2016 ANNUAL REPORT

COMMUNICABLE DISEASES CLUSTER

World Health Organization
REGIONAL OFFICE FOR Africa

2016

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INTRODUCTION

MESSAGE FROM THE DIRECTOR

We started 2016 with great hopes, as the devastating Ebola outbreak in three West African countries seemed on a firm path towards its end. Governments and their partners in the African Region and organizations from around the world joined successfully in their combined efforts to prevent the outbreak from spreading further. Recovery from regrettable losses of lives, the heavy impact on social and economic development and the consequences to health systems will take time.

The year 2016 marked an important new beginning, as the world came together around the Sustainable Development Goals. This new agenda, agreed to by United Nations Member States in September 2015, centres on people, the planet, shared prosperity, peace and partnerships. These are all the necessary ingredients for improving the health and well-being of humanity. Climate change moved high on the agenda, offering new hope for generations to come, with the adoption of the Paris Agreement on Climate Change in December 2015.

At the African Regional Office (AFRO), implementation of the Transformation Agenda was in full swing. Inspired and led by Dr Matshidiso Moeti – the first woman to ever hold the post of Regional Director of WHO AFRO – this agenda emphasizes pro-results values, smart technical focus, strategic operations, communications and partnerships. All have been embraced as essential drivers of success in a Region with the world's largest burden of infectious diseases, developing economies and fragile health systems – and yet an enormous potential to rise and continue to lift millions out of poverty.

In September 2015, I became Director of AFRO's newly established Communicable Diseases Cluster (CDS) – responsible for re-organizing and leading the work of the WHO African Region on HIV/AIDS, hepatitis, tuberculosis, malaria, neglected tropical diseases and protection of the human environment. This was a time of rapid change.

Countries in our Region have seen the emergence of new challenges and exacerbation of old ones. The technology revolution has opened new frontiers to better health, but its full potential needs to be explored. New alliances with civil society and the private sector have brought bold opportunities for communities to thrive.

At CDS, we have made great strides on various fronts, as you will find in reading this report. We have adjusted to meet expectations, re-shaped to align with new developments and built on what was working well.

Looking back, I think of this year as one of building a boat while sailing at sea. We forged new partnerships and were fortunate to be able to count on the power, network and support of existing ones. Our vision going forward is to cement the gains, expand the reach, conquer new spaces, focus on the essential and account for what we do or fail to do.

The achievements, narrated in this report would have not been possible without the dedication and drive of a small but committed team at Regional and Inter-country levels, the vast network and hard work of our WHO Country Offices and the support from other AFRO Clusters, WHO Headquarters and other WHO Regions. Our valued partners at all levels have been instrumental to our achievements, and we look forward to continuing the journey together.

Dr Magda Robalo Correia e Silva, Director, CDS

ABOUT THE COMMUNICABLE DISEASES CLUSTER

The World Health Organization (WHO) is building a better future for people everywhere by helping them lead healthier lives. At the WHO Regional Office for Africa (AFRO) our focus is on the 47 WHO Member States that constitute the WHO African Region. One of our top goals is to reduce the toll of infectious diseases, and our team of public health experts is devoted to this task.

The overwhelming majority of deaths in the WHO African Region are caused by HIV/AIDS, malaria and tuberculosis (TB). Along with neglected tropical diseases (NTDs), these infections are diminishing Africans' quality of life as individuals and thwarting entire countries' ability to develop vibrant and productive communities, stronger economies and safer societies.

The AFRO and WHO country offices – working in partnership with governments, United Nations agencies and other global and regional partners, non-governmental organizations and the private sector – have been behind dramatic reductions in illness and deaths from these diseases. We know how to reduce their impact – proven policies and strategies for prevention, treatment and for some diseases, elimination, are available, but there is much yet to be done.

Many infectious diseases that are prevalent in Africa are spread by *vectors:* living organisms, such as mosquitoes and other blood-sucking insects, which can transmit disease-causing germs between humans or from animals to humans. A key aspect of our work is to help Member States minimize the spread of diseases through these vectors.

Today, changes in climate and pollution of the environment across Africa are creating a new set of health hazards, including the potential for increased spread of infectious diseases. We are working closely with our partners to help ensure the safety of the air we breathe, the food we eat and the water we drink and to limit the effects of climate change on infectious disease transmission. And we are helping countries find entry points to develop responsive and resilient health systems as they strive to achieve Universal Health Coverage and pursue the health-related Sustainable Development goals and targets.

At AFRO, our mission is to help Member States provide every child, woman and man with the best chance to lead a healthier, longer life.

EXECUTIVE SUMMARY

This is the first annual report produced by the newly established Communicable Diseases Cluster (CDS) of the World Health Organization (WHO) Regional Office for Africa. In this age of the Sustainable Development Goals (SDGs), CDS adheres to the paramount principle of accountability. We believe it is critical to report on progress we have made in our efforts to reduce the toll of infectious diseases and address health challenges posed by environmental determinants in the WHO African Region.

CDS and WHO country offices – working in partnership with governments, United Nations agencies and other global and regional partners, non-governmental organizations and the private sector – have broken new ground in 2016 in many areas. Yet we are fully cognizant of the daunting challenges we face.

Despite the challenges, the CDS team at all levels also has formidable, unprecedented and unique opportunities. This report shows how we capitalized on them in 2016 and strove to realize the vision of the Transformation Agenda and build solid foundations for the years to come. As you page through the report, you will be taken through our key achievements in the various programmes.

HIV/AIDS: Strategize to achieve treatment for all. WHO's new policy recommendation, **Treat All,** removes all limitations on eligibility for antiretroviral therapy (ART) among people living with HIV, which means that all populations and age groups are now eligible for treatment. The expanded use of ART is supported by recent findings from clinical trials confirming that early use of antiretrovirals keeps people living with HIV healthier and reduces their risk of transmitting the virus to their partners. Although HIV/AIDS continues to be a devastating public health problem in the WHO African Region, we saw important progress in 2016. Angola, Benin, Botswana, Cameroon, Kenya, Lesotho, Mali,

Niger and Nigeria adopted and began rolling out this policy. This is encouraging progress. We have often seen slow uptake of new policies, but these countries acted with admirable speed, and we have no doubt that many more will follow suit.

Viral hepatitis: Time to act. Despite the heavy impact of viral hepatitis in Africa, this illness had not received the attention it deserves, but 2016 represented a turning point. Countries in the region acknowledged the need for viral hepatitis prevention, care and treatment and to collect data on the disease to inform policies and action. In 2016, WHO released the WHO Global health sector strategy on viral hepatitis, 2016-2021. The strategy has a vision of eliminating viral hepatitis as a public health problem; this is encapsulated in the global targets for reducing new viral hepatitis infections by 90% and reducing deaths due to viral hepatitis by 65% by 2030, worldwide. Following the release of the strategy, a framework for action on the prevention, care and treatment of hepatitis in the African Region was approved during the meeting of the WHO Regional Committee in August 2016.

Tuberculosis: Move beyond the MDG targets. The African Region has the highest rate of tuberculosis (TB) in the world, but it has achieved the Millennium Development Goal (MDG) target of halting and beginning to reverse the occurrence of new cases of TB. The Region had an 81% cure rate for TB among people who were treated for the first time and completed treatment, which saved hundreds of thousands of lives and prevented thousands of new infections. Although 35% of people with TB in the African Region were co-infected with HIV in 2015, there was impressive progress in reducing the incidence of TB/HIV co-infection, the burden of TB on people living with HIV and the burden of HIV/AIDS on persons with TB. We are encouraged by this progress and will continue working with countries to prevent slip backs.

Malaria: Elimination is no longer just a dream. Ambitious efforts to reduce the impact of malaria yielded impressive results in the African Region. Data for 2015 revealed a 42% decline in the number of cases in sub-Saharan Africa compared to the year 2000. There was also a 58% decline in deaths in children under 5 years of age. Six countries in the African Region now have the potential to eliminate local transmission by 2020. WHO AFRO and partners have provided guidance, training and support for programme performance reviews, evidence-based malaria strategic plan development and enhanced data collection and analysis, which are critical for decision-making.

We also helped to increase coverage of interventions by providing technical support to enable diagnosis with rapid diagnostic tests and treatment of uncomplicated malaria with quality-assured artemisinin-based combination therapy in young children by community health workers and on vector control strategies and approaches.

Neglected tropical diseases: Prevention for all. Countries are making successful efforts, with support from CDS and other key stakeholders and in partnership with donors, including pharmaceutical companies and medicine donation programmes, to meet the aims of the Neglected Tropical Disease Regional Strategy and Strategic plan for 2014-2020. At a side event at the World Health Assembly in May 2016, the Regional Director, Dr Mathisdiso Moeti, launched a major new partnership to help Member States reduce the burden of neglected tropical diseases (NTDs). The Expanded Special Project for Elimination of Neglected Tropical Diseases (ESPEN) will provide national NTD programmes with technical and fundraising support to help them control and eliminate the five NTDs with the greatest burden on the continent, which collectively affect hundreds of millions of people and have the potential to be prevented. Data and evidence are critical to this endeavor. NTDs amenable to treatment also continued to be a significant component of our work. Guinea worm is on the verge of being eradicated, and we have not relented.

Protection of the human environment: Seize the opportunity. Adoption of the Sustainable Development Goals (SDGs) at the United Nations in September 2015 provided new incentives for African countries to confront the environmental challenges facing the Region and affecting people's health. Adoption of the SDGs also brought into focus the unfinished agenda of the 2008 Libreville Declaration on Health and Environment in Africa, a framework that African countries and their development partners agreed on to address the impact of environmental determinants of human health.

