Republic of Rwanda

Ministry of Health

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NEGLECTED TROPICAL DISEASES STRATEGIC PLAN 2019-2024

Rwanda Biomedical Centre

Healthy People, Wealthy Nation

May, 2019

PREFACE

The Rwanda National Neglected Tropical Diseases (NTD) Strategic Plan has been developed in line with the Ministry of Health's vision to transform Rwanda into a nation free from preventable diseases in accordance with SDGs, EDPRS, Vision 2020 and 2050, HSSP IV 2018-2024 and the National Strategy for Transformation 2018-2024.

The strategic plan aims at guiding the implementation of NTDs in an integrated way to maximize on benefits. It is a product of Rwanda Ministry of Health with the support of World Health Organization (WHO). This NTD strategic plan was elaborated to be a pillar for the control of NTDs.

In Rwanda, NTDs include Soil-Transmitted Helminth infections (STH –Ascariasis, Trichuriasis and Hookworm), Schistosomiasis (SCH), Scabies and other ectoparasites (Tungiasis or Jigger disease), Podoconiosis, Rabies, Snakebite envenoming (SBE), Trachoma, Cysticercosis, Mycetoma, Lymphatic filariasis, Onchocerciasis and probably Human African Trypanosomiasis (HAT). All these neglected diseases are an obstacle to socio-economic development and quality of life of the Rwandan people.

Under this plan, the country is aiming at the elimination of preventable NTDs based on Rwanda's commitment at global and national level. By 2019, the follow-up mapping of STH and Schistosomiasis will be conducted to refine the national elimination strategies.

This is the first NTD Strategic plan or NTD master plan (most used terminology in NTDs international community) in the country, to be implemented in six-year term for the period of 2019-2024. In compliance with the national vision, the MOH will be leading its implementation through Rwanda Biomedical Center (RBC). The goal is to make Rwanda free from NTDs as public health problem by 2024 through the implementation of WHO recommended public health strategies for prevention and control of NTDs. These interventions include preventive chemotherapy, case management, vector control and surveillance, provision of safe water, improved sanitation and hygiene and veterinary public health. This is only achievable through multi-sectoral collaboration, decentralization for community and local leadership engagement and ownership.

The Ministry of Health in close collaboration with the Ministry of Local Government and other key stakeholders will decentralize all NTDs control interventions at District level where villages and schools will serve as implementation units in mobilizing the community for specific NTD problem identification and adequate response through awareness and mass drug administration campaign, education for behavior change and improved sanitation and hygiene.

The Ministry of Health will actively contribute through its domestic NTDs budget and will also engage the development partners (sector wide approach) to raise the additional resources needed for the achievement of the goals in the country plan.

Existing monitoring and evaluation system in the Ministry of Health/RBC and within other sectoral M'inistries such MINALOC, MININFRA (WASAC) and MINEDUC will serve to ensure coordinated and consistent implementation of all NTDs program activities as planned at each level

It is my expectation that this comprehensive NTD Strategic plan will be a major step towards the achievement of the goal of eliminating NTDs in Rwanda and I urge all stakeholders, both individuals and organizations, to play an active role in its implementation to enable the county to achieve its vision of a nation free of NTDs.

Dr. Diane GASHUMBA
Minister of Health

ACKNOWLEDGEMENTS

The Rwanda Biomedical Center (RBC) appreciates the effort and commitment of all partners and stakeholders in the fight against NTDs in Rwanda.

The RBC acknowledges active role of its MOPD Division's team which coordinated the development of this NTD Strategic plan, different Divisions and Units within the Ministry of Health participated in the development of this strategic plan along with different stakeholders including WHO which provided technical and financial support.

Sincere appreciation goes to Social Cluster Ministries, other development partners, civil society organizations, local government (from Districts and Sectors); health facilities and community health workers who contributed significantly to the development of NTD Strategic plan with their insight expertise.

I thank everyone who was actively involved in one or the other during process of developing this NTDs Strategic plan 2019-2024.

I want to reiterate RBC's firm commitment to the successful implementation of this Strategic plan and look forward to the collaboration of stakeholders towards elimination of NTDs as a public health problem in Rwanda.

Dr. Sabin NSANZIMANA
Director General

EXECUTIVE SUMMARY

In June 2007, Rwanda's Ministry of Health (MOH) in partnership with Columbia University's Access Project launched the large scale control Programme of Neglected Tropical Diseases (NTD) targeting the five Preventive-Chemotherapy NTDs: STH, SCH, trachoma (TRA), lymphatic Filariasis (LF), and onchocerciasis (ONCHO). After mapping surveys, STH and SCH was found to be public health problems. Among control interventions included Mass Drug Administration integrated in Maternal-Child Health weeks. In ten years (by end 2018), the implementation of Mass Drug Administration (MDA) has delivered more than 68.8 million and more than 3.2 million treatments to children against STH and SCH, respectively. This resulted in reduction of intestinal worms from 65.8% prevalence in school-aged children in 2008 to 45.2% in 2014. In 2018, more than 42000 CHWs were trained on prevention of common NTDs.

Although in past 10 years a lot of efforts concentrated on STH and SCH control interventions as they were found to be public health problems, in 2017 an attention was put on mapping podoconiosis which was found to be a problem.

To build on above achievements, this strategic plan has been developed in line with the MOH's vision to transform Rwanda into a nation free from preventable diseases and ill health and in accordance with the country Economic National Strategy for Transformation (NSP1) 2017-2024, HSSP IV, Vision 2020 and international priorities and commitments such as SDGs and WHO resolutions.

This document defines where we are in NTDs control (situational analysis), where we want to go by 2024 (NTD strategic agenda) and how we are plan to reach there (Operational framework).

During this strategic plan 2019-2024, all NTDs historically or potentially available in Rwanda will be targeted for control, elimination or WHO validation of elimination as a public health problem. NTDs targeted for elimination or WHO validation of elimination as a public health problem are SCH, Trachoma, Lymphatic filariasis, Onchocerciasis, rhodesiense-Human African Trypanosomiasis (HAT) and Yaws. NTDs targeted for control are STH, scabies and other ectoparasites (Tungiasis or Jigger disease), rabies, snakebite envenoming (SBE) and Cysticercosis. Leprosy is targeted for elimination under TB and Other Respiratory Diseases Division.

The development of this strategic plan was guided by 1) epidemiological trends of NTDs in Rwanda and related evidence-based control interventions at global and

national level (1); 2) decentralization and community development policies where the community and local leadership are engaged to solve their own health problems (2); 3) Universal health coverage (UHC) concept and program sustainability considering that external funding is on decline.

The main strategic changes and innovations in this strategic plan include decentralization of NTDs prevention, control and elimination interventions under District coordination given that NTDs burden differs from one District to another. It considers that the population should be involved in understanding NTDs problems and be part of solving approaches. Villages and schools will be the lower levels of implementation. Among decentralized interventions include: 1) mass treatment (deworming) against intestinal worms and Schistosomiasis which will be done at village and school levels under coordination of District in collaboration with sectors and health centers, 2) education for behavior change regarding hygiene/ hand and foot washing, water treatment, sanitation (prevention of open defecation, sanitation facilities, etc.) which will be done at village (community gatherings, ISIBO, etc.) and school levels.

Additional strategic changes are prioritization of preventive strategies at village and school levels and strengthening NTDs diagnosis and treatment; all populations and communities at risk will be targeted for mass treatment (deworming) (including adults in endemic Districts); and mobilization of other public and private sector actors for their support towards NTDs elimination program through strengthened multi-sectoral collaboration framework.

This strategic plan reflects principal strategic directions for NTDs eliminations. Details on operationalization are presented in annual work plans. As the context and knowledge change over time, this document shall be reviewed to accommodate the new emerging realities towards the country direction.

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LIST OF ACRONYMS & ABREVIATIONS

AIDS	Acquired Immunodeficiency Disease Syndrome
APOC	African Program for Onchocerchiasis
BCC	Behavior Change Communication
SBE	Snakebite envenoming
BUFMAR	Bureau des Formations Agréées du Rwanda
CAMERWA	Centrale d'Achat des Médicaments du Rwanda
CBHI	Community Based Health Insurance
CDPF	Capacity Development Pooled Fund
CHIMS	Community Health Information Management System
CHK	Centre Hospitalier de Kigali (Kigali Hospital Center)
CHUK	Centre Hospitalier Universitaire de Kigali
CHWs	The Community Health Workers
CSF	The cerebrospinal fluid
CTC	Capillary Centrifugation Test
DFID	UK Department for International Development
DH	District Hospital.
DP	Development Partner
DRC	Democratic Republic of the Congo
EAFI	Existing Adverse Effect Following Immunization
EHD	Environmental Health Department
EIC	Education Information and communication
FBO	Faith Based Organization
FELTP	Field Epidemiology and Laboratory Training Program
GDP	Gross Domestic Product
GoR	Government of Rwanda
GSK	GlaxoSmithKline
HAT	Human African Trypanosomiasis
HF	Health Facility
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
HR	Human Resource
HRH	Human Resource for Health
HSSP-III	Health Sector Strategic Plan III
ICT	Immunochromotographic Card Test
IDSR	Integrated Disease Surveillance and Response

IEC	Information Education Communication
IHDPC	Institute of HIV, Disease Prevention Control
IVM	Integrated Vector control Management
LF	Lymphatic Filariasis
LLIN	Long Lasting Insecticidal Net
M&E	Monitoring and evaluation
MCH/FP/RH	Maternal and Child Health/ Family Planning/Reproductive Health
MCHD	Moternal and Child Health Day
MDA	Mass Drugs Administration
MDG	Millennium Development Goals
MINALOC	Ministry of Local Government
MINECOFIN	Ministry of Finance and Economic Planning
MININFRA	Ministry of Infrastructure
MoH	Ministry of Health
MPPD	Medical Production and Procurement Division
MRC	Medical Research Center
MTN	Mobile Telephone Network
NGO	Non-Government Organization
NISR	National Institute of Statistics of Rwanda
NRL	National Reference Laboratory
NSTP	National Strategy for Transformation and Prosperity
NTD	Neglected Tropical Diseases
NUR	National University of Rwanda
PATTEC	Pan African Tse-tse and Trypanosomiasis Eradication Campaign
PBF	Performance Based Financing
PCT	Preventive Chemotherapy and Treatment
PHC	Primary Health Care
PRSP	Poverty Reduction Strategy Paper
PSI	Population Service International
RARDA	Rwanda Animal Resources Development Authority
RBC	Rwanda Biomedical Center
RDB	Rwanda Development Board
RDHS	Rwanda Demographic and Health Survey
RIDHS	Rwanda Interim Demographic and Health Survey
RNEC	Rwanda National Ethic Committee
RPHC	Rwanda Population and Housing Census
RWF	Rwandan Franc
SBS	Sector budget support
SDC	Swiss Development Cooperation
SDGs	Sustainable Development Goals

SHP	School Health Program
SOPs	Standard Operating Procedures
SPH	School of Public Health
SSA	Sub-Saharan Africa
STH	Intestinal and soil helminthiasis
SWAp	Sector Wide Approach
TB	Tuberculosis
TFR	The total fertility rate
TIGO	A brand name of Millicom International Cellular S.A
TRAC	Treatment Research AIDS Centre
TRACnet	Mobile Health Information System (to monitor ART scale-up)
TWG	Technical Working Group
UK	United Kingdom
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
USD	US dollars
WBC	White Blood Cells
WHO	World Health Organization

PART I. INTRODUCTION AND SITUATION ANALYSIS

1.1 INTRODUCTION ON NTDs IN RWANDA AND DEVELOPMENT OF THE CURRENT STRATEGIC PLAN 2019-2024

In June 2007, Rwanda's Ministry of Health (MOH) in partnership with Columbia University's Access Project through a consortium partnership (Legatum Foundation, Geneva Global, Schistosomiasis Control Initiative (SCI), Global Network for Neglected Tropical Diseases Control (GNNTDC), and Columbia University's Earth Institute and World Health Organization (WHO) launched the Neglected Tropical Diseases (NTD) control Programme to target five NTDs: STH, SCH, trachoma (TRA), lymphatic filariasis (LF), and onchocerciasis (ONCHO). Before the establishment of this program, Rwanda had no large-scale NTDs control effort in place and had minimal data on the prevalence and public health significance of various NTDs in the country.

Since the Rwanda Biomedical Center (RBC) was put in place in January 2011, the NTDs prevention and control program was under this implementing entity of the Ministry of Health. In the last ten years, the MOH, in collaboration with its partners, has built the foundation for an initiative to substantially reduce the NTDs burden. Among key activities included NTD mapping to determine the prevalence of each NTD, impact surveys, established NTD surveillance sites, trained health professionals and drug distributors including community health workers (CHWs) and teachers. In 2018, more than 42000 CHWs were trained on prevention of common NTDs. In ten years (by end 2018), the implementation of Mass Drug Administration (MDA) has delivered more than 68.8 million and more than 3.2 million treatments to children against STH and SCH, respectively. This resulted in reduction of intestinal worms from 65.8% prevalence in school-aged children in 2008 to 45.2% in 2014.

Although in past 10 years a lot of efforts concentrated on STH and SCH control interventions as they were found to be public health problems, in 2017 an attention was put on mapping podoconiosis which was found to be a problem. Others NTDs were targeted for control and surveillance.

To strategically guide control and elimination interventions, the NTDs strategic plan 2019-2024 was developed. The first draft NTDs strategic plan covered the period of 2017-2020 but it was extended for being aligned with HSSP IV which covers 2018-2024. The resulting NTDs strategic plan 2019-2024 was developed from previous draft

through active participation and inputs from all NTDs stakeholders during different workshops and technical meetings that took place from February 2019 to April 2019 and MOPD Division of RBC/MoH was the leading institution. The development process of this Strategic Plan involved stakeholders from MoH Divisions and units (MCCH Division, NCDs Division, RHCC Division, PMEBS Division, Environmental Unit, etc.); Ministries (such as MINALOC, MINEDUC, MINAGRI, MIGEPROF, MININFRA, etc.) and Government agencies (RAB, RDB, NECDP, REMA, WASAC; Health facilities and Community Health Workers; Local government (Districts, Sectors and village); development partners, Non-Government organizations and academia.

The development of this strategic plan was guided by 1) epidemiological trends of NTDs in Rwanda and related evidence-based control interventions at global and national level (1); 2) decentralization and community development policies where the community and local leadership are engaged to solve their own health problems (2); 3) Universal health coverage (UHC) concept and program sustainability considering that external funding is on decline.

The main strategic changes and innovations in this strategic plan include decentralization of NTDs prevention, control and elimination interventions under District coordination given that NTDs burden differs from one District to another. It considers that the population should be involved in understanding NTDs problems and be part of solving approaches. Villages and schools will be the lower levels of implementation. Among decentralized interventions include: 1) mass treatment (deworming) against intestinal worms and Schistosomiasis which will be done at village and school levels under coordination of District in collaboration with sectors and health centers, 2) education for behavior change regarding hygiene/ hand and foot washing, water treatment, sanitation (prevention of open defecation, sanitation facilities, etc.) which will be done at village (community gatherings, ISIBO, etc.) and school levels.

Additional strategic changes are prioritization of preventive strategies at village and school levels and strengthening NTDs diagnosis and treatment; all populations and communities at risk will be targeted for mass treatment (deworming) (including adults in endemic Districts); and mobilization of other public and private sector actors for their support towards NTDs elimination program through strengthened multi-sectoral collaboration framework.

This strategic plan reflects principal strategic directions for NTDs eliminations strategies. Details on operationalization are presented in annual work plans. As the context and knowledge change over time, the mid-term review is planned to accommodate the new emerging realities towards the country direction.

1.2 WHERE WE ARE: SITUATION ANALYSIS

1.2.1. Epidemiology of NTDS and Program Response and Gaps

In Rwanda, the most common neglected tropical diseases (NTDs) are schistosomiasis, soil-transmitted helminthiasis (STH), taeniasis/ cysticercosis, podoconiosis and scabies and other ectoparasites (Tungiasis). Other available NTDs include Snakebites, Rabies, Trachoma but the following are rarely reported: Lymphatic Filariasis, Mycetoma, and others are not reported recently: rhodesiense Human African Trypanosomiasis and Onchocerciasis.

1.2.1.1. Soil Transmitted Helminthiasis (STHs)

The nationwide school-based mapping conducted between 2007 and 2008 revealed that the overall country prevalence of any soil-transmitted helminth (STH) infection was 65.8%. District STH prevalence was generally over 50% except in 3 districts of Kigali city where it was found to be below 20%.(1). In 2014, a nationwide follow-up mapping of schistosomiasis and STH (using Kato-Katz) revealed the overall country prevalence of any STH was 45%. Fifteen (15) Districts have the prevalence of any STH above 45%.

Figure 1: STH prevalence data by district – mapping 2008 (TRAC Plus/MOH & Access Project, 2008)

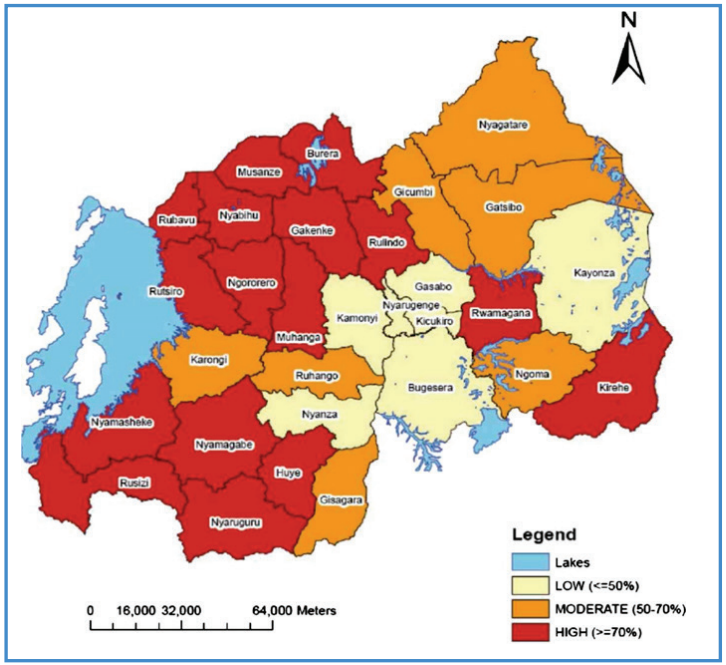
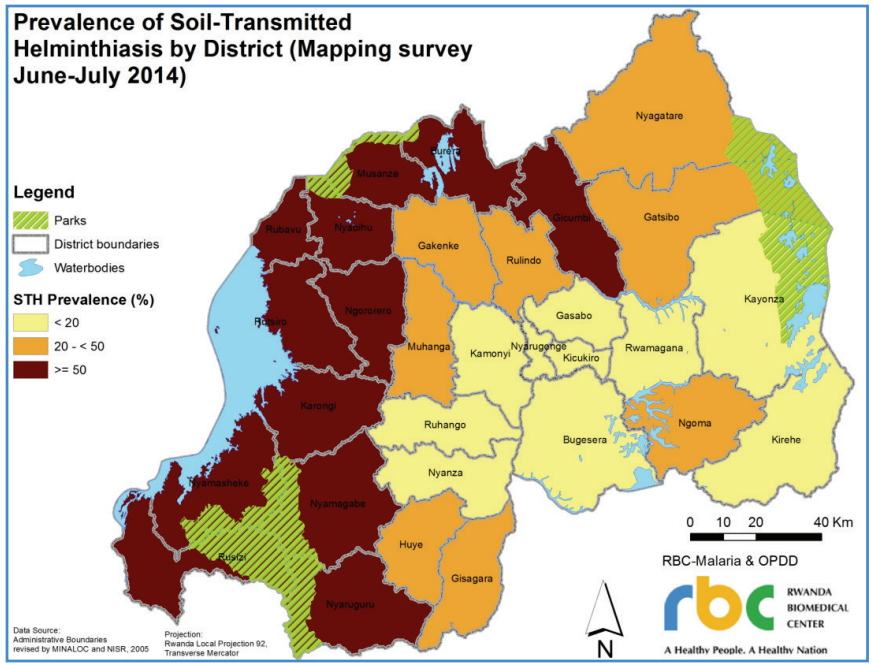


Figure 2: Prevalence of any STH by district (RBC, 2014)



1.2.1.2. Schistosomiasis

The nationwide school-based mapping conducted between 2007 and 2008 revealed that the prevalence of intestinal schistosomiasis was 2.7% among school children (using Kato-Katz technique). (1). In 2014, a nationwide follow-up mapping of schistosomiasis using both stool (with Kato-Katz) and urine (with CCA test) revealed the endemicity of schistosomiasis that requires interventions is in 127 administrative sectors.

***Figure 3:** Schistosoma mansoni prevalence by surveyed site – mapping 2008 (RBC, 2014)*

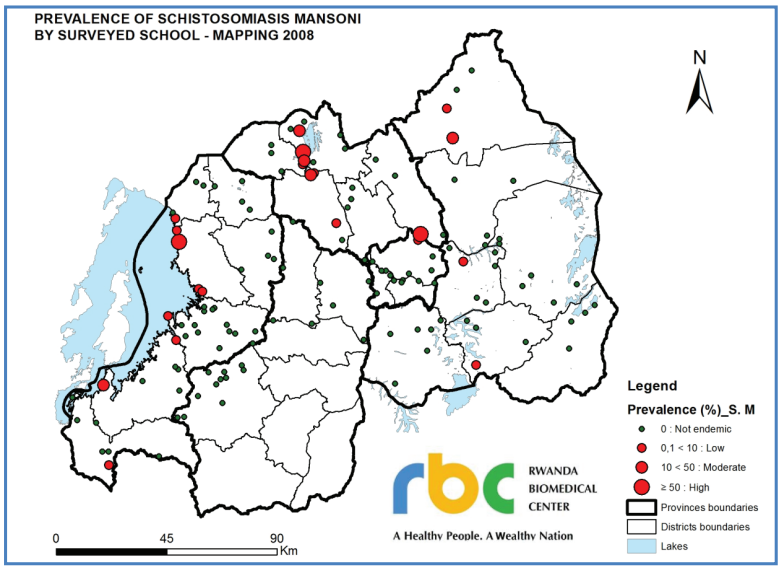
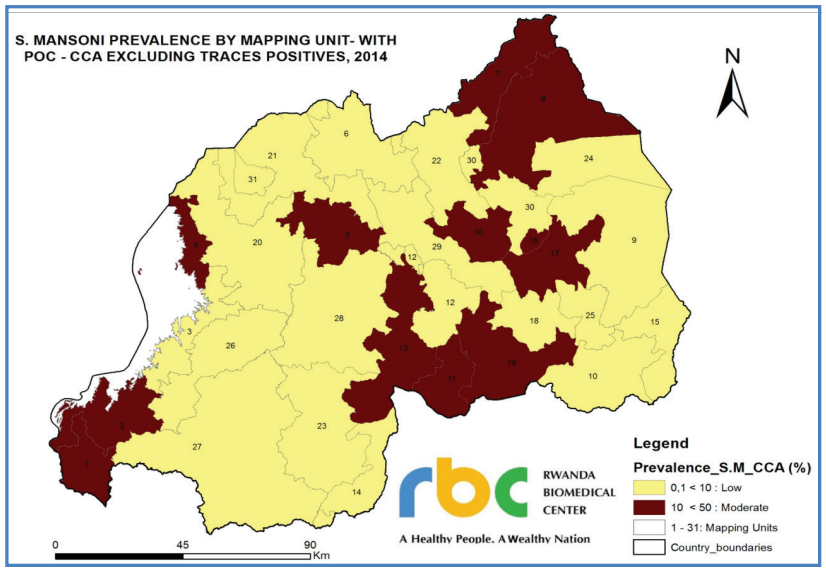


***Figure 4:** Schistosoma mansoni prevalence by mapping unit – with POC-CCA excluding traces as positives (RBC, 2014*



Box 1.
Program response to STH and Schistosomiasis

1. Mass Drug Administration is conducted regularly twice a year for STH and once a year for SCH
2. Education for behavior change conducted mainly during deworming campaigns using mass media communication and leaflets for on-site education
3. Training of 42.000 Community Health Workers to support in education and mass drug administration campaign
4. 20 SCH&STH surveillance sentinel sites to monitor STH&SCH interventions including drug efficacy
5. Routine reporting since 2012 through HMIS

Gaps in STH and Schistosomiasis Control

1. Insufficient knowledge of the community for prevention of these diseases (transmission, diseases' consequences and preventive measures including Sanitation, Hygiene and Education components)
2. Adults in endemic Districts are not targeted for mass drug administration while they continue to be prone to STH and SCH transmission.
3. The control program is vertical prioritizing mass drug administration
4. Low level of district and community engagement to address NTDs transmission rates
5. There is no formal framework for multi-sectoral collaboration involving public and private sectors toward NTDs elimination
6. Lack of a system to monitor WASH interventions towards NTDs
7. Lack of vector control program integrating snail control

1.2.1.3. Trachoma

In 2007/2008, a Trachoma Rapid Assessment (TRA) (2) was conducted in 9 Districts and revealed that:

- **Trichiasis:** 20 cases in a population of 20,417 people of 9 selected districts were diagnosed (Kayonza 7, Gicumbi 5, Nyagatare 3, Nyamasheke 2, Rulindo 2, Nyaruguru 1). 5,2% of Trichiasis cases have developed corneal opacity among them 1 went for surgical operation.
- **Active Trachoma:** 102 (7,4%) out of 1375 children examined with 1 village of Kirehe having 9 cases (18%) alone but the whole District with 5,8%, Gatsibo having 23 (15,3%) cases in 150 children examined and Nyaruguru 19 cases (12,6%) in 151 children examined.

