 | **151** |
| Debub | 21 | 36 | 21 | 11 | 20 | 16 | 17 | 29 | 40 | 9 | **260** |
| Debubawi Keyh Bahri | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | **9** |
| Gash Barka | 39 | 45 | 76 | 57 | 115 | 58 | 90 | 118 | 106 | 125 | **935** |
| Maekel | 2 | 2 | 1 | 0 | 0 | 3 | 2 | 0 | 0 | 0 | **10** |
| Nat.Referral Hospital | 28 | 40 | 61 | 51 | 59 | 56 | 64 | 60 | 110 | 28 | **557** |
| Semenawi Keyh Bahri | 4 | 1 | 10 | 12 | 14 | 6 | 35 | 9 | 6 | 8 | **105** |
| **Total** | **101** | **134** | **188** | **141** | **231** | **146** | **221** | **247** | **432** | **186** | **2,027** |

***Gaps and priorities:***

The real burden of the disease is not known, and data is received through the national DHIS2. There is very limited effort on the control of the disease including health promotion, treatment and surveillance activities. The main challenges are lack of trained personnel, weak surveillance system and lack of funding for procurement of supplies (drugs and medicines) for case management. Moreover, R&D is needed to identify the leishmania species, understand transmission dynamics including the sandfly.

Effort has to be made to conduct leishmaniasis burden assessment, identification of leishmaniasis species (for both cutaneous and visceral leishmaniasis), advocacy for improved ownership with established national programme including allocation of domestic funding, capacity building of health care providers and strengthening the surveillance system to have a successful VL that will enable the national goal which is aligned with the global NTD roadmap.

**Newly Added NTD**

**Scabies**

Scabies is caused by the microscopic ectoparasite Sarcoptes scabiei var. hominis. Transmission of scabies generally requires skin-to-skin contact. It occurs mainly in low-income and middle-income countries as overcrowding is a risk factor for transmission

Table 21: Scabies cases reported to HMIS

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **Total** |
| Anseba | 92 | 103 | 169 | 466 | 1,222 | 823 | 915 | 1,634 | 411 | 1,396 | **7,231** |
| Debub | 326 | 205 | 226 | 1,161 | 1,336 | 931 | 1,095 | 1,736 | 465 | 1,006 | **8,487** |
| Debubawi Keyh Bahri | 79 | 24 | 34 | 56 | 69 | 49 | 116 | 370 | 24 | 336 | **115** |
| Gash Barka | 68 | 68 | 101 | 138 | 203 | 295 | 849 | 885 | 147 | 1,069 | **3,823** |
| Maekel | 637 | 308 | 142 | 215 | 221 | 539 | 872 | 1,373 | 269 | 795 | **5,371** |
| National Referral Hospital | 90 | 88 | 125 | 323 | 813 | 1,297 | 1,627 | 1,539 | 648 | 855 | **7,405** |
| Semenawi Keyh Bahri | 83 | 28 | 32 | 105 | 380 | 494 | 1,267 | 842 | 411 | 410 | **3,888** |
| **Total** | **1,375** | **824** | **829** | **2,464** | **4,244** | **4,428** | **6,741** | **8,379** | **2,214** | **5,867** | **37,365** |

***Gaps and priority actions for Scabies:***

Gaps and challenges for scabies include:

* Lack of accurate data on disease burden
* Lack of capacity for diagnosis and case management
* Lack of tool for intervention (threshold level for MDA)
* Lack of donated medicines for scabies

***Priority actions for scabies:***

* Advocacy and resource mobilization
* Develop implementation guideline for scabies control
* Include scabies in the PHC package of care
* Research and Development on scabies management
* Capacity building on scabies diagnosis and management

**Snakebite Envenoming**

***Epidemiology and disease burden***

Table 22: Snake bite envenoming cases reported to HMIS, 2011 - 2020.

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** | **Total** |
| Anseba | 192 | 147 | 189 | 176 | 203 | 152 | 210 | 265 | 220 | 220 | **1,859** |
| Debub | 235 | 319 | 307 | 296 | 285 | 234 | 229 | 250 | 267 | 267 | **2,536** |
| Debubawi Keyh Bahri | 7 | 15 | 6 | 5 | 8 | 4 | 4 | 25 | 31 | 31 | **107** |
| Gash Barka | 767 | 671 | 725 | 783 | 756 | 504 | 617 | 698 | 1,052 | 1,052 | **6,881** |
| Maekel | 4 | 3 | 1 | 0 | 0 | 3 | 2 | 0 |  |  | **14** |
| Nat. Referral Hospital | 39 | 83 | 67 | 47 | 42 | 37 | 57 | 80 | 115 | 115 | **595** |
| Semenawi Keyh Bahri | 196 | 140 | 152 | 167 | 180 | 232 | 214 | 155 | 228 | 228 | **1,771** |
| **Total** | **1,440** | **1,378** | **1,447** | **1,474** | **1,474** | **1,166** | **1,333** | **1,473** | **666** | **1,913** | **13,764** |

Table 23: Capacity building activities conducted by the national programme

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Training type** | **Trainers** | **Trainee/ participants** | **# trainee** | **Key topics covered** |
| **2017** | TOT | Expert physicians and Internists (from referral hospitals) | Physicians Degree Nurse | **44** | 12 selected Neglected Tropical disease in Eritrea( PCT and IDM) |
| **2018** | Basic Training | Data Expert consultants from WHO | Zonal IDSR focal person and NTD unit staff | **8** | Country integrated NTD Data base and Joint application package forms |
| **2018 and 2019** | Basic Training | Trainers ( who Took( TOT | Health workers from six zobas | **432** | 12 selected NTDs in Eritrea ( PCT and IDM) |
| **2019** | Basic Training | Lymphatic Filariasis Expert consultants from WHO | Health workers , IDSR zonal focal Person NTD Program staff | **45** | -Preventive chemotherapy |
| -Ivermectin Diethylcarbamazine Albendazole (IDA) Implementation |
| -Coverage and assessment survey |
| - Morbidity management and Disability Prevention |
| **2019** | Basic Training | Expert Clinical laboratory sciences From National Health Laboratory | Clinical laboratory sciences and Lab. Technologists | **56** | On how to microscopic diagnose of selective neglected tropical disease theory and practice |
| From six zobas |
| Basic Training |  | Health workers and Teachers | **2,820** | Prevention and control of preventive chemo therapy disease and MDA |
| **2015-2019** | Basic Training | NTD program staff and Zonal IDSR focal person | community health workers | **1645** | Prevention and control of preventive chemo therapy disease and MDA |
| **2014 and 2015** | Basic Training | Expert Clinical laboratory sciences From National Health Laboratory | Clinical laboratory sciences and Lab. Technologists | **18** | Mapping Survey and sentinel site survey activities training |
| From six zobas |

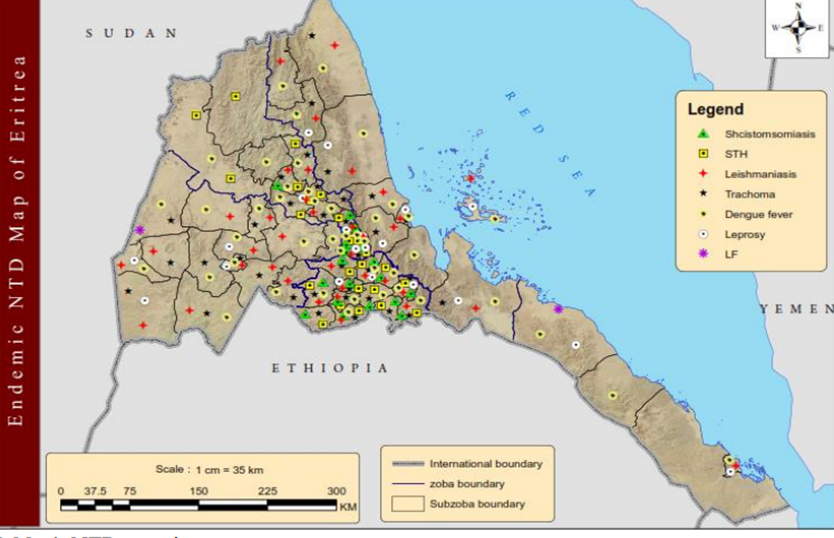
Table 24: National population data, schools, and health facilities at Sub-zone level

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **Sub-Zone** | **MM Kebabies** | **Total population** | **Under-fives (13.7%)** | **5-14 years (29.2%)** | **No. of primary schools** | **Peripheral HF** |
|  |
| **Ansebe** | Adi-Tekelezan | 11 | 42,483 | 5,098 | 12,745 | 11 | 1 |  |
| Asmat | 7 | 41,829 | 5,019 | 12,549 | 15 | 2 |  |
| Elabered | 12 | 63,387 | 7,606 | 19,016 | 34 | 5 |  |
| Geleb | 11 | 42,536 | 5,104 | 12,761 | 16 | 3 |  |
| Habero | 8 | 60,792 | 7,295 | 18,238 | 17 | 4 |  |
| Hagaz | 16 | 84,067 | 10,088 | 25,220 | 26 | 8 |  |
| Halhal | 9 | 66,479 | 7,977 | 19,944 | 14 | 4 |  |
| Hamelmalo | 10 | 35,118 | 4,214 | 10,535 | 21 | 5 |  |
| Keren | 7 | 91,420 | 10,970 | 27,426 | 42 | 9 |  |
| **TOTAL** | |  | **528,111** | **63,373** | **158,433** |  | **41** |  |
| **Debub** | Adi-Keih | 21 | 67,442 | 8,093 | 20,233 | 30 | 7 |  |
| Adi-Quala | 22 | 99,377 | 11,925 | 29,813 | 29 | 4 |  |
| Areza | 22 | 110,821 | 13,299 | 33,246 | 33 | 7 |  |
| Dbarwa | 28 | 120,788 | 14,495 | 36,236 | 35 | 8 |  |
| Dekemhare | 18 | 83,025 | 9,963 | 24,908 | 37 | 5 |  |
| Emi-Haily | 17 | 76,943 | 9,233 | 23,083 | 31 | 3 |  |
| May-Aynee | 14 | 53,652 | 6,438 | 16,096 | 20 | 3 |  |
| May-Mine | 17 | 66,498 | 7,980 | 19,949 | 18 | 2 |  |
| Mendefera | 15 | 62,232 | 7,468 | 18,670 | 23 | 2 |  |
| Segheneyti | 18 | 67,972 | 8,157 | 20,392 | 30 | 6 |  |
| Senafe | 24 | 80,791 | 9,695 | 24,237 | 38 | 7 |  |
| Tsorena | 16 | 55,377 | 6,645 | 16,613 | 22 | 6 |  |
| **TOTAL** | |  | **944,918** | **113,390** | **283,475** |  | **60** |  |
| **DKB** | Areta | 10 | 25,446 | 3,054 | 7,634 | 22 | 4 |  |
| Assab | 3 | 25,332 | 3,040 | 7,600 | 9 | 4 |  |
| DE-Denkalia | 10 | 17,050 | 2,046 | 5,115 | 18 | 6 |  |
| Makelay Keyhi Bahri | 7 | 14,429 | 1,731 | 4,329 | 13 | 3 |  |
| **TOTAL** | |  | **82,257** | **9,871** | **24,677** |  | **17** |  |
| **GB** | Agordat | 13 | 61,075 | 7,329 | 18,323 | 27 | 5 |  |
| Barentu | 13 | 63,083 | 7,570 | 18,925 | 23 | 6 |  |
| Dighe | 10 | 35,079 | 4,209 | 10,524 | 17 | 6 |  |
| Forto | 12 | 41,166 | 4,940 | 12,350 | 22 | 5 |  |
| Gogne | 12 | 37,462 | 4,495 | 11,239 | 17 | 2 |  |
| Guluj | 14 | 107,450 | 12,894 | 32,235 | 32 | 9 |  |
| Haycota | 11 | 61,803 | 7,416 | 18,541 | 24 | 4 |  |
| Kerkebet | 13 | 35,301 | 4,236 | 10,590 | 13 | 5 |  |
| Laelay Gash | 22 | 90,953 | 10,914 | 27,286 | 49 | 6 |  |
| Logo AN | 13 | 42,511 | 5,101 | 12,753 | 22 | 6 |  |
| Mensura | 10 | 54,548 | 6,546 | 16,364 | 25 | 5 |  |
| Mogolo | 11 | 22,403 | 2,688 | 6,721 | 14 | 3 |  |
| Mulki | 19 | 52,979 | 6,357 | 15,894 | 21 | 5 |  |
| Sela | 9 | 12,017 | 1,442 | 3,605 | 7 | 3 |  |
| Shambuko | 15 | 59,729 | 7,167 | 17,919 | 24 | 4 |  |
| Tesseney | 11 | 82,469 | 9,896 | 24,741 | 27 | 5 |  |
| **TOTAL** | |  | **860,028** | **103,203** | **258,008** |  | **79** |  |
| **Maakel** | Berikh | 12 | 55,273 | 6,633 | 16,582 | 20 | 4 |  |
| Ghala Nefhi | 17 | 59,028 | 7,083 | 17,708 | 29 | 6 |  |
| North East Asmara | 17 | 141,852 | 17,022 | 42,556 | 19 | 8 |  |
| North West Asmara | 4 | 138,750 | 16,650 | 41,625 | 24 | 10 |  |
| Serejeka | 4 | 67,964 | 8,156 | 20,389 | 23 | 9 |  |
| South East Asmara | 4 | 103,990 | 12,479 | 31,197 | 27 | 22 |  |
| South West Asmara | 5 | 98,492 | 11,819 | 29,548 | 13 | 23 |  |
| **TOTAL** | |  | **665,349** | **79,842** | **199,605** |  | **82** |  |
| **SKB** | Adobha | 6 | 21,233 | 2,548 | 6,370 | 6 | 4 |  |
| Afabet | 14 | 98,272 | 11,793 | 29,482 | 35 | 5 |  |
| Dahlak | 5 | 3,313 | 398 | 994 | 9 | 3 |  |
| Foro | 5 | 52,023 | 6,243 | 15,607 | 25 | 5 |  |
| Ghelaelo | 12 | 26,893 | 3,227 | 8,068 | 30 | 5 |  |
| Ghindae | 17 | 59,220 | 7,106 | 17,766 | 39 | 11 |  |
| Karora | 9 | 33,090 | 3,971 | 9,927 | 12 | 2 |  |
| Massawa | 4 | 38,469 | 4,616 | 11,541 | 16 | 10 |  |
| Nakfa | 12 | 44,665 | 5,360 | 13,400 | 32 | 4 |  |
| Shieb | 7 | 59,102 | 7,092 | 17,731 | 14 | 2 |  |
| **TOTAL** | |  | **436,280** | **52,354** | **130,884** |  | **51** |  |
| **GRAND TOTAL** | |  | **3,516,943** | **422,033** | **1,055,083** |  | **331** |  |

**NTD Co-endemicity**

Understanding the co-endemicity of diseases is important to integrate intervention of activities for targeted NTDs. It also improves understanding of the total NTD related burden and of the need for greater advocacy and optimal and efficient use of human, material and financial resources. This approach improves coordination between different stakeholders including persons affected by skin NTDs, community activities and participation, and educational media (refer Annex 9 for NTD co-endemicity table).