In 2017, we will have an even stronger focus on supporting countries' efforts to improve the quality and timeliness of health data – which is so critical for good decision-making on priorities and most importantly, action by Member States, individuals and stakeholders. We will also continue advocating for increased domestic investments in health. We will ensure that whatever we do leads to stronger health systems and universal access to quality health services for all.

HIV/AIDS

GOAL FOR 2016: STRATEGIZE TO ACHIEVE TREATMENT FOR ALL

Where things stood in 2016: Although HIV/AIDS continues to be a devastating public health problem in the WHO African Region (AFRO), we saw important progress based on 2015 data (the most recent year for which data are available). In 2015, 51% of people living with HIV in AFRO knew their HIV status, and more than 12 million were receiving HIV treatment. Treatment coverage with antiretroviral therapy (ART) was 43%, up from less than 1% in 2000. More than 10 million voluntary medical male circumcisions (which prevent sexual transmission of HIV) had been performed between 2000 and 2015 in 14 priority countries, and 75% of pregnant women living with HIV in the region were receiving medicines for preventing mother-to-child transmission (PMTCT).

Millennium Development Goal 6 – "have halted by 2015 and begun to reverse the spread of HIV/AIDS" – was achieved in the African Region. As of 2015, new HIV infections had declined by 41% since 2000, and the number of deaths caused by HIV/AIDS declined by 48% from the peak estimate of 1.5 million deaths in 2005.

How this progress was achieved: Political commitment towards the HIV/AIDS response, bolstered by our coordinated technical support, remains high and continues to grow. There has been expansion in domestic HIV/AIDS financing from Member States and external funding, particularly from the United States President's Emergency Plan for AIDS Relief (PEPFAR); the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund); and other contributors.

WHO's actions: In September 2015, WHO released a new policy recommendation known as **Treat All.** The policy removes all limitations on eligibility for ART among people living with HIV, which means that all HIV infected /positive populations and age groups are now eligible for treatment. The expanded use of ART is supported by recent findings from clinical trials confirming that early use keeps people living with HIV healthier and reduces their risk of transmitting the virus to their partners.

The policy also includes a recommendation that people at substantial risk of acquiring HIV should be offered preventive ART. This new recommendation builds on 2014 WHO guidance to offer a combination of antiretroviral drugs to prevent HIV acquisition, through pre-exposure prophylaxis (PrEP), for men who have sex with men. Following further evidence of the effectiveness and acceptability of PrEP, WHO has now broadened this recommendation to support the offer of PrEP to other population groups at significant HIV risk, such as people who inject drugs. PrEP is an additional prevention choice based on a comprehensive package of services, including HIV testing, counselling and support and access to condoms and safe injection equipment.

Expanding access to treatment is at the heart of a new set of targets for 2020 with the aim to end the AIDS epidemic by 2030. These targets include 90% of people living with HIV being aware of their HIV infection, 90% of those individuals receiving ART, and 90% of people on ART having no detectable virus in their blood. These three targets have collectively come to be known as the 90-90-90 target.

Ending the AIDS epidemic in the African Region will require rapid acceleration of the response over the next five years and then sustained action through to 2030 and beyond. This can only be achieved through renewed political commitment, additional resources and technical and programmatic innovations.

In June 2016, WHO released its Global Health Sector Strategy on HIV, 2016-2021. The strategy builds on public health achievements made in the HIV response and continues the momentum generated by the Millennium Development Goals and universal access commitments. In August, at the 66th WHO Regional Committee for Africa, a Framework for Action on HIV/AIDS in the WHO African Region 2016-2020 was adopted, and it became the task of the CDS team to work with countries to adopt and implement it.

ROLE OF THE HIV/AIDS PROGRAMME

Our role is to:

- Assist countries in the African Region as they implement WHO norms and guidance on HIV/AIDS;
- Provide technical support and strengthen institutional capacity for accelerating and scaling up HIV/AIDS interventions;
- Support member states in resource mobilization for implementing national strategic plans on HIV/AIDS;
- Contribute to the HIV/AIDS regional and global research agenda and support the generation, translation and dissemination of valuable knowledge; and
- Monitor implementation of programmes on HIV/AIDS and integrated programmes and assess trends in countries.

KEY ACHIEVEMENTS ON HIV/AIDS IN 2016: HIGHLIGHTS

Support for adopting new policies and plans

Organized workshops for 31 countries[1] in the African Region (Anglophone, Francophone and Lusophone) to disseminate and promote adoption of the New WHO Guidelines for HIV/AIDS Prevention, Treatment and Care and development of an HIV drug resistance action plan.

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Provided technical and financial support for adoption of the Treat All policy and update of the national guidelines for prevention, treatment and care in **Angola, Benin, Botswana, Cameroon, Kenya, Lesotho, Mali, Niger** and **Nigeria.**

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Helped complete a rapid assessment of **South Africa**'s national plan and identified components of a new national strategic plan on HIV/TB.

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Supported **Côte d'Ivoire** to develop and validate an HIV/AIDS strategic plan.

Support for programme reviews and analyses

Provided technical support for a programme review in **Botswana,** which resulted in a decision to revise the country's testing and treatment guidelines to align them with the 2015 WHO Consolidated Guidelines on HIV Testing Services. This led to improved testing coverage in Botswana.

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A laboratory programme review was conducted in **Swaziland** to assess how HIV viral load testing could be scaled up. The main recommendation made to the Ministry of Health was to begin testing on children, pregnant women and their partners, people for whom treatment failure is suspected and people receiving second line ART because of prior drug resistance. Viral load testing could then be adopted more broadly in a phased manner.

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In **Mali,** technical support was provided to assess the HIV laboratory system and develop a plan for scaling up laboratory services.

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With the Joint United Nations Programme on HIV/AIDS (UNAIDS), we conducted a treatment programme analysis in **Sierra Leone** to develop strategies for improving effectiveness of the Programme and help the Government, funders and other partners plan more effectively for future investments.

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In **Liberia,** a programme review in procurement and supply chain management was supported to ensure the Government and its partners were meeting standards set by the Global Fund to Fight AIDS, Tuberculosis and Malaria.

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With the Intercountry Support Team for Central Africa and the Health Systems Support team, we supported reviews of the HIV programme and laboratory system in the **Democratic Republic of the Congo.**

Training/Capacity building

Training of trainers on HIV testing in **Algeria.**

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Training for health staff on HIV/AIDS case based-surveillance and cascade analysis in **Tanzania.**

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Support provided for production of a national report on HIV/AIDS cascade analysis in **Zimbabwe.**

[1]Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Guinea Bissau, Lesotho, Malawi Mauritania, Mozambique, Namibia, Nigeria, Sao Tome and Principe, Senegal, South Africa, South Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia and Zimbabwe.

Surveillance, data quality and strategic information

Provided support for data quality assurance to **Botswana, Cameroon, Côte d'Ivoire, Ethiopia, Kenya, Malawi, Mozambique, Tanzania, Uganda, Zambia** and **Zimbabwe** on analysis of the cascade of treatment.

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Supported development of the Global Report on Early Warning Indicators for HIV drug resistance in **Angola, Benin, Burkina Faso, Burundi, Cameroon, Central African Republic, Côte d'Ivoire, Democratic Republic of the Congo, Ethiopia, Ghana, Guinea, Kenya, Lesotho, Mali, Mozambique, Namibia, Niger, Nigeria, Senegal, South Africa, Swaziland, Tanzania, Togo, Uganda** and **Zimbabwe.**

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Supported review of the protocol and collection of Early Warning Indicators for HIV drug resistance in **Burkina Faso, Cameroon,** and **Niger.**

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Technical guidance to **Malawi** for the process of laboratory accreditation on HIV drug resistance.

Support for implementing grants

CDS participated actively in 2016 in the Global Fund's Implementation Through Partnership (ITP) project, which supports countries that are encountering problems implementing grants. The problems include: grants starting late; grants falling behind schedule; and countries having difficulty absorbing all the financing they have been awarded.

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The ITP is focusing on 18 countries in the African Region that received allocations greater than US$ 150 million and met one or more of the following criteria:

- Historic fund absorption rates (expenditure vs. budget 2010-2014) of less than 70%; and
- Scale-up of greater than 50% in annual expenditure required; and
- Forecasted grant disbursements for the period 2015 (second quarter) to 2017, suggesting that greater than 20% of the country's allocation will remain undisbursed at the end of 2017.

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The 18 countries are **Benin, Burkina Faso, Cameroon, Chad, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Guinea, Kenya, Malawi, Mali, Mozambique, Niger, Nigeria, South Africa, South Sudan, Tanzania,** and **Uganda.**

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Since 2014, WHO has provided high-quality and timely technical support to 40 countries in the African Region applying for grants from the Global Fund.

STORIES FROM COUNTRIES

South Africa prepares to *treat all*

South Africa has been hit harder by HIV/AIDS than any country in the world. One in 10 South Africans are living with HIV.

Undaunted by the challenge, the Government of South Africa is highly ambitious about conquering AIDS: it has the largest HIV treatment programme in the world, with 3.7 million people receiving antiretroviral therapy (ART) in 2016. Nevertheless, 3.3 million individuals – 47% of people living with HIV in South Africa – are not accessing life-saving ART.

Like most countries, South Africa was, until recently, determining eligibility for ART through a blood test measuring CD4 count (which is lower than normal among people living with HIV and gives an indication of the health of the immune system) and other risk factors. Now, following the release of the WHO Treat All policy, South Africa is preparing to provide ART for every person living with HIV – regardless of immune status – as soon after diagnosis as possible.