In 2008, the recommended prevalence survey for a more representative sample was conducted in two districts (Nyaruguru and Gatsibo)(9) where results revealed that the prevalence of trachoma infections (active trachoma) in children 1-9 years old with trachoma follicular was 1,32% in Gatsibo and 0,73 in Nyaruguru but some villages were found to have >5% prevalence (range: 0-13.2%) which would require intervention "mass drug administration" by azithromycin according to WHO guideline .

Box 2.
Program response to Trachoma

- Initial mapping of the disease
- Incorporation of its routine reporting through HMIS
- National treatment guideline was developed

Gaps in Trachoma control

1. Lack of control interventions and surveillance activities conducted
2. Lack of follow-up surveys currently conducted to determine the status

1.2.1.4. Onchocerciasis

In 1999, a nationwide rapid epidemiological mapping of onchocerciasis (REMO) was conducted (3). The human ONCHO nodules was not found in 84 (85.7%) of the villages examined while few cases of ONCHO nodules were observed in 14 (14.3%) of the villages. These few cases of one to 3 nodule-carrying persons in these villages were very sporadic in distribution. They did not follow any pattern or river system (possible breeding sites/transmission foci) to enable identification the source of infection. In all villages with cases of nodules, the community nodule rates were between 2.0% and 5.0%. The sporadicity of these cases led to thinking they may be imported from endemic areas from DRC, Burundi and Uganda.

Box 3.
Program response to Onchocerciasis

- Clinical mapping of the disease
- Incorporation among diseases under Integrated Diseases surveillance and Response

Gaps in Onchocerciasis control

1. Lack of capacity building conducted on diagnosis and treatment of Onchocerciasis
2. Lack of follow-up survey conducted to confirm Onchocerciasis using Laboratory tests

1.2.1.5. Lymphatic Filariasis

In 2008, the lymphatic filariasis mapping survey conducted in adults aged over 15 years from the general population of 13 selected Villages of 5 Districts likely to be endemic according to WHO guidelines (Bugesera, Rwamagana, Kayonza, Nyagatare and Rusizi) where generally altitude of below 1500m, using the immuno-chromotographic card test (ICT), found only one positive case confirmed by a nocturnal blood smear positive, suggesting a prevalence of 0.3% (1/296).(4). In 2017, during a cross-sectional survey on distribution and prevalence of podoconiosis in Rwanda (5) where 80 sectors were surveyed, filarial rapid diagnostic tests (Filariasis Test Strip-FTS and Wb123) were performed on people with leg swelling and 9 cases were found to be positive in 6 different Districts (Rusizi, Nyamagabe, Gisagara, Gasabo, Ngoma and Bugesera).

Box 4.

Program response to lymphatic filariasis

- Initial mapping of the disease
- Incorporation of its routine reporting through HMIS

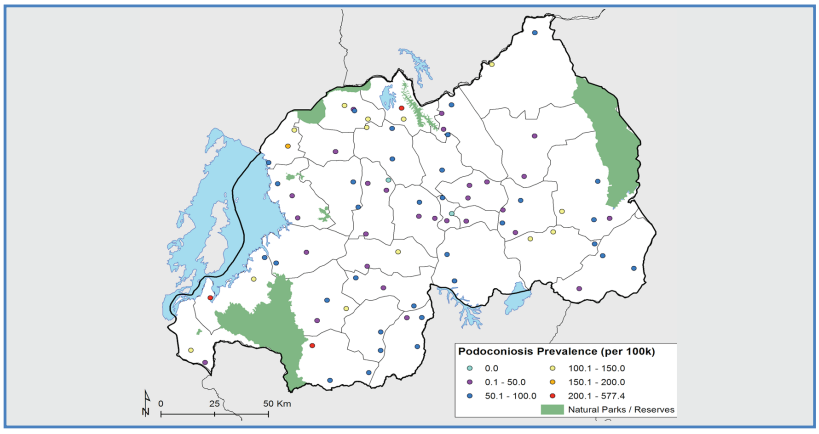
Gaps in lymphatic filariasis control

1. Lack of control interventions and surveillance activities conducted

1.2.1.6. Podoconiosis

The results of recent nationwide mapping supported by the Centre for Global Health Research at Brighton & Sussex Medical School, UK, showed that the disease is widespread in Rwanda with a national prevalence of 68.5 per 100,000 (5). Almost all districts of Rwanda have cases but Western and Northern Provinces are more affected.

***Figure 5:* Distribution of surveyed communities and prevalence of podoconiosis across Rwanda, 2017**



Box 5.
Program response to podoconiosis

- Mapping the distribution and prevalence of the disease
- Incorporation of its routine reporting through HMIS
- National treatment guideline was developed

Gaps in podoconiosis control

1. Lack of capacity building/training conducted on diagnosis and treatment of Podoconiosis
2. Lack of control interventions and surveillance activities in place
3. Lack of multi sectoral collaborations using One Health approach in the control of podoconiosis

Note: There is only one charity center (Heart and Sole Action) established in Musanze District (www.heartandsoleafrica.org) specialized in the management of podoconiosis cases. In January 2019, more than 476 persons affected by podoconiosis are being followed at that Center.

1.2.1.7. Scabies

Human scabies is a contagious dermatologic infestation caused by the mite *Sarcoptes scabiei var hominis*. Itching and skin rash are the most common symptoms. Cases are reported through the RHIMS while some outbreaks were reported in boarding centers with promiscuity. A cross-sectional survey (unpublished) which was conducted in 2018 among students of 8 primary schools demonstrated a prevalence between 1 and 20%. However, the real burden and distribution of scabies is still unknown in Rwanda.

Box 6.
Program response to Scabies

- Treatment guideline of the disease was developed
- Incorporation of its routine reporting through HMIS

Gaps in Scabies control

1. Community awareness, control and surveillance interventions are weak
2. Lack of drug (Ivermectin tab) in country for mass treatment during outbreak

1.2.1.8. Tungiasis

Tungiasis also commonly known as jiggers is classified among NTDs. Since 2014, the Government of Rwanda has prioritized the elimination of tungiasis targeting the poor families in rural areas where risk factors prevail (part of human security issues).

Box 7.
Program response to Tungiasis

- Treatment guideline of the disease was developed
- Incorporation of its routine reporting through HMIS

Gaps in Tungiasis control

1. Lack of strong community ownership in disease prevention
2. In Some households people live with domestic animals in the same house

1.2.1.9. Rabies

In Rwanda, an average of more than 500 cases of dog bites have been reported since 2016. Data on deaths related to rabies are yet to be collected.

Box 8.
Program response to Rabies

- Treatment guideline of the disease was developed
- Integration of Rabies among diseases under IDSR
- Vaccine available at RBC, Private pharmacies and Hospitals

Gaps in Rabies control

1. Lack of strong multi-sectoral collaboration with other relevant sectors (MINAGRI, RDB, Rwanda National Police, ESR, vaccination program, MPPD, etc.) in rabies prevention and control: **One Health approach.**
2. Lack of strengthened vaccine supply chain management and clear communication to the public and health workers where vaccines are found in case needed

1.2.1.10. Snake Bites Envenoming (SBE)

In Rwanda, in 2019, more than 1.000 snake bites have been reported through HMIS.

Box 9.
Program response to Snakebites Envenoming

- Treatment guideline of the disease was developes
- Anti-venom available at central level and some District pharmacies

Gaps in the control of Snakebites Envenoming

1. Lack of capacity building/training conducted for health care providers on case management
2. Lack of strong multi-sectoral collaboration with other relevant sectors (MINAGRI, RDB, ESR, vaccination program, MPP, etc.) in prevention and control of snakebites envenoming: through One Health approach.
3. Lack of Strengthened anti-venom supply chain management and no clear communication to the public and health workers where vaccines are found in case needed
4. Lack of community awareness activities conducted on preventive measures and First Aid interventions

1.2.1.11. Cysticercosis

In Rwanda, a health facility-based study conducted in persons with epilepsy in Southern province revealed that 23,3% were due to Neurocysticercosis in 2010 (6).

Box 10.
Program response to cysticercosis

- Treatment guideline of the disease was developed

Gaps in the control of cysticercosis

1. Lack of strong multi-sectoral collaboration with other relevant sectors (MINAGRI) in prevention and control of cysticercosis through One Health approach.
2. Lack of capacity building/training conducted on cysticercosis diagnosis and management.
3. Lack of strong community awareness activities conducted on preventive measures

1.2.1.12. Mycetoma and Yaws

Mycetoma was found to be very rare in Rwanda with less than 5 cases reported in the last 5 years by dermatologists of Referral Hospitals (unpublished data). Yaws was endemic in Rwanda in 1980's but no case has been reported recenthy.

Box 11.
Program response to Mycetoma and Yaws

- Treatment guideline of the disease was developed
- Collecting information for who validation of Yaws elimination as a public health problem in Rwanda

Gaps in the control of Mycetoma

1. Low understanding of mycetoma in health professionals and community
2. Lack of capacity building/training conducted on Mycetoma diagnosis and management.

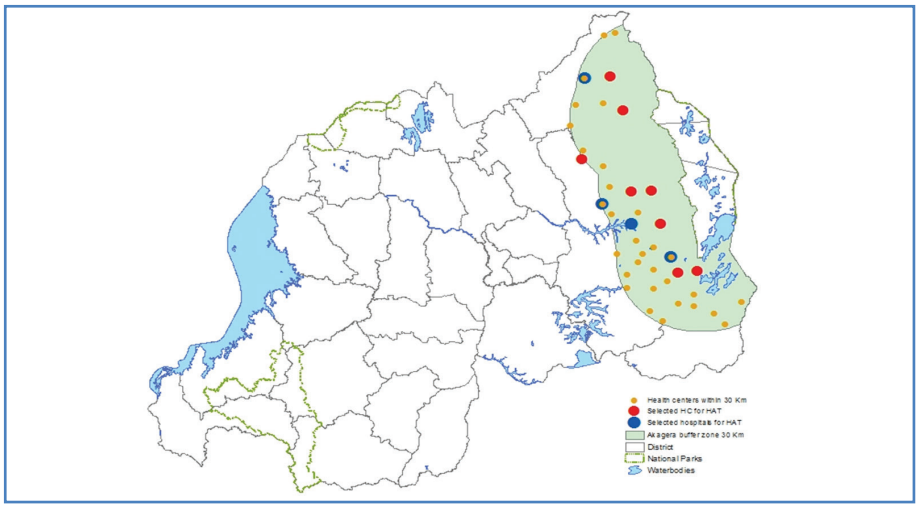
1.2.1.13. Human African Trypanosomiasis (HAT)

The results of document review confirmed that the situation of Human African Trypanosomiasis in Rwanda is documented up to 1994 by M. Jules Hanotier, who confirmed the presence of trypanosomiasis *T. b. rhodesiense*, in the formar Umutara and the Akagera Park region. In 1989, ten cases were diagnosed in CHUK (CHK, 1990), Eight (8) patients with late stage disease were admitted to CHUK for treatment in 1993 (J Clerinx et al. 1998). Lack of control activities have been conducted since 1994. Based on the results of a situational analysis by the WHO, it has been recommended to the MoH to start an integrated HAT surveillance through selected health structures in identified risk areas.

Box 12.
Program response to Human African Trypanosomiasis

- Training of 12 selected health facilities in risk area to implement surveillance activities
- Joint follow-up of surveillance activities by RBC and WHO
- Quality control performed by National Reference Laboratory and Hospitals
- GoR finances active and passive surveillance activities of Health centers

Figure 6 : ***Distribution of HAT Surveillance sentinel sites around AKAGERA National Park (ANP)/ Rwanda***



Box 13.

Gaps in surveillance of Human African Trypanosomiasis

1. Lack of framework for multi-sectoral collaboration with management of protected areas and animal resources through One Health approach
2. Lack of identification of species for prevailing animal trypanosomiasis (Nagana) in the risk area

1.2.1.14. Leprosy

In 2016, 35 new leprosy cases were diagnosed. Control strategies used early detection and treatment, sensitization of medical staff and communities in endemic areas, disability management and rehabilitation. Leprosy control is integrated into the TB program under the TB and Other Respiratory Diseases Division within RBC/MoH. It will not be included in the strategic planning 2019-2024 of this document.

1.2.2. Administrative and Socio-Economic Country Profile

1.2.2.1. Demography and Administrative and Community Structure

Demography: according to the fourth population and housing census of Rwanda (RPHC 2012), the Rwandan population was estimated at 10,515,973 with the population growth rate of 2.6% per annum. The population is estimated at 12,266,866 in 2018. The population is essentially young, with 41.3 percent of all Rwandans under the age of 15. This places Rwanda among the highest population densities in the world (468 inhabitants/ sqkm). Overall, the census results indicate that 83.5% of the Rwandan population resides in rural areas compared with 16.5% in urban areas.

Administrative and community structures: Rwanda is divided into 4 geographically-based provinces: North, South, East, West and the City of Kigali. The Provinces and Kigali city are subdivided in 30 districts, 416 sectors, 2,148 cells, and 14,837 villages.

The district is the basic political-administrative unit of the country while the village is the smallest political-administrative unit of the country and hence closest to the people. It is at this level where the community is engaged in problem identification and solutions. [www.minaloc.gov.rw].

Education: in 2018, the total numbers of primary schools were 2,909 and the net enrollment rate was 98.3%. The total number of pupils in primary school was 2,503,705 (MINEDUC, 2018 Statistics). Almost 9 in 10 children between the ages of 7 and 12 attend primary school.

Immigration patterns to and from NTD endemic areas/countries: civil disturbances in 1959 and genocide against Tutsi in 1994 caused major migrations from Rwanda. Consequently, many citizens of Rwanda migrated to neighboring NTD-endemic countries. The high level of political stability and peace since 1995 has encouraged the influx of millions of refugees from neighboring countries and beyond back to their homeland. However, at that time there were no surveillance mechanisms for these persons returning from NTD-endemic countries.

1.2.2.2. Geography

Climate

Because of its elevation, Rwanda enjoys a temperate, sub-equatorial climate with average yearly temperatures around 18.5°C. Although Rwanda enjoys constant temperatures, the climate is known to vary from year to year, with extreme variations in rainfall sometimes resulting in flooding or drought.

Drainage system

Rwanda has a dense network of rivers and streams, which drain into the Congo River on the western slope of the Congo-Nile Divide, and into the Nile River in the rest of the country via the Akagera River, which receives all the streams of this watershed. Water resources also include several lakes surrounded by wetlands. Lakes Burera, Ruhondo, Ihema, Mugesera, Rweru and the largest Kivu which is shared between Rwanda and DRC make up most of the open water area. However, there are other smaller lakes like Rwanyakizinga, Hago, Cyambwe, Muhazi, Cyohoha etc. The country has a network of rivers of which Nyabarongo formed by two effluents Mwogo and Mbirurume is the largest. River Nyabarongo pass through vast swamps most times and takes the name

Akagera after joining Lake Rweru. All those rivers, lakes are mostly surrounded by marshlands and many are used for cultivation (rice, maize…).

Figure 7: Administrative Map of Rwanda

1.2.2.3. Socio-Economic Situation and Indicators

According to the National Institute for Statistics and Research (NISR), Health Impact Indicators showed important improvements: Life Expectancy increased from 55 years (DHS 2010) to 65 years (DHS 2015), Maternal Mortality Ratio decreased from 476 (DHS 2010) to 210/100,000 live births (DHS 2015) and Infant Mortality Rate went down from 50 (DHS 2010) to 32/1000 live births (DHS 2015). Also, Neonatal Mortality went down from 27 (DHS 2010) to 20/1000 live births (DHS 2015). Other improvements were made in services like Nutrition (Prevalence rate of Stunting down from 44 % to 38%); Maternal Health (% Births attended in health facilities from 69% to 91%);

The prevalence of stunting is 38% according to the results of DHS 2015. Despite the significant reduction, the prevalence of stunting in Rwanda remains above the WHO high severity threshold and is a major public health concern and this problem is observed in District with high burden of soil transmitted helminthiasis (STH) also known as intestinal worms.

Households having access to improved sanitation increased from 83.4% in 2013-14 to 86.2% in 2016-17 while households using improved drinking water source were 87.4% in 2016-2017. (source: EICV, 2016-2017).

1.2.2.4. Transport and Communication

Rwanda is leveraging new mobile phone technologies to improve healthcare communication and infrastructure. In Rwanda, the mobile phones are used by Community Health Workers to report some health services offered at community level. According to the Rwanda Utilities Regulatory Authority (RURA), by December 2017, Rwanda had 8,819,217 mobile telephone subscribers and 12,333 fixed telephone subscribers. On the Data segment, the number of Internet subscriptions in 2017 reached 5,252,996 from 4,119,928 subscriptions in December 2016. This communication system is an opportunity for spreading key message regarding NTDs prevention.

1.2.3. Health System Situation Analysis and Available Opportunities for NTDs Control and Elimination

1.2.3.1. Policy environment

I. National policies and commitments: Goals and Priorities

Vision of the Health Sector:

The Health Sector Policy (January 2015) states the overall vision of the health sector as followws: To pursue an integrated and community-driven development process through the provision of equitable, accessible and quality health care services.

Mission of the health sector:

The Rwanda Health Sector mission is to provide and continually improve affordable promotive, preventive, curative and rehabilitative health care services of the highest quality, thereby contributing to the reduction of poverty and enhancing the general well-being of the population.

Different strategies presented in this document were aligned to the vision and mission of the health sector, Health Sector Strategic Plan 2018-2024 (HSSP IV), and National Strategy for Transformation 2018-2024.

Country direction on NTDs in strategic document:

The national NTDs targets included in HSSP IV (7) are the elimination of SCH as a public health problem in Rwanda by 2024 with the national prevalence below 0.5% and reduction of STH morbidity by 2024 with the national prevalence below 20%. Rwanda showed this commitment in joining WHO roadmap where it states the elimination of SCH as a public health problem by 2025 (8) and elimination of STH in childhood as a problem of public health by 2020 (9).

II. International policies and commitments:

In April 2018, H.E President of the Republic of Rwanda alongside the Commonwealth Heads of Governments committed to end blinding trachoma by 2020 and to achieve the health-related goals of the 2030 agenda (SDGs), particularly goal 3 related to health (10). SDGs related to NTDs and UHC under Goal 3 (11) are defined in the following box 1 and 2.

Box 14.
Definition of SDG indicator 3.3.5 related to NTDs (6)

Goal 3: Ensure healthy lives and promote well-being for all at all ages Target

Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Abbreviated indicator name: People requiring interventions against neglected tropical diseases (NTDs)

Indicator name 3.3.5: Number of people requiring interventions against neglected tropical diseases (NTDs):

1. Average annual number of people requiring preventive chemotherapy (PC) for at least one PC-NTD (which are ***STH, SCH, Trachoma, Lymphatic Filariasis and Onchocerciasis***)*; and
2. Number of new cases requiring individual treatment and care for other NTDs *(which are rabies, cysticercosis, Human African Trypanosomiasis and others as per below definition i.)**.

Definition:

i. Number of people requiring treatment and care for any one of the NTDs targeted by the WHO NTD Roadmap and the World Health Assembly resolutions and reported to WHO.

ii. Treatment and care is broadly defined to allow for preventive, curative, surgical or rehabilitative treatment and care.

iii. Other interventions (e.g. vector management, veterinary public health, water, sanitation and hygiene, disease surveillance, morbidity management and disability prevention) are to be addressed in the context of targets and indicators for Universal Health Coverage (UHC) and universal access to water and sanitation.

iv. Ending the epidemic of NTDs requires a reduction in the number of people requiring interventions for each NTD.

**Italic*: are specific NTDs endemic, potentially endemic or historically endemic in Rwanda*

Box 15.
Definition of SDG indicator 3.8.1 of UHC related to NTDs

Goal 3: Ensure healthy lives and promote well-being for all at all ages Target
Target 3.8: Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all Indicator.

Indicator 3.8.1: Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population)

Definition:

- Coverage of essential health services (defined as the average coverage of essential services based on tracer interventions that include reproductive, maternal, newborn and child health, infectious diseases, non-communicable diseases and service capacity and access, among the general and the most disadvantaged population).

Tracer indicator 8. Water and sanitation: Percentage of households using improved sanitation facilities. (This tracer indicator includes in comprehensive control strategies of NTDs under WASH approach)

1.2.3.2. Institutional Overview of the Health Sector and Governance

The Rwandan health sector is a pyramidal structure and consists of three levels: the central level, the intermediary level, and the peripheral level.

The Central Level

The central level comprises (i) Ministry of Health (MOH), (ii) Rwanda Biomedical Center (RBC) and the (iii) national referral and teaching hospitals:

- The responsibility of the MOH at central level is to formulate policies and strategies, ensure monitoring and evaluation, facilitate capacity building and mobilization of resources. The central level organizes and coordinates the intermediary and peripheral levels of the health system and provides them with administrative, technical and logistical support.

- The RBC is an implementing arm of Ministry of Health whose mission is to provide quality affordable and sustainable health care services to the population through innovative and evidence based interventions and practices, guided by ethics

and professionalism. The core functions of the RBC include coordination and improvement of biomedical research activities, coordination of various activities geared towards the fight against communicable and non-communicable diseases, provide high level technical expertise in the health realm, ensure availability of medicines and medical supplies at all times in health facilities, and establish strategic relations with regional and international institutions, so as to achieve the strategic health goals.

- Note: NTDs control program is managed under Neglected Tropical Diseases and Other Parasitic Diseases Unit within Malaria and Other Parasitic Diseases Division of RBC.

- The mission of the 5 national referral and teaching hospitals is to provide tertiary care to the population. One of them, King Faisal hospital was created to provide a higher level of technical expertise than that available in the national referral hospitals to both the private and public sector and to reduce the number of patients being referred abroad for complex medical interventions.

The Intermediary Level

1. District Health Unit (DHU)

As part of the decentralized structure of the GOR, the DHU is an administrative unit in charge of coordination of the provision of health services (including the private sector) and responsible for planning, monitoring and supervision of the decentralized implementing agencies. The DHU is part of the DHMT and reports to the Vice-Mayor in charge of social affairs. The functions of the DHU include organization of health services in the Health Facilities (DH, HCs, HPs) and the Community (for list of core functions of DHMT see the Box 3).(12). Therefore, decentralization of NTDs control interventions for community engagement and sustainability under District coordination will reinforce the District health system.

Referral and Provincial Hospital:

To decrease the pressure of demand for services in the national referral hospitals, 3 district hospitals were upgraded to referral hospital level (Ruhengeri, Kibuye and Kibungo hospitals) and four other district hospitals were upgraded to provincial hospital level (Rwamagana, Bushenge, Ruhango and Kinihira) to form an intermediary level of referral hospitals. In addition, there are private practices operating in most of these cities.