Figure 11: NTD co-endemicity map, Eritrea, based on the 2014/15 disease mapping



***1.4.2. NTD Programme Performance***

(In this section, information on key results, impact and trend analysis of the NTD programme should be provided. List the past and on-going NTD control programmes). This information should be organized into the following sections:

1. ***Completeness of the mapping and survey need***

Mapping of the various NTDs to understand the burden of these diseases were conducted at several instances. These base line data were used for the implementation of the NTD prevention, control, elimination and eradication activities (see table … below on mapping status of NTDs). In addition, the trend of these NTDs were followed during impact assessment surveys for Schistosomiasis, Soil Transmitted Helminthiasis, Lymphatic filariasis and Trachoma (results seen in the various disease specific sections).

Table 25: NTD mapping status in Eritrea

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Endemic NTD** | **Total # Districts** | **No. of endemic districts** | **No. of districts mapped or known endemicity status** | **No. of districts remaining to be mapped or assessed for endemicity status** |
| Schistosomiasis | 58 | 28 | 58 | 0 |
| Soil Transmitted Helminthiasis | 58 | 3 | 58 | 0 |
| Trachoma | 58 | 0 | 58 | 0 |
| Brucellosis | 58 | 58 |  | 58 |
| Leishmaniasis |  |  |  |  |
| Cutaneous | 58 | UK | UK | 58 |
| Visceral | 58 | 40 | UK | 58 |
| Leprosy | 58 | 58 | UK | 58 |
| Rabies | 58 | 9 | UK | 58 |
| Anthrax | 58 | 58 | UK | 58 |
| Scabies | 58 | 58 | UK | 58 |
| Snakebite envenoming | 58 | 51 | UK | 58 |
| Dengue fever | 58 | 51 | UK | 58 |

1. ***Geographical coverage for all NTDs and expansion need***

Table 26: Showing geographical coverage and treatment coverage for SCH

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Year** | **Area/Zones** | **Number of people targeted** | **MDA coverage** | |
| **No. people treated** | **%** |
| 2016 | Debub | 205,450 | 178,075 | 87 |
|  | Gash Barka | 39,800 | 34,906 | 88 |
|  | Anseba | 41,230 | 34,094 | 83 |
| 2017 | NRS | 43,250 | 37,291 | 86 |
|  | Debub | 177,520 | 162,548 | 92 |
|  | Maekel | 55,325 | 50,620 | 91 |
| 2018 | Debub | 186,396 | 162,394 | 87 |
|  | Gash Barka | 37,245 | 35,768 | 96 |
|  | Anseba | 33,273 | 30,598 | 92 |
| 2019 | Debub | 276,968 | 251,880 | 91 |
|  | NRS | 65,100 | 58,245 | 90 |
|  | Maekel | 55,583 | 51,879 | 93 |
|  | Gash Barka | 18,550 | 18,034 | 97 |
| 2020 | Debub | 48,283 | 46,615 | 96 |
| 2021 | Debub | 209,587 | 201,647 | 96 |
|  | Anseba | 46,136 | 43,921 | 95 |
|  | Gash Barka | 62,560 | 59,818 | 96 |
|  | NRS | 23,350 | 21,086 | 90 |

The LF treatment coverage for Eritrea is consistently very high and above the WHO treshold of 65% except for the first few years at the start of the programme (see table below on LF MDA treatment coverage).

Table 27: showing Treatment coverage for Lymphatic filariasis

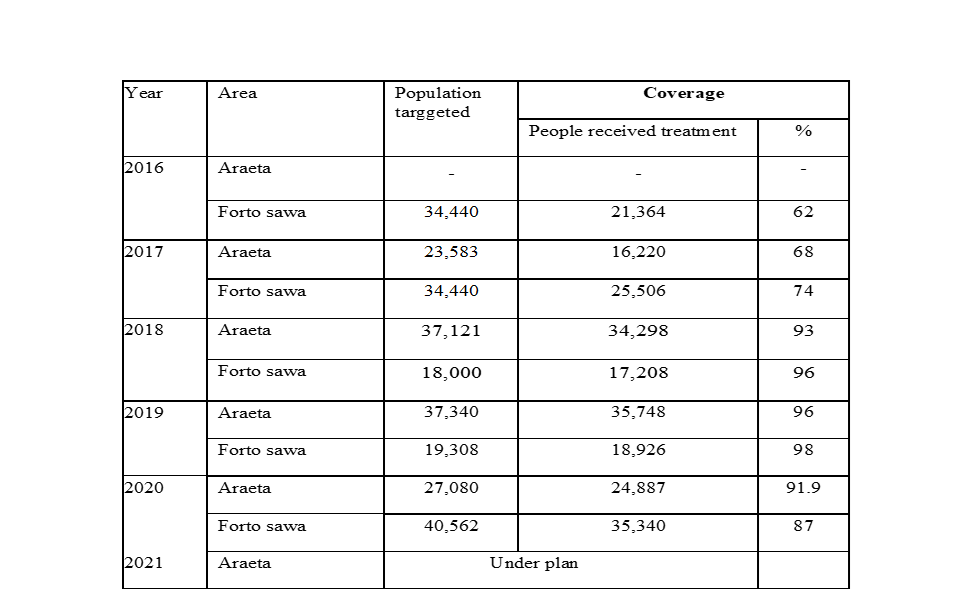


Table 28: Summary of intervention information on existing PCT NTDs



Table 29: Mass drug administration (MDA) by sub zone and number of people against SCH, STH and LF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Year of MDA** | **Schistosomiasis** | | **STH** | | **Lymphatic Filariasis** | |
| **# Sub Zone** | **# Population** | **# Sub Zone** | **# Population** | **# Sub Zone** | **# Population** |
| 2011 | 2 | 218,315 | 0 | 0 | 0 | 0 |
| 2013 | 2 | 221,542 | 0 | 0 | 0 | 0 |
| 2015 | 2 | 95,890 | 2 | 95,890 | 0 | 0 |
| 2016 | 6 | 246,548 | 6 | 246,548 | 1 | 21,364 |
| 2017 | 15 | 117,768 | 15 | 117,768 | 2 | 41,729 |
| 2018 | 8 | 228,760 | 8 | 228,760 | 2 | 51,506 |
| 2019 | 11 | 339,739 | 0 | 0 | 2 | 54,674 |
| 2020 | 1 | 43,850 | 0 | 0 | 1 | 35,480 |
| **TOTAL** | **47** | **1,412,412** | **31** | **688,966** | **8** | **204,726** |

Table 30: Summary of intervention information on the newly added NTDs

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Type of CM NTD** | **Date programme started** | **Disease burden** | **Ongoing activities** | **Target** | **Partners** |
| Leprosy | 1970 | Low burden | CM, contract tracing, HE | Elimination | WHO |
| Leishmaniasis | 2021 | Unknown | None | Control | None |
| Cut Leish | Estimate 300-500 | CM |  |  |
| Visceral Leish |  | Vector control with malaria | Elimination as PHP | WHO |
| Rabies | Not Yet | Unknown | Case management | Control/Elimination | NO |
| Vaccination of Dogs |
| Scabies | Not yet | Unknown | Case management | control | No |
| SBE | Not yet | Unknown | Case management\* | control | No |

**Performance of the other programmes that are closely related to NTD programme**

***Vector control: Integrated Vector Control and management***

The integrated vector management (IVM) approach is implemented in the country with focus on vector control diseases including malaria, dengue fever, chikungunya and etc. The country developed and implemented Malaria and other vector borne diseases control strategy for the period 2017-2021. This Malaria and Other Vector-borne Diseases Control Strategy demonstrate the Ministry of Health’s determination to integrate the control of all vector-borne diseases that occur in Eritrea. The goal of the strategy is to contribute to the reduction of the burden of vector-borne diseases mortality and morbidity in Eritrea through the implementation of IVM.

The leishmaniasis control can benefit greatly by the vector control interventions applicable to the malaria programme. Research and development is required to better understand and implement the vector control interventions (refer table below for the various IVM interventions and the diseases of concern).

Table 31: IVM for Vector borne diseases including NTDs (IVM Strategy, Eritrea, 2017-2021, page 15)

|  |  |  |  |
| --- | --- | --- | --- |
| **Component** | **Intervention** | **Vector targets** | **Vector borne-diseases** |
| Chemical control | LLINs | Anopheles, Culex, Aedes, Phlebotomus, sp | Malaria, leishmaniasis, lymphatic filariasis, dengue |
| IRS | Anopheles, Culex, Aedes, Phlebotomus, sp | Malaria, leishmaniasis, lymphatic filariasis, dengue |
| Larviciding | Anopheles, Culex, Aedes, Phlebotomus, Biompharia sp | Malaria, leishmaniasis, lymphatic filariasis, dengue, schistosomiasis |
| Space spraying | Anopheles, Culex, Aedes, Phlebotomus, sp | Malaria, leishmaniasis, lymphatic filariasis, dengue |
| Household products | Anopheles, Culex, Aedes, Phlebotomus | Malaria, leishmaniasis, lymphatic filariasis, dengue |
| Environmental management & sanitation | Environmental manipulation & modification | Anopheles, Culex, Aedes, Phlebotomus, Biomphararia sp | Malaria, leishmaniasis, lymphatic filariasis, dengue, schistosomiasis |
| Biological control | Larval control | Anopheles, Culex, Aedes, Phlebotomussp | Malaria, leishmaniasis, lymphatic filariasis, dengue, schistosomiasis |
| Predators &competitors | Anopheles, Culex, Aedes, Phlebotomus, Biomphararia sp | Malaria, leishmaniasis, lymphatic filariasis, dengue, schistosomiasis |

**One-Health**

One-Health is integrated approach to building understanding of human–animal transmission of NTDs with an animal interface and delivering interventions such as vaccinations, population management and tethering for dogs. One Health is a collaborative, multi-sectoral, and trans-disciplinary approach of addressing the health threats of human, animal, and the environment. Diseases including Rabies, Foodborne trematodiases, SBE, Brucellosis, Dracunculiasis, etc. will benefit from the One Health approach. Collaboration with FOA on Rabies, with ministry of Agriculture/livestock on brucellosis, Foodborne trematodiasis and SBE for data/information exchange, collaboration on control interventions and the like is essential.

**WASH**

The Government of Eritrea is committed to ensure availability of adequate and safe water, sanitation and hygiene (WASH) services to all its citizens by 2030. The **OneWASH Strategy and Investment Plan (OWSIP)** for the period 2019–2030has been prepared by the Government of the State of Eritrea (through the joint and coordinated efforts of the Ministry of Land, Water and Environment, Ministry of Health and Ministry of Education) in collaboration with its development partners. It is guided by the principle of “leave no one behind”. The main goal is to improve WASH services by adopting evidence- and data-based policies, expanding the WASH-related workforce and its technical capacity, securing sustainable access to WASH-related services and facilities by all and mobilizing WASH-related resources.

There is a need to have concerted effort for strengthening the collaboration between the WASH and NTD programmes and the coordination and partnership among the different actors. Improving hygiene and sanitation in the schools and communities could contribute a lot for the control and elimination of many NTDs.

**School Health**

A lot of NTD prevention and control interventions are conducted in the school. School Health and Nutrition Strategy helps to have a sustainable and quality health and nutrition interventions across the education sector, and strengthening coordination, linkage and partnership with relevant ministries, communities and other stakeholders. MDA is also conducted for school age children at school level with the involvement of the school community.

**NTDs and Gender and Equity**

Bases on the exposure status some of the NTDs are more prevalent to specific gender group. Some of the NTDs are more prevalent in women and to worsen the matter the health seeking behaviour (affected by level of educational, access to resources, household decision making power and physical access to health facilities) is often found to be low for women.

Embracing the idea of gender equity and human rights (GEHR), promoting equality with regard to gender (Goals 5 and 10 of the SDGs), should be the area of focus in implementing the NTD interventions. Hence it is necessary to ensure that all services for NTDs should be based on gender equity and human rights. Data disaggregated by gender will help to better understand this and better involvement of women, empowerment in decision making could improve the utilization of NTD services.

**Sustainability of NTD programme**

Sustainability of the NTD programme is very essential to achieve the national and global target for NTDs and contribute to the attainment of the SDGs. And for this, the key focus areas are: Improve multi-sectoral coordination (Health, Education, WASH, Agriculture, Finance, MCH, etc), improved implementation capacity through improved HR capacity, NTD programme ownership at all levels; including domestic funding for NTDs and strengthening national HIMS for informed decision making.

**Pharmacovigilance**

As the NTD programme is using millions of doses of medicines for MDA, proper monitoring and recording of adverse events, providing reliable, balanced information for effective assessment of the risk–benefit profile of medicines and communicating the findings to the concerned national regulatory department is very important for timely management, proper investigation and communication. The national pharmacovigilance system and NTD programme management to ensure satisfactory reporting and management of adverse side effects/ events that may be linked to NTD interventions under the programme setting. Community awareness, training of the drug providers and health workers, distribution and use of the national ADR reporting format. In Eritrea, the NTD programme is responsible for tracking the ADRs related to NTD medicines and collaboration with the NMFA for pharmacovigilance related activities.