In September 2016, CDS disseminated the new WHO consolidated guidelines on the use of antiretroviral drugs for preventing and treating HIV infection to more than 30 HIV priority countries in the African Region. Soon after, South Africa formally adopted the Treat All approach to ART. CDS also supported the development of the National Strategic Plan, which additionally affirms South Africa's adoption of the 90-90-90 targets to accelerate testing, connection to care and initiating ART after HIV diagnosis.

The Government of South Africa expects that by 2022, at least 5.5 million people (including 158 000 children) receiving ART will no longer transmit HIV because the level of HIV in their blood will have been sufficiently lowered. CDS is working with South Africa to reach populations vulnerable to HIV, promote HIV self-testing, prevent HIV drug resistance and support the national pre-exposure prophylaxis programme, which recommends that anyone at "substantial" risk of becoming infected should be offered preventive ART.

STORIES FROM COUNTRIES

Increasing access to HIV services in Cameroon

Cameroon has the most serious HIV/AIDS epidemic in Central Africa. More than 600 000 individuals are living with HIV, of whom an estimated 40 000 people were newly infected with HIV in 2015 alone.

Although access to HIV treatment in Cameroon has improved over the past decade, in 2015 only 27% of people needing ART (168 000) were receiving it. This was well below the average of 54% for the WHO African Region.

In 2016, Cameroon made a new commitment on HIV. Following the regional dissemination of the WHO consolidated guidelines on the use of antiretroviral drugs for preventing and treating HIV infection in 2016, CDS and the WHO country office in Yaoundé began a project with the Ministry of Health to rapidly improve access to ART.

Activities included the following:

- Revision of the national HIV treatment guidelines;
- Update of training materials for HIV service providers;
- Resource mobilization for implementing the **Treat All** policy;
- Development of a plan to accelerate ART access in all 190 health districts in Cameroon;
- Adoption of the task-shifting approach (whereby tasks are transferred, where appropriate, from more qualified to less specialized health workers) to increase patient access to care; and
- Training of health workers to ensure rapid roll-out of ART from 230 to 2750 health facilities.

During the second half of 2016, CDS helped select 22 priority health districts in three regions of Cameroon in which to implement the Treat All policy. Three consultants were recruited to train health workers and help implement the policy in 91 health facilities. Preliminary results found that, using the on-site training approach, the number of health workers trained to provide ART increased from 398 to 1544.

During the six months of the project, 75 386 individuals, including 737 infants who had been exposed to HIV *in utero*, were tested for HIV and 4060 initiated ART. More than 1700 patients who had earlier been lost to follow up were brought back into treatment programmes.

BURDEN OF HIV IN THE AFRICAN REGION

HIV/AIDS continued to be a major public health problem in the WHO African Region.

In 2015:

- Close to 26 million people were living with HIV, of whom 2.3 million were children under the age of 15 years.
- 90% of the children in the world living with HIV were in sub-Saharan Africa.
- 70% of AIDS-related deaths in the world occurred in the African Region.
- Of the 2.1 million new HIV infections, worldwide in 2015, 1.37 million (65%) occurred in sub-Saharan Africa.
- The overall estimate of HIV/AIDS prevalence in the Region was 4.8%.

CHALLENGES TO ENDING HIV/AIDS BY 2030 IN THE AFRICAN REGION

- Despite major progress, the HIV response is heavily funded by external resources with inadequate domestic financing.
- Not all countries are prioritizing HIV.
- There is limited involvement of the private sector and civil society in many countries.
- Many countries have weak health systems and current coverage of services is fragmented.
- There is still strong stigma and discrimination around HIV.
- Countries need more reliable data for sound decision-making and action.
- A reliable supply of needed commodities for prevention, diagnosis and treatment is lacking.
- Emergencies (such as Ebola, political and humanitarian crises and migration) compromise the effectiveness of HIV programmes.
- National health authorities need considerable support to adopt the new WHO recommendations on HIV.
- National capacity for implementing national responses to HIV/AIDS is inadequate.

THE HIV TREATMENT CASCADE

The HIV treatment cascade — also referred to as the HIV care continuum — is a system to monitor the number of individuals living with HIV who are receiving health care and the treatment they need. It was developed to make sure that all individuals who need HIV care stay engaged in it — from an initial stage of being tested for HIV to receiving the treatment needed to suppress the virus and stay as healthy as possible. The system recognizes the new science of viral suppression, which states that when people are engaged in care and taking ART to reduce the amount of virus in their body, it makes them less likely to transmit HIV to others.

HIV testing and diagnosis: The HIV treatment cascade begins with a diagnosis of HIV infection. People who don't know they are infected are not accessing the care and treatment they need to stay healthy. They can also unknowingly pass the virus on to others.

Linking to care: Once people know they are infected with HIV, it is important that they are immediately connected to an informed and competent HIV health-care provider who can offer treatment and counselling.

Staying in care: Because there is no cure for HIV, treatment is a lifelong process.

Taking antiretroviral therapy: ART prevents the HIV virus from making more copies of itself. ART is the recommended treatment for HIV infection and involves using a combination of three or more antiretroviral drugs from at least two different HIV drug classes every day to control the virus.

Achieving a low amount of HIV in the body: By taking ART regularly, a person living with HIV can achieve viral suppression, meaning they have a very low level of HIV in their blood. Lowering the amount of virus helps keep them healthy, helps them live longer and strongly reduces their chance of passing HIV on to others.

TREAT ALL POLICY ADOPTION FOR THE AFRICAN COUNTRIES: STATUS AS OF NOVEMBER 2016

Implementation of the TREAT ALL among adults and adolescents living with HIV in the WHO African Region.

Country wide

Botswana, Cameroon, Ethiopia, Kenya, Malawi, Rwanda, South Africa, South Sudan, Tanzania, Uganda, Zambia, Zimbabwe

Done in large number of treatment sites

Democratic Republic of the Congo, Equatorial Guinea, Mali, Nigeria

Done in small number of treatment sites

Chad, Mozambique, Senegal

Policy adopted, not yet implemented

Angola, Ghana, Namibia

Recommending Treat All later in 2016

Benin, Burkina Faso, Côte d'Ivoire, Mauritania, Togo

Not recommending Treat All in 2016

Central African Republic, Congo, Gabon, Guinea-Bissau, Madagascar, Sierra Leone, Guinea-Bissau

VIRAL HEPATITIS

GOAL FOR 2016: TIME TO ACT

Where things stood in 2016: Despite the heavy impact of viral hepatitis in Africa, this illness has not been adequately prioritized, but 2016 represented a turning point. Countries in the region acknowledged the need for viral hepatitis prevention, care and treatment and to collect data on the disease. Together, Member States have committed to eliminating hepatitis as a public health threat by 2030.

WHO's actions: In 2016, WHO released the WHO Global health sector strategy on viral hepatitis, 2016-2021. The strategy has a vision of eliminating viral hepatitis as a public health problem. This is encapsulated in the global targets for reducing new viral hepatitis infections by 90% and reducing deaths due to viral hepatitis by 65% by 2030, worldwide. Following the release of the strategy, a framework for action on the prevention, care and treatment of hepatitis in the African Region was approved during the meeting of the WHO Regional Committee in August 2016.

What needs to be done: In the African Region, hepatitis B is highly endemic and probably affects an estimated 5–8% of the population, mainly in West and Central Africa. It is estimated that 19 million adults in the Region are chronically infected with hepatitis C. People living with HIV are at special risk of becoming ill with hepatitis and dying from it. About 2.3 million people living with HIV are co-infected with hepatitis C virus and 2.6 million with hepatitis B virus.

The African Region is not alone in its slow motion to address viral hepatitis – countries around the world are facing the same challenges. AFRO, however, faces the biggest hurdles. Before 2016, few countries in the Region had a national viral hepatitis action plan. Treatments for chronic hepatitis B and C have been inaccessible to most patients because of the high prices of medicines, among other constraints.

There are tremendous opportunities to reduce the impact of hepatitis. Effective vaccines are available for preventing viral hepatitis B infections during childhood. The main avenue for hepatitis B transmission in the African Region is from mother to child during birth. This can be prevented through administration of a hepatitis B virus birth dose. There is also a risk of viral hepatitis B and C transmission in health care settings, which can be stopped through the rigorous application of universal precautions for all invasive medical interventions, promotion of injection safety measures and securing the safe supply of blood products.

Ensuring access to sterile injecting equipment and effective drug dependence treatment can prevent and control epidemics of viral hepatitis B and C among people who inject drugs. New oral, well-tolerated medicines and treatment regimens for people with chronic hepatitis C virus infection can achieve cure rates of over 90%. Effective treatment is also available for people with chronic hepatitis B virus infection, although for most people such treatment needs to be lifelong.

ROLE OF THE VIRAL HEPATITIS PROGRAMME

The team's role is to:

- Support countries on raising awareness on the need for prevention, care and treatment of viral hepatitis and the need to work towards elimination;
- Provide normative guidance and generic tools to Member States;
- Provide technical support, catalyze change and build institutional capacity for establishing a public health approach to eliminating hepatitis;
- Help Member States with resource mobilization for implementing the national strategic plans on viral hepatitis;
- Assist countries to strengthen surveillance, monitoring and evaluation systems to report on programme performance; and
- Monitor implementation of viral hepatitis programmes.