Box 16.
Core functions of the District Health System Management Team (7)

District Director of Health:

1. ***Participation***

- Enable and encourage local people to participate in initiating, devising, implementing and monitoring decisions and plans that consider their local health needs, priorities, capacities and resources

2. Planning and Management

- Develop the overall strategic plan for improved health outcomes at the District level, and incorporate into the District Action plan and District Health Plan
- Develop an evidence-based, and integrated health operational plan
- Develop a district-wide human resource management plan to ensure health care worker availability with appropriate skills in all facilities in the district at all times
  - Set District targets for the entire spectrum of prevention, treatment and care services in line with national priorities such as health sector strategic plan, EDPRS (in collaboration with Hospital Director General)
  - Ensure that health performance gaps (clinical and management/administrative) identified during supervision are addressed through appropriate capacity building and quality improvement interventions
  - Ensure use of evidence from HIS and other sources to evaluate impact of various programs and services

3. Coordination (sector-based and inter-sectoral)

- Provide District-wide partner coordination and alignment with Districts priorities to prevent duplication and health gaps in health service delivery and to maximize on available resources (SWAP)
- Work with partner in other sectors (e.g: education, agriculture, infrastructure) on initiatives aiming to promote health

4. Supervision of health services

- Assessment of health services, providers and health facility performance using appropriate and defined quality assurance mechanisms

5. Financing and resource allocation

- Ensure accountability of all stakeholders in terms of resources and results
- Advocate for, identify and mobilize resources to address current and future gaps in health service delivery (in collaboration with Hospital Director)

6. Regulations (norms and standards)

- Dissemination and implementation of national guidelines
- Oversight of deployment of services, resources/staff to ensure equitable distribution and quality of health services within the District
- Ensure that all relevant health committees are in place and functioning

Hospital Director General

1. Planning and management

- Set District targets for the entire spectrum of prevention, treatment and care services in line with national priorities such as health sector strategic plan, EDPRS (in collaboration with District Health Director)
- Hospital Director General

2. Coordination (sector-based and inter-sectoral)

- Support and develop patient referral, care networks at all levels of the health system

3. Supervision of health services

- Ensure delivery of care at community level (CHPA), Health center level (MPA), District Hospital level (CPA)
- Ensure integration of (vertical) programs to accomplish the overall health objectives of the District
- Technical and administrative supervision of health workers/ professionals (CHW, HC, DH)

4. Financing and resource allocation

- Advocate for, identify and mobilize resources to address current and future gaps in health service delivery (in collaboration with District Director of health)

Director of District Pharmacy

1. Planning and management

- Support and develop commodities, pharmaceutical supply chain systems at all levels of the health system

District Monitoring and evaluation officer

1. Planning and management

- Ensure consolidation and timely production of quality HIS data and relevant reports to facilitate decision making at the District and upward reporting to Ministries of Health and Local Government

District Health Promotion and Diseases Prevention Officer

- Lead in the planning and execution of integrated disease prevention and health promotion activities in the District
- Ensure that all health prevention and promotion programs are prioritized and integrated in the district health strategic and annual operational plan
- Build the capacity of community health workers to respond to preventable diseases and epidemics
- Lead in the development of campaigns and health information, and execution for regular programs such as immunization, HIV/AIDS, Family planning, Public hygiene as well as emerging diseases, etc.
- Work together with designated hospital staff to provide facility-level supervision for health prevention and promotion activities.

Source: The District Health system re-organization –for management perspective, 2011

The Peripheral Level

The peripheral level is represented by the health district and consists of an administrative office (DHU), a district hospital (DH), and a network of health centers and health posts (HCs / HPs).

2. DHs, HCs and HPs

Health facilities deliver the approved healthcare packages, provide administration, manage logistics supplies and supervise community health workers (CHWs). Generally, the service package at a district hospital (DH) includes inpatient / outpatient services, surgery, laboratory services, gynecology-obstetrics, radiology, mental health, dental and eye services. The HCs provide preventive services, primary health care, in-patient care, referrals, and basic maternity services, while the HPs provide services such as immunization, family planning, growth monitoring and antenatal care.

In 2016, health facilities received a total of 16,905,836 new cases. Among them 82.56% were patients seen in health centers, 3.2% in district and provincial hospitals, 1% in referral hospitals. In addition, 1,426,442 (8.4%) were treated by CHWs practicing community-based integrated management of child hood illness (C-IMCI), and sick adults and children under 5 years. The 6.1% increase in cases treated by CHWs from the previous year is due to the integration of malaria treatment for sick adults into their service package. Private dispensaries and medical clinics accounted for 601,438 new outpatient cases (3.5%).

In 2016, intestinal parasites occupied the third place in diseases with high number of reported new cases with 722,982 (5.2%) cases behind Malaria which came first with 3,335,208 (23.9%) and Acute Respiratory Infectious Diseases which came second with 3,267,932 (23.4%) (Annual Health Statistics Booklet 2016).

At the village level, Community health services are integrated into the community development services and administrative structures. Community Health Workers (CHWs) provide prevention, promotion and some curative health services. Village leaders are also responsible of advising the community and enforce the adoption of positive health behaviors. For NTDs control and elimination, the collaboration of Village leaders and CHWs is an important force to bring the community in problems identification and generation of local and feasible solution.

Table 1: ***Existing administrative structures and related health facilities***

S. No	Administrative level/ structures	Number	HSS Structures	Number
1.	Villages / Imidugudu	14,837	CHW	45,516
2.	Cells / Akagari	2,148	Health Posts	470
3.	Sectors / Imirenge	416	Health Centers	499
4.	Districts/Uturere	30	District Hospitals	36
5.	Provinces (including the City of Kigali)	5	District Pharmacies	30
6.	National		Provincial Hospitals	4
7.	Referral systems		National Referral and Teaching Hospitals	8
8.	Registered Private HFs	250	Ambulances / SAMU	225

1.2.3.3. Analysis of the Overall Health System: Achievements and Future Perspectives

Strategic Framework

The main objective of the Health sector strategic plan is to ensure universal access to equitable and affordable quality health services (preventative, curative, rehabilitative and promotional services) for all Rwandans.

This will be attained through four Strategic Objectives with respective focus on:

1. Full implementation of the various programs (improve demand, access, coverage and quality)
2. Strengthening the various health system components (strengthen policies, resources and management)

3. Strengthening all levels of service delivery (organize the services effectively at all levels)
4. Ensuring effective governance of the sector (strengthen decentralization, partnership coordination, aid effectiveness and financial management

i. Service Delivery

Levels of Interventions

All interventions that are implemented in the health sector are divided into three service delivery modes: **family oriented community based services** (including household behavior change activities, community workers service and social marketing), **population oriented schedulable services** (i.e. outreach services and campaigns for standardized universal services), **and individual oriented clinical services** (requiring decisions on diagnostic and treatment).

Family-oriented community based services

This consists of what **families and communities can practice by themselves when provided with information and education by health workers.** These interventions include mostly preventive and promotional measures as well as some management of neonatal and childhood illnesses. The responsibility of the system is to empower the community through information, education and other strategies as well as make accessible commodities and supplies.

Population-oriented schedulable services

This area includes disease-prevention services delivered to all individuals. Delivery strategy includes both periodic outreaches to communities and/or scheduled services at health facilities.

Individual-oriented clinical services

This area includes all types of individual curative care and delivery services that need to be offered by trained healthcare professionals in a healthcare facility. These interventions are offered in a continuous manner so that they can respond to unpredictable health emergencies. A need to integrate control and prevention of Neglected Tropical Diseases at all levels is necessary to reduce the burden of NTD's.

ii. Health Information System

As an integral part of Rwanda e-Health Architecture framework, HMIS consists of multiple processes put in place to provide health services actors at all levels with the information necessary for routine management and continuous improvement of

activities. HMIS collects a variety of health data at different frequencies from health facilities.

Indicators related to NTD reporting have been incorporated in the Health Management Information System Health to improve monitoring and evaluation of control/elimination interventions.

iii. Medical Products

Essential medicine procurement follows the same process and time line as other commodities. The current practice of drug distribution is in two forms: active distribution where Central warehouse "Medical Procurement and Production Division/ RBC (MPPD, former CAMERWA)" distribute drugs in Districts Pharmacies according to their requests via e-LMIS while the passive distribution is performed when Districts pharmacies pick the drugs from the central warehouse. If drugs are not available, other wholesalers (such as BUFMAR) are used. If neither can supply the required drugs and supplies a tender is made for purchase in the private pharmacies. When drugs are at Districts, the two forms of distribution (active and passive) are used to deliver drugs to Health centers. The drugs used at community level are picked at the health center by community health workers when there is a need or during monthly meeting of community health workers at health center. The same distribution channel is used to deliver NTDs drugs especially Mebendazole, Albendazole and Praziquantel for mass treatment campaign.

iv. Health Financing

The share of the public budget allocated to the health sector (including that for other ministries than the MoH) is 16%, which make Rwanda among few countries to meet the 15% target recommended by the Abuja declaration.

The expansion of the Community-Based Health Insurance (CBHI) and Performance Based Financing (PBF) has helped to increase utilization per capita of curative care services from 54% in 2006 to 91% in 2011. As recommended by the 12th National Leadership Retreat, the financial management of the CBHI was transferred to the Rwanda Social Security Board (RSSB) in 2016.

PART II. WHERE WE WANT TO GO: NTD STRATEGIC AGENDA

2.1 OVERALL NTD PROGRAM MISSION AND GOALS

Part of the attributions of the Ministry of Health through the Rwanda Biomedical Center/ Institute of HIV, Diseases Prevention and Control / Malaria and Other Parasitic Diseases Division, NTD and Other Parasitic Diseases Unit is to ensure optimal Public Health practice, surveillance and applied research to Neglected Tropical Diseases and Other Parasitic Diseases to prevent, control and eliminate Neglected Tropical Diseases throughout the country.

Activities to prevent and control Neglected Tropical Diseases in the country have been implemented since 2007 in collaboration with Ministry of Health institutions such as the maternal child health and community health during Mass Drug Administration's, together with other collaborating partners through Access Project. During the last ten years, the program has realized tremendous achievements that need to be sustained and improved during the coming years.

For the Ministry to improve the control and prevention of Neglected Tropical Diseases, statements of commitment are supposed to be elaborated so as to be able to monitor progress and allocate resources accordingly. This has been done during the elaboration of the HSSP IV (2018-2024), where strategic interventions to curb the prevalence of Neglected tropical diseases are mentioned and how performance will be monitored over the six years.

The following Vision, Mission and Goal are elaborated based on 1) progress made in NTDs prevention, control and elimination and 2) national and international commitments of Rwanda.

Vision

Rwanda free of Neglected Tropical Diseases.

Mission

To continually improve the health of the people of Rwanda through coordinated interventions by all stakeholders and to control and eliminate NTDs as a public health problem.

Goal

By 2024, reduce the morbidity and eliminate NTDs as a public health problem NTDs in Rwanda.

Program Focus

a. To reduce the prevalence and intensity of STH at a level where they are no longer a public health problem.

b. To reduce schistosomiasis prevalence and intensity at a level where it is not of public health significance.

c. To strengthen preventive interventions and case management of all endemic NTDs in Rwanda: STH, Schistosomiasis, scabies and other ectoparasites (tungiasis), podoconiosis, Rabies, snakebite envenoming (SBE), Trachoma, Cysticercosis

d. To conduct assessment and reinforce surveillance of NTDs targeted for elimination as a public health problem by 2024 including NTDs historically endemic in Rwanda: Schistosomiasis, Trachoma, HAT, LF, Onchocerciasis, Yaws.

2.2 GUIDING PRINCIPLES, STRATEGIC PRIORITIES AND OBJECTIVES

This six-year plan aims to strengthen government ownership, advocacy, resource mobilization and financial sustainability of the NTD control program, and to decentralize the implementation of NTD program interventions to the community under District coordination.

The plan has four strategic priorities, which are:

- **Strategic Priority 1:** To strengthen government ownership and decentralization, advocacy, coordination and partnerships.
- **Strategic Priority 2:** To enhance planning for results, resource mobilization and financial sustainability of national NTD programs.
- **Strategic Priority 3:** To scale-up access to interventions, treatment and system capacity (service delivery capacity) building.
- **Strategic Priority4:** To enhance NTD monitoring and evaluation, surveillance and operations research.

Several key objectives have been identified to support the achievement of each strategic priority area. These objectives are summarized in the table below:

Table 2: ***Strategic Framework Summary***

STRATEGIC PRIORITIES	STRATEGIC OBJECTIVES
1.To strengthen government ownership, decentralization and integration, advocacy, multi-sectoral coordination and partnerships.	1.1 To strengthen government ownership and foster decentralization, integration and multi-sectoral collaboration for the control and elimination of targeted NTDs at national, district and community level.
	1.2 To strengthen capacity and coordinating mechanisms for NTDs at all level (from community to national level) of health and local administration system hierarchies
	1.3 To enhance high-level reviews of NTD program performance and the use of lessons learnt to enhance advocacy, awareness and effective implementation of NTD program
2. To enhance planning for results, resource mobilization and financial sustainability of national NTD program.	2.1 To develop integrated strategic plan and annual operational plans for the control and elimination of targeted NTDs at all levels
	2.2 To enhance resource mobilization approaches and strategies at sub-national, national and international levels for NTD interventions
	2.3 To strengthen the integration and linkages of the NTD program and financial plan into sector-wide and national budgetary and financing mechanisms.
3.Scale-up access to interventions, treatment and system capacity (service delivery capacity) building and pharmacovigilance	3.1 To strengthen and integrate NTD case management and chronic care into existing health system
	3.2 To integrate preventive chemotherapy within existing health care delivery structure under coordination of Districts
	3.3 Scale up an integrated care and treatment interventions, including access to Preventive chemotherapy intervention for soil transmitted helminthiasis and schistosomiasis

STRATEGIC PRIORITIES	STRATEGIC OBJECTIVES
	3.4 To implement an integrated Water, sanitation and hygiene and education for behaviour change at community and school level for a comprehensive approach towards NTDs elimination
	3.5 To advocate for integrated vector control for targeted NTDs by multi-sectoral collaboration where necessary
	3.6 To strengthen pharmacovigilance system for NTD Drugs/ medical commodities
4. Enhance NTD monitoring and evaluation, surveillance& Response, and operations research.	4.1 To strengthen monitoring and evaluation of NTDs interventions at all levels
	4.2.To develop and promote an integrated NTD M&E framework and strengthen the surveillance and response of NTDs based on integrated health information systems (HMIS, IDSR).
	4.3.To Support operational and evaluative research, documentation and evidence to guide innovative approaches to NTD program interventions.
	4.4 To strengthen the monitoring of NTDs indicators

2.3 NATIONAL NTD PROGRAMME GOALS, OBJECTIVES, STRATEGIES AND TARGETS PER TARGETED NTDS

The endemic NTDs in Rwanda are of recognized global and regional public health significance that has World Health Assembly Resolutions and/or WHO African Regional Committee Resolutions. These Resolutions set Global goals/targets and as a result, the WHO developed strategies for implementing the necessary interventions to achieve the stated goals.

The Rwanda NTDs control program and stakeholders referred to those WHO 'strategies and other up-to-day knowledge to produce country-level strategies towards elimination of NTDs in Rwanda as summarized in the table below

*Table 3: **NTDs Control and Elimination Targets with Key Strategies***

Target	NTDs	Year	Means of verification	Strategy
Elimination as a public Health problem	Human African Trypanosomiasis Yaws	2021	Routine or survey data and WHO validation	Community and health facility-based screening, treatment and Surveillance
	Yaws	2021		
	Onchocerciasis	2022		
	Leprosy	2022		
	L. filariasis	2023		
	Trachoma	2024		
	Schistosomiasis	2024		
Control with 100% of mortality reduction (Zero death)	Rabies	2024	Routine or survey data	1.Decentralization of Control interventions under District coordination for sustainability in terms of impact and funding 2. Improved multi-sectoral collaboration 3. Prioritization of education for behavior change and Community engagement **"Tujyanemo"** 4.Scaling-up MDA intervention against STH&SCH (increasing MDA Rounds and consideration of adults)
Control with 25% of morbidity reduction	Scabies	2024	Routine or survey data	
Control with 50% of mortality and morbidity reduction	Snakebites Envenoming	2024	Routine or survey data	
Control with reduction of prevalence to far < 20%	STH	2024	Routine & survey data	
Control with reduction of morbidity by 25%	Cysticercosis/Taeniasis	2024	Routine or survey data	
Control with reduction of morbidity by 20%	Tungiasis	2024	Routine or survey data	
To eliminate podoconiosis in endemic Districts by 2024 with <1% prevalence of untreated podoconiosis among individuals aged ≥ 15 years and > 95% of lymphoedema cases are treated adequately	Podoconiosis	2024	Routine or survey data	

1. SOIL TRANSMITTED HELMINTHIASIS
(Ascariasis, Trichuriasis and Ankylostomiasis)

Global Goal: To eliminate STH as a public health problem in childhood by 2020

National Goal: To control STH morbidity by 2024 in Rwanda (national prevalence reduced to below 20%)

PROGRAM OBJECTIVES:
1. To treat 100% of patients in health facilities.
2. To treat 98% of children 1-15 years old through MDA.
3. To treat at least 97% of adults in STH endemic districts

PROGRAM STRATEGIES:
1. District ownership: Decentralization of STH elimination program under District for problem ownership and solution
2. Engagement of the community in problem identification, planning and implementation of STH elimination interventions (preventive and curative interventions)

INTERVENTIONS:
Prevention:
1. Education to the community and children (in village, schools and public places) for behavior change (hygiene/hand washing, No open-defecation, etc.)
2. Community engagement "**TUJYANEMO**" in identification of STH transimission factors and local feasible preventive measures
3. Conduct targeted awareness campaigns, screening and treatment
4. Construction of improved toilets per each household (by community mutual support, etc.)
5. Advocacy for access to clean water

Diagnosis and Treatment:
- Disseminate treatment guidelines and conduct capacity building in STH diagnosis and treatment in all health facilities (collaboration with medical schools and HFs)
- Conduct mass drug administration in endemic districts for children 1-15 years old and adults at risk
- Increase MDA rounds from 2 to 3 rounds in endemic districts for both children and adults

DELIVERY CHANNELS:
- Health facilities
- School based MDA
- School health for promotion messages
- Community-based MDA (sustained at community level)
- Media programs
- Poverty reduction programs
- Multi-sectoral collaboration through One Health approach for disease control (MINAGRI & RAB, MININFRA & WASAC, MoE, MINALOC and Districts, etc.)
- Partners (WASH and deworming partners)
- Private sector/ Organizations

TARGET POPULATION:
- Children from 1 to 15years old
- Adults in high endemic areas/ districts, etc.
- All confirmed cases in health facilities

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER (Soil Transmitted Helminthiasis)	
Activity	**Responsible**
• National coordination of STH control and elimination interventions in Districts (Provision of Guidelines and Tools, Mentorship Supervision and monitoring, Data and progress sharing, etc.) • Ensure the implementation of care and treatment related to NTDs in all health facilities • Through Social Cluster, advocate for households in UBUDEHE I to not be charged at public water taps	MoH/RBC
• To mobilize and sensitive the community on NTDs prevention through monthly UMUGANDA, videos conference on NTDs and coordination of the Human Security Issues which include some NTDs.	MINALOC
• Coordinate the implementation and monitoring of control/ elimination activities at in sectors (HFs, schools, and communities) • Ensure that the engagement of the community **"Tujyanemo"** at village level in problem identification (identification of high-risk areas and potential risk factors) and problem solving (planning and implementation of elimination strategies: prevention including mutual construction of improved toilets, screening and deworming, etc.) • Ensure that education for behavior change and related monitoring are implemented in all public places (sector offices, HFs, churches, meetings, etc.), in schools and in the community. • ensure water and public sanitation facilities are well maintained within sectors of the District • Facilitate and ensure all households have access to treated water and advocate for those in UBUDEHE I to not be charged at public water taps. • Organize and conduct village-led/community-led mass treatment campaign • mobilize and leverage resources needed to implement activities; • Collaborate with district WASH and BCC partners for mobilization and targeted allocation of resources for STH elimination • Report on quarterly basis the progress of STH elimination to national coordination body (relevant ministries)	DISTRICTS

Activity	Responsible
Through a decentralized channel (district and sector), • Lead, Promote and monitor practical health education that improves child health in study curriculum (Hand washing, etc.) • Ensure the engagement of all teachers in education for behavior change regarding schistosomiasis prevention • Ensure that the time dedicated to clubs in schools is implemented and considers education for behavior change regarding schistosomiasis • Promote and monitor the functionality of health clubs including activity anti-Schistosomiasis • Ensure and monitor the availability of clean toilettes, soap and best hand washing practice in all schools • Ensure the availability of clean drinking water for students • Conduct regular inspection of school activities related to hygiene, sanitation and education for behavior change	MINEDUC/REB
• To promote hygiene in families through Umugoroba w'ababyeyi, etc.	MIGEPROF
• To Promote hygiene and deworming activities at all levels including Centre-based ECD (Urugo Mbonezamikurire) and Home-based ECD as part of efforts to prevent chronic malnutrition and stunting.	NECDP
• Avail clean water supply and adequate sanitation especially in areas of high endemicity.	MININFRA/ WASAC and WASH Partners:

Activity	Responsible
• Ensure the availability of sanitation facilities (toilets, soap and water for hand washing, etc.) and education for behavior change in cultivated marshlands and large farms • Ensure proper treatment of human excreta as fertilizers through sensitization of population and instructions to districts	MINAGRI/RAB and other Agri-projects
• Promote WASH and deworming in all prisons	RCS
• support STH diagnosis and treatment (e.g: MDA including adults in high endemic areas), research, health education and capacity building where needed. • to provide funds and technical expertise and jointly implement awareness campaigns against STH through different channels such as school health clubs, education materials for youth (sketches, cartoons, songs), football Amahoro (street football), quiz for youth, debates, awarding best performers, etc. • Support the capacity building of health and local administration in case management and program implementation	Partners (Private sector including Companies, Associations, Donors, etc.)
• through research and community outreach activities: • To contribute in • Remapping and conducting operational and implementation research on STH control • Promoting awareness, skills transfer and capacity building on STH control • Holding scientific and professional conferences and debates on challenges and solutions on STH control	UR-CMHS
• Provide guidance in compliance with pharmacovigilance for drugs used in mass campaigns	FDA
• Promote, plan and implement WASH interventions and conduct education for behavior change • Support deworming activities in all refugee camps	MINEMA

2. SCHISTOSOMIASIS – ELIMINATION STRATEGY

Global Goal:
To eliminate SCH as a public health problem by 2025

National Goal:
To eliminate SCH as a public health problem by 2024 (national prevalence below 0.5%)

PROGRAM OBJECTIVES:

1. To treat all patients in all health facilities
2. To treat (mass) at least 97% of all school age children in endemic areas.
3. To treat at least 97% of all population in endemic areas (including adults)

PROGRAM STRATEGIES:

1. District ownership: Decentralization of SCH elimination program under District for problem ownership and solution
2. Engagement of the community in problem identification, planning and implementation of SCH elimination interventions (preventive and curative interventions)

INTERVENTIONS:

Prevention:

1. Education to the community and children (in village, schools and public places) for behavior change (hygiene/hand washing, No open-defecation, No use of contaminated water, etc.)
2. Conduct targeted awareness campaigns and NTDs screening and treatment
3. Construction of improved toilets per each household (by community mutual support, etc.)
4. Advocacy for access to clean water
5. Snail control by multi-sectoral collaboration

Diagnosis and Treatment:

- Disseminate Treatment guidelines and conduct capacity building in SCH diagnosis and treatment in all health facilities (Training and availability of sensitive Diagnostic test (Rapid Test))
- Conduct Mass drug administration in endemic areas (Sectors) for children 5-15 years old and adults
- Notification and monitoring of side effects from Praziquantel as well as from other NTDs Drugs via RapidSMS or HMIS
- Surveillance: put in place a surveillance/notification system when a suspect or confirmed case is diagnosed and conduct public and healthcare awareness and community screening campaigns

DELIVERY CHANNELS:

- Health facilities
- School based MDA
- School health for promotion messages
- Community-based MDA (sustained at community level)
- Media programs
- Poverty Reduction programs
- Multi-sectoral collaboration through One Health Approach for disease and snail control (MINAGRI & RAB, MININFRA & WASAC, MoE & Ministry of Environment/ REMA, MINALOC and Districts, RDB, RSB, etc.)
- University of Rwanda
- Partners, Private sector/ Organizations

TARGET POPULATION:

-School age children
-Adults population in endemic areas
-All confirmed cases in health facilities

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER (SCHISTOSOMIASIS – ELIMINATION STRATEGY)

Activity	Responsible
-National coordination of SCH elimination interventions in Districts (Provision of Guidelines and Tools, Mentorship Supervision and monitoring, Data and progress sharing, etc.) -Ensure the implementation of care and treatment related to NTDs in all health facilities -Through Social Cluster, advocate for households in UBUDEHE I to not be charged at public water taps	MoH/RBC
- To mobilize and sensitive the community on NTDs prevention through monthly UMUGANDA, videos conference on NTDs and coordination of the Human Security Issues which include some NTDs	MINALOC
-Coordinate the implementation and monitoring of control/ elimination activities at in sectors (schools, HFs and communities) -Ensure that the engagement of the community at village level in problem identification (identification of high-risk areas and potential risk factors) and problem solving (planning and implementation of elimination strategies: prevention including mutual construction of improved toilets, screening and deworming, etc.) -Ensure that education for behavior change and related monitoring are implemented in all public places (sector offices, HFs, churches, meetings, etc.), in schools and in the community. -Collaborate with District WASH and BCC partners for mobilization and targeted allocation of resources in SCH elimination -ensure water and public sanitation facilities are well maintained within sectors of the District -Organize and conduct village-led/community-led mass treatment campaign -mobilize and leverage resources needed to implement activities; -Report on quarterly basis the progress of SCH elimination to national coordination body (Relevant Ministries)	DISTRICTS
Through a decentralized channel (District and Sector), -Lead, Promote and monitor practical health education that improves child health in study curriculum (Hand washing, etc.)	MINEDUC/ REB