# Section 1.5: Building on NTD Programme Strengths

From the analysis on data on country profile, health system, and NTD programme status in Eritrea, the result of the Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis is summarized in the table below**.**

Table 32. SWOT analysis

|  |  |
| --- | --- |
| ***Strengths*** | ***Weaknesses*** |
| * *Progress towards achieving targets set in the second NTD master plan* * *Availability of NTD team at national and Zoba levels* * *Inclusion of NTDs in National Strategic Health Agenda and Nat Health policy* * *Progress on mapping of targeted NTDs* * *Engagement of CHWs on NTD Programs* * *Presence of NTD coordination mechanism -* * *Inclusion of NTDs indicators in DHIS2* * *Integration within the NTD program* * *Established M &E system* * *Periodic NTDs annual review meetings* * *Certification for Dracunculiasis in 2011* * *Success for Trachoma programme* | * *Inadequate subnational commitment* * *Limitations on storage of NTD drugs* * *Gaps in recording and reporting* * *weak drug inventory management* * *Inadequate NTD staff* * *Lack of domestic funding for NTDs* * *Delay delivery of medicines to IUs* * *Inadequate partnership for NTDs* * *Insufficient vector control interventions for NTDs* * *Inadequate intervention for social and behavioural change* * *Weak collaboration with WASH* |
| ***Opportunities*** | ***Threats*** |
| * *Collaborations with international organizations* * *Drug donations for NTDs* * *High political commitment* * *New NTD road map* * *Availability of WASH platform, One WASH Strategy* * *SDG goal to “eliminate NTD by 2030”* * Active involvement of Ministry of Education | * *COVID-19 pandemic* * *No/inadequate donor funding for NTDs* * *Population movement* * *Cross-border issues* * *Weak local ownership* |

## 

***1.5.3. Gaps and priorities***

Based on the SWOT Analysis, the following have been identified as major gaps and priorities and used for the formulation of the strategic objectives to help Eritrea achieve the 2030 goal of eliminating the targeted NTDs.

Table 33: Gaps and priorities

|  |  |
| --- | --- |
| Gaps | |
| Planning | * Planning in silos |
| Coordination | * Weak level of coordination at zone and sub-zone level * Weak integration of WASH and NTDs programme * Periodic and regular coordination platforms |
| Partnership | * Limited number of partners |
| Management | * Inadequate skilled manpower. * Lack of budget for NTDs interventions * Inadequate data for NTDs |
| Implementation | * Inadequate collaboration for implementation e.g., NTD & WASH. * Delay in TAS for LF * COVID19 restriction affecting implementation |
| Priorities | |
| Planning | * Integrated planning |
| Coordination | * Strengthen coordination and collaboration * Establish regular coordination platforms |
| Partnership | * Advocacy for improved partnership |
| Management | * Build capacity to improve NTD implementation capacity * Improve data management capacity * Advocacy and awareness raising on NTDs |
| Implementation | * Strengthen integration and collaboration * Conduct M&E while implementing COVID19 prevention measures |

PART 1:

# PART 2: NTD Strategic Agenda

# Section 2.1. NTD Programme Vision, Mission and Goals

|  |  |
| --- | --- |
| Table 34: Mission and vision of the NTD Programme for Eritrea | |
| Vison | Eritrea free of neglected tropical diseases and related morbidity and disabilities |
| Mission | To provide cost-effective, sustainable, equitable, and community-owned  interventions for the prevention, control and elimination and/or eradication of targeted NTDs through a coordinated, and where possible, integrated NTD control programme |

# Section 2.2: Milestones and Targets

The goal of the national NTD Programme is to improve the health and socio-economic status of Eritreans by reducing significantly the morbidity, disability and mortality caused by the Neglected Tropical Diseases through an integrated delivery of interventions, at a cost-effective approach, to control and eliminate targeted NTDs. The overarching and cross-cutting targets, derived from the NTD Global Roadmap 2021–2030 will help in integration, coordination and country ownership and equity.

***2.2.1. Targets***

***2.2.1.A. Overarching targets***

|  |
| --- |
| *By 2025 in Eritrea:*   * Stop autochthonous transmission of leprosy (zero new autochthonous leprosy case). * Elimination of Trachoma as a Public Health Problem. * Elimination of STH as a public Health Problem. |

***2.2.1.B. Cross-cutting Targets***

Apart from the above overarching targets, the following cross-cutting targets are set for the National NTD programme to achieve the national goal in line with the global one.

Figure 13: Cross-cutting targets

2.2.1.C. Disease specific targets

Table 35: NTD targets to be attained by 2025

|  |  |  |  |
| --- | --- | --- | --- |
| Indicator | Baseline 2020 | 2025 | Source of information |
| At least one NTD eliminated from Eritrea | 0 | 1 | HMIS, Dossier |
| Achieve zero report of new autochthonous case of leprosy | 1 | 1 | DHIS, ACD |

Table 36: Disease-Specific Targets

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| National target | Diseases | Objective | Year | Strategies |
| Targeted for elimination as a public health problem | **Schistosomiasis** | To be validated for elimination of schistosomiasis as a public health problem | **2028** | Mass drug administration, WASH improvement, public health education, snail control |
| **Soil-transmitted helminths** | To be validated for elimination of STH as a public health problem | **2027** | Integrated mass drug administration with LF and schistosomiasis, improvement of WASH, public health education |
| **Lymphatic filariasis** | To be validated for elimination of LF as a public health problem | **2027** | Mass Drug Administration, MMDP & Vector control, social support |
| **Trachoma** | To be validated for elimination of trachoma as PHP (TF in 1–9 y <5%, Identify and manage TT cases). | **2025** | SAFE strategies |
| **Leishmaniasis**  **(Visceral form)** | Achieving case fatality <1% due to primary visceral leishmaniasis | **2030** | Active surveillance, case management, integrated vector management with malaria |
| **Rabies** | zero human deaths from rabies | **2030** | Post-exposure prophylaxis, dog vaccinations, morbidity management |
| Interruption autochthonous of transmission of leprosy | **Leprosy** | To achieve zero new autochthonous leprosy cases | **2025** | Active surveillance, active contact tracing, case management, prophylaxis (single dose rifampicin) |
| Targeted for control | **Leishmaniasis (cutaneous)** | 85% of all cases are detected and reported and 95% of reported cases are treated | **2030** | Active surveillance, case management and morbidity management |
| **Snakebite envenoming** | National SBE control strategy developed | **2023** | Provision of antivenom to all health facilities, morbidity management, public health education for early treatment seeking |
| **Scabies** | Incorporated scabies management in UHC package | **2024** | Mass drug administration  IDM |
| **Dengue fever and chikungunya** | Disease control and surveillance systems established | **2027** | Integrated vector control, case management, public health education to create awareness, surveillance |
| **Brucellosis and anthrax** | To reduce case fatality rate by 10% | **2023** | Case management, integrated service with veterinary |

***2.2.2. Milestones***

In order to achieve the overarching, cross-cutting and disease-specific targets as set forth in this strategic plan and given the progress so far made as elucidated in the fore-going sections the following disease specific milestones are set for Eritrea NTD programme. (See table below).

**Milestones for targeted NTDs**

Table 37a: Milestones for LF elimination

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators** | **2022** | **2023** | **2024** | **2025** | **2026** |
| Mass drug administration to two districts (Araata and Forto Sawa sub-zobas) | 100% |  |  |  |  |
| First Transmission Assessment Survey (TAS-1) in two districts (Araata and Forto Sawa sub-zobas) | 100% |  |  |  |  |
| Confirmatory mapping of LF in one sub-zoba (Afaabet) | 100% |  |  |  |  |
| Achieving 100% geographical coverage in LF endemic districts | 100% |  |  |  |  |
| Conducted more than 5 rounds of MDA in all endemic IUs with regional/state coverage more than 65% and stopped MDA in at least 100% of LF endemic implementation units (IUs) under WHO criteria | 100% |  |  |  |  |
| Conducted and passed at least 2 TAS activities in at least 100% of IUs |  | 100% |  |  |  |
| Started passive surveillance & vector control activities in at least 100% of IUs |  |  | 75% |  | 100% |
| Prepare and present "the dossier" for in country validation of absence of LF transmission |  |  |  | 100% | 100% |
| Proportion and number of IUs where there is full coverage of morbidity-management services and access to basic care |  | 30% | 40% | 70% | 100% |
| All cases of LF from endemic IUs benefits from appropriate morbidity management and disability prevention services |  | 30% | 50% | 75% | 100% |

Table 37b: Schistosomiasis Elimination Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators** | **2022** | **2023** | **2024** | **2025** | **2026** |
| Implementation of school-based/community-based treatments in targeted endemic sub-zobas | 100% | 100% | 100% | 100% | 100% |
| Impact assessment survey for schistosomiasis | 100% |  |  | 100% |  |
| Achieving 100% geographical coverage in SCH endemic districts | 100% | 100% | 100% | 100% | 100% |
| Conducted 3-5 years of consecutive treatments in all endemic sub-zobas with coverage more than 75% | 100% | 100% | 100% | 100% | 100% |
| Conducted sentinel sites survey in at least 100% of SCH endemic sub-zobas after at least 3 years of consecutive treatments | 100% | 100% | 100% | 100% | 100% |
| Endemic sub-zobas achieving moderate morbidity control | 20% | 50% | 75% | 100% | 100% |
| Endemic sub-zobas achieving advanced morbidity control | 10% | 20% | 50% | 75% | 100% |
| Prepare and present "the dossier" for in country validation for elimination as a public health problem |  |  |  | 100% | 100% |
| Endemic sub-zobas achieving elimination as a public health problem |  |  |  |  | 100% |

Table 37c: STH Elimination Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators** | **2022** | **2023** | **2024** | **2025** | **2026** |
| Conducted impact assesment survey (integrated in schistosomiasis surveys) in at least 100% of STH endemic sub-zobas | 100% |  |  | 100% |  |
| Prepare and present "dossier" for in country validation for elimination as a public health problem |  |  |  | 100% | 100% |
| Endemic sub-zobas achieving elimination as a public health problem |  |  |  |  | 100% |

Table 37d: Trachoma Elimination Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators** | **2022** | **2023** | **2024** | **2025** | **2026** |
| Achieving 100% geographical coverage in Trachoma target sub-zobas | 100% | 100% | 100% | 100% | 100% |
| Conducted 3-5 years of consecutive treatments in all target sub-zobas with regional/state coverage more than 75% | 100% | 100% | 100% | 100% | 100% |
| Conducted impact assessment activities in at least 100% of Trachoma target sub-zobas after at least 3 rounds of treatments | 100% | 100% | 100% | 100% | 100% |
| Passive surveillance in 100% of Implementation Unit (IUs) | 100% | 100% | 100% | 100% | 100% |
| Proportion and number of target sub-zobas where there is full coverage of case management services | 100% | 100% | 100% | 100% | 100% |
| Prepare and present "dossier" for in country validation for elimination as a public health problem | 100% | 100% |  |  |  |
| Endemic sub-zobas achieving elimination of blinding trachoma as a public health problem |  |  | 100% | 100% |  |

Table 37e: IDM Control/Elimination Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Indicators** | **2022** | **2023** | **2024** | **2025** | **2026** |
| **Leprosy** | | | | | |
| 1. Active case detection of leprosy in 50% of highly endemic districts | 50% | 60% | 70% | 80% | 100% |
| 2. Passive case detection of leprosy in 100% of other endemic districts | 100% | 100% | 100% | 100% | 100% |
| 3. Manage all leprosy patients in peripheral health facilities | 100% | 100% | 100% | 100% | 100% |
| 4. Refer severe and complicated cases for management at sub-zone/zonal hospitals and reference centres | 100% | 100% | 100% | 100% | 100% |
| 5. Achieved 100% treatment coverage of identifies leprosy cases | 100% | 100% | 100% | 100% | 100% |
| 6. Prepare and present "dossier" for in country verification for elimination of leprosy (elimination of transmission) |  |  |  | 100% | 100% |
| 7. Achieve elimination of leprosy transmission (2035) |  |  |  |  |  |
| **Cutaneous leishmaniasis** | | | | | |
| 1.Conduct burden assessment of CL in 100% of targeted sub-zobas |  | 100% | 100% |  |  |
| 2.Detect and report 85% of cutaneous leishmaniasis cases | 10% | 25% | 40% | 70% | 100% |
| 3. Achieve 95% of reported CL cases access for treatment |  | 25% | 30% | 40% | 50% |
| Visceral leishmaniasis |  |  |  |  |  |
| 1.Conduct mapping of leishmaniasis in 100% of targeted sub-zobas |  | 100% | 100% |  |  |
| 2. Active surveillance in all hotspot areas (sub-zobas)/sentinel sites |  |  | 25% | 50% | 70% |
| 3.Passive surveillance in all the sub-zobas | 100% | 100% | 100% | 100% | 100% |
| 4. Achieve case fatality rate <1% due to primary visceral leishmiasis | 25% | 30% | 40% | 50% | 75% |
| 5. Establish case management services in all sub-zobas health facilities |  | 10% | 20% | 30% | 50% |
| 6. Establish case management services in all zoba health facilities | 100% | 100% | 100% | 100% | 100% |
| 7. Implement integrated vector management in targeted sub-zobas | 50% | 60% | 70% | 80% | 100% |
| **Scabies** | | | | | |
| 1.Mapping to identify the burden of disease and endemic areas |  |  | 100% |  |  |
| 2.Conduct MDA for sub-zobas above the threshold levels |  |  | 50% | 100% |  |
| 3.Establish surveillance for scabies | 100% | 100% | 100% | 100% | 100% |
| 4.Establish morbidity management for scabies in all health facilities | 25% | 30% | 50% | 70% | 100% |
| 5.Conduct impact surveys |  |  |  |  | 100% |
| **Rabies** | | | | | |
| 1 Ensure timely access to post-exposure prophylaxis rabies vaccine | 100% | 100% | 100% | 100% | 100% |
| 2. Availability of post-exposure prophylaxis at zoba referral hospitals | 100% | 100% | 100% | 100% | 100% |
| 3. Mass dog vaccination for rabies for at least 70% of dogs in high-risk areas | 100 | 100% | 100% | 100% | 100% |
| 4.Wound management for dog bites | 100% | 100% | 100% | 100% | 100% |
| 5.Achieving zero death from rabies |  | 50% | 60% | 75% | 80% |
| **Snakebite envenoming** | | | | | |
| 1.Establishment of surveillance system for reporting at various level of health system |  | 100% | 100% | 100% | 100% |
| 2.Availability of polyvalent anti-venom at sub-zoba level |  | 25% | 40 | 60% | 75% |
| 3.Availability of case management services at sub-zoba level | 50% | 50% | 75% | 90% | 100% |
| **Brucellosis/Anthrax** | | | | | |
| 1. Establishment of surveillance for reporting of brucellosis/anthrax cases at various level of health system | 50% | 60% | 70% | 80% | 100% |
| 2. Availability of diagnostics and drugs for case management | 50% | 60% | 70% | 80% | 100% |
| 3. Availability of case management services at sub-zoba level | 20% | 30% | 40% | 50% | 60% |
| **Dengue Fever and chikungunya virus** | | | | | |
| 1.Risk mapping of potential epidemic prone areas |  |  | 30% | 40% | 50% |
| 2.Establishment of integrated vector control | 100% | 100% | 100% | 100% | 100% |
| 3.Establish of case management at all health facilities | 50% | 60% | 70% | 80% | 100% |
| 4.Active case identification and reporting | 100% | 100% | 100% | 100% | 100% |
| 5. Capacity building for early detection and response | 50% | 60% | 70% | 80% | 90% |