KEY ACHIEVEMENTS ON HEPATITIS IN 2016: HIGHLIGHTS

Regional consultation on viral hepatitis control in the WHO African Region

In November 2016, the Communicable Diseases and Family and Reproductive Health Clusters jointly organized the first Regional Consultation on Viral Hepatitis Control in the WHO African Region. The meeting brought together immunization and viral hepatitis focal points from 18 countries, all of which had expressed interest in establishing national viral hepatitis programmes and introducing a birth dose of hepatitis B vaccine to prevent mother-to-infant transmission.

The meeting allowed participants to share experiences and for WHO to provide an update on recent developments in the surveillance, prevention and treatment of viral hepatitis. It focused on the development of national plans and strategies on prevention, diagnosis and treatment and considerations for conducting surveys to collect representative data on the burden of viral hepatitis in the participating countries.

Participants identified priority actions, provided timelines for their implementation and indicated the support they would require to achieve their objectives. There was strong agreement by all for the need to build the capacity of health workers, if progress was to be made.

Development and dissemination of policy materials

Development of Prevention, care and treatment of viral hepatitis in the African region: framework for action, 2016 aligned with the Global Health sector strategy for hepatitis 2016-2021, adopted by Ministers of Health at the 66th Session of the Regional Committee.

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Regional dissemination workshops on the new WHO Guidelines for Hepatitis Prevention, Treatment and Care for 33 Anglophone, Francophone and Lusophone countries **(Angola, Benin, Botswana, Burkina Faso, Burundi, Cape Verde, Cameroon, Côte d'Ivoire, Chad, Democratic Republic of the Congo, Ethiopia, Kenya, Ghana, Guinea-Bissau, Lesotho, Malawi, Mali, Mauritania, Mozambique, Namibia, Nigeria, Sao Tome and Principe, Senegal, South Africa, South Sudan, Swaziland, Tanzania, Togo, Uganda, Zambia** and **Zimbabwe)** to promote adoption and adaptation of the new guidelines by countries and support their implementation.

Technical support

CDS provided financial and technical support to **Eritrea** and **Guinea** to develop their national action plans for viral hepatitis.

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Rwanda developed national guidelines for the prevention and treatment of viral hepatitis, and CDS contributed to this process through desk reviews.

CHALLENGES TO REDUCING THE IMPACT OF VIRAL HEPATITIS IN THE AFRICAN REGION

- Lack of awareness of the threat of hepatitis in the African Region
- Existing obstacles for countries of starting a new programme to tackle the disease
- Inadequate health workforce for the implementation of hepatitis programmes
- Scarcity of epidemiological data on the burden of hepatitis in the African Region
- Insufficient access to medicines and commodities because of high prices
- Domestic funds not allocated yet to implement hepatitis strategies
- Donor funds not yet available to support implementation of country programmes.

FAST FACTS ON HEPATITIS IN THE AFRICAN REGION

Viral hepatitis is an infection of the liver caused by five distinct hepatitis viruses (A, B, C, D, and E). Hepatitis B and C are the most common forms of the disease that represent a public health threat in the African Region.

Because the disease often causes no symptoms, millions of people are unaware they are ill and remain untreated. Consequently, viral hepatitis is a silent epidemic. When left untreated, chronic hepatitis B and C infection can result in liver cirrhosis, a condition where there is irreversible scarring of the liver and which can evolve towards liver cancer.

HEPATITIS B

- Hepatitis B is a viral infection that attacks the liver and can cause both acute and chronic disease.
- The virus is transmitted through contact with the blood or other body fluids of an infected person.
- Children less than 6 years of age who become infected with the hepatitis B virus are the most likely to develop chronic infections.
- Administration of a birth dose of hepatitis B vaccine prevents mother-to-infant transmission and chronic infection.
- There is no specific treatment for acute hepatitis B, but when the disease becomes chronic it can be treated with drugs, including oral antiviral agents. Treatment can slow the progression to cirrhosis, reduce incidence of liver cancer and improve long term survival.

Hepatitis B affects an estimated 100 million people in the African Region (mainly in West and Central Africa).

HEPATITIS C

- Hepatitis C is a liver disease caused by the hepatitis C virus. The virus can cause both acute and chronic hepatitis infection, ranging in severity from a mild illness lasting a few weeks to a serious, lifelong illness.
- The hepatitis C virus is a bloodborne virus. The most common modes of infection are through unsafe injection practices, inadequate sterilization of medical equipment and the transfusion of unscreened blood and blood products.
- Antiviral medicines can cure hepatitis C infection in approximately 90% of cases, thereby reducing the risk of death from liver cancer and cirrhosis, but access to diagnosis and treatment is very low in the African Region.

An estimated 19 million adults in the African Region are chronically infected with hepatitis C.

STORIES FROM COUNTRIES

Establishing the National viral hepatitis programme in Rwanda

Rwanda has one of the highest viral hepatitis rates in the African Region. An estimated 130 000–160 000 people – who represent 4–5% of the population – are affected.

In 2016, Rwanda's government developed a strategic plan for hepatitis testing and treatment and became one of the first countries in the African Region to establish a national viral hepatitis prevention and control programme. Partners, clinicians and more than 200 Ministry of Health staff were engaged in developing the programme, which is now fully integrated with services for blood-borne infections, HIV and sexually transmitted infections. CDS assisted the Ministry of Health by developing training and mentorship materials for doctors and nurses and facilitating training workshops.

Lack of awareness about viral hepatitis is a major barrier to reducing the disease's impact. Working with Rwanda's Ministry of Health, through the WHO Country Office, CDS was actively involved in 2016 in sensitizing the Rwandan population about hepatitis.

On World Hepatitis Day in July, CDS worked with the WHO Country Office to support a series of public events to promote prevention, testing and treatment for hepatitis B and C. The campaign started with a "sensitization walk" from the University Teaching Hospital of Kigali to the city's car-free zone, where free hepatitis testing and vaccination services were provided to the public. The city's high-level officials – including the Vice Mayor of Nyarugenge District in charge of Social Affairs, the President of the Rwanda Organization for Fighting Against Hepatitis, officials from the Rwandan Government and WHO – called on the public to understand hepatitis risks and consequences and act to stop its transmission.

Rwanda is now setting an example for other countries in the Region on how to tackle the hepatitis epidemic. Access to diagnosis and treatment of viral hepatitis in Rwanda has more than tripled since 2014.

Nigeria embarks on an ambitious plan to confront hepatitis

In Nigeria, 20 million people are living with chronic hepatitis B or C. With financial and technical support from CDS and through the WHO Country Office, Nigeria developed its National Policy for the Control of Viral Hepatitis late in 2015. The policy was adopted by the country's 36 states and the Federal Capital Territory of Abuja – all of which maintain a high degree of autonomy in running health programmes – after presentation at the National Council on Health in March 2016.

Subsequently, CDS supported the development of a Five-year national strategic plan for the control of viral hepatitis (2016 – 2020), which was launched and disseminated in July 2016. The National Hepatitis Control Programme began implementing several priority interventions.

They included:

- Raising public awareness;
- In-service training of health-care providers;
- People with chronic hepatitis B or C treated in specialty centers by private medical professionals or by liver specialists;
- Establishment of viral hepatitis B registries; and
- Resource mobilization for implementing the national strategy.

CDS has provided support to the national programme to convene meetings of a national technical working group on viral hepatitis prevention and control, in which WHO national staff participated and provided strategic and technical support. CDS also has supported the revision of national training materials to integrate viral hepatitis into all training packages for health workers, in collaboration with the WHO Country Office.

TUBERCULOSIS

GOAL FOR 2016: MOVE BEYOND THE MDG TARGETS

Where things stood in 2016: Although tuberculosis (TB) continued to represent a massive burden in the African Region – with 1.3 million cases reported to public health authorities in 2015 – efforts to prevent and treat the disease advanced steadily. The Region had an 81% cure rate for TB among people who were treated for the first time and completed treatment, which saved hundreds of thousands of lives and prevented thousands of new infections. However, only about half of the people who needed TB diagnosis and treatment were being reached.

The African Region has the highest rate of TB (incidence) in the world, but it has achieved the Millennium Development Goal (MDG) target of halting and beginning to reverse the occurrence of new cases of TB.) Although 35% of people with TB in the African Region were co-infected with HIV in 2015, there was impressive progress in reducing the incidence of TB/HIV co-infection, the burden of TB on people living with HIV and the burden of HIV/AIDS on persons with TB.

WHO's actions: WHO has supported countries Region-wide to develop and run national TB programmes. In 2016 every country in the Region – apart from a few with conflict situations – were using internationally recommended approaches to TB control.

How this progress was achieved: More and more countries were conducting TB prevalence surveys to accurately measure the number of people affected by the disease and to identify where they live. Between 2012 and 2016, The Gambia, Ghana, Kenya, Malawi, Nigeria, Rwanda, Sudan, Uganda, Tanzania, Zambia and Zimbabwe all conducted national TB prevalence surveys. This represents enormous progress from the earlier approach, which involved making estimates and developing models for prevalence. We also saw new efforts on drug-resistant TB (DR-TB). As of 2016, 39 of 43 countries that had ever reported cases of DR-TB had established treatment programmes.

Burkina Faso, Cameroon, the Central African Republic, Chad, Côte d'Ivoire the Democratic Republic of the Congo, Gabon, Guinea, Rwanda, and Swaziland had introduced a comparatively more effective short course treatment for drug resistant TB; and Ethiopia, Kenya, Namibia and South Africa had introduced bedaquiline and delamanid into their treatment programmes. These two new drugs were not recommended by WHO for use in DR-TB treatment until 2014 and their introduction is an important step forward in confronting DR-TB.