Activity	Responsible
-Ensure the engagement of all teachers in education for behavior change regarding Schistosomiasis prevention -Ensure that the time dedicated to clubs in schools is implemented and considers education for behavior change regarding Schistosomiasis -Promote and monitor the functionality of health clubs including activity anti-Schistosomiasis -Ensure and monitor the availability of clean toilettes, soap and best hand washing practice in all schools -Ensure the availability of clean drinking water for students -Conduct regular inspection of school activities related to hygiene, sanitation and education for behaviour change	
- To promote hygiene in families through Umugoroba w'ababyeyi, etc.	MIGEPROF
To Promote hygiene and deworming activities at all levels including Centre-based ECD (Urugo Mbonezamikurire) and Home-based ECD as part of efforts to prevent chronic malnutrition and stunting.	NECDP
Avail clean water supply and adequate sanitation especially in areas of high endemicity.	MININFRA/ WASAC and WASH Partners:
-Elaborate a mitigation plan for snail control considering that fertilizers in marshlands promote the increased density of snail population. (Halstead et al., 2018) -Ensure the availability of sanitation facilities (Toilets, etc.) in cultivated marshlands - Ensure proper treatment of human excreta as fertilizers through sensitization of population and instructions to Districts	MINAGRI/ RAB and other Agri-projects
Work with rice farmers cooperative to ensure clean toilettes are available nearby cultivated marshlands, in collaboration with MINAGRI	RCA
-support Schisto diagnosis and treatment (e.g: MDA including adults in high endemic areas), research, health education and capacity building where needed.	Partners (Private sector

Activity	Responsible
-to provide funds and technical expertise and jointly implement awareness campaigns against SCH through different channels such as school health clubs, education materials for youth (sketches, cartoons, songs), football Amahoro (street football), quiz for youth, debates, awarding best performers, etc. -Support the capacity building of health and local administration in case management and program implementation	including Companies, Associations, Donors, etc.)
through research and community outreach activities: -To contribute in • Remapping and conducting operational and implementation research on SCH control • Promoting awareness, skills transfer and capacity building on SCH control •Holding scientific and professional conferences and debates on challenges and solutions on SCH control	UR-CMHS
-Provide guidance in compliance with pharmacovigilance for drugs used in mass campaigns and Molluscicides used in snail control	FDA, RSB
-To ensure treatment of contaminated water bodies (lakes) used as touristic sites in collaboration with MoH, MINENV, RWFA and REMA (considering that some tourists acquired schistosomiasis from Rwanda (Jan Clerinx et al., 2011)). -To ensure the availability of toilets in touristic areas of lakes. -To ensure that beaches are kept clear with regular removal of vegetation that may favor proliferation of snail population	RDB
- To lead all snail control interventions in collaboration with MoH, MINAGRI and RDB -To lead the finalization and implementation of snail control strategy in collaboration with vector control unit of MoH -To conduct a feasibility study and environmental impact assessment for snail control using molluscicides (kills snails which are vector of schistosoma) in contaminated areas of lakes and cultivated marshlands, in collaboration with MoH, MINAGRI and RDB	MINENV RWFA REMA

3. TRACHOMA –ELIMINATION STRATEGY

Global Goal:
To Eliminate blinding trachoma by 2020

National Goal:
To eliminate blinding trachoma by 2024

PROGRAM OBJECTIVES:

1.To treat all patients in all health facilities
2.To conduct the follow-up assessment by 2020
3.To elaborate appropriate strategies according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:

1. Elimination mapping according to WHO guidelines and treat all positive cases
2. To elaborate specific strategies according to findings
3. Education to the community and children (in village, schools and public places) for behavior change regarding hand washing and hygiene in general, etc.
4. Advocacy for access to clean water
5. Disseminate Treatment guidelines and conduct capacity building in TRA diagnosis and treatment in all health facilities (Collaboration with Medical schools and HFs)
6. Ensure care and treatment of all trachoma cases
7. Conduct public and healthcare awareness and put in place a surveillance/ notification system when a suspect or confirmed case is diagnosed

DELIVERY CHANNELS:

- Local government institutions
- Health facility
- Initiate routine reporting channel where necessary
- Multi-sectoral collaboration through One Health Approach

TARGET POPULATION:

- All people in the country
- Health facilities

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of trachoma elimination interventions (Resource mobilization, provision of guidelines and tools, mentorship supervision and monitoring, data and progress sharing, etc.) -Ensure the implementation of care and treatment related to trachoma in all health facilities	MoH/RBC
-Coordinate the implementation and monitoring of control/ elimination activities at in sectors (schools, HFs and communities)	DISTRICTS
-Lead, Promote and monitor practical health education that improves child health in study curriculum (Hand washing, etc.)	MINEDUC/REB
- To provide technical and financial support	Partners/ Donors

4. ONCHOCERCIASIS –ELIMINATION STRATEGY

Global Goal:
To Eliminate Onchocerciasis by 2020

National Goal:
To eliminate Onchocerciasis by 2022

PROGRAM OBJECTIVES:

1. To conduct the follow-up assessment by 2020
2. To elaborate appropriate strategies according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:

1. Elimination mapping according to WHO guidelines and treat all positive cases
2. To elaborate specific strategies according to findings
3. Conduct public and healthcare awareness and put in place a notification system when a suspect or confirmed case is diagnosed

DELIVERY CHANNELS:

- Local government institutions
- Health facilities

TARGET POPULATION:

- All people in districts at Risk
- Health facilities for routine positive cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
National coordination of onchocerciasis elimination interventions (resource mobilization, provision of guidelines and tools, mentorship supervision and monitoring, data and progress sharing, etc.) -Ensure the implementation of care and treatment related to NTDs in all health facilities	MoH/RBC
-To provide technical and financial support	WHO and Other Partners

5. LYMPHATIC FILARIASIS (LF) – ELIMINATION STRATEGY

Global Goal:
To Eliminate LF by 2020

National Goal:
To eliminate LF by 2023

PROGRAM OBJECTIVES:

1. To conduct the follow-up assessment by 2020 2. To elaborate appropriate strategies according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:

1. Elimination mapping according to WHO guidelines and treat all positive cases
2. To elaborate specific strategies according to findings
3. Conduct public and healthcare awareness and put in place a notification system when a suspect or confirmed case is diagnosed

DELIVERY CHANNELS:

- Local government institutions
- Health facilities

TARGET POPULATION:

- All people in Districts at Risk
- Health facilities for routine positive cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of Lymphatic Filariasis elimination interventions (Resource mobilization, Provision of Guidelines and Tools, Mentorship Supervision and monitoring, Data and progress sharing, etc.) -Ensure the implementation of care and treatment related to NTDs in all health facilities	MoH/RBC
-To provide technical and financial support	WHO and Other Partners

6. PODOCONIOSIS – CONTROL STRATEGY

Global Goal: -

National Goal: To eliminate podoconiosis in endemic districts by 2024 with <1% prevalence of untreated podoconiosis among individuals aged ≥ 15 years and > 95% of lymphoedema cases are treated adequately (13)

PROGRAM OBJECTIVES:
1.To increase capacity of health facilities for podoconiosis management
2. To increase self-management skills for podoconisosi cases
3. To raise awareness on podoconiosis prevention in the community and among health professionals

PROGRAM STRATEGIES/ INTERVENTIONS:
1. To disseminate podoconiosis mapping results
2. To train ToT and Health care providers and CHWs by starting in districts with highest burden
3. To Establish treatment reference/ model centers (in HCs)
4. To sensitize the population for behavior change (shoe wearing, foot washing and general hygiene) in affected areas
Strategies, Delivery Channel and Target Population

DELIVERY CHANNELS:
- Local government institutions
- Health facilities and CHWs
- Awareness materials (printed and online)
- Mass media communication
- Multi-sectoral collaboration through One Health Approach

TARGET POPULATION:
- All people in the top 10 endemic districts
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of podoconiosis control interventions (Resource mobilization; Technical lead: Provision of Guidelines and Tools, Mentorship Supervision and monitoring, Data and progress sharing, etc.) -Ensure the implementation of care and treatment related to NTDs in all health facilities	MoH/RBC
-To promote and support self-care management in the community -Promote and support Education for behavior change regarding shoes wearing	MINALOC, MINEDUC, MIGEPROF
-To provide technical and financial support for implementation of different morbidity control interventions, research and capacity building	Partners such as WHO, UK NIHR, Welcome Trust and BSMS, Heart and Sole Action
-To conduct advocacy activities for persons living with podoconiosis -To provide technical guidance and advocacy for persons living with podoconiosis -To support financially and technically the interventions improving the health of persons living with podoconiosis	National council of Persons Living with Disabilities (NCPD) and National Union of Disability Organizations in Rwanda (NUDOR)

7. SCABIES –CONTROL STRATEGY

Global Goal: -

National Goal:
To reduce morbidity of Scabies in Rwanda by 25% in 2024

PROGRAM OBJECTIVES:
1.To determine the disease prevalence
2. To improve case management of scabies in all Health Facilities (availability of appropriate drugs and treatment algorithm)
3.To conduct mass treatment when applicable
4. increase awareness of scabies in the affected districts

PROGRAM STRATEGIES/ INTERVENTIONS:
1. Mapping of Scabies
2.Dissemination of guidelines on prevention and treatment of Scabies for capacity building of healthcare providers
3.MDA using ivermectin for scabies outbreaks
4.Sensitization to raise the awareness of Scabies in the affected districts
5.Put in place a surveillance system of scabies
Strategies, Delivery Channel
and Target Population

DELIVERY CHANNELS:
- Local government institutions
- Health facilities and CHWs
- Awareness materials (printed and online)
- Mass media communication
- Multi-sectoral collaboration through One Health Approach

TARGET POPULATION:
- Countrywide in affected Districts and risk areas (promiscuity: schools, refugee camps, prisons, etc.)
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of scabies control interventions (Resource mobilization; Technical lead: Provision of Guidelines and Tools, community mobilization, Mentorship Supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to scabies in all health facilities	MoH/RBC and Rwanda Association of Dermatologists
-To promote and support Education for behavior change regarding the implementation of preventive measures (conduct in promiscuity, body hygiene, WASH) in the community and in schools	MINALOC, MINEDUC, MIGEPROF, MINEMA, Media
-To provide technical and financial support for implementation of different morbidity control interventions, research and capacity building	Partners such as WHO, UK NIHR, Welcome Trust and BSMS, UR

8. TUNGIASIS or JIGGER DISEASE (AMAVUNJA) –CONTROL

Global Goal: -

National Goal: Reduce morbidity of tungiasis by 20% by 2024

PROGRAM OBJECTIVES:

1.To increase awareness on tungiasis prevention in the affected districts and emphasize the importance of hygiene

2.To enhance case management across all health facilities in affected areas

PROGRAM STRATEGIES/ INTERVENTIONS:

1. Conduct assessment of endemicity and geographical distribution of Tungiasis and drug efficacy surveys
2. Disseminate guidelines on prevention and treatment of tungiasis
3. Conduct awareness activities for prevention of tungiasis

DELIVERY CHANNELS:

- Local government institutions
- Health facilities and CHWs
- Awareness materials (printed and online)
- Mass media communication
- Multi-sectoral collaboration through One Health Approach

TARGET POPULATION:

- Countrywide in affected Districts and communities
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of tungiasis control interventions (resource mobilization; technical lead: provision of guidelines and tools, community sensitization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to tungiasis in all health facilitie	MINALOC and MoH/RBC
-To promote and support education for behavior change and related monitoring regarding the implementation of preventive measures (foot washing, body hygiene, WASH) in the community (families) and in schools	MINEDUC, MIGEPROF, MINEMA, Media
-To provide technical and financial support for implementation of different morbidity control interventions, research and capacity building	Partners such as WHO, UK NIHR, Welcome Trust and BSMS, UR

9. RABIES –CONTROL STRATEGY

Global Goal:
Zero human dog-mediated rabies deaths by 2030

National Goal:
Zero human dog mediated rabies deaths by 2024

PROGRAM OBJECTIVES:
1.To conduct Rabies burden assessment
2.To adapt the national strategy according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:

1. Rapid evaluation of rabies burden in Rwanda
2. Improve supply chain for human vaccine and its availability at each hospital
3. Conduct awareness campaign in communities at risk
4. Conduct rapid intervention together with MINAGRI/ RAB, MINALOC and Police when dog bites are instantaneously reported

DELIVERY CHANNELS:
- Local government institutions
- Health facilities, CHWs and reporting through HMIS
- Awareness materials (development, print out and online)
- Mass media communication
- Multi-sectoral collaboration through One Health Approach (MINAGRI/ RAB, MINALOC, Police, RBC/ MCCH, MPPD, ESR)

TARGET POPULATION:
- Countrywide in affected Districts and risk areas
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of rabies control interventions (resource mobilization; technical lead: provision of guidelines and tools, community mobilization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to Rabies in all health facilities	MoH/Clinical services and RBC/MOPD, MPPD,MCCHD &ESR
-Ensure and conduct regular monitoring of vaccination of all dogs according to guidelines in place	MINAGRI/ RAB
Participation in management of stray dogs (killing stray dogs, etc.)	Rwanda National Police
-To provide technical and financial support for implementation of different morbidity control interventions, research and capacity building	Partners such as WHO, etc.
-Facilitate collaboration and data sharing for coordinated disease elimination efforts -Promote jointly planning towards elimination of the disease	Through One Health Approach including all above institutions

10. SNAKEBITE ENVENOMING (SBE) – CONTROL STRATEGY

Global Goal: Reduce snakebite deaths and disability by 50% before 2030.

National Goal: Reduce snakebite deaths and disability by 50% before 2024.

PROGRAM OBJECTIVES:
1. To conduct the risk and burden assessment of SBE
2. To adjust strategies according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:
1 Rapid evaluation of Snakebites envenoming in Rwanda
2. Disseminate guideline for proper case management
3. Training of health care providers
4. Improve supply chain of antivenomen products (SBE); fast delivery where possible
5. Include SBE in RHMIS
6. Raise awareness of diseases in community and among health care providers and CHWs

DELIVERY CHANNELS:
- Local government institutions
- Health facilities, CHWs and reporting through HMIS
- Awareness materials (development, print out and online)
- Mass media communication
- Multi-sectoral collaboration through One Health Approach (MINARI/ RAB, RDB, RBC/ MCCH, MPPD, ESR)

TARGET POPULATION:
- Countrywide in affected Districts and risk areas
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of snakebites envenoming control interventions (resource mobilization; technical lead: provision of guidelines and tools, community mobilization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to Snakebites Envenoming in all health facilities	MoH/Clinical services and RBC/MOPD, MPPD &ESR
-Collaborate with MoH/RBC through data sharing and community mobilization	MINAGRI/ RAB and RDB
-To provide technical including training of central level staff and financial support for implementation of different morbidity control interventions, research and capacity building	UR and Partners such as WHO, HAI, etc.
-Facilitate collaboration and data sharing for coordinated disease elimination efforts -Promote jointly planning towards elimination of the disease	Through One Health Approach including all above institutions

11. CYSTICERCOSIS – CONTROL STRATEGY

Global Goal:
Interventions scale up and elimination by 2020

National Goal:
Interventions scale up and morbidity reduction of 20% by 2024

PROGRAM OBJECTIVES:
1. To conduct risk and burden assessment for Cysticercosis
2. To adjust strategies according to findings

PROGRAM STRATEGIES/ INTERVENTIONS:
1 Mapping of cysticercosis
2. Capacity building in diagnosis and treatment of taenia cases
3. Workshop to adjust strategies according to study findings
4. Improve awareness of disease in community and among health care providers and CHWs
5. Improve case management capacity in all Hospitals

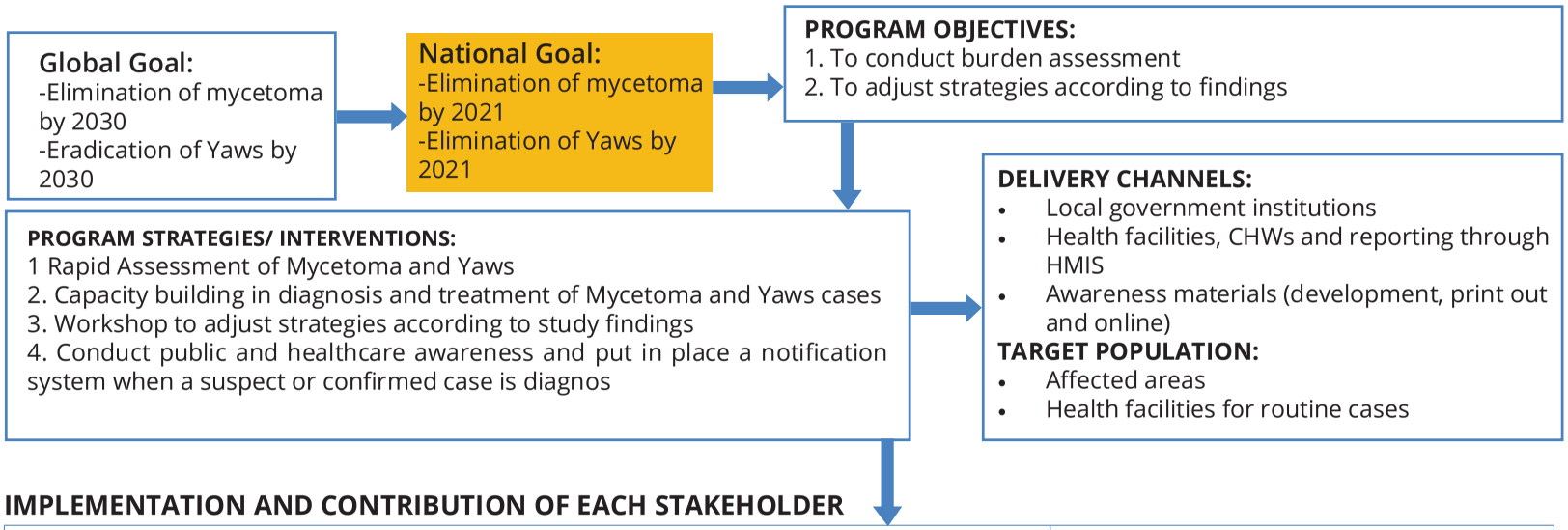
DELIVERY CHANNELS:
- Local government institutions
- Health facilities, CHWs and reporting through HMIS
- Awareness materials (development, print out and online)
- Mass media communication
- -Multi-sectoral collaboration through One Health Approach (MINARI/ RAB, RBC/ MOPD, ESR)

TARGET POPULATION:
- Countrywide in affected Districts and risk areas
- Health facilities for routine cases

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of cysticercosis control interventions (resource mobilization; technical lead: provision of guidelines and tools, community mobilization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to cysticercosis in all health facilities	MoH/Clinical services and RBC/MOPD &ESR
-Collaborate with MoH/RBC through data sharing on pigs (population and infestivity with *Taenia*) and community mobilization	MINAGRI/ RAB
To provide technical including training of central level staff and financial support for implementation of different morbidity control interventions, research and capacity building	UR and Partners such as WHO, etc.
-Facilitate collaboration and data sharing for coordinated disease elimination efforts -Promote jointly planning towards elimination of the diseases	Through One Health Approach including all above institutions

12. MYCETOMA AND YAWS – ELIMINATION STRATEGY



IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of mycetoma&yaws control interventions (resource mobilization; technical lead: provision of guidelines and tools, community mobilization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to mycetoma & yaws in all health facilities	MoH/Clinical services and RBC/MOPD &ESR
-To provide technical and financial support for implementation of different morbidity control interventions, research and capacity building including training of central level staff	UR and -Partners such as UK NIHR and BSMS, etc

13. HUMAN AFRICAN TRYPANOSOMIASIS (HAT) – ELIMINATION STRATEGY

Global Goal:
To eliminate HAT as PHP by 2020 and to interrupt transmission of rhodesiense HAT by 2030

National Goal:
To eliminate r-HAT by 2020

PROGRAM OBJECTIVES:
1.Enhance r-HAT surveillance towards validation of elimination
2.To conduct the comprehensive HAT transmission risk assessment in animals and humans
3.To adjust strategies according to findings.

PROGRAM STRATEGIES/ INTERVENTIONS:
1. Monitoring of implementation of detailed surveillance plan
2. Assessment of HAT (species) transmission in animals through collaboration with MINAGRI/ RAB and RDB
3.Adjust strategies according to findings

DELIVERY CHANNELS:
- Local government institutions
- Health facilities, CHWs
- Awareness materials (development, print out)
- Multi-sectoral collaboration through One Health Approach (MINARI/ RAB, RDB, RBC/ ESR)

TARGET POPULATION:
- Affected Districts and risk areas

IMPLEMENTATION AND CONTRIBUTION OF EACH STAKEHOLDER

Activity	Responsible
-National coordination of human african trypanosomiasis elimination interventions (Resource mobilization; technical lead: provision of guidelines and tools, community mobilization, mentorship supervision and monitoring, etc.) -Ensure the implementation of care and treatment related to human african trypanosomiasis in all health facilities -Report to WHO as appropriate	MoH/Clinical services and RBC/MOPD, MPPD &ESR
-Collaborate with MoH/RBC on assessment of HAT transmission of animals (domestic and touristic) - Promote collaboration by MoH/ RBC through data sharing and community mobilization	MINAGRI/ RAB and RDB
-To provide technical including training of central level staff and financial support for implementation of different morbidity control interventions, research and capacity building	UR and Partners such as WHO, etc.
-Facilitate collaboration and data sharing for coordinated disease elimination efforts -Promote jointly planning towards elimination of the diseases	Through One Health Approach including all above institutions

2.4 RWANDA CONTROL AND ELIMINATION MILESTONES PER TARGETED NTD

*Table 4: **STH control milestones, 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Sustained 100% geographical MDA coverage in STH endemic districts	30 100%	30 100%	30 100%	20 100%	15 100%	10 100%
2	Conducted 6 years of consecutive regular treatments in all endemic districts with national coverage for children aged 1-15 years of 98%	30 100%	30 100%	30 100%	20 100%	15 100%	10 100%
3	Conducted 5 years of consecutive 3 rounds of treatment per year in all highly endemic districts for children and adults with overall coverage of at least 97%	0 0%	10 97%	15 97%	15 97%	15 98%	15 98%
4	Endemic districts achieving moderate morbidity control	30 100%	30 100%	30 100%	30 100%	30 100%	30 100%
5	Endemic districts achieving advanced morbidity control	30 100%	30 100%	30 100%	30 100%	30 100%	30 100%
6	Completed national mapping of STH (30 Districts) and determined areas for intervention	NA	30 100%	NA	NA	NA	30 100%
7	Conducted STH sentinel surveillance survey in village	NA	NA	30	NA	30	NA
8	Conduct Albendazole and Ivermectin combination therapy trial in Districts endemic to trichuriasis	NA	NA	NA	10	10	10
9	Reduced national prevalence of STH	45% (2014)	35%	NA	NA	NA	<20%

*Table 5: **SCH elimination milestones, 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Achieving 100% geographical MDA coverage in SCH endemic sectors	129 97%	129 100%	129 100%	129 100%	80 100%	50 100%
2	Conducted 6 years of the school and community-based treatments in endemic sectors (implementation unit is the administrative sector – only endemic sectors are targeted)	129 100%	129 100%	129 100%	129 100%	80 100%	50 100%

	Indicators	2019	2020	2021	2022	2023	2024
3	Conducted 5 years of consecutive treatments targeting SAC and adults in all endemic sectors with national therapeutic coverage of more than 97%	129 96%	129 97%	129 97%	129 97%	80 98%	50 98%
4	Endemic sectors/Health Facilities achieving moderate morbidity control	129 100%	129 100%	129 100%	129 100%	80 100%	50 100%
5	Hospitals achieving advanced morbidity control	50 100%	50 100%	50 100%	50 100%	50 100%	50 100%
6	Completed national mapping of SCH (30 Districts) and determined areas for intervention	NA	30 100%	NA	NA	NA	30 100%
7	Conducted SCH sentinel surveillance survey in village	NA	NA	30	NA	30	NA
8	Reduced national prevalence of SCH	1,9 (2014)	1%	NA	NA	NA	0,5%

Table 6: ***Trachoma Elimination milestones 2019-2024***

Indicators	2019	2020	2021	2022	2023	2024
Completed evaluation mapping of Trachoma and determined endemic areas and the population at risk (districts)	NA	3 (100%)	NA	NA	NA	NA
Number and percentage of districts where there is full coverage of morbidity-management services and access to basic care	30 100%	30 100%	30 100%	30 100%	30 100%	30 100%
Percentage of villages conduct mass treatment when required	NA	TBD	100%	100%	100%	100%
Number and percentage of Health centers with an established surveillance system	505 100%	505 100%	505 100%	505 100%	505 100%	505 100%

Table 7: ***Onchocerciasis Elimination milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Completed elimination mapping of onchocerciasis and determined endemic areas and the population at risk (districts)	NA	3 (100%)	NA	NA	NA	NA
2	Number and percentage of districts where there is full coverage of morbidity-management services and access to basic care	0 0%	3 100%	3 100%	3 100%	3 100%	3 100%
3	Number and percentage of Health centers with an established surveillance system	0 0%	505 100%	505 100%	505 100%	505 100%	505 100%