Table 37f: PHASE Milestones

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Indicators | 2022 | 2023 | 2024 | 2025 | 2026 |
| 1. Proportion (number) of endemic districts with adequate\* access to clean water for SCH control |  |  |  |  |  |
| 2. Proportion (number) of endemic districts with adequate\* sanitation for SCH control |  |  |  |  |  |
| 3. Proportion (number) of endemic districts with adequate\* environmental manipulation for SCH control |  |  |  |  |  |
| 4. Proportion (number) of endemic districts with adequate\* access to clean water and health education for STH control |  |  |  |  |  |
| 5. Proportion (number) of endemic districts with adequate\* environmental manipulation for STH control |  |  |  |  |  |

# Section 2.3: Guiding Principles

The guiding principles for the implementation of the National NTD programme are as follows:

1. National ownership and leadership
2. High level of commitment for collaboration and sharing
3. Mutual accountability of national authorities and partners, transparency and accountability for NTD programme
4. High level of community engagement and participation
5. Safety: “Do not harm” while providing NTD health services

# 

# Section 2.4: Strategic Pillars and Strategic Objectives

Table 38: Strategic Priorities for the Elimination of Neglected Tropical Diseases

|  |  |
| --- | --- |
| Strategic Pillar | Strategic priorities |
| Pillar 1. Accelerating programmatic action | Integrated preventive chemotherapy to maintain 100% geographic coverage, scale down PCT where applicable and achieve the minimum disease specific treatment coverage level of threshold. |
| Ensure early detection and prompt treatment of targeted case management/ IDM NTDs |
| Prioritize and strengthen monitoring and evaluation for tracking progress in line with the 2030 NTD Road map and SDGs |
| Identify and prioritize operational research areas to facilitate NTD implementation |
| Pillar 2. Intensify cross-cutting approaches | Strengthen and mainstream platforms with similar delivery strategies and interventions (MDAs, IVM, Morbidity management, Social mobilization for Behaviour Change and Communication, WASH etc) for integrated approaches across NTDs |
| Strengthen national supply management system to ensure timely, safe, and effective supply of quality assured NTD products and medicines |
| Integrated NTD planning, implementation, and monitoring |
| Strengthen multi-sectoral coordination and response (WASH, One Health, Education, Finance, Agriculture, Ministry of Water and Land, etc.) |
| Pillar 3. Operating Models and culture to facilitate country ownership | Strengthen country ownership and leadership at all levels (improved allocation of domestic funding) |
| Empower local capacity for social mobilization, communication and building support for NTD interventions |
| Strengthen collaboration with other sectors (WASH, Environment, Education, Community organizations) |
| Pillar 4. Strengthen Resource  Mobilization,  Coordination and  Communication for the  elimination of NTDs | Build NTD programme capacity for resource mobilization |
| Promote partnership and coordination for NTD programme implementation |
| Advocate for domestic resource allocation |
| Improve awareness of the community on NTDs |

NTD STRATEGIC AGENDA

# Part 3: Implementing the Strategy: NTD Operational Framework

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n line with the 2021- 2030 NTD Global Roadmap, this strategic plan is geared towards ensuring three fundamental shifts in the approach to tackling NTDs: **first**, increase accountability for impact by using impact indicators instead of process indicators, as reflected by the targets and milestones in Part II and accelerate programmatic action; **secondly**, move away from siloed, disease-specific programmes by mainstreaming programmes into national health systems and intensifying cross-cutting approaches centred on the needs of people and communities: and **thirdly**, change in operating models and culture to facilitate greater ownership of programmes by countries.

# Section 3.1: Strategic priorities and Key Activities

|  |  |  |  |
| --- | --- | --- | --- |
| Table 39: Strategic Pillar 1 - Accelerating programmatic action | | | |
| Strategic Priorities | **Key Activities** | **Time frame** | Resources needed |
| Strategic priority 1*:* *Integrated preventive chemotherapy to maintain 100% geographic coverage, scale down PC intervention where applicable and achieve the minimum disease specific treatment coverage level for SCH, LF, STH and TRA.* | Implement MDA for SCH in the targeted sub-zobas (#28) | Every 2 years | HR, Financial resources, medicines, supplies (stationary, measuring tape, etc.), vehicles |
| Conduct MDA for LF in targeted (#2) Sub-zobas | yearly | HR, Financial resources, medicines, supplies (stationary), vehicles, |
| Conduct Social mobilization and BCC | yearly | Expert, IEC materials (posters, leaflets, Billboard, FGD, TV/Radio spot messages, etc), , funding |
| Conduct MDA for scabies where applicable | TBD after burden assess | HR, Financial resources, medicines, supplies (stationary, measuring tape, etc.), vehicles |
| Strategic priority 2: *Ensure early detection and prompt treatment of targeted case management/ IDM NTDs* | Conduct burden assessment for LEISH, SBE, Scabies, Brucellosis, Rabies, Anthrax | 2023 -2025 | Funding, experts, tools, supplies, transportation, |
| Improve capacity of HWs on case management, morbidity management and disability prevention | yearly | HR, funding, guidelines and manuals, stationery, |
| Capacity building of CHWs, community leaders and teachers on NTDs | yearly | HR, funding, guidelines and manuals, stationery, |
| Build national capacity for timely detection and response for outbreak prone NTDs (Dengue, Chikungunya, Brucellosis, VL, scabies, etc.) | Ad hoc | Expert, supplies (diagnostic kits, medicines), funding, transportation, tools (Rapid assessment guideline, etc), stationary materials, |
| Quantification and request for the procurement of supplies for CM NTDs (medicines, diagnostic kits) | Yearly | Expert, funding, commodities |
| Institutional capacity building for laboratory services | Yearly | Expert, funding, supplies, transportation, infrastructure, |
| Contact tracing and management for LEP | Ad hoc | Expert, transportation, tools and guidelines, funding, medicines |
| Strategic priority 3: Prioritize and strengthen monitoring and evaluation for tracking progress in line with the 2030 NTD Road map and SDGs | Conduct confirmatory mapping in Afaabet | 2022 | Expert, ICT, funding, transportation, tools |
| Conduct TAS survey for LF | 2022, 2023 | Expert, supplies, funding, transportation, IEC |
| Conduct Schisto impact assessment | 2022, 2025 | Expert, supplies, funding, transportation, IEC |
| Conduct STH impact assessment | 2022, 2025 | Expert, supplies, funding, transportation, IEC |
| Conduct sentinel site surveillance for Trachoma | yearly | Expert, tools, funding, transportation |
| Burden assessment for **CM NTDs** including the newly added ones | 2022/23 | Guidelines and tools, funding, transportation, kits and medicines, experts |
| Prepare and submit dossier (LF, TRA, SCH, STH) | 2022-2025 | National documents and reports, experts, transportation, community mobilization, funding, stationary materials, |
| Strengthen national HMIS | routine | Expert, funding, IT equipment and services, tools/manuals, |
| Strategic priority 4: *Identify and prioritize operational research areas to facilitate NTD implementation* | Expert consultation and consensus on priority research areas for NTDs | yearly | Expert, funding, venue |
| Build institutional capacity to conduct research |  | Expert, venue, funding |
| Capacity building to conduct research | yearly | HR, funding, guidelines |
| Publish and disseminate research | Ad hoc | HR (experts, prog managers, policy maker, venue, funding, stationary |
| Strategic Pillar 2. Intensify cross-cutting approaches | | | |
| Strategic Priority 5: *Strengthen and mainstream platforms with similar delivery strategies and interventions (MDAs, Morbidity management, Social mobilization for Behaviour Change and Communication, WASH, IVM, EPI, MCH services, etc) for integrated approaches across NTDs* | Conduct Integrated delivery of service (EPI, MCH, nutrition, TB, Prevention of Blindness, Malaria) | Ad hoc | Advocacy and consensus building, HR, funding, tools, transportation, medicines, kits |
| Conduct IVM for vector borne NTDs | Ad hoc | Supplies (ITN, chemicals, etc), funding, experts, transportation, IEC, guidelines |
| Conduct integrated MDA where applicable | yearly | Guidelines and manuals, HR, funding, medicines, SAE reporting format, tools, transportation, IEC |
| Integrate with WASH/Environmental Health | Ad hoc | Expert, funding, transportation, IEC, supplies and materials |
| Capacity building on provision of integrated services | yearly | Expert, funding, guidelines and manuals, venue, stationary |
| Monitoring on integrated service delivery | yearly | Expert, funding, tools, transportation |
| Strategic Priority 6: *Strengthen national supply management system to ensure timely, safe, and effective supply of quality assured NTD products and medicines* | Advocacy for wavering free importation of donated medicines and supplies | 2022 | National Policy, HR |
| Build capacity of national supply management system | annually | Expert, funding |
| Improve infrastructure | Ad hoc | Funding, IT materials, HR |
| Capacity on quantification and request of supplies | annually | Expert, IT services, programme reports |
| Capacity for timely delivery of supplies to IU level, monitor stock, improve reverse logistics | quarterly | Supplies, HR, Transportation, funding, (training and per diem), Storage place |
| Strategic Priority 7*: Integrated NTD planning, implementation, and monitoring* | JAP for targeted PC NTDs | annually | HR, tools, IT equipment and service, fund for training |
| Conduct annual programme review and stakeholders meeting | annually | Funding, venue, transportation, HR, stationary, |
| Quantification, application and procurement of supplies for CM NTDS | annual | HR, tools |
| Conduct supportive supervision | quarterly | Expert, tools, funding, transportation |
| Participate in international meetings | annual | HR, Funding |
| Strategic Priority 8*: Strengthen multi-sectoral coordination and response (WASH, One Health, Ministry of Education, Finance, Agriculture, Water and Land, etc.)* | Strengthen coordination mechanism | annually | HR, TOR, funding |
| Regular planning and review meetings | quarterly | Funding, experts, programme reports, venue, transportation |
| Develop multisectoral strategic plan | annually | Expert, guidelines/tools, funding |
| Strategic Pillar 3. Operating Models and culture to facilitate country ownership | | | |
| Strategic Priority 9: *Strengthen country ownership and leadership at all levels (improved allocation of domestic funding)* | Annual planning exercise | yearly | Expert, planning tool, funding (stationary, transportation, ) |
| Advocacy workshop for domestic funding | yearly | Advocacy tools, experts, funding, venue, stationary, IEC materials, transportation |
| Build capacity for resource mobilization | 2-yearly | HR/Expert, training materials, funding, |
| Improve community involvement (community centred approach) | Ad hoc | IEC, community leaders, experts, funding |
| Advocate for Gender, **equity** and human rights (GER) approach | Ad hoc | Expert, NHP, funding (venue, transportation, ), engagement with officials, monitoring tools |
| Inclusion of NTDs in the NHP and National Health Sector Strategic Development Plan | 2022 | HR/expert, participation in the development |
| Ensure NTD service provision at PHC (under the principle of UHC) | Ad hoc | National Health Policy, HR, supplies, guidelines |
| Inclusion of NTD indicators in national HMIS | 2022/23 | Tools (disease specific indicators, HMIS), existing NHP, HR/expert, IT, funding |
| Strategic Priority 10*: Empower local capacity for social mobilization, communication and building support for NTD interventions* | Improve community awareness | annually | IEC materials, Expert, funding |
| Community engagement and communication | Semi-annual | IEC materials, Expert, funding |
| Involvement of the affected people | Ad hoc |  |
| Involvement of community groups (fishermen, farmers, business, etc) | Ad hoc | Experts, funding, IEC |
| Strategic Priority 11: *Strengthen collaboration with other sectors (WASH, Environment, Education, Community organizations)* | Strengthen coordination mechanism among various sectors | quarterly | SOP, HR, venue, stationary |
| Conduct regular programme planning and review meetings | annually | HR, funding, programme report |
| Promote integrated service provision | Ad hoc | National strategy, HR |
| Involvement of community in NTD interventions |  | IEC, stationary |
| Strategic Pillar 4. Strengthen Resource Mobilization, Coordination and Communication for the elimination of NTDs | | | |
| Strategic Priority 12: *Build NTD programme capacity for resource mobilization* | Disease specific epidemiology and burden | 2022/23 | Expert, Funding, supplies |
| Capacity building on resource mobilization | 2022/23 | Expert, funding for organizing meeting, stationary |
| Mapping donors, partners | 2022 | Expert for desk review |
| Local funding opportunities | Annually | IEC, High level advocacy |
| Strategic Priority 13*: Promote partnership and coordination for NTD programme implementation* | Identify NTD stakeholders (internal, external) | 2022 | HR |
| Strengthen integrated Intervention | annual | HR, funding for consultative meeting, stationary |
| Strengthen multisectoral coordination | quarterly | HR, venue, stationary |
| Documentation and sharing best experience | annually | COM expert, funding |
| Celebration of World NTD Day | annual | IEC material, HR |
| Strategic Priority 14: *Advocate for domestic resource allocation* | Conduct advocacy workshop | annual | IEC, stationary, funding Expert |
| Engagement of policy makers | annual | IEC, HR |
| Multisectoral engagement | quarterly | HR, programme reports |
| Public Private Partnership | annual | IEC, reports, HR |
| NTD Ambassador (public figures for advocacy on NTDs) | Ad hoc | Identify NTD Ambassador, transportation, COM Expert , TV/Radio spots |
| Strategic Priority 15: *Improve awareness of the community on NTDs* | Conduct awareness raising | Ad hoc | IEC, HR, Stationary |
| Engagement of community | Ad hoc | IEC, transportation |
| Promote social inclusion | Ad hoc | IEC, National Policy, HR |

# 

# Section 3.2: Toward NTD Programme Sustainability: IntensifyingCoordination and Partnerships

***NTD Programme Partnership and Coordination Mechanism***

WHO is developing NTD Sustainability Framework for Action as one of the companion documents to the NTD Roadmap 2021-2030 through a consultative process with member states, disease and health systems experts, and the wider global health community. The framework describes a participatory and inclusive methodology for embedding NTD services within National Health Policies, Strategies, and Plans (NHPSPs).