The African Region has made outstanding progress in addressing the challenges posed by TB/HIV. In 2015, more than 75% of people diagnosed with TB were tested for HIV. Of those who tested positive, more than 80% were linked to ART programmes. Among the six WHO Regions, only the Americas had also achieved this level of progress on combatting TB/HIV co-infection.

What needs to be done: Although the WHO African Region is home to less than 13.5% of the world's population, an estimated 26% of TB cases worldwide occurred in this Region in 2015. One of the most critical steps to reducing the number of TB cases in a region is to ensure everyone affected by the disease is diagnosed and treated early on and therefore become unable to spread it. In the African Region, however, only an estimated 48% of people affected with TB had access to TB treatment services in 2015. This relates to: poor access generally to health services; geographical barriers in hard-to-reach areas; financial barriers, including high out-of-pocket expenditures; and inadequate engagement of private health facilities. Access to diagnosis was even lower, because many facilities able to supervise treatment lack appropriate laboratory and X-ray facilities.

Much more action is needed on drug-resistant TB, but the African Region remains ill-equipped to assess drug resistance by testing whether patients are responsive to first- and second-line drugs. In much of the world, supranational reference laboratories – which are internationally recognized for quality assurance – play an important role in building the capacity of diagnostic facilities and staff. There are 31 such laboratories worldwide, but only three of them are in the African Region, and all are overstretched.

The risk of developing TB is estimated to be between 26 and 31 times greater in people living with HIV than among those without HIV infection. High TB/HIV co-infection rates continue to drive the TB epidemic, especially in Southern Africa, where HIV rates among TB patients reach up to 70%. It has become clear that the two epidemics must be approached together. Diagnosis and treatment of the two infections must be integrated into a "one-stop-shop" arrangement that allows patients to receive care for both infections at one service point.

ROLE OF THE TB PROGRAMME

CDS supports countries throughout the African Region in their efforts to tackle the TB epidemic. Our goal is to facilitate the availability of affordable and equitable access to quality prevention, treatment and care services for TB.

Our activities include:

- Developing policies, strategic guidance documents, guidelines and manuals;
- Helping countries develop TB control programmes to translate the policy and strategy documents into services;
- Providing technical support to build the capacity of national TB programmes;
- Conducting surveillance, monitoring and evaluation of TB programmes;
- Providing technical assistance for planning and conducting programmatic research such as evaluating effectiveness of models of care delivery; and
- Ensuring technical support for planning and conducting surveys to measure the impact of interventions that are being delivered to communities such as national TB prevalence surveys and anti-TB drug resistance surveys.

FAST FACTS ON TB

- Tuberculosis (TB) is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. TB is curable and preventable.
- TB is one of the top **10 causes of death worldwide.**
- In 2015, 10.4 million people fell ill with TB and 1.8 million died from the disease (including 400 000 people with HIV). Over 95% of TB deaths occur in low- and middle-income countries.
- Six countries account for 60% of the total, with India leading the count, followed by Indonesia, China, Nigeria, Pakistan and South Africa.
- In 2015, an estimated 1 million children became ill with TB and 170 000 children died of TB (excluding children with HIV).
- TB is a leading killer of HIV-positive people: in 2015, 35% of HIV deaths were due to TB.
- Globally in 2015, an estimated 480 000 people developed multidrug-resistant TB (MDR-TB).
- TB incidence has fallen by an average of 1.5% per year since 2000. This needs to accelerate to a 4–5% annual decline to reach the 2020 milestones of the "*End TB Strategy*".
- An estimated 49 million lives were saved through TB diagnosis and treatment between 2000 and 2015.
- Ending the TB epidemic by 2030 is among the health targets of the newly adopted Sustainable Development Goals.

KEY ACHIEVEMENTS ON TB IN 2016: HIGHLIGHTS

Strategic alignment

An important part of CDS' work with countries in 2016 revolved around two major shifts in the TB landscape.

In May 2014, the World Health Assembly approved the End TB Strategy, which aims to: reduce TB deaths by 90%; cut new cases by 80% between 2015 and 2030; and ensure that no family is burdened with catastrophic expenses because of TB. In 2016, CDS was actively engaged in helping countries start to adapt and implement the strategy and confront unfinished business from the MDG era while taking on board SDG goals on TB and Universal Health Coverage.

As it did for HIV grants, CDS collaborated actively on the Implementation Through Partnership project of the Global Fund. This project aims to support countries that are encountering problems implementing Global Fund grants by alleviating bottlenecks and increasing operational efficiency and effectiveness.

Policy and strategic planning

Conducted reviews of the national TB control programmes of **Madagascar, Namibia, Rwanda, Senegal, Zambia** and **Zimbabwe** to:

- Inform development of new strategic plans aligned with the SDGs and End TB Strategy and
- Assist with applications to the Global Fund for new funding windows opening in March 2017.

Programme implementation

CDS provided the following support to countries to meet the milestones of the Implementation through Partnership initiative of the Global Fund:

Guinea: to strengthen the TB laboratory network.

Burkina Faso: to develop and implement a plan to install and maintain the Xpert MTB/RIF assay (a nucleic acid amplification test that detects the presence of TB bacteria and tests for resistance to the anti-TB drug rifampicin); which included installation of equipment and training of clinicians and laboratory technicians.

Côte d'Ivoire: to assess 52 of 62 TB treatment sites and set up an expansion plan for new TB treatment sites and laboratory infrastructure.

Niger: to develop a roll-out plan for using the Xpert MTB/RIF assay and begin implementing a plan to find a larger proportion of people affected by MDR-TB and strengthen infection control practices.

Mali: to expand the MDR-TB programme.

In 11 French-speaking countries of Central and West Africa (Benin, Burkina Faso, Cameroon, Côte d'Ivoire, the Democratic Republic of the Congo, Guinea, Mali, Niger, Senegal, Chad and **Togo):** jointly with the Global Fund, sought to identify actions needed to speed up utilization of Global Fund resources.

Control of drug-resistant TB

CDS continued implementing a memorandum of understanding with the Global Fund through which CDS monitors the implementation of Global Fund grant agreements for drug-resistant TB. The arrangement requires that an annual report be submitted to the Fund demonstrating that countries are following international standards and ensure consistency of interventions. An adverse report leads to suspension or termination of the Programme Management of Drug-Resistant TB component of the grant.

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To help secure continued funding, in 2016 CDS conducted reviews and provided technical support to 24 countries **(Burkina Faso, Cape Verde, Côte d'Ivoire, Ethiopia, The Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Liberia, Malawi, Mali, Mauritania, Namibia, Niger, Rwanda, Senegal, Sierra Leone, Swaziland, Togo, Uganda, Zambia** and **Zimbabwe).** Support included follow-up missions, technical assistance to improve laboratory and treatment practices, development of new guidelines and expansion plans and drug resistance surveys.

TB laboratory network strengthening

Assessed the quality of TB smear microscopy (examination of a patient's sputum for the presence of TB bacteria) and testing of TB bacteria for drug resistance in all 16 countries in the African Region that have been identified by WHO as having a high TB burden **(Angola, Congo, Central African Republic, the Democratic Republic of the Congo, Ethiopia, Kenya, Lesotho, Liberia, Mozambique, Namibia, Nigeria, Sierra Leone, South Africa, Tanzania, Zambia** and **Zimbabwe).** A supranational reference laboratory performed quality assurance of the tests.

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Published a Regional Framework for Strengthening TB laboratory services jointly with the Global Laboratory Initiative (a working group of the Stop TB Partnership that is hosted at WHO headquarters)

Surveys and impact measurement

Support was provided to the following countries:

Kenya and **Zambia** for completion of national TB prevalence surveys to determine the burden of TB in their countries with the result that both countries used findings to inform new programme priorities and targets.

Botswana, Lesotho, Mozambique, Namibia, South Africa and **Swaziland** to develop survey protocols.

Burkina Faso, Côte d'Ivoire, Kenya, Namibia, South Africa, Togo and **Zimbabwe** to complete surveys to measure the burden of DR-TB in their countries to inform treatment plans.

Research

Working under the umbrella of the West African TB Research Network (WARN-TB), CDS provided support to 15 West African countries to conduct a pilot study focused on uploading their historic TB data into a District Health Information System (DHIS2), a web-based, open-source information system with visualization features including a geographic information system, charts and pivot tables. The project also involved developing action plans for implementing an electronic data capture system.

WARN-TB is a project created in 2015 by the WHO Special Programme for Research and Training in Tropical Diseases (TDR). It focuses on developing more effective approaches to TB care, using implementation and operational research to investigate barriers and design new solutions for individual countries **(Benin, Burkina Faso, Cape Verde, Côte d'Ivoire, The Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Sierra Leone, Senegal** and **Togo)** and the entire sub-region. The DHIS2 TB-module was developed by WHO and the University of Oslo, Norway.

STORIES FROM COUNTRIES

Kenya: New hope for children affected by TB

TB is often missed or overlooked in children because they tend to present in health-care settings with nonspecific symptoms, and because diagnosis is difficult. Consequently, the magnitude of the childhood TB epidemic cannot easily be measured. WHO estimates that worldwide, at least 1 million children become ill with TB each year and over 200 000 die of the disease. There are only rough estimates for the extent of the problem in the African Region.

Until recently, children whose TB was identified had a difficult road to achieve a cure. TB treatment requires taking a mix of three drugs over six months. All available formulations were in the form of tablets that had to be crushed or swallowed whole — not an easy task for most children.