Table 8: ***Lymphatic Filariasis (LF) Elimination milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Completed Rapid assessment of LF in suspected Districts	NA	TBD	NA	NA	NA	NA
2	Number and percentage of districts where there are skilled staff and full coverage of morbidity- management services and access to basic care	0%	TBD 100%	30 100%	30 100%	30 100%	30 100%
3	Percentage of villages conduct mass treatment when required	NA	TBD	TBD	TBD	TBD	TBD

Table 9: ***Podoconiosis control milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
	Number and percentage of endemic districts where there are skilled staff and full coverage of morbidity-management services and access to basic care	1 (3.3%)	3 (16.5 %)	7 (23.1%)	8 (26.4%)	9 (29.7%)	10 (33.3%)

Table 10: ***Scabies control milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Completed Rapid assessment in primary schools in 4 Districts reporting many routine cases	100%	NA	NA	NA	NA	NA
2	Completed prevalence of Scabies and determined endemic areas and the population at risk (districts)	NA	NA	100%	NA	NA	NA
3	Number and percentage of districts where there is full coverage of morbidity-management services and access to basic care	30 100%	30 100%	30 100%	30 100%	30 100%	30 100%
4	Percentage of villages that conducted mass treatment when required (for confirmed outbreaks)	NA	NA	100%	100%	100%	100%
5	Number and percentage of Health centers with an established surveillance system	505 100%	505 100%	505 100%	505 100%	505 100%	505 100%

Table 11: ***Tungiasis/Jigger control milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Percentage of affected Districts with community mobilization campaigns conducted	-	100%	100%	100%	100%	100%
2	Number and percentage of Health centers with morbidity- management services and access to basic care	505 100%	505 100%	505 100%	505 100%	505 100%	505 100%

Table 12: ***Rabies control milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Percentage of Districts/ Sectors with a rapid assessment on Rabies conducted (incidence, geographical distribution and risk factors)	NA	100%	NA	NA	NA	NA

	Indicators	2019	2020	2021	2022	2023	2024
2	Percentage of affected Districts with awareness campaign conducted	-	100%	100%	100%	100%	100%
3	Number and percentage of Hospitals with full coverage of morbidity-management services and access to basic care (with anti-rabies vaccines)	-	43 100%	43 100%	43 100%	43 100%	43 100%
4	Percentage of health facilities reporting on rabies through RHMIS	-	>90%	>90%	>95%	100%	100%

Table 13: ***Snake-Bites Envenoming (SBE) control milestones 2019-2024***

	Indicators	2019	2020	2021	2022	2023	2024
1	Percentage of Districts with a rapid assessment of snakebites conducted (incidence, geographical distribution and risk factors)	NA	NA		NA	NA	NA
2	Percentage of affected Districts with awareness campaign conducted			100%	100%	100%	100%
3	Number and percentage of Hospitals with knowledge and full coverage of morbidity- management services and access to basic care (with anti-Venom vaccines)	-	-	43 100%	43 100%	43 100%	43 100%
4	Percentage of health facilities reporting on SBE through RHMIS		>90%	>90%	>95%	100%	100%

Table 14: Cysticercosis control milestones 2019-2024

	Indicators	2019	2020	2021	2022	2023	2024
1	Percentage of suspected Districts/ communities assessed for Cysticercosis infection	NA	NA	100%	NA	NA	NA
2	Percentage of affected Districts/communities with awareness campaign conducted	NA	100%	100%	100%	100%	100%
3	Number and percentage of Hospitals with skilled staff and full coverage of morbidity- management services	-	46 100%	46 100%	46 100%	46 100%	46 100%

Table 15: Mycetoma and yaws elimination milestones 2019-2024

	Indicators	2019	2020	2021	2022	2023	2024
1	Percentage of suspected communities assessed for Mycetoma and Yaws infection	100%	NA	NA	NA	NA	NA
2	Percentage of affected communities with awareness campaign conducted	100%	100%	100%	100%	100%	100%
3	Number and percentage of Referral Hospitals with skilled staff and full coverage of morbidity-management services and access to basic care	6 100%	6 100%	6 100%	6 100%	6 100%	6 100%
4	Submitted dossier for validation of elimination of Mycetoma and yaws as a public Health problem	NA	NA	1	NA	NA	NA

Table 16: Human African Trypanosomiasis elimination milestones 2019-2024

	Indicators	2019	2020	2021	2022	2023	2024
1	Maintained sentinel surveillance activities in 12 HCs Surrounding Akagera National Park	12 100%	12 100%	12 100%	12 100%	12 100%	12 100%
2	Submitted dossier for validation of elimination of r-HAT as a public Health problem	NA	NA	1	NA	NA	NA

PART III: HOW WE WILL REACH THERE: OPERATIONAL FRAMEWORK PER STRATEGIC PRIORITY

3.1 STRENGTHENING GOVERNMENT OWNERSHIP, DECENTRALIZATION, ADVOCACY, MULTI-SECTORAL COORDINATION AND PARTNERSHIP

Neglected tropical diseases are included in the National health sector Strategic Plan IV. The Ministry of health will therefore mobilize funding through the health sector funding mechanisms. There will be need to strengthen advocacy, visibility and profile of NTD control and elimination and this will involve creation of awareness at all levels through Ministry of Health communication center and media. The specific activities that will be conducted to strengthen government ownership decentralization, advocacy, coordination and partnership are guided by the following principles:

Guiding principles in developing NTD activities:

- Streamlining and incorporation of NTD control and elimination in national and sub-national budget and health strategic plans including Districts;
- Decentralization of NTD control and elimination activities under District coordination
- Community engagement **"Tujyanemo"** in identification of NTDs problems, planning and implementation of elimination strategies
- Regular NTD discussions and knowledge update in country coordinating mechanisms at all levels;
- Institute a week or a day dedicated to the fight and elimination of NTDs in-country
- Regular reviews of NTD programmes involving the steering committee, task forces, secretariat and stakeholders in annual stakeholders meeting
- Media engagement;
- Coordination meeting with Districts twice a year for progress sharing
- Strengthening partnerships and seeking opportunities for collaboration;

Government ownership, Decentralization and coordination of NTDs control and elimination interventions under District coordination

Box. 17

Know the previous approach (deworming):

Since large scale NTDs control program in 2007

- Deworming against intestinal worms and schistosomiasis was the main control intervention and education for behavior change during deworming integrated mother Child Health week.
- Targeted population: pre-school aged children (12 to 59 months); School-aged children (5-15 years old)
- These interventions **were planned, conducted and coordinated by NTD program** from central level. And District Hospitals were informed and called to implement the integrated campaign
- The District hospitals in collaboration with administrative Districts organized and coordinated the activity in their catchment area, while
- Health centers coordinated the implementation of deworming I outreach sites and schools
- The implementation of those interventions were done **at outreach** sites (serving some villages) and schools under health center supervision.
- The health center was supervised by Hospitals while
- Hospitals were supervised by Central level

Gaps in the previous approach:

- **Unsustainability of impact:** After the campaign, no more efforts were made at community and school level to sustain the efforts deployed to prevent re-transmission. And also, the approach was hugely costing as it was centrally-implemented without community engagement.
- **Deworming was the prioritized strategy for STH&SCH control:** Other elimination strategies (education for behavior change, hand washing/ hygiene, sanitation, water, etc.) did not have a clear implementation strategy to complementing deworming strategy.
- **Not targeting all the population in the community:** Deworming interventions and on-site education for behavior change only targeted pre-school aged children (12 to 59 months); School-aged children (5-150 years old) and adults having children under-5 years (they brought them to the deworming site)
- **Lack of community engagement in problem solving and ownership:** Without community engagement and ownership in identifying NTDs as a problem and planning for local strategies towards elimination, the achievement of our vision of Rwanda free from NTDs was likely impossible.
- **Lack of Multi-sectoral contribution:** Different sectors (Private, Public, NGOs, etc.) linked to transmission or control of NTDs were not appropriately engaged in implementation of NTDs control/elimination

interventions

Box 18.

Know the New Approach

Decentralization, a solution towards NTDs elimination: considering the decentralization policy and functions of district related to health (see box. 3), and also the burden of NTDs which differ from one District to another requiring different strategies and different efforts and considering also the nature and level of implementation of NTDs elimination strategies (community-based interventions such as deworming, education for behavior change, water, sanitation and hygiene), the decentralization of NTDs interventions under District in close collaboration with Ministry of Health and Ministry of Local Government will accelerate the elimination of those diseases transmitted through poor hygiene towards a healthy Rwandan people.

Implementation:

- NTD control activities shall be included in the district health plans and funded by the District budget. There is need to ensure that districts incorporate activities in their district work plans and budgets so that NTD activities are funded within the district budgets, even for large scale interventions (MDAs).
- The oversight of NTDs interventions will be under **Vice Mayor in-charge of Social affairs** and the implementation of NTDs interventions in a District will be coordinated by district under **Health unit** in collaboration with **District Education Unit**, **District hospitals** and other Units.
- Administrative sectors in collaboration with Health Centers will coordinate all NTDs interventions at sector level while
- village and schools will be the lower implementation unit of control and elimination interventions/ activities.
- **At School,** every teacher will administer deworming tablets and teaching key practical lessons regarding hand washing/ hygiene, sanitation and drink water under coordination of school Director and teacher in-charge of health at school.
- **In the community**, Village leaders in collaboration with 4 CHWs will set some distribution sites (usual village meeting site) for deworming tablets and will also deliver education for behavior change through different channels as highlighted under strategy priority No. 3.

Strength in the New approach:

- **Sustainability of impact:** Control and elimination efforts made at community and school level will be sustained following the feeling of

ownership and protection of their achievement. And also, the approach will not be much costing as previously following the community engagement to seek local solutions.

- **Implementation of a Comprehensive strategy:** Other elimination strategies are prioritized in this new approach (education for behavior change, hand washing/ hygiene, sanitation, water, etc.) with a comprehensive monitoring.
- **All the population in the community will be targeted:** Education for behavior change, hygiene and sanitation will target all the population in the community and schools. And deworming will target additional high risk groups in the community including adults.
- **Engagement of the community in problem solving and ownership:** The community will be engaged in identifying NTDs problems and planning for local strategies towards elimination. This approach will be called **"Tujyanemo"** and will result in problem ownership and sustainability of achievements.
- **Multi-sectoral contribution:** All stakeholders linked to transmission or control of NTDs will contribute to the implementation of control/elimination strategies according to roles and responsibilities defined in this strategic plan (see roles and responsibilities under)

Figure 8: Responsibilities In Decentralized NTDS Control Approach Under District Coordination

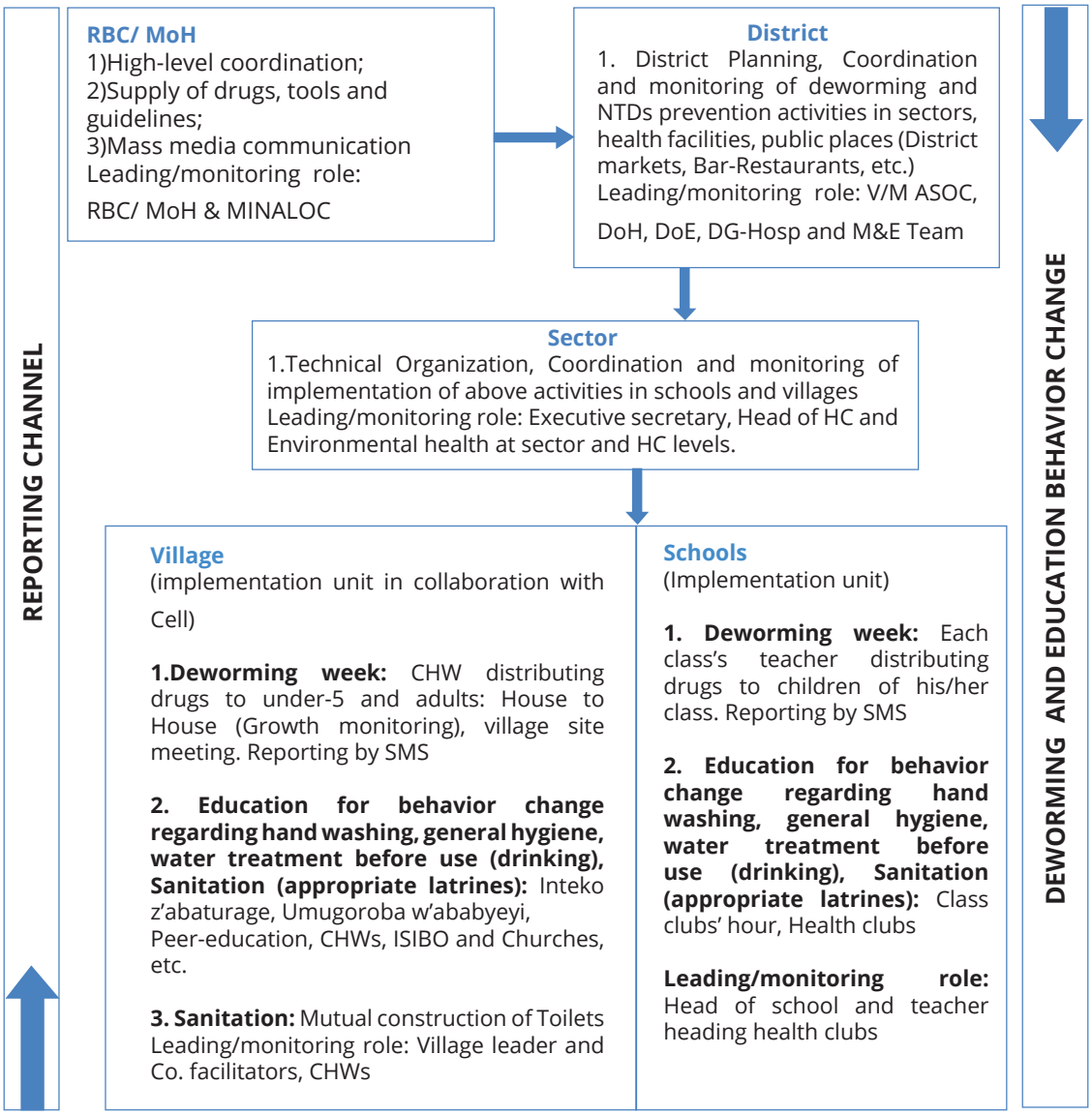


Table 17: Activities for implementing Strategic priority 1: Strengthen government ownership, decentralization & integration, advocacy, coordination, and partnership.

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic objective 1.1 To strengthen government ownership and foster decentralization & integration for the control and elimination of targeted NTDs at national, district and community level.			
Create sufficient NTD staff positions (MoH)	-Maintain 3 existing official positions on structure: Director of NTD Unit, NTD Research and Surveillance Senior Officer, NTD Case Management Senior Officer; -Recruitment of additional staff (NTD Project Manager, NTD Prevention and communication Officer; NTD Multi-Sectoral liaison Officer; NTD M&E and Elimination Planning Officer; NTD District Coordination Officer; 4 NTD District supervisors)	Monthly	-Salaries -Office equipment (Computers, LCD Projector)
To increase the budget allocated to NTD activities in health sector budget	-NTD detailed budget inserted in the health sector budget -NTDs indicators inserted in the Health sector action plan	Once per year	Ordinary budget
Organize and conduct Orientation meetings at all levels for capacity building in home-grown solutions and smooth decentralization and integration of NTDs interventions	-Organize the orientation meeting at all levels (Districts, Sectors and Villages engaging the community members) with all relevant stakeholders -Disseminate NTD strategic plan	Once	Funds for orientation meeting until District level

Activity	Details (sub-activities)	Frequency	Resources needed
Organize and conduct mentorship supervision (by MoH, MINALOC, MINEDUC and Other Stakeholders)	Provide technical support for district NTD technical coordination mechanisms for effective decentralization and monitor the progress of implementation	Once per quarter	Perdiems and transport
Elaborate and share guidelines and reporting tools (MOH-MINALOC)	Provide guidelines and reporting tools to district level	Once per year	Funds for workshop
Conduct a District coordination meeting to review progress of strategy implementation (Districts)	-Identify the key stakeholders for District coordination meeting -Gather available information on gaps	At least twice a year	Integration within other meetings
Conduct a sector meeting to review progress of strategies implementation and coordination (Sectors)	-Identify the key stakeholders -Establish meeting agenda (use available information on gaps) -Invite the participants	At least once per month	Integration within other meetings
Conduct a meeting to review progress of implementation of elimination strategies within the community (Villages)	-Identify the key stakeholders -Establish meeting agenda (use available information on gaps) -Invite the participants	Weekly (Inteko y'Abaturage, etc.)	Mobilization and integration within other meetings

Strategic objective 1.2 To strengthen capacity and multi-sectoral coordinating mechanisms for NTDs at all level (from community to national level) of health and local administration system hierarchies			
Activity	**Details (sub-activities)**	**Frequency**	**Resources needed**
Conduct capacity building activities in NTD programme management for national and districts coordination team members (MoH, MINALOC and Districts)	Organize trainings, short courses, participation in scientific meetings for national and districts coordination team members	Once a year and depending on the needs	Funds for trainings, short courses, participation in scientific meetings for national and districts coordination team members
Organize and conduct coordination meetings with Districts and members of technical working group for progress sharing and next step (MOH-MINALOC)	Organize coordination meetings with implementing entities (Districts) progress sharing for improvement	Twice per year	Funds for coordination meetings Communication fees
Conduct NTD technical working meeting (MoH)	-Identify the NTD TWG team -Develop their ToR and nomination -Organize and conduct the TWG meetings	Every month	Funds for organizing and conducting meetings
Strategic objective 1.3 To enhance high-level reviews of NTD program performance and the use of lessons learnt to enhance advocacy, awareness, visibility and effective implementation of NTD program.			
Conduct annual stakeholders meetings	- Identify the key institutions -The meeting will focus on program success, challenges and updates on NTDs -Meetings will involve Government and private institutions, media	Once per year	Funds for the meeting
Publish annual reports and success stories on NTDs	The publication will be done at national and international level	Twice a year	Funds for publication

Table 17.b.: Roles and Responsibilities of Government institutions, Private sector and Partners in NTDs Control and Elimination

No	Institutions	Roles & Responsibilities
1	MINALOC	• To mobilize and sensitive the community on NTDs prevention through monthly UMUGANDA, videos conference on NTDs and coordination of the Human Security Issues which include some NTDs.
2	Districts	• District ownership of NTDs problem and target the elimination of key NTDs transmitted through poor hygiene practices such as Schistosomiasis, Intestinal worms, Scabies, Tungiasis (Amavunja) and Other NTDs • Preparation and coordination of implementation and monitoring of community-led mass Deworming/ treatment campaign and other preventive strategies (Education for behavior change regarding hand washing and general hygiene, sanitation with use of latrines, treatment of water) • Ensure that the engagement of the community at village and school level in NTDs problem identification with related potential risk factors and problem solving • To include NTDs indicators into their Annual Action Plans and IMIHIGO • To mobilize resources through JADF including Private Sector (PPP) to support implementation of NTD interventions • To improve their needs assessment by collaborating with research institutions (e.g. Universities) to well understand the problems and challenges faced during implementation of interventions • To improve diagnosis and treatment of affected communities (active screening and treatment, mobilization to seek healthcare services, etc.)
3	MoH	• To submit to MINALOC achievable NTDs indicators to be included into District Annual Plans and Performance Contracts (IMIHIGO) - for FY19/20 onward • To collaborate with MININFRA to design a model of appropriate and cheap latrine for the rocky terrain (amakoro) in volcanic region that prevent to dig deep and where the soil is very permeable • Through Social cluster, to advocate for families in Ubudehe 1 to get water free of charge on public taps

No	Institutions	Roles & Responsibilities
		• Through Social cluster, to advocate for schools to get water with reduced tariff or availability of filters or other water treatment mechanisms • To lead the Coordination of ONE HEALTH Concept and host its Secretariat • To disseminate NTD Strategic Plan 2019-2024 at national level • To promote PPP (through Corporate Social Responsibility) to support the implementation of the NTD Strategic Plan
4	RBC	• To submit to MINALOC key message on NTDs and a request earlier possible for video conference with Districts • To formalize the NTD TWG and involve all key stakeholders • To share with Districts and relevant institutions/ stakeholders the distribution and burden of NTDs • To improve diagnosis and treatment of affected communities (active screening and treatment, mobilization to seek healthcare services, etc.) • To coordinate all control and elimination interventions and to share updates on progress to all stakeholders
5	MINEDUC/ REB	• Through a decentralized channel (District and Sector), • Lead, Promote and monitor practical health education in study curriculum to improve child health through engagement of all teachers in education for behavior change regarding prevention of NTDs transmitted through poor hygiene practices such as Schistosomiasis, intestinal worms, Tungiasis (Amavunja), Scabies (Shishikara or Uruheri) and other NTDs • Promote and monitor the functionality of health clubs including activity against common NTDs • Monitor the availability of clean toilettes, soap and best hand washing practice in all schools • Ensure the availability of clean drinking water for students
6	MININFRA	• To work with RURA and engage Districts for the construction and maintenance of latrines along all main roads • Support high endemic Districts in water-sanitation projects

No	Institutions	Roles & Responsibilities
7	WASAC	• To prioritize the population affected by water and sanitation related disease in water and sanitation projects (areas without potable water or around lakes, rivers, marshes for water supply to prevent the use of contaminated water for domestic purposes) • To coordinate efforts of availing water treatment products at low cost to the population in need • To coordinate mobilization activities on water treatment and use to prevent water-related diseases
8	MINENV RWFA REMA	• To collaborate with MINAGRI/RAB and RCA to promote the latrines around the lakes • To lead the finalization and implementation of snail control strategy in collaboration with Vector control unit of MoH • To lead all snail control interventions in collaboration with MoH, MINAGRI and RDB in elimination of Schistosomiasis transmission • To conduct a feasibility assessment and environmental assessment for snail control using molluscicides (kill snails which are vector of Schistosoma) in contaminated areas of Lakes and cultivated marshlands, in collaboration with MoH, MINAGRI and RDB
9	MINAGRI/RAB	• Ensure Vaccination of dogs and other relevant animals against Rabies' viruses • Ensure awareness of farmers' cooperatives on snakebites envenoming first aid in collaboration with MoH/ RBC • Ensure the promotion and education of farmers on wearing boots in prevention of Podoconiosis • Share data on species of Trypanososmiasis identified in Animals in surveillance and elimination of Human Trypanosomiasis, mainly in surroundings of Akagera National park
10	RDB	• To collaborate with MoH/ RBC in surveillance of Trypanosomiasis in Akagera National Park towards validation of elimination of Human African Trypanosomiasis by World Health Organization (WHO)

No	Institutions	Roles & Responsibilities
11		• To collaborate with MoH, MINENV, RWFA and REMA for the treatment of contaminated water bodies in touristic areas of lakes (considering that some Tourists acquired Schistosomiasis from Rwanda (Jan Clerinx et al., 2011)). • To ensure the availability of toilets in touristic areas around lakes. • To support awareness activities targeting farmers surrounding Akagera National Park and tourists for snakebites envenoming (first aid, etc.)
	MIGEPROF/ NECDP	• To promote and monitor education for behavior change regarding hand washing, general hygiene, sanitation (appropriate toilets) and treated water in families through Umugoroba w'ababyeyi, etc. to prevent the spread of key NTDs transmitted through poor hygiene practices such as Schistosomiasis, Intestinal worms, Scabies, Tungiasis (Amavunja), Trachoma and Others. • To support deworming activity for children under-5 to prevent morbidity of intestinal worms and Schistosomiasis (chronic malnutrition and stunting) at all levels including Centre-based ECD (Urugo Mbonezamikurire) and Home-based ECD
12	MINEMA	• Promote and monitor the education for behavior change regarding prevention of NTDs transmitted through poor hygiene practices such as Schistosomiasis, intestinal worms, Tungiasis (Amavunja), Scabies (Shishikara or Uruheri) and other NTDs • Support deworming activities in all refugee camps • Collaborate with MoH in screening and treatment of refugees in efforts to control the cross-border diseases (NTDs)
13	FDA	• Provide guidance on and monitor the compliance with pharmacovigilance guidelines for drugs used in mass campaigns and Molluscicides used in snail control
14	RCA	• To collaborate with RCA and farmers to promote the latrines which can be used by workers (e.g. around rice fields)

No	Institutions	Roles & Responsibilities
15	RCS	• Promote Water, Sanitation and Hygiene and conduct deworming when necessary in prisons against Intestinal worms, Scabies and other NTDs
16	UR-CMHS	Through research and community outreach activities, contribute in: • Promoting awareness, skills transfer and capacity building on NTDs in students and in the community • Remapping and conducting operational and implementation research on NTDs • Holding scientific and professional conferences and debates on challenges to and solutions to address NTDs
17	Partners (International organizations such as WHO, FAO, UNICEF, WFP, UNHCR, World Vision, etc., Donors) and Private sector including Industries, Companies, etc. .	• To support the multi-sectoral collaboration framework (One Health) to eliminate neglected Tropical Diseases in Rwanda • To support in diagnosis and treatment (e.g: MDA including adults in high endemic areas), research, Water treatment capacities, health education and capacity building where needed in elimination of **Schistosomiasis, intestinal worms, Rabies, snakebites, Scabies (Shishikara or Uruheri), Tungiasis (Amavunja) and other NTDs in Rwanda.** • To provide technical expertise, funding and jointly implementation of deworming and education for behavior change regarding hand washing, water treatment, toilets utilization and prevention of open defecation in efforts to control and eliminate common NTDs through different channels such as education materials, mass media communication, school health clubs, community outreach activities in high endemic Districts, etc. • Support the capacity building of health and local administration in case management and program implementation

3.2 ENHANCING PLANNING FOR RESULTS, RESOURCE MOBILISATION AND FINANCIAL SUSTAINABILITY

Planning for results: to continuously sustain activities related to Prevention, Control and elimination of Neglected Tropical Diseases, strategic objectives and a comprehensive framework to achieve HSSP IV targets related to NTDs were elaborated in line with strategies spelled in HSSP IV. This plan builds on already existing initiatives to integrate NTD prevention, control and elimination measures into the entire health care system under District coordination. The strategic plan will limit duplication of activities and minimize wastage of resources by continuously leveraging on the success of the entire health care system.