In Eritrea, there is high level of government commitment for the implementation of NTD programme despite the limited number of partners in the country. The Disease Control and Prevention Directorate of the MoH-Eritrea where NTD is one of the Programme Units is coordinating the NTD related activities in the country with good level of collaboration with the other government sector offices. Regular annual planning and review meeting of the NTD programme is organized by the MoH involving the few partners and sector offices (see table below on NTD Partnership).

There are NTD focal points that follow routine NTD programme intervention at Zoba level. There is coordination meeting every six months (chaired the Communicable Diseases Control Division/CDCD Director) with the involvement of various programme units of MoH and zonal health offices (NGOs and other partners are not involved) to review performance. In the future the NTD programme is planning to have a separate meeting with the NTD zonal focal points.

Table 40: Risk criteria and risk assessment

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Potential Risk** | **Before risk mitigation** | | | | **Risk Mitigation** | | **After risk mitigation** | | |
| **Likelihood of occurrence** | **Impact** | | **Score** | **Likelihood of occurrence** | **Impact** | **Score** |
|  | Certain =5  Likely =4  Possible =3  Unlikely =2  Rare =1 | Severe =5  Major =4  Moderate =3  Minor =2  Insignificant =1 | | Likelihood x Impact |  | | Certain =5  Likely =4  Possible =3  Unlikely =2  Rare =1 | Severe =5  Major =4  Moderate =3  Minor =2  Insignificant =1 | Likelihood x Impact |
| *Risk Type* | | | | | | | | | |
| COVID19 pandemic | 4 | 4 | | 16 | COVID19 prevention | | 3 | 3 | 9 |
| Lack of Funding | 3 | 4 | | 12 | Advocacy for funding | | 3 | 3 | 9 |
| Weak coordination | 4 | 3 | | 12 | Coordination mechanism | | 1 | 3 | 3 |
| Few partners | 5 | 2 | | 10 | Advocacy for partnership | | 2 | 3 | 6 |
| Population movement | 1 | 3 | | 3 | Improve access | | 1 | 4 | 4 |
| Inadequate ownership | 1 | 4 | | 4 | Advocacy with policy makers | | 2 | 2 | 4 |
| Risk Rating (Likelihood x Impact) | | | | | |
| 19 – 25 | | | Severe | | |
| 13 – 18 | | | Major | | |
| 7 – 12 | | | Moderate | | |
| 0 – 6 | | | Minor | | |

**Risk Management**: Managing risk means mitigating the threats or capitalizing on the opportunities that uncertainty presents to expected results. Failure to identify risks and failures to come up with risk mitigation strategies can and do kill projects. If no mitigation strategy can help, then *change* your strategy and project approach.

Table 41: Steps to mitigate risk

|  |  |
| --- | --- |
| Avoid | Change plans to circumvent the problem |
| Control | Reduce threat impact or likelihood (or both) through intermediate steps |
| Share | Outsource risk (or a portion of the risk) to a third party or parties that can manage the outcome. |
| Accept | Assume the chance of the negative impact |
| Monitor | Monitor and review process in which risk management is in place |

# 

# Section 3.4. Performance and Accountability Framework

Table 42: Performance Indicators

|  |  |  |  |
| --- | --- | --- | --- |
| Strategic Priority | Performance Indicators | Target | Date |
| *Strategic priority 1: Integrated preventive chemotherapy to maintain 100% geographic coverage, scale down PC intervention where applicable and achieve the minimum disease specific treatment coverage level for SCH, LF, STH and TRA.* | No. of IUs with 100% geo coverage for SCH | 28 | Annually |
| No. of IUs with 100% geo coverage for LF | 2 | Annually |
|  |  |  |
| No of individuals treated for LF | All individuals in endemic IUs | Annually |
| No. of individuals treated for SCH | All eligible individuals in endemic IUs | Every 2 years |
| *Strategic priority 2: Ensure early detection and prompt treatment of targeted case management/ IDM NTDs* | No. of HFs providing CM NTD services | HFs in Gash Barka, Ansseba and Debub (6 referral and 15 sub-zoba) | Annually |
| No. of HFs with no stockout of supplies for case management NTD supplies (LEP, VL, etc.) | HFs in Gash Barka, Ansseba and Debub (21) | Annually |
| No. of outbreaks detected & managed timely | All | Immediately |
| Case fatality rate for primary VL | <1% |  |
| No. of people trained | TBD | biannual |
| CFR due to rabies | 0 | 2030 |
| No. cases with G2D | TBD | annually |
| No. of contacts detected & managed for LEP | All contacts | annually |
| *Strategic priority 3: Prioritize and strengthen monitoring and evaluation for tracking progress in line with the 2030 NTD Road map and SDGs* | Completed TAS for LF in 2 IUs | 2 IUs | 2024 |
| Impact assessment completed for SCH & STH | 28 IUs | 2025 |
| Validated for elimination of trachoma as PHP | TF < 5% in 1-9 years | 2025 |
| TT Capacity for TT CM |
| Number of G2D cases for leprosy | 0 | annually |
| Case fatality rate for primary VL | < 1% | annually |
| % of targeted sub-zobas completed burden assessment for at least one CM NTD | 75% | 2023 |
| *Strategic priority 4: Identify and prioritize operational research areas to facilitate NTD implementation* | Prepare consolidated list of national research agenda for priority NTDs | 1 | Dec. 2022 |
| No. of studies on vector identification/control related to NTDs | At least one | annually |
| Sample collected and made available for species identification for leishmaniasis | 1 | 2022 |
| *Strategic priority 5: Strengthen and mainstream platforms with similar delivery strategies and interventions (MDAs, IVM, Morbidity management, Social mobilization for Behavior Change and Communication, WASH etc.) for integrated approaches across NTDs* | No. of integrated community awareness activities conducted | 1 | annually |
| No. of integrated trainings on NTD data management | 1 | annually |
| No. of rounds of integrated IVM interventions conducted | 1 | annually |
| No. of villages graduated ODF free | 100% | 2022 |
| *Strategic priority 6: Strengthen national supply management system to ensure timely, safe, and effective supply of quality assured NTD products and medicines* | Completion and submission of JAP | 1 | annual |
| Quantification and submission of supply need for CM NTDs | 1 | annual |
| No. of SAE timely reported and investigated | All | immediately |
| No. of targeted IUs received supplies in time for intervention | all | annual |
| *Strategic priority 7: Integrated NTD planning, implementation, and monitoring* | No. annual NTD planning and review meeting | 1 | annual |
| No. of annual plan submitted to ESPEN | 1 | annual |
| Implementation Guideline/Integrated | 1 | 2022/23 |
| *Strategic priority 8: Strengthen multi-sectoral coordination and response (WASH, One Health, Education, Finance, Agriculture, Ministry of Water and Land, etc.)* | No. of coordination meetings conducted | 1 | annually |
| Integrated implementation guidelines developed/reviewed and used | 1 | 2024 |
| No. of NTD related trainings conducted with involvement of other sectors (Education, WASH, etc) | 1 | annual |
| *Strategic priority 9: Strengthen country ownership and leadership at all levels (improved allocation of domestic funding)* | Improvement in the national WASH coverage (full coverage) | 100% | 2030 |
| NTD structure with dedicated FP assigned | National and Zoba level | 2022 |
| No. of partner coordination meetings with policy makers | 1 | annually |
| *Strategic Priority 10: Empower local capacity for social mobilization, communication and building support for NTD interventions* | No. of NTD trainings conducted at sub-zoba level | 16 | annually |
| No. of social mobilization sessions | 1 | annually |
| No. of community leaders involved in MDA (at least one for each community) | ?380 | annually |
| *Strategic Priority 11: Build NTD programme capacity for resource mobilization* | No. of trainings conducted on resource mobilization | 1 | annually |
| No. of proposals submitted by the National programme for NTD implementation | 2 | annually |
| *Strategic Priority 12: Promote partnership and coordination for NTD programme implementation* | No. of NTD partner consultative meetings |  |  |
| Improved % of support by partners for NTD programme | 10% | annually |
| *Strategic Priority 14: Advocate for domestic resource allocation* | % of domestic funding allocation for NTDs | 5% |  |
| No. advocacy meetings with policy makers | 1 | annually |
| *Strategic Priority 15: Improve awareness of the community on NTDs* | At least one CHW/teacher participated during MDA campaign in every community/school | 1 | MDA session |
| No. of community sensitization session (CHW) made for the community on NTDs | All community | annual |

PART 3

Implementing the Strategy: NTD

# Part4: Budgeting for Impact: Estimates and Justifications

A

budget is a plan for future activities and is a key management tool. It is essential for the national NTD programme to have a simple yet comprehensive budgetary plan in line with the NTD strategic plan. The budget estimates below are what would cost to effectively implement the NTD Elimination Master Plan.