Now new child-friendly formulations for TB treatment are available in the form of dispersible tablets that disintegrate in water or a small amount of breast milk. They combine the needed mixture and dosage of drugs to treat drug-sensitive TB in children weighing less than 25 kg. In 2016, WHO prequalified the use of this improved formulation, the development of which was overseen by the TB Alliance, a non-profit organization.

In 2016, Kenya became the first country in the world to roll out this new formulation through its national TB programme. "Kenya is playing a role in the fight against childhood TB by being the first to introduce improved TB medicines for children," Cabinet Secretary for Health, Dr Cleopa Mailu told Kenya's Standard news service in September 2016.

CHALLENGES TO ENDING TB IN THE AFRICAN REGION

- Not enough people with TB properly diagnosed.
- Inadequate tracing of people who have been in contact with TB patients and might be ill themselves.
- Over 25 million people in sub-Saharan Africa living with HIV and vulnerable to TB, which continues to sustain the TB epidemic.
- Slow uptake of and access to newer, more sensitive molecular diagnostic technologies in national TB programmes.
- Low treatment success rates in many countries because patients do not complete proper treatment or are lost to follow-up.
- Insufficient health workforce.
- Inadequate financial resources to undertake planned activities.

Over 25 million people in sub-Saharan Africa living with HIV are vulnerable to TB, which continues to sustain the TB epidemic

LAUNCH OF A REGIONAL FRAMEWORK FOR STRENGTHENING TUBERCULOSIS DIAGNOSTIC NETWORKS IN AFRICA

TB diagnostic services in the African Region are hindered by several challenges: weak strategic and joint planning with national TB programmes; heavy reliance on external funding; inadequate infrastructure and biosafety; low staff capacity and numbers; lack of integration within the health system; and insufficient quality monitoring. In 2016, the Global Laboratory Initiative (GLI) for Africa launched a new framework for strengthening TB diagnosis in the context of the End TB Strategy.

The goal of the framework, which covers the years 2016-2020, is to support countries in the African Region to achieve quality-assured, accessible and sustainable TB laboratory services through national TB control programmes. CDS, along with the African Region and international partners of GLI-Africa – which includes the African Society for Laboratory Medicine, the United States Centers for Disease Control and Prevention, the Foundation for Innovative New Diagnostics (FIND) and the United States Agency for International Development – are assisting countries with development and strengthening of national TB laboratory strategic plans as an integral component of national health policy.

The partners are also supporting countries to monitor and evaluate their strategic plans for TB laboratory diagnosis. They will work with the African Region's three supranational reference laboratories (in Algeria, South Africa and Uganda) and strive to help create new supranational reference laboratories and national centres of excellence in Africa.

Special priority is being given to countries:

- With a high burden of TB, TB/HIV or DR-TB;
- Lacking sufficient capacity for high-quality diagnosis by microscopy, Xpert MTB/RIF or drug susceptibility testing;
- That are implementing a drug-resistance survey, prevalence survey or other laboratory projects; and
- Which already have national TB reference laboratories with the potential to become supranational reference laboratories.
  WHO Country Office.

MALARIA

GOAL FOR 2016: MALARIA ELIMINATION IS NO LONGER JUST A DREAM

Where things stood in 2016: Ambitious efforts to reduce the impact of malaria yielded impressive results in the African Region. Data for 2015 (the most recent year for which they are available) revealed a 42% decline in the number of cases in sub-Saharan Africa compared to the year 2000. There was also a 58% decline in deaths in children under 5 years of age. Six countries in the African Region now have the potential to eliminate local transmission by 2020. Malaria elimination is the interruption of local transmission (reduction to zero incidence of indigenous cases) of a specified malaria parasite species in a defined geographic area; continued measures are required to prevent re-establishment of transmission.

How this progress was achieved: WHO Member States in the African Region have scaled up cost-effective methods of prevention and treatment through stronger leadership and greater political commitment to their malaria programmes. A robust global partnership and better coordination between actors also has played a critical role.

WHO's actions: WHO AFRO and partners have provided guidance, training, and support for programme performance reviews and enhanced data collection and analysis, which are critical for decision-making. We have also helped to increase coverage by providing technical support to enable diagnosis with rapid diagnostic tests and treatment of uncomplicated malaria with quality-assured artemisinin-based combination therapy in young children by community health workers.

What needs to be done: 44 countries in the WHO African Region have zones that are endemic for malaria. Although malaria illness and deaths have decreased significantly in the African Region, the disease remains a major public health and development problem. In 2015, 834 million people were at risk of the disease and 83% of those people were at high risk.

Many countries in the Region are still challenged by the need to scale up malaria prevention and treatment. In countries with high or moderate rates of malaria transmission, national malaria control programmes need to maximize the reduction of malaria cases and deaths through quality-assured vector control, chemoprevention, diagnostic testing and treatment of confirmed malaria cases.

ROLE OF THE MALARIA PROGRAMME

Saving lives

The Malaria Programme in the WHO African Region supports countries in their efforts to scale up evidence-based approaches to prevention and treatment of malaria with the goal of making these interventions available to every person at risk in the context of Universal Health Coverage and reducing malaria illnesses and deaths.

These approaches include:

- **Vector control:** Reducing exposure to the mosquitoes that transmit malaria;
- **Preventive treatment:** Administering medications – an approach called *chemoprophylaxis* – that prevent malaria in young children in selected countries with short transmission seasons, during periods of high malaria risk; and administering *Sulfadoxine-pyrimethamine* at least three times during pregnancy among women living in areas with a high burden of malaria (an approach called Intermittent-Preventive Therapy);
- **Rapid diagnosis** when signs and symptoms of malaria and are present;
- **Treatment** with quality-assured medication for malaria (artemisinin-based combination therapies).

Reducing the burden

Boosting efforts on elimination: Supporting countries with required skills and tools as they intensify their efforts to eliminate malaria, especially in areas with very low transmission.

Strengthening surveillance systems: Helping to ensure effective allocation of limited resources and take decisive action, through data-driven programme planning and evaluation of progress and impact.

Technical support provided by CDS is in line with the new Global Technical Strategy (GTS) for malaria and the AFRO framework for the implementation of the strategy, which emphasize three major pillars:

- Ensure universal access to malaria prevention, diagnosis and treatment;
- Accelerate efforts towards malaria elimination and attainment of a malaria-free status; and
- Transform malaria surveillance into a core intervention.

We support countries with required skills and tools as they intensify their efforts to eliminate malaria

KEY ACHIEVEMENTS ON MALARIA IN 2016: HIGHLIGHTS

Development of strategies, technical materials and publications

A strategy tailored for the African Region: A Framework for the implementation of the Global Technical Strategy for Malaria 2016-2030 in the African Region was adopted by Member States during the 66th session of WHO Regional Committee for Africa in August 2016. The framework describes interventions and actions countries need to prioritize to accelerate efforts towards elimination of malaria in Africa by 2030.

Steps towards elimination: WHO has identified critical steps necessary for malaria elimination in African countries with low transmission of the disease. One of them is administering a single low-dose of the drug primaquine along with the respective first-line artemisinin-based combination therapy used in that country. The objective is to clear parasitic cells in their early stage of development from the blood of individuals who have malaria, reducing the likelihood they can transmit them to malaria vector species which can, in turn, transmit the disease to other individuals.

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The CDS malaria team, along with colleagues from the WHO Global Malaria Programme, provided technical expertise during a meeting in London on the use of single low-dose primaquine in March 2016. Participants in the meeting – who included malaria programme managers from African countries, researchers, donors and industry partners – agreed there was enough evidence to recommend this strategy to countries that have malaria elimination programmes. A roadmap for countries to adopt this measure was also developed.

Support to countries

National plans: CDS supported 14 countries to develop or update their national malaria strategic plans. As part of the overall support provided, guidelines for strategic planning were reviewed to include more detailed analysis of the epidemiology of malaria to better orient activities that would allow for more domestic investments. The following countries benefited from this support: **Benin, Botswana, Burkina Faso, Central Africa Republic, the Democratic Republic of the Congo, Equatorial-Guinea, Guinea, Madagascar, Mali, Mauritania, Sao Tome and Principe** and **Senegal.**

Data quality assessment: WHO has developed two generic tools for assessing the quality of malaria data. In 2016, CDS supported the development of a tailored, national data quality assessment tool, based on the generic model in mainland Tanzania and Uganda, both of which have a high burden of malaria. Following development of this tool, health personnel across the country – including staff responsible for Malaria and Integrated Management of Childhood Illnesses (IMCI) programmes – received training on its use.

Collection of entomological data: In 2016, the CDS malaria team created materials aimed at helping countries in the Region develop a systematic approach to collecting entomological data on malaria-vector species. These include an operational manual for malaria vector surveillance in the African Region and a WHO African Region training manual for malaria vector surveillance. The objective was to give countries tools for consistent data collection with the aim of coordinated and meaningful decision-making.

Insecticide resistance: Insecticide-treated bed nets and indoor residual spraying with insecticides remain the keystones of malaria prevention throughout the African Region. Their use is especially important in countries striving for malaria elimination.

These approaches are challenged, however, by growing resistance to insecticides by anopheline mosquitoes. In 2016, CDS provided technical guidance to **Botswana, Burkina Faso, Côte d'Ivoire, Mauritania, Mozambique, Niger** and **Zimbabwe** as they developed insecticide resistance monitoring and management plans (IRMMP). The overall goal of the IRMMP is to maintain the effectiveness of valuable insecticides used in vector control interventions, despite the threat of resistance. It is also aimed at preventing or delaying resistance of malaria vector species to insecticides and regaining the susceptibility of malaria vector populations in which resistance has already been observed.