Resources mobilization mechanism: The HSSP IV document clearly spells mechanisms for resource mobilization from developing partners through sector budget support as specified in the SWAP manual endorsed by all stakeholders supporting the Ministry of Health. Resources will be mobilized with use of the above-mentioned strategies to attain maximum results.

The Ministry of Health integration of NTD Program Strategic Plan is a tool for guiding and coordination implementation of interventions as well as foundation for advocating for recognition of the importance of NTD control and therefore need to allocate resources to it. Incorporation of NTD control in the HSSP IV and in the Department of Health Strategic Plans ensures that identification of funding for NTD control will be an integral part of the sector-wide budget. In addition, operational plans with budgets will be developed annually for support from the sector-wide budget and other efforts will be made fill funding gaps.

The capacity of management level health workers will be strengthened to conduct effective and evidence-based advocacy and resource mobilization skills for NTD prevention, control and elimination in Rwanda particularly linking with the existing community-based developmental projects. In this regard, appropriate resource mobilization strategies will be developed at all levels targeting global NTD funding initiatives directly and through WHO, bilateral partners and NGOs.

The inclusion of NTD control in the HSSP- IV and the plan to implement activities within health system will ensure sustainability of financial support for NTD interventions and sustained surveillance within national health information systems.
The objectives primarily aim at generating adequate resources as well as establishing an enabling environment that will suit resource mobilization for the Multi-year NTD Strategic Plan.

Guiding principles

- Formulation of an annual operational plan for the control, elimination and eradication of target NTDs at national and sub-national levels in the country;
- Incorporation of NTDs in planning at national and sub-national levels;
- Development of resource mobilization strategies (within countries and outside);
- Production and use of evidence for resource mobilization;
- Establishment of reliable processes and systems to support mobilization;
- Institution of good communication channels and information flow mechanisms;
- Ensuring enabling and supportive environment;
- Establishment of good accountability systems for resource monitoring and control.

The following table summarizes the key activities for implementation to achieve the three strategic objectives of: enhancing planning for results, resource mobilization, and financial sustainability of national NTD programme.

Table 18: Activities for implementing Strategic Priority 2: Enhance planning for results, resource mobilization, and financial sustainability of national NTD programme.

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic objective 2.1 To develop integrated strategic plan and annual operational plans for the control and elimination of targeted NTDs at all levels			
Conduct the validation and dissemination of the strategic plan 2019-2024	Put in place workshop preparation team	2018-2019	Funds for Transport, perdiems, Refreshment
	To invite all relevant Stakeholders and partners (for mobilization and sharing responsibilities)		
	MOH to organize and conduct a validation workshop		
Develop the annual operational plan with detailed budget at national and District level	Organize a workshop with stakeholders to develop a national annual operational plan	Once a year	Funds for Venue, per diems, transport
	Districts: Organize a workshop with stakeholders to develop a District annual operational plan and resource mobilization strategy with central level support	Once a year	Funds for Venue, per diems, transport

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic objective 2.2 To enhance resource mobilization approaches and strategies at sub-national, national and international levels for NTD interventions			
Develop an NTD resource mobilization strategy at central level	Organize meetings at National level	Once a year	Funds for venue, per diems, transport and stationery
Strategic objective 2.3: Strengthen the integration and linkages of NTD programme and financial plans into sector-wide and national budgetary and financing mechanisms			
Sensitize and advocate with all line Ministries and partners to support implementation of NTD strategic plan through budget allocation	Prepare the briefing note for the Minister of Health with the executive summary of the NTD strategic plan to be presented in the cabinet meeting	Continuous	Cabinet brief
Disseminate the NTD strategic plan to other government sectors at national and district levels	Organise the dissemination/ validation meeting of the NTD strategic plan to other sectors at National and district levels.	Once	Funds for venue, per diems, transport, refund and stationary

3.3 SCALING UP ACCESSS TO NTDs INTERVENTIONS AND PHARMACOVIGILENCE

This section focuses on **Strategic Priority No. 3** (table 6) and provides a detailed description of the activities that will form the basis for scaling up of the NTD control and elimination programme.

Based on the WHO manuals: 'Preventive chemotherapy' and 'Approaches to implementation of integrated NTD programmes', the guidelines on case management diseases, and disease-specific guidelines, the following three packages of interventions are recommended by WHO:

- Preventive chemotherapy;
- Case management/chronic care;
- Transmission control (which includes vector and reservoir control as well as improvements in sanitation and water quality and supply).

3.3.1. Scaling up NTD Case Management Interventions

The case management package of activities includes identification (active and passive case finding) and management of patients of a specific NTD. Rwanda may need case management for morbidity control during and after elimination of any NTD.

- The following tables summarizes activities to be carried out for case management and morbidity control for non-chronic and chronic NTDs

Table 19: Activities for non-chronic NTDs case management interventions (Strategic objective 3.1a)

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic Objective 3.1a. To strengthen and integrate NTD case management and chronic care into existing health system			
Conduct capacity building of Health facility in case management (diagnosis and treatment) for morbidity control of SCH, STH, Scabies and other NTDs	-Conduct on-site, cascade mentorship/ training or e-learning sessions for health care providers in all health facilities including Private health facilities on morbidity management of SCH, STH, Scabies and other NTDs (Medical doctor, Nurses and lab technologists) -Deliver a lecture on NTDs case management in Medical universities (main target: future graduate)	Once in 2 years for refresher mentorship/ training -every year for targeted mentorship (where gaps are highlighted)	- Funds cascade mentorship/ training or e-learning sessions and for lecture in medical university
	-Conduct targeted clinical mentorship supervision for monitoring program implementation by Central level and Districts	Twice a year	Funds for program supervision
	-Procurement by HFs of Quality and sensitive Lab tests and reagents (Rapid Test for Schistosomiasis (CCA), cfr. attached guide)	Depend on HFs needs	Funds
	-Procurement by HFs of essential medicines as per NTDs& OPDs guidelines for common NTDs in a specific Districts/ HFs (Praziquantel for Schistosomiasis; etc.)	Depend on HFs needs	Funds
	-Printing Clinical algorithm and lamination of Lab Bench Aids on NTDs in all Labs at Health centers	Once a year	Funds for printing and lamination of Bench Aids
	-Transport and confirmation of suspected cases to NRL	Depending on type of NTDs as defined by surveillance guideline	-Existing sample transportation system

Table 20: Case management and chronic care (Strategic objective 3.1b)

Interventions	NTDs targeted	Requirements	Other non-NTD opportunities for integration
Conduct a capacity building in Podoconiosis treatment centers in high endemic Districts	Podoconiosis and Lymphatic Filariasis (rare cases)	• Medical commodities • Selection of Health Centers in Endemic Districts • Cascade training of staff in selected health centre • Conduct awareness of the community • Monitoring supervision	• Private Orthopaedic centers are in different Districts of the country • Collaborate for integration of podo component in their services
Conduct on-site capacity building of health professionals through NTDs community screening and treatment	Podoconiosis, Trachoma, Schistosomiasis, etc.	• Trained medical specialists, funds for transport and perdiem of specialists	• Eye outreach activities, Deworming week
Conduct diagnosis and treatment of NTDs related complications (Endoscopy, ultrasound, Surgery)	Schistosomiasis, Soil Transmitted Helminthiasis (mainly Ascariasis), Trachoma, Podoconiosis, Cysticercosis, Lymphatic Filariasis, Snakebites envenoming	• On-site Clinical mentorship of medical doctors and radiographers; • Training in specialized Hospitals • Follow-up and experience sharing • Communication with referral facilities	• e-Learning in many hospitals • Capacity building for basic skills at the district and referral level.

For health facilities case management: All patients reporting to health facilities have equal opportunities to get treatment for any of the endemic NTDs, through community health insurance. There is need to improve the drug management system to ensure continuous stocks of praziquantel in health facilities in identified endemic sectors for Schistosomiasis. Rwanda has a strong health worker system that supports management of cases within the health system. There is need to strengthen capacity of district laboratory and peripheral health facilities to ensure diagnosis and treatment of all NTDs cases.

The following is the status of drug availability for endemic NTDs:

- **Praziquantel** of Schistosomiasis treatment is included on the Essential Drug List and stocked centrally in MPDD. All health facility pharmacies place requests depending on their needs.
- **Albendazole** for intestinal worms' treatment is stocked in all peripheral health facility pharmacies.
- **Benzyl Benzoate Emulsion (BBE) or Ivermectin** for scabies ('URUHERI' or 'SHISHIKARA') are included on the Essential Drug List and available in MPPD for distribution upon request from health facility Pharmacies
- **Tetracycline ointment** 1% for Active Trachoma is included on the Essential Drug List and available in MPPD for distribution upon request from health facility Pharmacies
- **Anti-rabies vaccine** when bitten mainly by infected dogs: Available at RBC/ MCCH Division for distribution upon request from health facility Pharmacies
- **Anti-venom against snakebites:** Available at MPPD for distribution upon request from health facility Pharmacies
- Medicines for treatment of Human African Trypanosomiasis are not stocked in health facility pharmacies. There is dose stored at WHO/RWANDA country Office.

3.3.2 Scaling up Preventive Chemotherapy Interventions

Based on preventive chemotherapy diseases targeted in Rwanda NTD programme (Intestinal worms and Schistosomiasis), the following tables provide brief descriptions of the interventions and details on the package of activities of PCT interventions using WHO algorithms.

Table 21: Types of mass drug administration

Cross-cutting MDA types	Delivery channels	Timing of treatments	Disease combination	Requirements	Target (districts and pop.)	Other mass disease control interventions
Praziquantel + Albendazole; Albendazole or mebendazole only and a 3rd round of albendazole in high endemic districts for children and adults	-Community-based MDA that involves CHWs as drug distributors -School-based deworming using teachers as drug distributors	February, and September June for the 3rd round	Schistosomiasis and STH	-Procurement or donation of drugs -Training of health, Teachers and local administration officials; -Social mobilization; -Supervision; -Production of tools; -Logistics for drug distribution and management;	Children and adults in endemic districts	EPI and MCH campaigns, LLINs distribution

Table 22: Activities for strategic objectives 3.2 & 3.3 –Scale up Access to PCT interventions

Activity	Details (sub-activities)	Time frame	Resources needed
Strategic objective 3.2 To integrate preventive chemotherapy within existing health care delivery structure under coordination of Districts			
Integration of MDA in routine under District coordination (for sustainability) (see the chart below this table)	Orientation meetings at all levels (village and school as drug administration units) for capacity building and smooth decentralization and integration.	Once	Funds for orientation meetings at all levels (see S.O 1.1)
Conduct District-level micro-planning	Organize micro planning workshops within districts	Three times a year	Funds for micro planning workshops (see S.O 1.1)
Strategic objective 3.3: Scale up an integrated care and treatment interventions, including access to intervention for soil transmitted helminthiasis and schistosomiasis			Preventive chemotherapy

Activity	Details (sub-activities)	Time frame	Resources needed
Purchase Albendazole and Praziquantel for non-donated risk groups and Apply for donations	- Funding mobilization and Procurement processes of Albendazole and Praziquantel for other risk groups (adults, etc.) -Perform application for WHO&UNICEF donated medicines (SAC, PreSAC)	Once a year	Purchase costs Clearance costsStorage costs (PSM management cost)
Drug management and distribution to District and from District to Health facilities	-Monitor supply chain to avoid stock out -Collect, analyze and feedback of stock reports on NTDs drugs and commodities use.	Once a quarter	-Funds for monitoring of the drugs management at health facility level (see mentorship supervision S.O 3.1a)
Conduct Community and school-based Drug distribution	-Ensure drugs and tools supply chain from HFs to the distribution sites	3 times a year	-Per diems/Allowances of staff -Transportation costs

Table 23: Scaling up

NTD	Total No. implementation units requiring MDA	Total at risk population	2019 No. Districts and Total population to be treated	2020 No. Districts and Total population to be treated	2021 No. Districts and Total population to be treated	2022 No. Districts and Total population to be treated	2023 No. Districts and Total population to be treated	2024 No. Districts and Total population to be treated
PCT IMPLEMENTATION (MDA)								
SCH*			129 1,139,027	127 3,838,000	127 3,838,000	127 3,838,000	127 3,838,000	127 3,838,000
STH**			30 5,057,114	30 8,520,000	30 8,520,000	30 8,520,000	30 8,520,000	30 8,520,000

*Implementation unit: administrative sectors

** Districts

3.3.3. Scaling up NTD Transmission Control Interventions

NTD transmission control activities are cross-cutting for both vector-borne diseases and other diseases. In effect, transmission control interventions are complementary to preventive chemotherapy and case management and, as such, they need to be conducted in all NTD endemic areas. These activities include vector control and environmental measures such as improvement of water supply and sanitation as well as behaviour changes. To achieve country targets of NTDs elimination, in this strategic plan, the priority will be given to prevention through all its components below:

PHASE activities are included in tables 17 and 18.

- P - Preventive chemotherapy (discussed under table 13)
- H - Health Education for behavior change
- A - Access to clean water (WA)
- S - Sanitation and hygiene Improvement (SH)
- E - Environmental manipulation

Table 24: Intervention packages for Transmission control

Cross-cutting interventions	Targeted NTDs	Methods of Intervention delivery	Requirements	Other non - NTD opportunities for integration
Conduct education for behavior change: important component towards elimination	Soil Transmitted Helminthiasis, Schistosomiasis, Scabies, Podoconiosis, Trachoma, Tungiasis and Cysticercosis	Deliver practical education for community behavior change regarding hygiene (hand and foot washing & personal hygiene), sanitation (Prohibit open defecation, mutual community support for construction of toilets), safe drinking water (piped water or treated water with Sûr'eau, SUPA, Boiling, etc.) and screen NTDs and treat where possible in: • **School-based:** 1.Through **health clubs** 2.**Each teacher** will deliver practical lessons to his students • **Community/village-based:** 1. **Household education:** Village and Isibo Leaders and CHWs will sensitize the community through their planned or unplanned household visit as a culture of (during growth monitoring, etc.) **2.Village meeting:** In-charge of the village will lead the education alongside CHWs **3. Isibo meeting:** The in-charge of Isibo will organize and lead the education in his area. **4.Community works (Umuganda) -Monthly:** The delegates from upper administrative structure will visit and work with the lower administrative structure having a high burden of intestinal worms and other NTDs to sensitize the community and discuss with authorities of that administrative structure on local strategies to reduce the burden of these diseases transmitted through poor hygiene practices • **Mass media communication:** **1.Radio and other mass communication channels**: will used to disseminate key messages for behavior change **2. Individualized education through SMS:** This channel will be used mainly in District with high endemicity for behavior change sensitization		

Cross-cutting interventions	Targeted NTDs	Methods of Intervention delivery	Requirements	Other non - NTD opportunities for integration
		3.Mass gatherings/Public places: In public places (HFs-IEC, Churches, Sector, Districts, Ministries, private companies/ institutions such as Banks, etc. and other public places, video and posters will be played/ displayed to deliver key message for behavior change.		
Conduct interventions to improve sanitation, Hygiene and water supply Helminthiasis, Schistosomiasis, Trachoma, Podoconiosis, Tungiasis	Soil Transmitted Helminthiasis, Schistosomiasis, Scabies, Podoconiosis, Trachoma, Tungiasis and Cysticercosis	**1. Sanitation/Hand washing/Hygiene:** • Building latrines wherever they are needed: i. Households and other public places **against Intestinal worms,** ii. marshlands, beaches, touristic areas: against **Schistosomiasis** • Avail hand and foot washing supplies (mainly soap and water) at latrine's area • Prohibit open defecation • Avail hand and foot washing posters (benefits and technique) in public latrines –community or Public offices, etc. (front of seat) and at washing station **2.Water:** • Provision of piped water (tap water) • Sinking of boreholes • Household and school water treatment (Sûr'eau, SUPA, Boiling, etc.) • Consideration of people unable to afford water prices (Ubudehe I, etc.)	• -Awareness tools • Funds • Multi-sectoral collaboration • Water treatment products • Registration of people unable to afford water price	-UNICEF program for water and sanitation improvement in schools -Various water supply projects (Water for People, Water Aid, etc.)
Conduct Monitoring supervision on Education for behavior change, hygiene/ hand washing, sanitation, safe drinking water in schools, community and Public places at least once per quarter		**At least once per month,** the visit will be made in targeted areas to monitor the implementation of hygiene/hand and foot washing; sanitation and water supply strategy: **1.Village:** village-leaders in collaboration with CHWs will monitor the implementation in: • **All household**s in the community **2. Sector:** the administrative sector in collaboration with the Health center shall monitor the implementation in: • **All schools** including boarding and non-boarding schools in their catchment area		

Cross-cutting interventions	Targeted NTDs	Methods of Intervention delivery	Requirements	Other non - NTD
		All public places: Sector Markets, Bar and Restaurant, Public offices (sector, village, etc.), marshlands, etc. **3. Districts**: the administrative District in collaboration with District Hospital will monitor the implementation in: • Targeted public places: District Markets, District Hotels (3 stars and below); Bar and Restaurant, Public offices (Districts, etc.), etc. **4.MINALOC** in collaboration with RBC/MoH: will monitor the implementation in: • Targeted public places: Districts offices, University schools, Hotels (4 stars and above), Ministries and Government agencies), etc.	• M&E Tools • Funds for perdiem and transport	Integration with other field/ supervision activities conducted at sector, District and central level
Environmental management for snail control	Schistosomiasis	MINENV in collaboration with key players MINAGRI, RAB, REMA, RWFA, RDB, Districts, sectors and villages etc. conduct • Manual removal of vegetation (mainly in risk area: contaminated water-human contact areas) during community works (Umuganda)		
Use of molluscicide	Schistosomiasis through Snail control in prevention of Schistosomiasis transmission	MINENV in collaboration with Vector Control Unit of MoH and other key players (RDB, MINAGRI, RAB, REMA, RWFA, etc.) • Spray chemical product • Education of the community on benefit and behavior during spraying	**1.Training** **2.Required assessments:** • Feasibility assessment (spray in lakes, large marshlands, etc.) • Environmental Impact assessment • Piloting phase (application after community mobilization)	Agri-cooperatives

- The following is a summary table on key activities to implement the transmission control package in Rwanda.

Table 25: Activities for disease transmission control

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic objective 3.4 To implement an integrated Water, sanitation and hygiene and education for behaviour change at community and school level for a comprehensive approach towards NTDs elimination			
1.Develop and produce communication tools for education towards behaviour change	• Develop and produce awareness materials/tools on hygiene/hand and foot washing, etc.	Radio spots: 1. Continuous and 2.targeted (campaign, etc.) • Community Radio magazine: once per month • Live radio talk Shaw: Twice a month • SMS: Once per month • Posters and Flyers for community and school education: Once a year • Flipbook for education: once in 2 years • Pull-up or ordinary banners for public awareness: once a year • Documentary film: Once per 2 years • Animated cartoon: Once in 2 years • Prevention message on notebooks of students	• Funds for workshop and production
	• Recruit for short term BCC expert	Once per 2 years to design the awareness materials	Funds
2.Involve public Influencers/ figures (media, Religions, etc.) to support in awareness	• Conduct a workshop training with public influencers (media, Religions, etc.) to discuss their role and implementation • Share education materials with Public Figures	Once a year	Funds for a workshop
3.**Conduct Education for behavior Change** regarding hygiene/ hand washing, sanitation and clean water: Important component towards elimination	• Conduct education for behavior change at all levels regarding hygiene **(hand and foot washing &** personal hygiene), sanitation (Prohibit open defecation, mutual community support for construction of toilets), safe drinking water (piped water or treated water with Sûr'eau, SUPA, Boiling, etc.) (see methods of intervention delivery above ***under table 24)***	**Frequency per implementation level:** **1.Village level:** • Household: at least once a week • ISIBO meeting: Once a week • Umugoroba w'ababyeyi: Once a week • Village meetings (Inteko y'abaturage): Once a week **Umuganda: Once a month:** Visit affected community to sensitize and discuss with the community on local strategies to reduce the burden of these diseases transmitted through poor hygiene practices	Awareness materials

Activity	Details (sub-activities)	Frequency	Resources needed
		2.School level: • Class: Teacher delivering practical lessons: once a week • Presentation during morning students meeting through Health clubs: at least once a week	
		3.Sector level: • Sector meeting with all local leaders: Once a week during weekly management meeting • Health centers: Morning IEC: Every day CHWs meeting: Once a month • Churches: At least once a week • Public places: Video: Every day; • Posters: Continuous **-Community works (Umuganda): Monthly:** The Sector delegates will visit and work with the Villages having a high burden of intestinal worms and other NTDs to sensitize the community and discuss with village authorities on local strategies to reduce the burden of these diseases transmitted through poor hygiene practices	
		4.District level: • District meeting with all local and District leaders during JADF meeting: Once a month • Hospitals: Morning IEC: Every day • **Public places:** Video: Every day; Posters: Continuous • **Community works (Umuganda):** Monthly:The District delegates will visit and work with the Sectors having a high burden of intestinal worms and other NTDs to sensitize the community and discuss with Sector authorities on local strategies to reduce the burden of these diseases transmitted through poor hygiene practices **5.Central level (MoH/RBC, MINALOC, MINEDUC, etc.):** • Radio spots: 1. Continuous and 2.targeted specific periods (campaign, etc.) • Community Radio magazine: once per month	

Activity	Details (sub-activities)	Frequency	Resources needed
		• Live radio talk Shaw: Twice a month • SMS: Once per month • Public places: Video: Every day • Community works (Umuganda): Once a quarter: The central level delegates will visit and work with the Districts having a high burden of intestinal worms and other NTDs to sensitize the community and discuss with District authorities on local strategies to reduce the burden of these diseases transmitted through poor hygiene practices	
	Conduct specific awareness campaigns for Education towards behavior Change on hand washing, open defecation, treatment of drinking water and where possible NTDs screening and treatment in targeted high endemic communities	-Mass awareness campaigns targeting high burden communities in endemic Districts -Use of public figures or any other entertainment to attract the community -Screen for NTDs and conduct deworming Funds for Mass campaigns and public figures	Funds for Mass campaigns and public figures
4. Construction of toilets and avail hand washing supplies in marshlands and households with limited resources	**1.Sanitation/ Hand and Hand washing/ Hygiene:** • Conduct latrines need assessment at village level including marshlands	Once a year	-Village officials and -Cooperative leaders
	• Building latrines wherever needed	Continuous	Funds and Community works
	• Avail hand and foot washing supplies (mainly soap and water)	Continuous	Funds
	• Avail hand and foot washing posters (benefits and technique) in public latrines	Continuous	Posters, see its production under 3.4 activity 1.
	2.Water: • Conduct an assessment of water needs and registration of people without capacity to pay for water at village level	Once a year	Funds or WASAC/ Government staff
	Provision of clean water (tap water, boreholes	Continuous	Funds
	• Household water treatment (sterilization)	Continuous	Funds water treatment chemical

Activity	Details (sub-activities)	Frequency	Resources needed
5. To conduct strategic visit to high endemic areas to discuss with local leaders on local strategies to reduce NTDs burden	During Community works (Umuganda), all administrative structures will visit the next lower structure to work together in community works and discuss with local leaders on local strategies to reduce NTDs burden	• Central level to District: Once a quarter (better at the start of each quarter) • Districts to Sectors: Once a quarter (better at the start of each quarter) • Sector to Cells and Village: Once a Month Each community works day)	Funds for vehicles and mission fees
Strategic objective 3.5 To advocate for integrated vector control for targeted NTDs by multi-sectoral collaboration where necessary			
1.Conduct Environmental management for snail control	• Identification of contaminated water-human contacts area and Community mobilization for engagement and ownership	Once a year	Funds for field identification of areas of human-contaminated water contacts
	• Remove vegetation in areas near human • contaminated water contacts by the surrounding community under Village/ sector supervision	Continuous	Decentralization for engagement and ownership of community and local leadership
2.Conduct application of molluscicide	To conduct consultative meetings to finalize and validate Snail control operational plan	Quarterly	Funds for the workshop
	Conduct feasibility assessment (spray in lakes, large marshlands, etc.)	Once	Funds for expert
	• Environmental Impact assessment	Before, during and after application	Funds for expert
	Training for field implementation of pilot and scale up phase	Twice	Funds for training and hiring Expert
	Conduct a piloting phase	At least once before annual Mass treatment against Schistosomiasis	Funds for application and monitoring
	Scale-up snail control intervention	At least once before annual Mass treatment against Schistosomiasis	Funds for application and monitoring

3.3.4. Pharmacovigilance in NTD control activities

Rwanda has a policy on pharmacovigilance and it is fully operational with elaborated Standard Operating Procedures (SOPs). The structure consists of a national team and a network of district hospital level drugs and therapeutic committee that includes an officer-in-charge for pharmacovigilance. There are no similar committees at community level. Pharmacovigilance will be included in the training of the personnel involved in the NTD activities at all levels. The quality of deworming medicines and Side effects occurring during the MDA will be monitored. A reporting system for any serious adverse event will be set up and investigation will be undertaken.