Figure 12: Five-year cost projections

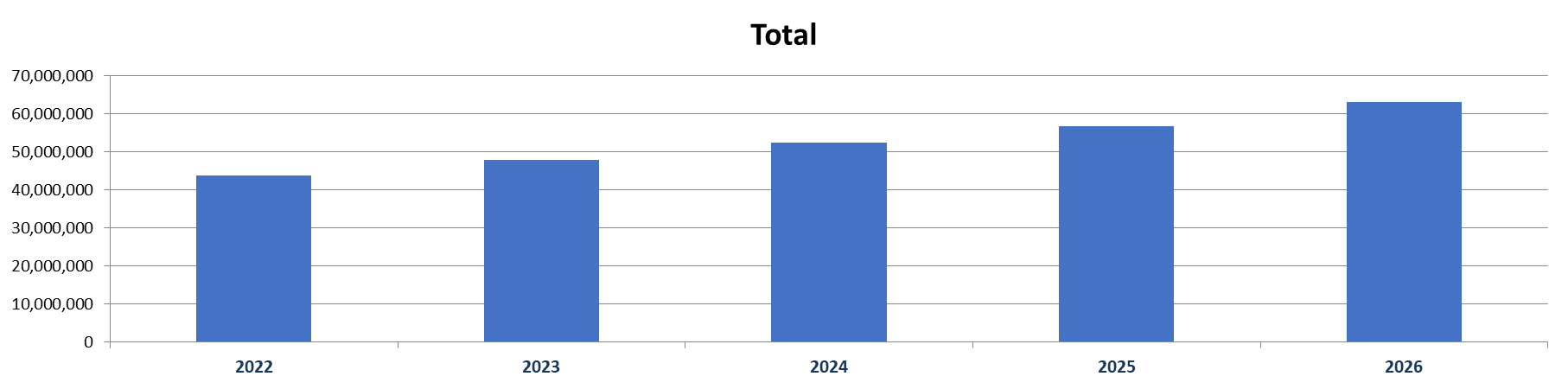


Table 43: Budgeting activities costing for five years

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sub-activity** | **2022** | **2023** | **2024** | **2025** | **2026** | **TOTAL** |
| **Total** | **43,815,746** | **47,781,779** | **52,350,514** | **56,740,341** | **63,107,573** | **263,795,954** |
| **Strategic Priority 1: Integrated preventive chemotherapy to maintain 100% geographic coverage, scale down PC intervention where applicable and achieve the minimum disease specific treatment coverage level for SCH, LF, STH and TRA.** |  |  |  |  |  |  |
| Implement MDA for SCH in the targeted sub-zobas (#28) | 2,592,900 | 2,855,301 | 3,144,258 | 3,462,457 | 3,812,858 | 15,867,774 |
| Conduct MDA for LF in targeted (#2) Sub-zobas | 921,800 | 1,015,086 | 1,117,813 | 1,230,936 | 1,355,506 | 5,641,141 |
| Conduct Social mobilization and BCC | 1,311,092 | 1,443,775 | 1,589,884 | 1,750,781 | 1,927,960 | 8,023,492 |
| **Strategic Priority 2: Ensure early detection and prompt treatment of targeted case management/ IDM NTDs** |  |  |  |  |  |  |
| Conduct burden assessment for LEISH, SBE, Scabies, Brucellosis, Rabies, Anthrax | 1,398,000 | 1,539,478 | 1,695,273 | 1,866,834 | 2,055,758 | 8,555,343 |
| Improve capacity of HWs on case management, morbidity management and disability prevention | 662,850 | 729,930 | 803,799 | 885,144 | 974,720 | 4,056,444 |
| Capacity building of CHWs, community leaders and teachers on NTDs | 1,829,800 | 2,014,976 | 2,218,891 | 2,443,443 | 2,690,720 | 11,197,830 |
| Build national capacity for timely detection and response for outbreak prone NTDs (Dengue, Chikungunya, Brucellosis, VL, scabies, etc.) | 233,700 | 257,350 | 283,394 | 312,074 | 343,656 | 1,430,174 |
| Quantification and request for the procurement of supplies for CM NTDs (medicines, diagnostic kits) | 4,284,000 | 4,717,541 | 5,194,956 | 5,720,685 | 6,299,619 | 26,216,801 |
| Institutional capacity building for laboratory services | 3,684,640 | 4,057,526 | 4,468,147 | 4,920,324 | 5,418,260 | 22,548,897 |
| Contact tracing and management for LEP | 1,218,000 | 1,341,262 | 1,476,997 | 1,626,469 | 1,791,068 | 7,453,796 |
| **Strategic Priority 3: Prioritize and strengthen monitoring and evaluation for tracking progress in line with the 2030 NTD Road map and SDGs** |  |  |  |  |  |  |
| Conduct confirmatory mapping in Afaabet | 452,600 | 498,403 | 548,842 | 604,384 | 665,548 | 2,769,777 |
| Conduct TAS survey for LF | 425,100 | 0 | 0 | 0 | 625,109 | 1,050,209 |
| Conduct SCH/STH Impact Assessment | 5,557,264 | 6,119,659 | 6,738,969 | 7,420,952 | 8,171,953 | 34,008,797 |
| Burden assessment for CM NTDs including the newly added ones | 2,100,000 | 2,312,520 | 2,546,547 | 2,804,258 | 3,088,048 | 12,851,373 |
| Prepare and submit dossier (LF, TRA, SCH, STH) | 700,000 | 770,840 | 848,849 | 934,753 | 1,029,349 | 4,283,791 |
| Strengthen national HMIS | 1,050,000 | 1,156,260 | 1,273,274 | 1,402,129 | 1,544,024 | 6,425,687 |
| **Strategic Priority 4: Identify and prioritize operational research areas to facilitate NTD implementation** |  |  |  |  |  |  |
| Expert consultation and consensus on priority research areas for NTDs | 340,000 | 374,408 | 412,298 | 454,023 | 499,970 | 2,080,698 |
| Build institutional capacity to conduct research | 170,000 | 187,204 | 206,149 | 227,011 | 249,985 | 1,040,349 |
| Capacity building to conduct research | 153,000 | 168,484 | 185,534 | 204,310 | 224,986 | 936,314 |
| Publish and disseminate research | 425,000 | 468,010 | 515,373 | 567,528 | 624,962 | 2,600,873 |
| **Strategic Priority 5: Strengthen and mainstream platforms with similar delivery strategies and interventions (MDAs, Morbidity management, Social mobilization for Behaviour Change and Communication, WASH, IVM, EPI, MCH services, etc) for integrated approaches across NTDs** |  |  |  |  |  |  |
| Conduct Integrated delivery of service (EPI, MCH, nutrition, TB, Prevention of Blindness, Malaria) | 680,000 | 748,816 | 824,596 | 908,045 | 999,939 | 4,161,397 |
| Conduct IVM for vector borne NTDs | 425,000 | 468,010 | 515,373 | 567,528 | 624,962 | 2,600,873 |
| Conduct integrated MDA where applicable | 2,550,000 | 2,808,060 | 3,092,236 | 3,405,170 | 3,749,773 | 15,605,239 |
| Integrate with WASH/Environmental Health | 300,000 | 330,360 | 363,792 | 400,608 | 441,150 | 1,835,910 |
| Capacity building on provision of integrated services | 391,000 | 430,569 | 474,143 | 522,126 | 574,965 | 2,392,803 |
| Monitoring on integrated service delivery | 765,000 | 842,418 | 927,671 | 1,021,551 | 1,124,932 | 4,681,572 |
| **Strategic Priority 6: Strengthen national supply management system to ensure timely, safe, and effective supply of quality assured NTD products and medicines** |  |  |  |  |  |  |
| Advocacy for wavering free importation of donated medicines and supplies | 300,000 | 330,360 | 363,792 | 400,608 | 441,150 | 1,835,910 |
| Build capacity of national supply management system | 450,000 | 495,540 | 545,689 | 600,912 | 661,725 | 2,753,866 |
| Improve infrastructure | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| Capacity on quantification and request of supplies | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| Capacity for timely delivery of supplies to IU level, monitor stock, improve reverse logistics | 300,000 | 330,360 | 363,792 | 400,608 | 441,150 | 1,835,910 |
| **Strategic Priority 7: Integrated NTD planning, implementation, and monitoring** |  |  |  |  |  |  |
| JAP for targeted PC NTDs | 350,000 | 385,420 | 424,425 | 467,376 | 514,675 | 2,141,896 |
| Conduct annual programme review and stakeholders meeting | 120,000 | 132,144 | 145,517 | 160,243 | 176,460 | 734,364 |
| Quantification, application and procurement of supplies for CM NTDS | 450,000 | 495,540 | 545,689 | 600,912 | 661,725 | 2,753,866 |
| Conduct supportive supervision | 50,000 | 55,060 | 60,632 | 66,768 | 73,525 | 305,985 |
| Participate in international meetings | 75,000 | 82,590 | 90,948 | 100,152 | 110,287 | 458,978 |
| **Strategic Priority 8: Strengthen multi-sectoral coordination and response (WASH, One Health, Ministry of Education, Finance, Agriculture, Water and Land, etc.)** |  |  |  |  |  |  |
| Strengthen coordination mechanism | 500,000 | 550,600 | 606,321 | 667,680 | 735,250 | 3,059,851 |
| Regular planning and review meetings | 120,000 | 132,144 | 145,517 | 160,243 | 176,460 | 734,364 |
| Develop multisectoral strategic plan | 700,000 | 770,840 | 848,849 | 934,753 | 1,029,349 | 4,283,791 |
| **Strategic Priority 9: Strengthen country ownership and leadership at all levels (improved allocation of domestic funding)** |  |  |  |  |  |  |
| Annual planning exercise | 40,000 | 44,048 | 48,506 | 53,414 | 58,820 | 244,788 |
| Advocacy workshop for domestic funding | 350,000 | 385,420 | 424,425 | 467,376 | 514,675 | 2,141,896 |
| Build capacity for resource mobilization | 200,000 | 220,240 | 242,528 | 267,072 | 294,100 | 1,223,940 |
| Improve community involvement (community centred approach) | 550,000 | 605,660 | 666,953 | 734,448 | 808,775 | 3,365,836 |
| Advocate for Gender, equity and human rights (GER) approach | 100,000 | 110,120 | 121,264 | 133,536 | 147,050 | 611,970 |
| Inclusion of NTDs in the NHP and National Health Sector Strategic Development Plan | 50,000 | 55,060 | 0 | 0 | 0 | 105,060 |
| Ensure NTD service provision at PHC (under the principle of UHC) | 100,000 | 110,120 | 121,264 | 133,536 | 147,050 | 611,970 |
| Inclusion of NTD indicators in national HMIS | 200,000 | 220,240 | 242,528 | 0 | 0 | 662,768 |
| **Strategic Priority 10: Empower local capacity for social mobilization, communication and building support for NTD interventions** |  |  |  |  |  |  |
| Improve community awareness | 150,000 | 165,180 | 181,896 | 200,304 | 220,575 | 917,955 |
| Community engagement and communication | 150,000 | 165,180 | 181,896 | 200,304 | 220,575 | 917,955 |
| Involvement of the affected people | 150,000 | 165,180 | 181,896 | 200,304 | 220,575 | 917,955 |
| Involvement of community groups (fishermen, farmers, business, etc) | 150,000 | 165,180 | 181,896 | 200,304 | 220,575 | 917,955 |
| **Strategic Priority 11: Strengthen collaboration with other sectors (WASH, Environment, Education, Community organizations)** |  |  |  |  |  |  |
| Strengthen coordination mechanism among various sectors | 400,000 | 440,480 | 485,057 | 534,144 | 588,200 | 2,447,881 |
| Conduct regular programme planning and review meetings | 50,000 | 55,060 | 60,632 | 66,768 | 73,525 | 305,985 |
| Promote integrated service provision | 50,000 | 55,060 | 60,632 | 66,768 | 73,525 | 305,985 |
| Involvement of community in NTD interventions | 50,000 | 55,060 | 60,632 | 66,768 | 73,525 | 305,985 |
| **Strategic Priority 12: Build NTD programme capacity for resource mobilization** |  |  |  |  |  |  |
| Disease specific epidemiology and burden | 120,000 | 132,144 | 145,517 | 0 | 0 | 397,661 |
| Capacity building on resource mobilization | 110,000 | 121,132 | 133,391 | 0 | 0 | 364,523 |
| Mapping donors, partners | 120,000 | 132,144 | 0 | 0 | 0 | 252,144 |
| Local funding opportunities | 120,000 | 132,144 | 145,517 | 160,243 | 176,460 | 734,364 |
| **Strategic Priority 13: Promote partnership and coordination for NTD programme implementation** |  |  |  |  |  |  |
| Identify NTD stakeholders (internal, external) | 50,000 | 55,060 | 0 | 0 | 0 | 105,060 |
| Strengthen integrated Intervention | 150,000 | 165,180 | 181,896 | 200,304 | 220,575 | 917,955 |
| Strengthen multisectoral coordination | 200,000 | 220,240 | 242,528 | 267,072 | 294,100 | 1,223,940 |
| Documentation and sharing best experience | 20,000 | 22,024 | 24,253 | 26,707 | 29,410 | 122,394 |
| Celebration of World NTD Day | 100,000 | 110,120 | 121,264 | 133,536 | 147,050 | 611,970 |
| **Strategic Priority 14: Advocate for domestic resource allocation** |  |  |  |  |  |  |
| Conduct advocacy workshop | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| Engagement of policy makers | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| Multisectoral engagement | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| Public Private Partnership | 250,000 | 275,300 | 303,160 | 333,840 | 367,625 | 1,529,925 |
| NTD Ambassador (public figures for advocacy on NTDs) | 250,000 | 275,300 | 303,160 | 0 | 0 | 828,460 |
| **Strategic Priority 15: Improve awareness of the community on NTDs** |  |  |  |  |  |  |
| Conduct awareness raising | 120,000 | 132,144 | 145,517 | 160,243 | 176,460 | 734,364 |
| Engagement of community | 80,000 | 88,096 | 97,011 | 106,829 | 117,640 | 489,576 |
| Promote social inclusion | 100,000 | 110,120 | 121,264 | 133,536 | 147,050 | 611,970 |
|  |  |  |  |  |  |  |
| Eritrea FY 2022 | TIPAC generated: 3/22/2022 1:51:27 PM  Inflation rate 10.12% Category: Implementation costs Operational costs | | |  |  |  |  |

# References

1. World Health Organisation (WHO), Strategic Plan 2012 – 2020
2. Eritrea National Health Policy 2020
3. Eritrea Health Management Information System Report 2020