Data management and e-software: CDS oriented malaria data managers and health observatory experts from 20 out of 47 countries in the WHO African Region on data management and e-health software applications. The objective was to reinforce their capacity to manage malaria data and use the information to guide policy and take action. CDS additionally organized capacity building workshops on malaria data management for all countries in the African Region.

Mobilizing community-based care: Integrated Community Case Management (iCCM) is a strategy aimed at providing timely and effective treatment of malaria, pneumonia and diarrhoea to children living in communities with limited access to health-care facilities. The availability of high-quality rapid diagnostic tests (RDTs) for malaria has made testing (and then treatment) possible in such communities. As part of iCCM, front-line workers at the community level are trained, supplied and supervised to diagnose and treat children for malaria using artemisinin-based combination therapies, while oral antibiotics, oral rehydration salts and zinc are administered for treatment of diarrhoea and pneumonia. In 2016, the CDS malaria team collaborated with the Child, Adolescent Health and Nutrition (CAN) Programme to support rapid implementation of iCCM in **the Democratic Republic of the Congo, Malawi, Mozambique, Niger** and **Nigeria.**

Monitoring efficacy of malaria treatment: WHO asks countries in the African Region to do routine studies every two years on the efficacy of malaria treatment with artemisinin-based combination therapy to ensure early detection of drug resistance. The findings of these studies also provide evidence for guiding national malaria treatment policy. In 2016, CDS provided the following support:

Conducting therapeutic efficacy tests; This was done in **Angola, Burundi, Republic of Congo, Equatorial-Guinea, the Democratic Republic of the Congo, Gabon, The Gambia, Kenya, Mozambique, Nigeria, Sierra Leone, Tanzania, Uganda, Zambia,** and **Zimbabwe.**

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Finalization of the protocol for therapeutic efficacy testing in **Burkina Faso, Liberia, Guinea-Bissau** and **Sao Tome and Principe.**

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Support to complete comprehensive documentation of therapeutic efficacy testing conducted from 2005-2015 in **Cameroon** and **Côte d'Ivoire.**

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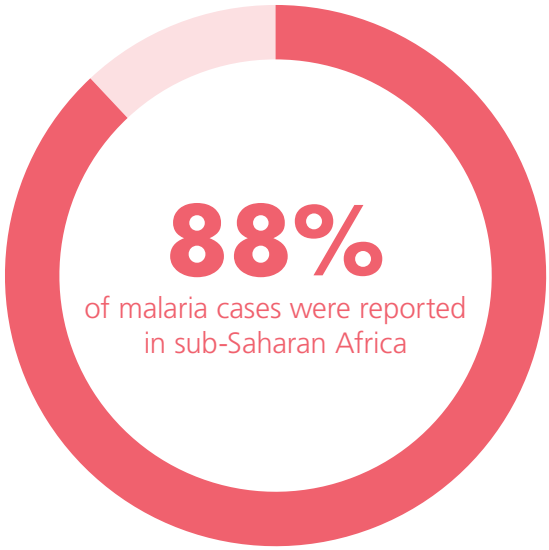
Improving malaria laboratory diagnostic capacity: With support from CDS and the WHO Country Offices, 12 senior laboratory technicians from **Benin, Cape Verde, Guinea, Guinea-Bissau, Mauritania** and **Togo** went through WHO competency evaluation on microscopy for malaria at the University of Cheick Anta Diop (UCAD) in Dakar, Senegal, in April 2016. An additional external competency assessment for malaria microscopy was organized for **Angola, Chad, Equatorial Guinea, Sao Tome and Principe** and **Senegal** with support from UCAD and the African Medical and Research Foundation (AMREF).



In 2015, there were an estimated **188 million** cases of malaria **(88%)** in sub-Saharan Africa with an incidence rate **2.7** higher than in all regions considered together at risk of malaria (**246** per **1000** population against **91** per **1000**).

Similarly, it is estimated that in 2015, **90%** of malaria deaths **(395 000)** were in the WHO African Region where again the estimated malaria death rate was **2.7** higher than the average at global level (**52** per **100 000** population at risk of deaths due to malaria against **19** per **100 000**).

CHALLENGES TO MALARIA ELIMINATION IN THE AFRICAN REGION

Obstacles to preventing and treating malaria

- Shortages of health workers with the right mix of skills
- Inadequate funding for malaria
- Abrupt shortages of diagnostic tests, treatment, prevention or other needed items to prevent, diagnose, and treat malaria, leading to outbreaks in some settings
- Gaps in use of available malaria interventions
- Threat of resistance to antimalarial medicines and insecticides
- Inadequate strategies to reach mobile and displaced populations
- Availability of fake (counterfeit or poor quality) medicines
- Difficulties in purchasing medicines for radical treatment to prevent relapse (primaquine)
- Delayed or inadequate response to malaria outbreaks and epidemics
- Health systems not strong enough to provide universal coverage of malaria prevention and treatment interventions
- Data collection and the ability to manage data still inadequate, making it difficult to obtain a full picture of the epidemiological situation, detect malaria outbreaks and target interventions to the areas where they are needed.

MALARIA ELIMINATION PARTNERSHIP IN SOUTHERN AFRICA MOVES FORWARD

The Southern Africa Development Community (SADC) has engaged in a coordinated regional approach to eliminating malaria in eight countries (Angola, Botswana, Mozambique, Namibia, South Africa, Swaziland, Zambia and Zimbabwe). SADC's initiative, Malaria Elimination 8 (E8), provides a platform for these countries to collaborate more effectively with each other and partner with SADC and international partners, including WHO, as they develop and implement elimination strategies. Two of the countries – Botswana and Swaziland – each have less than 500 cases of malaria each year and are pursuing full elimination by 2020.

The CDS team in the WHO Regional Office for Africa has been instrumental in supporting the development of the malaria elimination framework for the eight countries and played a key role in helping to obtain a grant from the Global Fund to fight AIDS, Tuberculosis and Malaria to finance critical elements of the initiative. In 2016, WHO – as a member of the E8 Technical Committee – led the training and certification of expert microscopists, which will enable the high-quality diagnostic reporting required for malaria elimination certification. The CDS team also provided technical advice to malaria programme managers in each country.

A strong surveillance programme is considered a core intervention for all malaria programmes. In 2016, a regional platform was established for sharing malaria surveillance data between the eight countries with technical support from CDS. This platform will help countries track cross-border movement of malaria and should help reduce imported malaria cases in the region. The E8 Secretariat, in collaboration with the eight countries, has helped to advance the global scientific agenda on malaria, authoring a position paper on mass drug administration (MDA) strategies for malaria elimination, in close consultation with the WHO.

STORIES FROM COUNTRIES

Algeria aims for certification of malaria elimination

Algeria was one of the world's first countries to document experience with malaria, in the 12th century. In the first half of the 20th century, malaria was still endemic and caused millions of deaths.

In 1963, working with WHO, Algeria joined with Morocco and Tunisia to launch a malaria eradication programme. By 1986, Algeria was no longer endemic for the disease. However, it was soon to face a new challenge: importation of malaria from the south. Following construction of the trans-Saharan route between Alger and Lagos, Nigeria, and increased movement of people across the Algerian border, malaria resurged and eventually became endemic in four provinces (*wilayas*).

Not to be discouraged, Algeria's malaria programme persisted in investigating every case, with the aim of eliminating malaria, and running awareness-raising campaigns to encourage engagement by the country's population. Finally, in 2014, not a single case of endemic malaria was recorded in Algeria. National authorities believe that all 747 cases in 2015 were either imported by a person who entered the country sick with malaria or transmitted from a traveller to a local resident. With no malaria transmission, Algeria is prepared to seek certification of elimination by 2018. The national malaria programme enlisted the WHO Country Office to help prepare the necessary dossier.

Certification of malaria elimination is the official recognition by WHO of a country's malaria-free status. WHO grants this certification when a country has proven, beyond reasonable doubt, that the chain of local malaria transmission by *Anopheles* mosquitoes has been interrupted nationwide for at least three consecutive years. The final decision on granting a certification of malaria elimination rests with the WHO Director-General.

STORIES FROM COUNTRIES

Ghana: WhatsApp in malaria control?

Social media pundits, market researchers and a host of other trend watchers have put considerable energy into understanding the runaway success of the mobile app, WhatsApp – a free, cross-platform and end-to-end encrypted messaging application for smart phones. It uses the Internet to make voice calls, one-to-one video calls, send text messages, images, GIFs, videos, documents, audio files, phone contacts and voice notes to other users using standard cellular mobile numbers.

Much of the attention has focused on the app's popularity for personal connections – especially among young people. In Ghana, the app has entered a new realm. In February 2016, health information officers began using a WhatsApp platform to improve the quality of malaria data. The platform lets them share information on data management, timeliness and completeness of reporting and to identify quality issues.

Here are a couple of examples of recent communications on WhatsApp that took place in 2016 and drew attention in real-time to data issues that needed to be solved quickly.

Ghana HI Group

Kofi: Today is 14th, the last day for achieving Timeliness for the month of October.

Regional MJP Group

UE Stephen: …it appears a lot of your facilities and mine as well have almost run out of space in the midwife returns booklet and NMCP should try and get us some before facilities start using the old formats again because we saw some already making photocopies of the old forms to report with June ending.*

"Feedback is an important aspect of data management and in particular the use of data to inform decision-making and action," says Dr Felicia Owusu-Antwi, a malaria programme officer in the WHO Ghana country office. "There were already several feedback mechanisms in Ghana, such as quarterly subnational reviews, but the WhatsApp platform provides something new, because it provides quick and real-time solutions to practical problems."