- The table describes activities that will be implemented as part of strengthening pharmaco-vigilance NTDs programme.

Table 26: Activities for strengthening pharmaco-vigilance in NTD Programmes.

Activity	**Details (Sub-activities)**	**Frequency**	**Resources needed**
Strategic Objective 3.6 Strengthening a pharmacovigilance system for NTD Drugs/ medical commodities			
-Conduct an orientation meeting on pharmacovigilance on NTD commodities from Village to country level	-Disseminate and train health professionals and CHWs on pharmacovigilance (PV) guidelines related to NTD medicines	-Once for orientation meeting -Continuous during MDA preparatory meetings	Funds See S.O 1.1 Tools
Conduct the quality testing for deworming medicines in a routine monitoring at arrival in the country and from the distribution sites/ Health facilities	Arrival of deworming medicines in the country: According to SOPs in place at MPPD, a given quantity will be taken to Laboratory for quality testing	Once per year (Per shipment as it is on annual basis)	Funds for Quality testing
	The medicines remaining after the campaign in the health facilities will be sampled and be taken to Laboratory for quality testing	Twice per year (as deworming campaign is a bi-annual event)	Funds for Quality testing

Activity	Details (Sub-activities)	Frequency	Resources needed
-In close collaboration with RFDA, Conduct pharmacovigilance activities for NTD drugs/ medical commodities through the existing national pharmacovigilance system and real time notification during MDA	Communicate and Report side effects via RapidSMS or any other electronic reporting system	Real-time notification (whenever observed)	-Forms, cell phones -Training on MDA new reporting
	Investigate Serious adverse event cases	continuous	Transportation
	Provide medical care to Serious adverse events cases	continuous	Refer serious cases to health facilities
	Share to relevant institutions data on side effects for decision making and planning	Every 6 months	Funds for workshop

3.4 HOW WE WILL KNOW THAT OUR STRATEGIES ARE WORKING: MONITORING AND EVALUATION

The existing system of monitoring and evaluation in the country include a health management information system from the peripheral to the central level of the Health structure and survey data. Most of NTDs indicators are part of the system and will be reviewed and uploaded in the HMIS to reflect information and indicators that will facilitate the monitoring of NTDs implementation in the timeframe of this strategic plan. The review of NTDs reporting will also consider SDGs reporting requirements. During the implementation of this strategic plan, monitoring and evaluative assessments will be conducted to estimate the compliance and impact of interventions.

3.4.1. Public health surveillance:

To successfully maintain disease levels below thresholds where they are not of public health significance following intense period of interventions depends on how strong post-intervention surveillance is in the primary healthcare. The NTD strategic plan will be implemented within the existing primary healthcare system which has a strong health Information system (HMIS and other supporting systems) to reporting health data at all levels including community level (SISCOM). Information flows from the CHWs to the HC then to the DH and then the central level. NTDs indicators will be monitored using those existing systems.

3.4.2. Key Definitions Guiding the M&E of this Strategic Plan:

- Monitoring is the process of continuous observation and collection of data on the NTD programme to ensure that the programme is progressing as planned.
- Evaluation is the systematic and critical analysis of the adequacy, efficiency, and effectiveness of the programme and its strategies as well as progress. Evaluation refers to long, mid-term and annual analysis of a performance in relation to the set goals.
- Public health surveillance: is define as "the ongoing, systematic collection, analysis, and interpretation of health-related data essential to planning, implementation, and evaluation of public health practice." And it will help the NTD program to 1) be on alert of any approaching public health emergencies related to NTDs; 2) inform on epidemiology of NTDs for strategic planning and prioritization; and also 3) track progresses towards set targets and document the impact of NTDs interventions

Figure 9: Rwanda Community Health information System Data Flow Chart

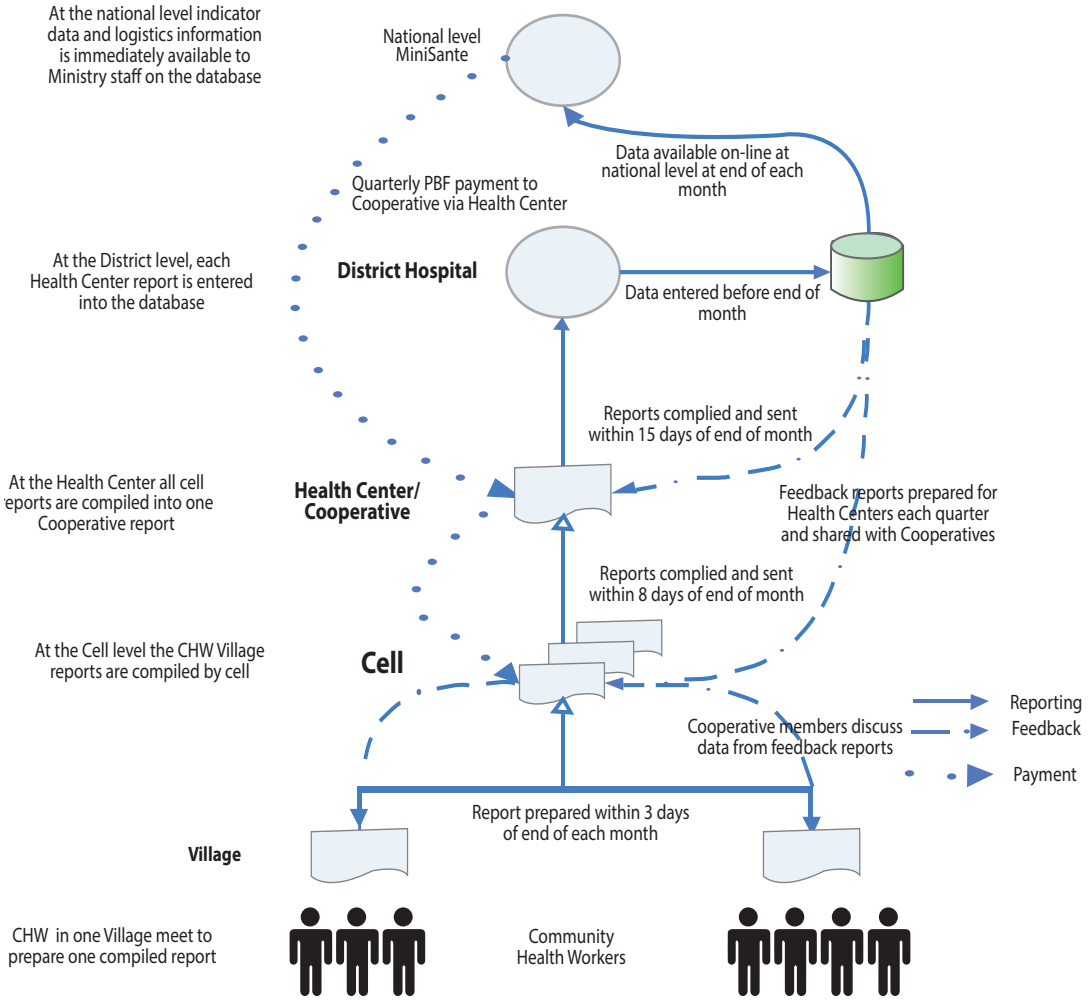


Table 27: Strategic Priority 4: Enhance NTD monitoring and evaluation, surveillance and response and operations research.

Activity	Details (sub-activities)	Frequency	Resources needed
Strategic objective 4.1 To strengthen monitoring and evaluation of NTDs interventions at all levels			
Conduct monitoring supervision to Districts (**by MoH, MINALOC, MINEDUC)**	-During this supervision the central level will monitor the field progress on implementation of elimination strategies and randomly selected public facilities (school, public offices, etc.)	Once a quarter	Funds see mentorship supervision under S.O 1.1
Conduct monitoring supervision to Sectors by Districts **(by Districts)**	-District will monitor the field progress on implementation of elimination strategies at sector level and randomly selected public facilities (school, etc.) or household	Once per Quarter	Funds see mentorship supervision under S.O 3.4
Conduct monitoring supervision to villages by Sectors **(by sectors)**	-Sectors will monitor the field progress on implementation of elimination strategies in all schools and in all villages (by randomly selecting some households)	At least once per quarter	Funds see mentorship supervision under S.O 3.4
Conduct monitoring of the community compliance to agreed strategies **(by Cells and Villages)**	-Villages will monitor the field progress on implementation of agreed elimination strategies in all community households	Once per month	Tools
Conduct program evaluation at all levels before and after implementation of elimination strategies for the period 2019-2024	-Conduct a survey or situation analysis (weakness and strengthen) before and after by documenting the problem (NTDs) magnitude and response at respective level and compare baseline, mid-term and end line	3 times (2019, 2021 and 2023)	Tools
To conduct mid-term review of the NTD strategic Plan	-Organize a meeting with Stakeholders to review the strategic plan based on new evidence or planned mid-term review	Start of 2022	Funds for meetings

Activity	Details (sub-activities)	Frequency	Resources needed
To disseminate the revised Strategic plan		Once	See meeting of NTDs Stakeholders
Strategic objective 4.2 To develop and promote an integrated NTD M&E framework and strengthen the surveillance and response of NTDs based on integrated health information systems (HMIS, IDSR).			
Review the reporting of and response to NTDs including complications and severe adverse events	NTD technical working group will: -Develop and Review NTDs data elements, M&E indictors and NTDs surveillance guideline in line with country NTDs control and elimination direction and also SDGS reporting requirements -Develop appropriate reporting tools including form for adverse effects, education sessions and reporting process -Mobilize local leaders, data manager and health centers on reporting of all NTDs related cases, education sessions, drug adverse events, etc. -Conduct a quick response upon reporting of unusual or emergency NTDs related condition as per surveillance guideline	Twice	Funds for workshop to develop those tools
Build capacity at all levels for M&E on NTDs	Integrate mentorship on M&E indicators and reporting in monitoring mentorship conducted by all levels and in orientation meetings	frequency under S.O 4.1	See monitoring supervision under S.O 4.1
Conduct routine data analysis and Data quality assessment (DQA)	Epidemiological assessment and data analysis for surveillance purpose -Programmatic data analysis ***-Analyse the quality of data and contact all concerned Health facilities for quality issues*** -Share data with relevant institutions for planning and decision making	Bi-annual	HMIS and program Data

Activity	Details (sub-activities)	Frequency	Resources needed
Conduct Surveillance for all NTDs including rare NTDs	-Develop the surveillance guideline for all NTDs prevailing in Rwanda	Continuous	See the first activity under this SO 4.2
Conduct Rapid investigation of any unusual increase of NTDs routine data	-Concerned Districts will conduct preliminary assessment of the problem and communicate to Central level -According to District reports on problem magnitude, MoH will provide guidance for District to contain the situation or mobilize necessary resources for a quick intervention/ investigation from central level	Continuous	-Analyzed HMIS Data -District assessment report -Funds for field intervention
Conduct HAT Surveillance in suspected Districts	- Maintain and strengthen 12 selected sentinel sites active and passive surveillance and prepare the dossier for WHO validation of elimination	Continuous	Funds for active surveillance and few materials
	-Mentorship supervision and QC	Once/ quarter	Funds
	-Progress meeting with sentinel sites and other surrounding health centers	Bi-annual	Funds
	-Multi-sectoral coordination meeting	Bi-annual	Funds
Conduct specific STH&SCH sentinel surveillance	Community-based surveillance for STH&SCH prevalence: -village -Select villages as sentinel sites based on WHO recommendations -Conduct follow-up surveys on regular basis	Once in 2 years	Funds for conducting an evaluation survey
	Conduct Health Facility-based surveillance for Monitoring of MDA drug efficacy and specific risk factors for infection	Continuous and every 2 years for progress meeting	Funds for few Lab materials, communication and progress meeting

Activity	Details (sub-activities)	Frequency	Resources needed
Conduct Snail sentinel sites surveillance	-Select villages as sentinel sites based on WHO recommendations -Collect data on define intervals	Continuous	Funds for staff, materials and reagents
Conduct NTDs vectors integrated in existing Vector control framework	-Elaboration of operation plan for NTDs targeted vectors by Vector control unit in collaboration with NTD program	Continuous	Funds for NTDs vector control
Strategic objective 4.3 To Support operational and evaluative research, documentation and evidence to guide innovative approaches to NTD program interventions.			
Conduct prevalence, operational and evaluative research research on NTDs	Context: -Collaborate with the Medical research Center (MRC)/ RBC and Research institutions, national reference laboratory) for development of operational research on NTD -Collaborate with research institutions such as MRC, NUR, NRL, etc. to develop research agenda priorities -Elaborate protocols on NTD researches -Conduct research	Once a year	Funds to conduct research
	Conduct National follow-up Mapping of STH&SCH	2019	
	Conduct Albendazole and Ivermectin combination therapy trial in Districts endemic to trichuriasis	2021	
	Conduct elimination mapping of Onchocerciasis	2020	
	Conduct Rapid assessment of scabies in 4 Districts with many routine cases	2019	
	Conduct prevalence and geographical distribution of scabies in Rwanda	Once	
	Conduct prevalence and Geographical distribution of Tungiasis in Rwanda	Once	
	Conduct drug efficacy study for Tungiasis in Rwanda	Once	

Activity	Details (sub-activities)	Frequency	Resources needed
	Conduct rapid assessment of Rabies	Once	
	Conduct rapid assessment of Snakebites Envenoming	Once	
	Conduct rapid assessment of Trachoma	Once	
	Conduct rapid assessment of Lymphatic Filariasis	Once	
	Conduct rapid assessment of Cysticercosis	Once	
	Conduct rapid assessment of Mycetoma	Once	
Publish findings of research in national and international scientific journals	-Produce scientific papers on NTDs -Submit abstracts to international peer review scientific journals and conferences -Publish in national newsletter	Continuous	Funds for publication
Strategic objective 4.4 To strengthen the monitoring of NTDs indicators			
Develop NTDs indicators at all levels (National, District, Sector and Village level)	-Consideration of national priorities and international commitments such as SDGs and WHO key recommended indicators -Elaborate indicators for implementation of NTDs elimination strategies	Depending on individual indicator	See the table below
Monitor indicator on regular basis depending on indicator	- Analyze program data on quarterly, bi-annual or annual basis to monitor progress of achieving indicator -Share findings with relevant stakeholders	Depending on individual indicator	HMIS and Program Data

Table 28: Key process and outcome indicators

Definition of indicator	Baseline	Target		Source	Use of indicator
		2021	2024		
Process indicators **1.Mass Drug Administration (MDA)**					
Number of health professionals and local leaders who participated in orientation meeting on decentralization of NTDs elimination strategies	0	60,000	0	Meeting reports	-To monitor Decentralization process
Percentage of targeted population who received MDA (Number of treated population/ number of targeted population x100)	96	97	98	MDA reports	-Effectiveness of program and Decentralization;
Percentage of geographical MDA coverage (number of districts or sectors receiving mass treated/ number of endemic districts or sectors x100)	100%	100%	100%	MDA campaign report	-to monitor MDA-UHC
Number of Districts/ sectors requiring MDA intervention	STH: 30 Schisto: 127	30 districts for STH and 127 endemic sectors for schisto	30 districts for STH and 127 endemic sectors for schisto	MDA campaign report	Use to monitor MDA-UHC (Universal Health coverage) Use to monitor SDG 3. End epidemics of NTDs by lowering number of population requiring NTDS interventions
Number of the population requiring MDA intervention	STH: 5,057,119 SCH: 1,139,027	STH: 8,520,000 SCH: 3,838,000	STH: 8,520,000 SCH: 3,838,000	MDA campaign report	

Definition of indicator	Baseline	Target		Source	Use of indicator
		2021	2024		
Percentage of epidemiological coverage per disease (Number treated/ total pop in the geographic area)	STH: 41% (4,751,540/ 12,300,000) SCH: 29% (1,139,027/ 3,950,661)	STH: 70% (8,520,000/ 12,500,000) SCH: 100% (3,838,000/ 3,838,000)	STH: 70% (8,520,000/ 12,500,000) SCH: 100% (3,838,000/ 3,838,000)	MDA campaign report	Use to assess disease transmission and monitor MDA-UHC (Universal Health coverage
Amount of external funding that support MDA	774,000USD	2,200,000 USD	300,000 USD	Governing Contracts	Use to monitor Government ownership for sustainability
Process indicators ***2.NTDs Case management (Facility based)***					
Number of health professionals trained or mentored on NTD diagnosis and treatment for Lab, nurses, MD	1615	1000	2000	Training re-ports	Use to improve quality services towards UHC
Number of confirmed cases/ disease/year/geographic area	No complete data (Some NTDs are not or properly reported): to be refined & customized in HMIS			HMIS	Use to monitor SDG 3. End epidemics of NTDs by lowering number of population requiring NTDS interventions
Proportion of health facilities that reported stock out of NTDs drugs (Praziquantel, BBE, Ivermectin, etc.)	No data available			HMIS	Use to monitor supply chain management and UHC

Definition of indicator	Baseline	Target		Source	Use of indicator
		2021	2024		
Number of complicated cases treated (Trachoma, LF, Ascariasis, etc.)	No complete data (Some data elements not or properly reported)			HMIS	Use to monitor UHC
Process indicators ***3. Education for behavior change***					
Proportion of schools conducting weekly education sessions on regular basis as per HMIS reporting	No data	50%	60%	HMIS	Use to monitor access to health education for diseases preventions (UHC)
Proportion of Villages conducting weekly mass educative session and monitoring of self-set preventive measures locally feasible	No data	50%	60%	HMIS	
Proportion of Health facilities conducting mass educative session (at least weekly)	No data	80%	100%		
Proportion of Villages conducting households visits for education and monitoring Hand washing/ hygiene; sanitation and Water treatment per month	No data	40%	50%		

Inputs/ Process indicators ***4.Hand washing/ hygiene; sanitation and Water***					
Definition of indicator	**Baseline**	**Target**		**Source**	**Use of indicator**
		2021	**2024**		
Percentage of schools using improved latrines	No data	50%	60%	Reports	Use to assess disease transmission
Percentage of schools having clean latrines, Hand washing station and supplies (soap) during supervision visit	No data	40%	50%		
Percentage of households in village using improved latrines	-	40%	50%		
Percentage of Households having clean latrines, Hand washing station and supplies (soap) during supervision visit	No data	20%	30%		
Outcome indicators					
Prevalence and intensity of any soil transmitted helminthiasis infection	Prev. 45% -Heavy intensity: 0% -Moderate intensity: 13%	Prev. 35% -Heavy intensity: 0% -Moderate intensity: <8%	Prev. <20% -Heavy intensity: 0% -Moderate intensity: <1%	Survey	Use to monitor disease trends and for review of treatment strategies and programme goal
Prevalence and intensity of S. mansoni infection	Prev. 1.9% -Heavy intensity: 0.04% -Moderate intensity: 0.5% -Heavy& Moderate: 0,5%	Prev. 1% -Heavy intensity: 0% -Moderate intensity: 0,3% -Heavy& Moderate: 0,3%	Prev. 0,5% -Heavy intensity: 0% -Moderate intensity: 0.1% -Heavy& Moderate: 0,1%	Survey	Use to monitor disease trends and for review of treatment strategies and programme goal

PART IV. BUDGET JUSTIFICATION AND ESTIMATES

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 was elaborated in considering the criteria below:

- Comprehensive;
- Integrative
- Concise;
- Cost-effective;
- Accurate and persuasive to stakeholders.

4.1 Summary Budget

Area	Sub/area	Total budget (RWF)	Contribution		Gap
			Country	Partners	
Prevention	Awareness Materials	139 178 706			
	Awareness Activities	596 875 896			
	Sanitation/ Hand washing/ Latrines and Drinking water	759 700 000			
	Snail control for SCH elimination	1 599 612 400			
Diagnosis and Treatment	Case management	1 548 088 240			
	MDA (STH: 3rd Round & Adults in High Endemic Districts and SCH: Adults in endemic Sectors)	6 540 104 976			
M&E and re-search	Monitoring& mentorship Supervisions	2 640 858 310			
	NTDs surveillance and response	385 070 656			
	Research and Publication	982 270 000			

Area	Sub/area	Total budget (RWF)	Contribution		Gap
			Country	Partners	
Planning and Resource Mobilization	Develop SP and Annual Operation plan and resource mobilization strategy	214 500 000			
Coordination, Partnership & Advocacy	Transition process of NTDs control to Govt ownership (Decentralization): Orientation and progress meetings at Local Government level	979 990 326			
	Capacity building of Districts and national coordination meetings	195 850 000			
	Mobilization for multi-sectoral collaboration	65 755 000			
Total		**16 647 854 510**			

Note : Contribution of Partners is determined on annual basis.

4.2. Budget 4.2. Budget Per Type of Strategic Priority and Objectives

STRATEGIC PRIORITY NO. 1: To strengthen government ownership, decentralization, advocacy, coordination and partnerships.

1.1 To strengthen government ownership and foster decentralization and multi-sectoral collaboration for the control and elimination of targeted NTDs at national, district and community level.				**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
1	Create sufficient NTD staff positions (MoH)	Recruitment of additional staff (NTD-Multisectoral liaison officer and M&E and elimination planning Officer)	Continuous	27 600 000	55 200 000	55 200 000	55 200 000	55 200 000	55 200 000	55 200 000
2	Conduct Orientation meetings at all levels	Organize the orientation meeting at all levels (Districts, Sectors and Villages for smooth decentralization and integration of NTDs interventions	Once	52 000 000	-	-	-	-	-	-
3	Conduct monitoring/ mentorship supervision (by MoH, MINALOC, MINEDUC)	Provide technical support for district NTD technical coordination mechanisms for effective decentralization (Transport and perdiem)	Once a Quarter	8 413 776	16 827 552	16 827 552	16 827 552	16 827 552	16 827 552	16 827 552

1.1 To strengthen government ownership and foster decentralization and multi-sectoral collaboration for the control and elimination of targeted NTDs at national, district and community level.				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
4	Conduct a workshop to Elaborate and share guidelines and reporting tools	Provide guidelines and reporting tools to district level	Once	22 348 790						
5	Conduct a District coordination meeting to review progress of strategies implementation and MDA Preparation	Identify the key stakeholders for District coordination meeting (Transport including lunch)	3 times a year	22485 000	67455 000	67 455 000	67 455 000	67 455 000	67 455 000	67 455 000
6	Conduct a sector meeting to review progress of strategies implementation and coordination	Identify the key stakeholders for Sector coordination meeting (Transport including lunch)	Once a Quarter	7 130 000	28 520 000	28 520 000	28 520 000	28 520 000	28 520 000	28 520 000
Strategic objective 1.2 To strengthen capacity and multi-sectoral coordinating mechanisms for NTDs at all level (from community to national level) of health and local administration system hierarchies										
7	Conduct capacity building activities in NTD programme management for national and districts coordination team members	Organize trainings or short courses	Once a year	4 500 000	4 500 000	4 500 000	4 500 000	4 500 000	4 500 000	27 000 000

Strategic objective 1.2 To strengthen capacity and multi-sectoral coordinating mechanisms for NTDs at all level (from community to national level) of health and local administration system hierarchies				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
8	Organize and conduct coordination meetings with Districts for progress sharing and next step	With all Districts for 3 days	Twice a year	14 600 000	29 200 000	29 200 000	29 200 000	29 200 000	29 200 000	160 600 000
9	Conduct NTD technical working meeting		Once a year	1 375 000	1 375 000	1 375 000	1 375 000	1 375 000	1 375 000	8 250 000
Strategic objective 1.3 To enhance high-level reviews of NTD program performance and the use of lessons learnt to enhance advocacy, awareness, visibility and effective implementation of NTD program										
10	Conduct NTD stakeholders meetings (Annually)	will focus on program success, challenges and updates on NTDs and will involve Government and private institutions, partners, media, etc.	Once a year	6 765 000	5 390 000	5 390 000	5 390 000	5 390 000	5 390 000	33 715 000
11	Publish annual reports and success stories on NTDs	publication will be done at national and international level	Once a year	5 340 000	5 340 000	5 340 000	5 340 000	5 340 000	5 340 000	32 040 000
TOTAL				**172 557 566**	**213 807 552**	**213 807 552**	**213 807 552**	**213 807 552**	**213 807 552**	

STRATEGIC PRIORITY NO. 2: To enhance planning for results, resource mobilization and financial sustainability of national NTD program.