# Annexes

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Annex 1: Annual work plan matrix and timeline - FY 2022 | | | | |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | **Timeline for implementation** | | | | | | | | | | | | **Estimated cost** |
| **Activities - Sub-activities - Districts** | **Jan-22** | **Feb-22** | **Mar-22** | **Apr-22** | **May-22** | **Jun-22** | **Jul-22** | **Aug-22** | **Sep-22** | **Oct-22** | **Nov-22** | **Dec-22** | **NKF** |
| **Strategic Priority 1: Integrated preventive chemotherapy to maintain 100% geographic coverage, scale down PC intervention where applicable and achieve the minimum disease specific treatment coverage level for SCH, LF, STH and TRA.** |  |  |  |  |  |  |  |  |  |  |  |  | **4,825,792** |
| Implement MDA for SCH in the targeted sub-zobas (#28) |  |  |  |  |  |  |  |  |  |  |  |  | 2,592,900 |
| Conduct MDA for LF in targeted (#2) Sub-zobas |  |  |  |  |  |  |  |  |  |  |  |  | 921,800 |
| Conduct Social mobilization and BCC |  |  |  |  |  |  |  |  |  |  |  |  | 1,311,092 |
| **Strategic Priority 2: Ensure early detection and prompt treatment of targeted case management/ IDM NTDs** |  |  |  |  |  |  |  |  |  |  |  |  | **13,310,990** |
| Conduct burden assessment for LEISH, SBE, Scabies, Brucellosis, Rabies, Anthrax |  |  |  |  |  |  |  |  |  |  |  |  | 1,398,000 |
| Improve capacity of HWs on case management, morbidity management and disability prevention |  |  |  |  |  |  |  |  |  |  |  |  | 662,850 |
| Capacity building of CHWs, community leaders and teachers on NTDs |  |  |  |  |  |  |  |  |  |  |  |  | 1,829,800 |
| Build national capacity for timely detection and response for outbreak prone NTDs (Dengue, Chikungunya, Brucellosis, VL, scabies, etc.) |  |  |  |  |  |  |  |  |  |  |  |  | 233,700 |
| Quantification and request for the procurement of supplies for CM NTDs (medicines, diagnostic kits) |  |  |  |  |  |  |  |  |  |  |  |  | 4,284,000 |
| Institutional capacity building for laboratory services |  |  |  |  |  |  |  |  |  |  |  |  | 3,684,640 |
| Contact tracing and management for LEP |  |  |  |  |  |  |  |  |  |  |  |  | 1,218,000 |
| **Strategic Priority 3: Prioritize and strengthen monitoring and evaluation for tracking progress in line with the 2030 NTD Road map and SDGs** |  |  |  |  |  |  |  |  |  |  |  |  | **10,284,964** |
| Conduct confirmatory mapping in Afaabet |  |  |  |  |  |  |  |  |  |  |  |  | 452,600 |
| Conduct TAS survey for LF |  |  |  |  |  |  |  |  |  |  |  |  | 425,100 |
| Conduct SCH/STH Impact Assessment |  |  |  |  |  |  |  |  |  |  |  |  | 5,557,264 |
| Burden assessment for CM NTDs including the newly added ones |  |  |  |  |  |  |  |  |  |  |  |  | 2,100,000 |
| Prepare and submit dossier (LF, TRA, SCH, STH) |  |  |  |  |  |  |  |  |  |  |  |  | 700,000 |
| Strengthen national HMIS |  |  |  |  |  |  |  |  |  |  |  |  | 1,050,000 |
| **Strategic Priority 4: Identify and prioritize operational research areas to facilitate NTD implementation** |  |  |  |  |  |  |  |  |  |  |  |  | **1,088,000** |
| Expert consultation and consensus on priority research areas for NTDs |  |  |  |  |  |  |  |  |  |  |  |  | 340,000 |
| Build institutional capacity to conduct research |  |  |  |  |  |  |  |  |  |  |  |  | 170,000 |
| Capacity building to conduct research |  |  |  |  |  |  |  |  |  |  |  |  | 153,000 |
| Publish and disseminate research |  |  |  |  |  |  |  |  |  |  |  |  | 425,000 |
| **Strategic Priority 5: Strengthen and mainstream platforms with similar delivery strategies and interventions (MDAs, Morbidity management, Social mobilization for Behaviour Change and Communication, WASH, IVM, EPI, MCH services, etc) for integrated approaches across NTDs** |  |  |  |  |  |  |  |  |  |  |  |  | **5,111,000** |
| Conduct Integrated delivery of service (EPI, MCH, nutrition, TB, Prevention of Blindness, Malaria) |  |  |  |  |  |  |  |  |  |  |  |  | 680,000 |
| Conduct IVM for vector borne NTDs |  |  |  |  |  |  |  |  |  |  |  |  | 425,000 |
| Conduct integrated MDA where applicable |  |  |  |  |  |  |  |  |  |  |  |  | 2,550,000 |
| Integrate with WASH/Environmental Health |  |  |  |  |  |  |  |  |  |  |  |  | 300,000 |
| Capacity building on provision of integrated services |  |  |  |  |  |  |  |  |  |  |  |  | 391,000 |
| Monitoring on integrated service delivery |  |  |  |  |  |  |  |  |  |  |  |  | 765,000 |
| **Strategic Priority 6: Strengthen national supply management system to ensure timely, safe, and effective supply of quality assured NTD products and medicines** |  |  |  |  |  |  |  |  |  |  |  |  | **1,550,000** |
| Advocacy for wavering free importation of donated medicines and supplies |  |  |  |  |  |  |  |  |  |  |  |  | 300,000 |
| Build capacity of national supply management system |  |  |  |  |  |  |  |  |  |  |  |  | 450,000 |
| Improve infrastructure |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| Capacity on quantification and request of supplies |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| Capacity for timely delivery of supplies to IU level, monitor stock, improve reverse logistics |  |  |  |  |  |  |  |  |  |  |  |  | 300,000 |
| **Strategic Priority 7: Integrated NTD planning, implementation, and monitoring** |  |  |  |  |  |  |  |  |  |  |  |  | **1,045,000** |
| JAP for targeted PC NTDs |  |  |  |  |  |  |  |  |  |  |  |  | 350,000 |
| Conduct annual programme review and stakeholders meeting |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| Quantification, application and procurement of supplies for CM NTDS |  |  |  |  |  |  |  |  |  |  |  |  | 450,000 |
| Conduct supportive supervision |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| Participate in international meetings |  |  |  |  |  |  |  |  |  |  |  |  | 75,000 |
| **Strategic Priority 8: Strengthen multi-sectoral coordination and response (WASH, One Health, Ministry of Education, Finance, Agriculture, Water and Land, etc.)** |  |  |  |  |  |  |  |  |  |  |  |  | **1,320,000** |
| Strengthen coordination mechanism |  |  |  |  |  |  |  |  |  |  |  |  | 500,000 |
| Regular planning and review meetings |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| Develop multisectoral strategic plan |  |  |  |  |  |  |  |  |  |  |  |  | 700,000 |
| **Strategic Priority 9: Strengthen country ownership and leadership at all levels (improved allocation of domestic funding)** |  |  |  |  |  |  |  |  |  |  |  |  | **1,590,000** |
| Annual planning exercise |  |  |  |  |  |  |  |  |  |  |  |  | 40,000 |
| Advocacy workshop for domestic funding |  |  |  |  |  |  |  |  |  |  |  |  | 350,000 |
| Build capacity for resource mobilization |  |  |  |  |  |  |  |  |  |  |  |  | 200,000 |
| Improve community involvement (community centred approach) |  |  |  |  |  |  |  |  |  |  |  |  | 550,000 |
| Advocate for Gender, equity and human rights (GER) approach |  |  |  |  |  |  |  |  |  |  |  |  | 100,000 |
| Inclusion of NTDs in the NHP and National Health Sector Strategic Development Plan |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| Ensure NTD service provision at PHC (under the principle of UHC) |  |  |  |  |  |  |  |  |  |  |  |  | 100,000 |
| Inclusion of NTD indicators in national HMIS |  |  |  |  |  |  |  |  |  |  |  |  | 200,000 |
| **Strategic Priority 10: Empower local capacity for social mobilization, communication and building support for NTD interventions** |  |  |  |  |  |  |  |  |  |  |  |  | **600,000** |
| Improve community awareness |  |  |  |  |  |  |  |  |  |  |  |  | 150,000 |
| Community engagement and communication |  |  |  |  |  |  |  |  |  |  |  |  | 150,000 |
| Involvement of the affected people |  |  |  |  |  |  |  |  |  |  |  |  | 150,000 |
| Involvement of community groups (fishermen, farmers, business, etc) |  |  |  |  |  |  |  |  |  |  |  |  | 150,000 |
| **Strategic Priority 11: Strengthen collaboration with other sectors (WASH, Environment, Education, Community organizations)** |  |  |  |  |  |  |  |  |  |  |  |  | **550,000** |
| Strengthen coordination mechanism among various sectors |  |  |  |  |  |  |  |  |  |  |  |  | 400,000 |
| Conduct regular programme planning and review meetings |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| Promote integrated service provision |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| Involvement of community in NTD interventions |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| **Strategic Priority 12: Build NTD programme capacity for resource mobilization** |  |  |  |  |  |  |  |  |  |  |  |  | **470,000** |
| Disease specific epidemiology and burden |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| Capacity building on resource mobilization |  |  |  |  |  |  |  |  |  |  |  |  | 110,000 |
| Mapping donors, partners |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| Local funding opportunities |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| **Strategic Priority 13: Promote partnership and coordination for NTD programme implementation** |  |  |  |  |  |  |  |  |  |  |  |  | **520,000** |
| Identify NTD stakeholders (internal, external) |  |  |  |  |  |  |  |  |  |  |  |  | 50,000 |
| Strengthen integrated Intervention |  |  |  |  |  |  |  |  |  |  |  |  | 150,000 |
| Strengthen multisectoral coordination |  |  |  |  |  |  |  |  |  |  |  |  | 200,000 |
| Documentation and sharing best experience |  |  |  |  |  |  |  |  |  |  |  |  | 20,000 |
| Celebration of World NTD Day |  |  |  |  |  |  |  |  |  |  |  |  | 100,000 |
| **Strategic Priority 14: Advocate for domestic resource allocation** |  |  |  |  |  |  |  |  |  |  |  |  | **1,250,000** |
| Conduct advocacy workshop |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| Engagement of policy makers |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| Multisectoral engagement |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| Public Private Partnership |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| NTD Ambassador (public figures for advocacy on NTDs) |  |  |  |  |  |  |  |  |  |  |  |  | 250,000 |
| **Strategic Priority 15: Improve awareness of the community on NTDs** |  |  |  |  |  |  |  |  |  |  |  |  | **300,000** |
| Conduct awareness raising |  |  |  |  |  |  |  |  |  |  |  |  | 120,000 |
| Engagement of community |  |  |  |  |  |  |  |  |  |  |  |  | 80,000 |
| Promote social inclusion |  |  |  |  |  |  |  |  |  |  |  |  | 100,000 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Eritrea FY 2022 | TIPAC generated: 3/22/2022 1:43:51 PM | | |  |  |  |  |  |  |  |  |  |  |  |

# 

# Annex 2: NTD Endemicity Statuses and Five-year target populations by Sub Zoba

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Sub Zoba** | **LF** | **SCH** | **STH** | **TRA** | **BRUC** | **LEP** | **ANTH** | **DF** | **RAB** | **LESIH** | **SCAB** | **SBE** | **ECCN** | **FBT** | **2,022** | **2,023** | **2,024** | **2,025** | **2,026** |
| **Total** | **2** | **28** | **3** | **25** | **58** | **58** | **58** | **51** | **58** | **51** | **58** | **58** | **0** | **0** | **206,519** | **212,302** | **218,246** | **224,357** | **230,639** |
| Ansseba: Elabered | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Geleb | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Keren | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Hagaz | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Halhal | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Habero | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Asmat | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Kerkebet | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Sela | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Adi-tekelezan | 0 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Ansseba: Hamelmalo | 0 | 0 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Debub: Dbarwa | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Debub: Areza | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 13,066 | 13,432 | 13,808 | 14,195 | 14,592 |
| Debub: Mendefera | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Debub: Dekemhare | 0 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 25,748 | 26,468 | 27,210 | 27,971 | 28,755 |
| Debub: Segheneyti | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 8,014 | 8,238 | 8,469 | 8,706 | 8,950 |
| Debub: Adi-keih | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 6,278 | 6,453 | 6,634 | 6,820 | 7,011 |
| Debub: Senafe | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 9,525 | 9,792 | 10,066 | 10,348 | 10,638 |
| Debub: Tsorena | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Debub: Adi-quala | 0 | 2 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Debub: Emni-haily | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 9,072 | 9,326 | 9,587 | 9,855 | 10,131 |
| Debub: May-mine | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 7,840 | 8,060 | 8,285 | 8,517 | 8,756 |
| Debub: May-aynee | 0 | 2 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 16,639 | 17,104 | 17,583 | 18,076 | 18,582 |
| Southern Red Sea: Areta | 1 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 26,122 | 26,853 | 27,605 | 28,378 | 29,173 |
| Southern Red Sea: M.denkalia | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Southern Red Sea: Debub-denkalia | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Southern Red Sea: Assab | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Agordat | 0 | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Barentu | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Dighe | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Forto | 1 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 38,107 | 39,174 | 40,271 | 41,399 | 42,558 |
| Gash Barka: Gogne | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Haycota | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Logo Anseba | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Mensura | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Mogolo | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Guluj | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Shambuko | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Mulki | 0 | 2 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Tesseney | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Gash Barka: Laelay Gash | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Maekel: Serejeka | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 8,013 | 8,237 | 8,468 | 8,705 | 8,949 |
| Maekel: Berikh | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 6,517 | 6,699 | 6,887 | 7,080 | 7,278 |
| Maekel: Ghala Nefhi | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 6,959 | 7,154 | 7,355 | 7,560 | 7,772 |
| Maekel: North East Asmara | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Maekel: North West Asmara | 0 | 1 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Maekel: South East Asmara | 0 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Maekel: South West Asmara | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Ghelaelo | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Foro | 0 | 1 | 0 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 6,134 | 6,305 | 6,482 | 6,664 | 6,850 |
| Northern Red Sea: Dahlak | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Massawa | 0 | 1 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 4,536 | 4,663 | 4,793 | 4,927 | 5,065 |
| Northern Red Sea: Ghindae | 0 | 1 | 1 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 6,982 | 7,178 | 7,379 | 7,585 | 7,798 |
| Northern Red Sea: Shieb | 0 | 1 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 6,968 | 7,163 | 7,364 | 7,570 | 7,782 |
| Northern Red Sea: Afabet | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Nakfa | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Adobha | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |
| Northern Red Sea: Karora | 0 | 0 | 0 | M | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | M | M | 0 | 0 | 0 | 0 | 0 |

Annex 3: Main streaming NTDs into national health systems

Prevention

Prevention

Case Finding and Diagnosis

Case Finding and Diagnosis

Treatment

Treatment

Care and rehabilitation

Care and rehabilitation

**Primary care**

**interventions**

**Primary care**

**interventions**

**Community**

**interventions**

**Community**

**interventions**

**Secondary**

**Care interventions**

**Secondary**

**Care interventions**

**Prevention**

**Prevention**

**Prevention chemotherapy**

**Prevention chemotherapy**

**Targeted prevention**

**Targeted prevention**

**Vector control**

**Vector control**

**One Health**

**One Health**

**Health care worker training and supportive supervision**

**Health care worker training and supportive supervision**

**Point-of-contact diagnosis**

**Point-of-contact diagnosis**

**Active case-finding**

**Active case-finding**

**Preventive chemotherapy**

**Preventive chemotherapy**

**Support networks**

**Support networks**

**Self-care**

**Self-care**

**Counselling and psychological support**

**Counselling and psychological support**

**Screening and treatment of skin NTDs**

**Screening and treatment of skin NTDs**

**Rapid response systems**

**Rapid response systems**

**Physical therapy**

**Physical therapy**

**Wound care**

**Wound care**

**Anthelminthic treatment**

**Anthelminthic treatment**

**Provision of assistive devices**

**Provision of assistive devices**

**Laboratory diagnosis**

**Laboratory diagnosis**

**Individual/intensified case/morbidity management**

**Individual/intensified case/morbidity management**

**Management of complications and surgery**

**Management of complications and surgery**

* Interventions unique to certain NTDs remain relevant, e.g. individual treatment and case management including first-line treatment and care
* All services for NTDs should be based on gender equity and human rights
* Interventions unique to certain NTDs remain relevant, e.g. individual treatment and case management including first-line treatment and care
* All services for NTDs should be based on gender equity and human rights