Strategic objective 2.1 To develop integrated strategic plan and annual operational plans for the control and elimination of targeted NTDs at all levels				**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
1	Conduct the validation and dissemination of the strategic plan 2019-2024	all relevant Stakeholders and partners (for mobilization and sharing responsibilities)								
2	Develop the national annual operational plan with detailed budget	With relevant stakeholders	Once a year	6 000 000	6 000 000	6 000 000	6 000 000	6 000 000	6 000 000	36 000 000
3	Develop the national annual operational plan with detailed budget	With relevant stakeholders	Once a year	25 750 000	25 750 000	25 750 000	25 750 000	25 750 000	25 750 000	154 500 000
Strategic objective 2.2 To enhance resource mobilization approaches and strategies at sub-national, national and international levels for NTD interventions										
4	Develop an NTD resource mobilization strategy at central level		Once a year	3 000 000	3 000 000	3 000 000	3 000 000	3 000 000	3 000 000	18 000 000
TOTAL				**37 750 000**	**34 750 000**	**34 750 000**	**37 750 000**	**34 750 000**	**34 750 000**	**214 500 000**

STRATEGIC PRIORITY NO. 3: To Scale-up access to interventions, treatment and system capacity (service delivery capacity) building and pharmacovigilance

Strategic Objective 3.1a. To strengthen and integrate NTD case management and chronic care into existing health system				**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
1	Conduct capacity building of Health facility in diagnosis and treatment of SCH, STH, Scabies and other NTDs	Conduct on-site, cascade mentorship for Medical doctor, Nurses and lab technologists	Once a year	2 500 000	5 000 000	5 000 000	5 000 000	5 000 000	5 000 000	27 500 000
2		Conduct a lecture on NTDs case management in Medical universities	Once a year	2 005 740	2 005 740	2 005 740	2 005 740	2 005 740	2 005 740	12 034 440
3		Conduct targeted program supervision	Once a quarter	6 685 800	13 371600	13 371 600	13 371 600	13 371 600	13 371 600	73 543 800
4		Procurement sensitive Rapid Tests for SCH (CCA)	Once a year	70 950 000	141 900 000	141 900 000	141 900 000	141 900 000	141 900 000	780 450 000
5	Conduct capacity building of Health facility in diagnosis and treatment of SCH, STH, Scabies and other NTDs	Printing Clinical algorithm (Flip Box) and Plastification of Lab Bench Aids on NTDs for Health center	Once a year	20 305 000	-	-	505 000	-	-	20 810 000
6	Establishment of Podo treatment centers in selected health centers	Train staff and provide medical commodities	Once a year	-	310 000 000	-	-	310 000 000	-	620 000 000

Strategic Objective 3.1a. To strengthen and integrate NTD case management and chronic care into existing health system				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
7	Conduct diagnosis and treatment of NTDs related complications (Endoscopy, ultrasound, Surgery)	Support training in specialized Hospitals or On-site Clinical mentorship	Once in 2 years	1 250 000	2 500 000	2 500 000	2 500 000	2 500 000	2 500 000	13 750 000
Strategic objective 3.3: Scale up an integrated preventive chemotherapy, including access to interventions for soil transmitted helminthiasis and schistosomiasis										
8	Purchase Albendazole and Praziquantel for non-donated risk groups and	Procurement, clearance and management of Albendazole (Against Intestinal worms)	Once a year	-	429 624 000	429 624 000	429 624 000	429 624 000	429 624 000	2 148 120 000
9	Conduct Community and school-based Drug distribution	Procurement, clearance and management of Praziquantel (against Schistosomiasis)	Once a year	-	777 600 000	777 600 000	777 600 000	777 600 000	777 600 000	3 888 000 000
10	Conduct Community and school-based Drug distribution	Funds for perdiem and transport from central level	Three times a year	30 546 432	72 002 304	54 547 200	54 547 200	18 182 400	10 909 440	240 734 976
11		Funds for perdiem and transport from District level	Three times a year	22 485 000	22 485 000	22 485 000	22 485 000	22 485 000	22 485 000	134 910 000
12		Funds for perdiem and transport from Sector/Health Center level	Three times a year	21 390 000	21 390 000	21 390 000	21 390 000	21 390 000	21 390 000	128 340 000

Strategic objective 3.4 To implement an integrated Water, sanitation and hygiene and education for behaviour change at community and school level for a comprehensive approach towards NTDs elimination				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
13	Develop and produce and disseminate communication tools	Recruit for short term BCC expert (6 months)	Once per 2 years	15 306	-	-	-	-	-	15 306
14		Posters	Once in 2 years	8 000 000	-	-	8 000 000	-	-	16 000 000
15		Flyers	Once in 2 years	4 141 700	-	-	4 141 700	-	-	8 283 400
16		Flipbook	Once in 2 years	5 780 000			5 780 000			
17		Pull-up Banners	Once a year	480 000	480 000	480 000	480 000	480 000	480 000	2 880 000
18	Develop and produce and disseminate communication tools	Documentary film	Once per 2 years	10 000 000	-	-	10 000 000	-	-	20 000 000
19		Animated cartoon	Once per 2 years	11 000 000	-	-	11 000 000	-	-	22 000 000
20		Prevention message on notebooks/ Production House	Once con-tract per 2 years	35 000 000	-	-	35 000 000	-	-	70 000 000
21	Conduct Mass Media communication for behaviour change	SMS	Once per month	20 000 000	20 000 000	20 000 000	20 000 000	20 000 000	20 000 000	120 000 000
22		Radio spots during MDA for mobilization and awareness	Three times a year	2 217 600	2 217 600	2 217 600	2 217 600	2 217 600	2 217 600	13 305 600
23		Radio spots for awareness (Continuous)	Continuous	19 008 000	19 008 000	19 008 000	19 008 000	19 008 000	19 008 000	114 048 000
24		Community Radio magazine	Once per month	7 080 000	7 080 000	7 080 000	7 080 000	7 080 000	7 080 000	42 480 000

Strategic objective 3.4 To implement an integrated Water, sanitation and hygiene and education for behaviour change at community and school level for a comprehensive approach towards NTDs elimination				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
25	Conduct Mass Media communication for behaviour change	Live radio talk Shaw	Once per month	18 840 000	18 840 000	18 840 000	18 840 000	18 840 000	18 840 000	113 040 000
26	Conduct targeted awareness Mass campaigns and NTDs screening and treatment	Mass awareness; Use of public figures or any other entertainment; and Screen for NTDs and conduct deworming	Once a quarter	30 000 000	30 000 000	30 000 000	30 000 000	30 000 000	30 000 000	180 000 000
27	Conduct a workshop training with public influencers (media, Religions, etc.)	Workshop	Once	-	14 002 296	-	-	-	-	14 002 296
28	Conduct interventions to improve Sanitation/ Hand washing/ Hygiene	Building latrines in households	Continuous	50 000 000	150 000 000	100 000 000	100000 000	50 000 000	-	450 000 000
29		Building latrines in neighborhood of marshlands, touristic areas	Continuous	5 000 000	7 000 000	1 500 000	1 000 000		24 000 000	14 500 000
30		Avail hand washing supplies (mainly soap and water)	Continuous	9 600 000	48 000 000	48 000 000	48 000 000	24 000 000	3 600 000	201 600 000

Strategic objective 3.4 To implement an integrated Water, sanitation and hygiene and education for behaviour change at community and school level for a comprehensive approach towards NTDs elimination				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
31	Conduct interventions to improve access to water (drinking & household use)	Conduct registration of people without capacity to pay for water at village level and waster need assessment	Continuous	3 600 000	3 600 000	3 600 000	3 600 000	3 600 000	12 000 000	21 600 000
32		Household water treatment (sterilization)	Continuous	12 000 000	12 000 000	12 000 000	12 000 000	12 000 000		72 000 000
33	Conduct application of molluscicide	conduct consultative meetings to finalize and validate Snail control operational plan	Twice	10 000 000	-	-	-	-		
34		Conduct feasibility assessment (spray in lakes, large marshlands	Once	20 000 000	-	-	-	-		
35		Environmental Impact assessment	Three times a year	10 000 000	10 000 000	10 000 000	10 000 000	10 000 000		
36		Training for field implementation of pilot and scale up phases	Twice	20 000 000	-	-	-	-		
37		Conduct a piloting phase	Once	45 612 400	-	-	-	-		
38		Scale-up snail control intervention	Once a year	-	358 500 000	358 500 000	239 000 000	119 500 000		
TOTAL				**535 492 978**	**2 508 606 540**	**2 101 649 140**	**2175 575 840**	**2 180 284 340**	**1 693 511 380**	**11 183 560 218**

STRATEGIC PRIORITY NO. 4: To Enhance NTD monitoring and evaluation, surveillance& Response, and operations research.

Strategic objective 4.1 To strengthen monitoring and evaluation of NTDs interventions at all levels				**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
1	Conduct monitoring supervision to Sectors by Districts	Funds for perdiem and transport from central level	Once a Quarter	22 630 400	45 260 800	5 000 000	5 000 000	5 000 000	5 000 000	27 500 000
2	Conduct monitoring supervision to villages by Sectors	Funds for perdiem and transport from central level	At least once per quarter	215 415 920	430 831 840	2 005 740	2 005 740	2 005 740	2 005 740	12 034 440
3	Conduct mid-term review of the NTD strategic Plan	with Stakeholders to review the strategic plan based on new evidence or planned mid-term review	At least once Once	-	-	13 371 600	13 371 600	13 371 600	13 371 600	73 543 800
Strategic objective 4.2 To develop and promote an integrated NTD M&E framework and strengthen the surveillance and response of NTDs based on integrated health information systems (HMIS, IDSR).										
4	Review the reporting of and response to NTDs including complications and severe adverse events	Funds for 2 workshops to review and add NTDs data elements in reporting system	Once	15 300 000	-	-	-	-	-	15 300 000
5	Conduct Rapid investigation of any unusual increase of NTDs routine data	According to District reports on problem magnitude, MoH will provide guidance for District to contain the situation or mobilize necessary resources for a quick intervention/ investigation from central level	Continuous	8 413 776	8 413 776	8 413 776	8 413 776	8 413 776	8 413 776	50 482 656

Strategic objective 4.2 To develop and promote an integrated NTD M&E framework and strengthen the surveillance and response of NTDs based on integrated health information systems (HMIS, IDSR).				2019	2020	2021	2022	2023	2024	Total
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
6	Conduct HAT Surveillance in suspected Districts	Maintain and strengthen 12 selected sentinel sites active and passive surveillance and prepare the dossier for WHO validation of elimination	Continuous	3 696 000	3 696 000	3 696 000	-	-	-	11 088 000
7		Mentorship supervision and QC	Once a Quarter	6 000 000	6 000 000	6 000 000	-	-	-	18 000 000
8		Progress meeting with sentinel sites and other surrounding health centres	Once a year	5 000 000	5 000 000	5 000 000	-	-	-	15 000 000
9		Multi-sectoral coordination meeting	Once a year	400 000	400 000	400 000	-	-	-	1 200 000
10		Identification of HAT species infecting animals (MIINAGRI)	Continuous	10 000 000	10 000 000	10 000 000	-	-	-	30 000 000
11	Conduct specific STH&SCH sentinel surveillance (community -village)	Conduct follow-up surveys , every 2 years	Once in 2 years	-	-	50 000 000	-	50 000 000	-	100 000 000
12	Conduct Snail sentinel sites surveillance	Collect data on define intervals	Continuous	24 000 000	24 000 000	24 000 000	24 000 000	24 000 000	24 000 000	144 000 000

Strategic objective 4.3 To Support operational and evaluative research, documentation and evidence to guide innovative approaches to NTD program interventions.										
No	**Activities**	**Sub-Activities Details**	**Frequency**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**	**RWF**
13	Conduct operational and evaluative research on NTDs	National follow-up Mapping of STH&SCH	Once	329 300 000	48 950 000	-	-	-	329 300 000	658 600 000
14		Elimination mapping of Onchocerciasis	Once	-	-	-	-	-	-	48 950 000
15		Conduct prevalence and Geographical distribution of **scabies** in Rwanda	Once	10 000 000	-	-	-	-	-	10 000 000
16		Conduct prevalence and Geographical distribution of **scabies** in Rwanda	Once	-	20 000 000	-	-	-	-	50 000 000
17		Conduct rapid assessment of **Rabies**	Once	-	20 000 000	-	-	-	-	20 000 000
18		Conduct rapid assessment of **Snakebites Envenoming**	Once	-	20 000 000	-	-	-	-	20 000 000
19		Conduct rapid **assessment of Trachoma**	Once	-	20 000 000	-	-	-	-	20 000 000
20		Conduct rapid assessment of **Lymphatic Filariasis**	Once	-	-	-			-	20 000 000
21		Conduct rapid assessment of **Cysticercosis**	Once	0						80 000 000
22		Conduct rapid assessment of **Mycetoma**		12000000						12 000 000
23	Publish findings of research in national and international scientific journals	Funds for publication	Twice a year	8 010 000	13 350 000	10 680 000	-	10 680 000	-	42 720 000
TOTAL				**670 166 096**	**675 902 416**	**724 282 416**	**530 855 206**	**569 186 416**	**837 806 416**	**4 008 198 966**

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ANNEXES

Annex 1: Mass Drug Administration against STH 2008-2018: Treatments delivered

Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**Total treaments**
Target population	Pre-SAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC / SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	PreSAC/ SAC	
Round 1												
Population targeted		4,278,168	4,389,400		4,620,616			4,574,333	4,693,266	4,815,291	4,898,351	
Population treated		4,173,623	4,149,114		3,810,968			4,276,657	4,736,005	4,668,394	4,851,720	**30,666,481**
Geographical coverage		100%	100%		100%			100%	100%	100%	100%	
Programme coverage		98%	95%		82%			93%	101%	97%	99%	
Round 2												
Population targeted		4,278,168				4,160,188	4,445,063	4,574,333		4,815,291	4,921,426	
Population treated		4,099,207				4,124,088	4,268,434	3,830,581		4,974,437	5,060,034	**38,196,574**
Geographical coverage		100%				100%	100%	100%		100%	100%	
Programme coverag		96%				99%	96%	84%		102%	103%	
Total treatments delivered against STH (both rounds)											**68,863,055**	

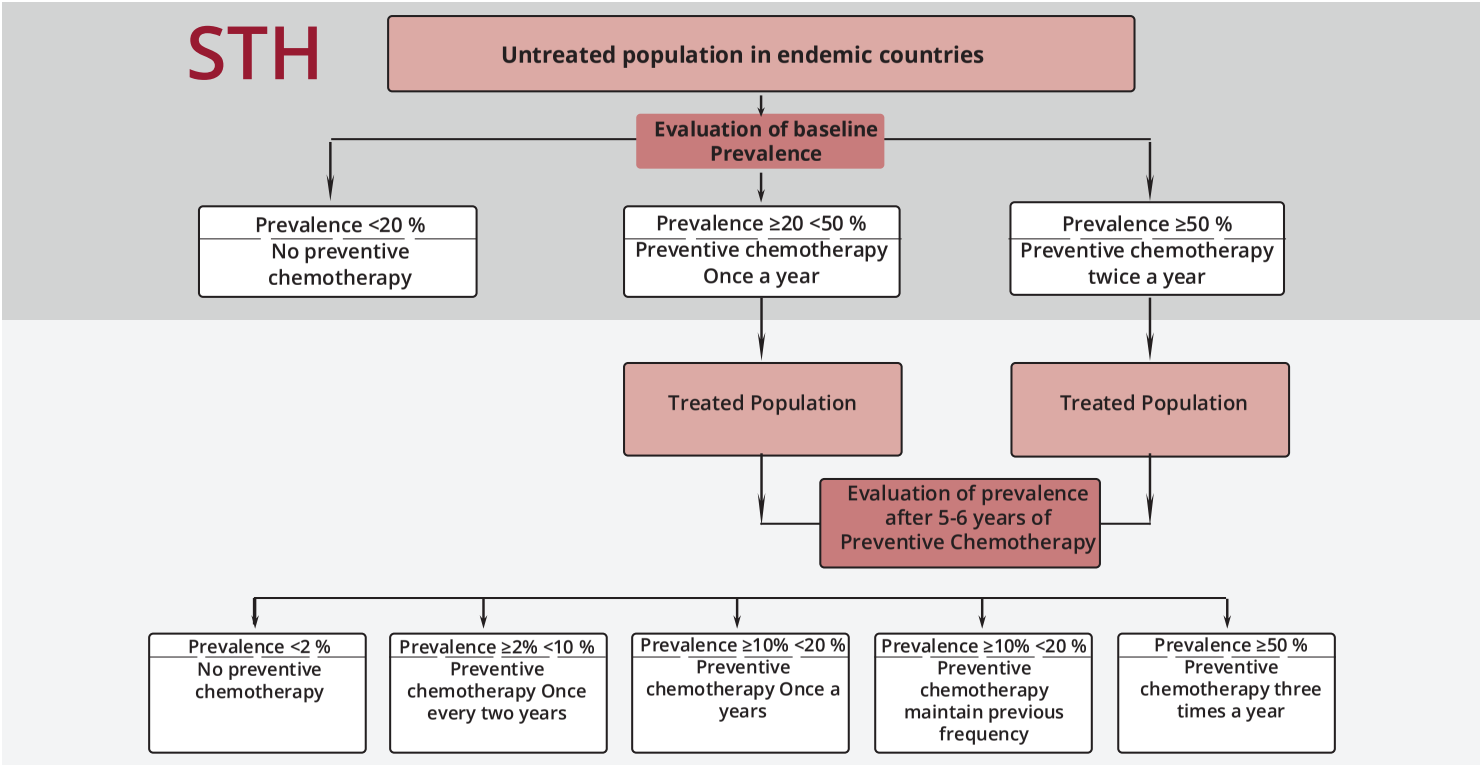
A total of **68,863,055 treatments** delivered for intestinal worms (albendazole or mebendazole to children 1-15 years old through bi-annual mother and child health week)

Annex 2: Mass Drug Administration against SCH 2008-2018: Treatments delivered

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	Total (cumulative)
Population targeted						76,458	178,329	294,756		1,033,551	1,142,967	
Population treated	86,561	203,829	127,710	75,168	119,865	86,854	174762	212,224		964,673	1,154,486	**3,206,132**
Geographical coverage												
Programme coverage						114%	98%	72%		93%	101%	

- A total of **3,206,132** treatments delivered to children 5-15 years for schistosomiasis. The numbers of some adults treated between 2008 and 2013 are not included.

Annex 3: PCT algorithm



Annex 4: Any STH prevalence by district, 2014

S/N	District	N schools for STH testing	N pupils sampled	Any STH prevalence (%)	95%CI
1	BUGESERA	5	250	10.8	5.9-19.0
2	BURERA	11	546	80.2	73.0-85.9
3	GAKENKE	7	350	46.9	29.3-65.2
4	GASABO	7	350	5.7	3.0-10.6
5	GATSIBO	5	250	24.4	16.8-34.0
6	GICUMBI	7	350	52.6	29.6-74.5
7	GISAGARA	6	300	29.3	16.6-46.4
8	HUYE	5	246	45.5	23.3-69.7
9	KAMONYI	5	250	19.6	14.6-25.9
10	KARONGI	7	350	72.3	59.7-82.1
11	KAYONZA	6	300	17.7	12.9-23.7
12	KICUKIRO	5	243	2.1	0.9-4.5
13	KIREHE	5	250	16.8	13.4-20.8
14	MUHANGA	6	300	25	15.9-37.0
15	MUSANZE	8	397	77.1	59.1-88.7
16	NGOMA	6	293	25.6	18.0-35.1
17	NGORORERO	5	250	58.8	41.3-74.4
18	NYABIHU	5	250	88.4	85.1-91.0
19	NYAGATARE	8	400	22.5	15.9-30.8
20	NYAMAGABE	5	245	56.3	25.6-82.9
21	NYAMASHEKE	7	350	56.3	47.4-64.8
22	NYANZA	5	250	12.8	10.0-16.3
23	NYARUGENGE	5	250	6	2.5-13.5
24	NYARUGURU	5	249	79.9	75.4-83.8
25	RUBAVU	7	335	89.6	60.0-98.0
26	RUHANGO	5	250	12	8.2-17.2
27	RULINDO	5	250	46.8	26.7-68.0
28	RUSIZI	10	499	75.4	61.8-85.2
29	RUTSIRO	8	399	87.7	76.0-94.1
30	RWAMAGANA	5	248	7.7	6.1-9.5

Annex 5: NTD Co-endemicity in Rwanda

Province	District	Diseases					
		STH	Schisto.	Tracho-ma	Onchorcerciasis	HAT	Lep-rosy
North	Musanze	+	+				
	BUrera	+	+				
	Gakenke	+	+				
	Gicumbi	+	+				
	Rulindo	+	-				
South	Nyaruguru	+	-	+/-	+?		
	Gisagara	+	+		+?		
	Huye	+	-				
	Kamonyi	+	+				
	Muhanga	+	+				
	Nyamagabe	+	-				
	Nyanza	+	+				
	Ruhango	+	+				
East	Bugesera	+	+				
	Nyagatare	+	+			+	
	Rwamagana	+	+				
	Gatsibo	+	+	+/-		+	
	Kayonza	+	+			+	
	Ngoma	+	+				
	Kirehe	+	-			+	
West	Rubavu	+	+				
	Rutsiro	+	+				
	Karongi	+	+				
	Rutsiro	+	+				
	Nyamasheke	+	+				
	Rusizi	+	+		+?		
Kigali City	Nyarugenge	+					
	Gasabo	+					
	Kicukiro	+					

Annex 6: Packages of Mass drug distribution by district

Province	District	Disease		MDA Type	Drugs Required
North	Musanze	+	+	T1	Albendazole & praziquantel
	Burera	+	+	T1	Albendazole & praziquantel
	Gakenke	+	+	T1	Albendazole & praziquantel
	Gicumbi	+	+	T1	Albendazole & praziquantel
	Rulindo	+	-	T3	Albendazole
South	Nyaruguru	+	-	T3	Albendazole
	Gisagara	+	+	T1	Albendazole & praziquantel
	Huye	+	-	T3	Albendazole
	Kamonyi	+	+	T1	Albendazole & praziquantel
	Muhanga	+	+	T1	Albendazole & praziquantel
	Nyamagabe	+	-	T3	Albendazole
	Nyanza	+	+	T1	Albendazole & praziquantel
	Ruhango	+	+	T1	Albendazole & praziquantel
East	Bugesera	+	+	T1	Albendazole & praziquantel
	Nyagatare	+	+	T1	Albendazole & praziquantel
	Rwamagana	+	+	T1	Albendazole & praziquantel
	Gatsibo	+	+	T1	Albendazole & praziquantel
	Kayonza	+	+	T1	Albendazole & praziquantel
	Ngoma	+	+	T1	Albendazole & praziquantel
	Kirehe	+	-	T3	Albendazole
West	Rubavu	+	+	T1	Albendazole & praziquantel
	Rutsiro	+	+	T1	Albendazole & praziquantel
	Karongi	+	+	T1	Albendazole & praziquantel
	Nyamasheke	+	+	T1	Albendazole & praziquantel
	Rusizi	+	+	T1	Albendazole & praziquantel
Kigali	Gasabo	+	-	T3	Albendazole
	Kicukiro	+	-	T3	Albendazole
	Nyarugenge	+	+	T1	Albendazole & praziquantel

Annex 7: Drug forecasting and logistics

Drug	Source of drug	Status of procurement (donate/purchased)	Minimum Lead time before delivery	In-country Consignee
ALB for SAC	WHO	Donated	3 months	WHO Country Office
ALB for SAC (3rd round) and adults	END Fund and Other Partners	To be purchased	3 months	RBC/MOH
MEB for U5	WHO, UNICEF, World Relief, WFP	Donated	3 months	RBC/MOH
PZQ for SAC	WHO	Donated	3 months	WHO Country Office
PZQ for adults	END Fund and Other Partners	To be purchased	3 months	RBC/MOH

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