**Management and tracking of referrals**

**Management and tracking of referrals**

**Activities relevant to patient journey**

**Activities relevant to patient journey**

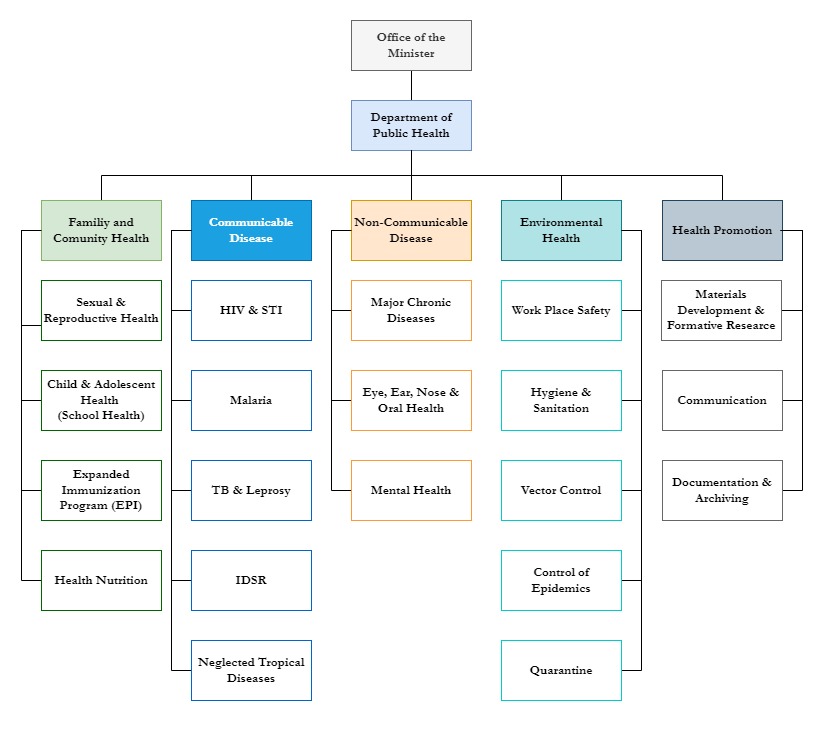
# Annex 3: Coordination with MoH and other Ministries and Departments/Divisions

Activities of MOH that are relevant for NTDs

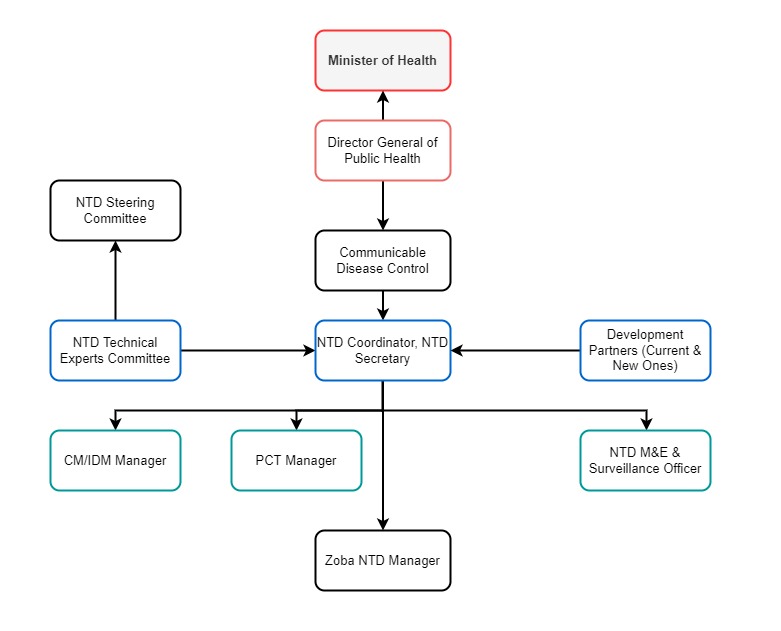
|  |  |  |
| --- | --- | --- |
| Global vector control response | Bug with solid fill | ITNs, Insect repellents, screens molluscicides  Environmental management to minimize mosquito habitats (Housing improvements, safe storage of water, sanitation, window screens), Container management includes covering, emptying, cleaning and disposing of containers, Draining or treating stagnant water, Behavioural change, and other innovative approaches. |
| Mental Health | Artificial Intelligence outline | Psychological support and counselling services for NTD patients  Routine assessment of mental health for patients with specific NTDs, particularly those with chronic conditions |
| Disability and inclusion | Person in wheelchair outline | Treatment of disability and morbidity management, Provision of support services (e.g., walking devices and prosthetics) and Training for self-management of disability and self-care |
| Women’s and child health | Woman changing Baby with solid fill | Awareness-building about diseases for which women and children are disproportionately at risk  Use of maternal health clinics, to deliver interventions (e.g., deworming tablets, supplements (e.g., iron) for pregnant women and children to prevent anaemia) |
| Pharmacovigilance |  | Develop and use standard tool for reporting, investigation and management of ADRs  Monitor drug efficacy for NTDs |
| Eye Health | Eye with solid fill | Promotion of eye care, e.g. face-washing, protecting eyes and eye examinations  Provision of treatment for eye conditions related to NTDs, including surgery when required |
| Nutrition | Pasta with solid fill | **Access to better nutrition** to strengthen immune systems and reduce susceptibility to infection, e.g. for visceral leishmaniasis for which malnutrition is a risk factor  **Provision of food and supplements** (e.g. iron and vitamin A) to combat common side-effects of NTDs, such as anaemia and nutritional impairment |
| Other disease programmes | Germ outline | **Immunization programmes**: joint delivery of preventive chemotherapy to pre-school-age children Tuberculosis: joint detection of paragonimiasis (foodborne trematodiases), leprosy and other mycobacterial diseases,  **Malaria**: vector control against *Anopheles* mosquitoes  HIV/AIDs: education about risks, e.g. of coinfection with certain NTDs |

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# Annex 4a: MoH Organizational Chart



# Annex 4b: Organization chart of the National NTD Programme



# Annex 5: NTD Commodities Forecasting Dashboard

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | **Total needed** | **Total stock** | **Total funded** | **Gap** |  |
| **Drug** | **Manufacturer** | **(Units)** | **(Units)** | **(Units)** | **(Units)** | **Donor** |
| **DEC - Diethylcarbamizine** | multiple | 160,573 | 0 | 182,000 | -21,427 | WHO/Johnson & Johnson |
| **IVM - Ivermectin** | Merck | 0 | 0 | 0 | 0 |  |
| **ALB - Albendazole (with IVM or DEC)** | GSK/multiple | 64,229 | 0 | 75,000 | -10,771 | WHO/ Merck-Serono |
| **ALB/MBD (alone or with PZQ)** | GSK/multiple | 0 | 0 | 15,000 | -15,000 | WHO/Johnson & Johnson |
| **PZQ - Praziquantel** | multiple | 364,710 | 0 | 600,000 | -235,290 | WHO/ Merck-Serono |
| **TEO - Tetracycline eye ointment** | multiple | 0 | 0 | 0 | 0 |  |
| **ZMAX POS bottles** | Pfizer | 0 | 0 | 0 | 0 |  |
| **Zmax TABS - Zithromax tablets** | Pfizer | 0 | 0 | 0 | 0 |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **2022** | **2023** | **2024** | **2025** | **2026** | **Total** |
| **DEC - Diethylcarbamizine** | 160,573 | 165,069 | 169,691 | 174,443 | 179,327 | **849,104** |
| **IVM - Ivermectin** | 0 | 0 | 0 | 0 | 0 | **0** |
| **ALB - Albendazole (with IVM or DEC)** | 64,229 | 66,028 | 67,877 | 69,777 | 71,731 | **339,642** |
| **ALB/MBD (alone or with PZQ)** | 0 | 0 | 0 | 0 | 0 | **0** |
| **PZQ - Praziquantel** | 364,710 | 374,922 | 385,419 | 396,211 | 407,305 | **1,928,567** |
| **TEO - Tetracycline eye ointment** | 0 | 0 | 0 | 0 | 0 | **0** |
| **ZMAX POS bottles** | 0 | 0 | 0 | 0 | 0 | **0** |
| **Zmax TABS - Zithromax tablets** | 0 | 0 | 0 | 0 | 0 | **0** |

NB: Other supplies (diagnostic kits, etc) and commodities for case management NTDs is not included in this table.

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# Annex 6: Implementation of Open Defecation Free (ODF) in Eritrea at rural area (Source: MoH/WASH report)

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Zone** | **No. of villages** | **No, villages triggered** | **Population No.** | **No of house holds** | **Communities declared ODF** | | |
| **Villages** | **House holds** | **population** |
| **Ansseba** | 325 | 4 | 16,097 | 3,497 | 321 | 52,458 | 291,295 |
| **Debub** | 1021 | 365 | 345,605 | 80,178 | 630 | 76,883 | 342,350 |
| **Gash Barka** | 968 | 223 | 145,479 | 33,587 | 679 | 143,663 | 640,196 |
| **Maekel** | 94 | 3 | 15,625 | 2,440 | 91 | 41,333 | 149,667 |
| **N.R.Sea** | 288 | 58 | 89,711 | 22,155 | 236 | 46,322 | 226,972 |
| **S.R Sea** | 142 | 25 | 12,105 | 2,136 | 117 | 8,235 | 48,021 |
| **Total** | **2,838** | **678** | **624,622** | **143,993** | **2,074** | **368,894** | **1,726,700** |
| *N.B; Recently out of 2838 villages 2,074 declared ODF, about 1,726,700 population, 368,894 households constructed 564,795 pit latrines.* | | | | | | | |

# Annex 7.: Safety

Safety is critical for the success of programmes to control and eliminate neglected tropical diseases (NTDs). Attention to safety is also required to fulfil the core ethical obligation of public health programmes to ‘do no harm’ while delivering health benefits. Safety should be embedded in, and permeate, all aspects of NTD programmes, including training; supervision; drug supply and management; preventive chemotherapy; communication with communities; programme monitoring; and prompt SAE investigation and reporting.

Safety has long been a consideration for NTD programmes. For example, drugs that are donated for preventive chemotherapy are manufactured according to the highest standards of safety and quality. However, maintaining safety requires ongoing vigilance, particularly in administering preventive chemotherapy, which now reaches more than 1 billion persons each year. For example, deaths continue to be reported among children who choke on tablets during preventive chemotherapy.

Safety is not automatic. It must be considered, planned for, and integrated across all components of NTD programmes. Few NTD Master Plans currently include safety-related objectives or targets. As a result, safety has not received the attention it deserves. NTD programmes are not alone in this regard; in response to the growing problem of ‘medical error,’ WHO recently launched a world patient safety initiative to improve safety in all medical and public health settings (WHA72.6). Including safety as an integral part of NTD Master Plans can ensure that safety receives adequate attention in NTD programming. This annex provides guidance to NTD programme managers in addressing safety as they draft and implement national NTD Master Plans.

**Organizational and systems preparedness**

The WHO NTD Road Map, 2021-2030 addresses safety primarily in the context of safe drug management and response to adverse reactions.

Safe drug administration and competent responses to adverse events require advance planning as well as organizational preparedness, both within and beyond the ministry of health. National pharmacovigilance centres represent a key, but often overlooked resource for NTD Programmes in planning for, and responding to, drug-related adverse events. Pharmacovigilance centres have regulatory authority and responsibility for investigating and reporting adverse events, and they can provide essential resources and expertise to NTD programmes when serious adverse events (SAEs) occur. Collaboration with national pharmacovigilance centres should be highlighted in NTD Master Plans. Pharmacovigilance agency representatives should be included in National NTD Technical Advisory Group.

A second high-priority area for preparedness is communications. Concern about adverse events is one of the main reasons for refusal to participate in preventive chemotherapy. When adverse events – or even rumours of them – occur, clear, effective communication is essential. Increasingly, this involves social media. NTD Master Plans should develop and review strategic communications plan to address key safety messages during community mobilization, coordinate responses to adverse events and other situations that cause community panic or threaten the program.

**Safe drug management and storage**

The NTD Master Plan need to address the need for safe management, storage, and shipment of NTD drugs. As preventive chemotherapy becomes increasingly integrated, and drugs are co-administered, safe drug management is essential for preventing mix-ups and improper dosing.

**Safety training and safe drug administration**

Safe drug administration depends on the quality of the interaction between the CDD and persons participating in preventive chemotherapy. CDDs should understand that safety is as important as high drug coverage and should be trained and skilled in ensuring correct dosing and preventing choking (such as insisting on observed treatment, crushing deworming tablets, and not forcing young children to take medicine against their will). CDDs should adhere to exclusion criteria (e.g., first trimester of pregnancy) and should know how to respond to choking events (e.g., Heimlich manoeuvre).

**Managing adverse events**

Inadequate or poorly executed responses to SAEs pose a threat to NTD programmes. NTD Master Plans should include objectives and activities specifically directed at recognition, response, investigation, reporting – and ultimately, prevention – of SAEs. They can include process objectives for preparedness and response to adverse events, as well as targets for collaboration with national pharmacovigilance agencies, strategic communications planning, and stakeholder awareness of procedures for responding to SAEs. Zero choking deaths would be an example an outcome target.

**Integrating safety into NTD Master Plans**

There are many opportunities for integrating safety into NTD Master Plans, which is facilitated by the systematic approach recommended in this document for developing NTD Master Plans. A first step may be to include safety – ‘do no harm’ – as a guiding principle.

**Conclusion**

Addressing safety in NTD Master Plans will have far-reaching consequences for improving programme quality. Additional details on NTD programme safety can be found in the WHO document, *Safety in Administering Medicines for Neglected Tropical Diseases,* which outlines approaches to establishing and nurturing collaboration with pharmacovigilance agencies, developing preparedness and excellence in communications, and creating systems to detect, respond to, and prevent SAEs.

1. WHO. Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030. Available at <https://www.who.int/neglected_diseases/Revised-Draft-NTD-Roadmap-23Apr2020.pdf>. Accessed on July 21, 2020. [↑](#footnote-ref-1)
2. WHO. The Thirteenth General Programme of Work, 2019–2023. Available at <https://apps.who.int/iris/bitstream/handle/10665/324775/WHO-PRP-18.1-eng.pdf>. Accessed on August 1, 2020.

   3 National Health Policy 2020: Maximize the Health and Wellbeing for all Eritreans and Residents of Eritrea at All Ages! [↑](#footnote-ref-2)