The platform now supports timely dissemination of malaria control activities and subnational training opportunities. It also facilitates distribution of malaria commodities to health facilities and monitoring of stock outs.

*National Malaria Control Programme.

FAST FACTS ON MALARIA

- Malaria is caused by Plasmodium parasites. The parasites are spread to people through the bites of infected female *Anopheles* mosquitoes, called "malaria vectors". There are four parasite species that cause malaria in humans. Two of these species – *P. falciparum* and *P. vivax* – pose the greatest threat.
- *P. falciparum* is the most prevalent malaria parasite on the African continent. It is responsible for most malaria-related deaths worldwide.
- Malaria is preventable and curable; increased efforts are dramatically reducing the malaria burden in many places.
- Sub-Saharan Africa carries a disproportionately high share of the global malaria burden. In 2015, the region was home to 90% of malaria cases and 92% of malaria deaths.
- There is currently a global effort to eliminate malaria in targeted countries. Malaria elimination is defined as the interruption of local mosquito-borne malaria transmission; continued measures are required to prevent re-establishment of transmission.

NEGLECTED TROPICAL DISEASES

GOAL FOR 2016: PREVENTION FOR ALL

Neglected tropical diseases (NTDs) are a group of diseases that place a constant and heavy burden primarily on the poorest, most marginalized and isolated communities in the world. Forty percent of the global burden of NTDs is in Africa, where these diseases destroy lives, prevent children from attending school and keep communities in generational cycles of poverty. A study by Erasmus University projects that reaching WHO's 2020 goals for these diseases would generate an estimated $565 billion in additional productivity by 2030.

CDS focuses its efforts on combatting the 11 NTDs[2] that have the greatest impact on people in the African Region and for which there are effective preventive strategies or reliable diagnostic tests and effective treatment. Ultimately, the aim is elimination or eradication of these diseases. WHO divides these diseases into two categories:

- Diseases for which availability of safe and effective drugs make it feasible to implement *preventive chemotherapy* (PC) for entire populations at risk of becoming ill with them. This approach is called *mass drug administration.* The diseases include: lymphatic filariasis (elephantiasis); onchocerciasis (river blindness), schistosomiasis, soil-transmitted helminthiasis (round-worms, hook-worms and whip-worms); and blinding trachoma.
- Diseases that require diagnosis and medical care for affected individuals, an approach called *case management* (CM). These diseases are: Buruli ulcer; dracunculiasis (Guinea worm disease); human African trypanosomiasis (sleeping sickness); leishmaniasis; leprosy; and yaws (endemic treponematose). Prompt diagnosis and treatment of these diseases reduces disability and deaths and prevents their spread.

Since 2015, CDS has recommended an integrated strategy for case management – in which two or more disease are treated simultaneously – to be used in countries where combinations of leprosy, Buruli ulcer, yaws, human African trypanosomiasis and leishmaniasis coexist. In 2016, Liberia, for example, developed an integrated strategic plan for leprosy, Buruli ulcer, yaws and lymphatic filariasis complications. Togo carried out two training workshops for district level staff on leprosy, Buruli ulcer and yaws.

Where things stood in 2016: In 2015, 41 countries in the WHO African Region were meeting WHO standards for mass drug administration, up from 11 in 2006. Two countries (Malawi and Togo) had made sufficient strides to be able to stop mass drug administration nationwide for lymphatic filariasis while 10 (Benin, Burkina Faso, Cameroon, Ghana, Madagascar, Mali, Niger, Nigeria, Tanzania and Uganda) have been able to discontinue this intervention in some districts.

As for diseases requiring case management, the number of cases of Buruli ulcer, human African trypanosomiasis and leprosy collectively declined from 35 799 in 2011 to 27 745 in 2015. Forty countries were certified as having no local transmission of Guinea worm disease. Only four countries – Chad, Ethiopia, Mali and South Sudan – remain endemic for the disease, but Mali reported zero cases in 2016 for the first time. Angola and the Democratic Republic of the Congo are undergoing verification for and certification of absence of local transmission of the disease, and one country (Kenya) entered the pre-certification stage.

[2]The 11 NTDs are: Buruli ulcer, Guinea worm disease, human African trypanosomiasis, leishmaniasis, leprosy, lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiasis, trachoma and yaws.

How this progress was achieved: In 2015, the most recent year for which data are available, 603 million people in 44 countries in the WHO African Region required preventive chemotherapy for lymphatic filariasis, onchocerciasis, schistosomiasis, soil-transmitted helminthiasis and blinding trachoma. Thirty countries were able to deliver preventive chemotherapy to 309 million people, meaning that 50.9% of people who required preventive chemotherapy received it.

WHO's actions: Countries have been working, with support from CDS, and in partnership with donors, including pharmaceutical companies and medicine donation programmes, to meet the aims of the NTD Regional Strategy and Strategic Plan for 2014-2020.

The strategy aims to build national NTD programmes capable of achieving elimination of NTDs in endemic countries in the African Region through fulfilment of four strategic objectives:

1. Strengthen country ownership and government-led advocacy, coordination and partnerships;
2. Enhance planning for results, resource mobilization and financial sustainability of national NTD programmes;
3. Scale-up access to interventions, treatments and system capacity building; and
4. Enhance NTD monitoring and evaluation, surveillance and research.

What needs to be done: The goal for all of these diseases is elimination – meaning no local transmission.

ROLE OF THE NTD PROGRAMME

The NTD Programme's activities are guided by the NTD Regional strategy and strategic plan, 2014-2020.

Strategic objective 1:
Strengthen government ownership, advocacy, coordination and partnerships

Strategic objective 2:
Enhance planning for results, resource mobilization and financial sustainability of national NTD programmes

Strategic objective 3:
Scale up access to interventions, treatments and system capacity building

Strategic objective 4:
Enhance NTD monitoring and evaluation, surveillance and research

KEY ACHIEVEMENTS ON NTDS IN 2016: HIGHLIGHTS

Completion of mapping of all NTDs amenable to preventive chemotherapy in 41 of the 47 countries in the Region.

◆◆◆

Providing support to the Onchocerciasis Laboratory in Ouagadougou, Burkina Faso, which allowed 10 countries (Burundi, Cameroon, Chad, Ethiopia, Guinea, Guinea-Bissau, Malawi, Mali, Nigeria, and Tanzania) to evaluate the impact of their onchocerciasis programmes.

◆◆◆

Production and dissemination of five guidance documents available in English, French and Portuguese for integrated case management of NTDs.

◆◆◆

Establishment of NTD case management sub-group of the NTD Regional Programme Review Group.

◆◆◆

Support and capacity building for six countries (the Democratic Republic of the Congo, Kenya, Liberia, Niger, Sierra Leone and Togo) for finalizing NTD master plans for 2016-2020 and integrated case management interventions.

◆◆◆

Establishment and launch of the Expanded Special Project for Elimination of Neglected Tropical Diseases (ESPEN).

◆◆◆

Technical support by WHO national focal points for NTDs in country offices and inter-country support teams to the Democratic Republic of the Congo, Ethiopia, Nigeria (ESPEN priority countries) and Eritrea, The Gambia, Guinea-Bissau and Malawi. Funding for logistics and supervision of staff during mass drug administration campaigns in these countries.

◆◆◆

Establishment of a comprehensive Regional Office NTD portal, which tracks progress being made in achieving the NTD goals for 2020. It will include disease maps, summary tables, and charts of disease prevalence and provide access to existing NTD databases.

NEGLECTED TROPICAL DISEASES IN THE AFRICAN REGION: AN OVERVIEW

DISEASES REQUIRING PREVENTIVE TREATMENT

LYMPHATIC FILARIASIS

Lymphatic filariasis occurs when filarial parasites are transmitted to humans through mosquitoes. Infection is usually acquired in childhood causing hidden damage to the lymphatic system. The disease leads to abnormal enlargement of body parts, causing pain, severe disability and social stigma.

Lymphatic filariasis is endemic in 32 Member States of the WHO African Region with an estimated 395 million people at-risk and requiring preventive chemotherapy. In 2015, 22 endemic countries reported having undertaken mass drug administration) with *albendazole* and *ivermectin* or DEC to treat 177 million people (44% PC coverage).

Togo and Malawi have stopped mass drug administration for lymphatic filariasis at the national level, while 10 other countries (Benin, Burkina Faso, Cameroon, Ghana, Madagascar, Mali, Niger, Nigeria, Tanzania and Uganda) have stopped MMA for lymphatic filariasis in endemic health districts.

32
COUNTRIES
Lymphatic filariasis is endemic in 32 countries of the WHO African Region

393
MILLION
people at-risk and requiring preventive chemotherapy

22
endemic countries reported having undertaken mass drug administration

44%
(44% PC coverage)

ONCHOCERCIASIS

Onchocerciasis, commonly known as "river blindness", is caused by the parasitic worm *Onchocerca volvulus* transmitted by repeated bites of infected blackflies.

Onchocerciasis is endemic in 27 countries of the WHO African Region with an estimated 186 million people at-risk. All countries were supported by the African Programme for Onchocerciasis Control to organize Community-Directed Treatment with *ivermectin* and the coverage reached 60.8% of persons at-risk by the end of 2015 with 113 million people treated.

With the exception of Equatorial Guinea and Gabon, all countries in the African Region endemic for river blindness were combining and coordinating mass administration of *ivermectin* as a preventive treatment for lymphatic filariasis in 2016. Some countries, including Burkina Faso, Burundi, Cameroon, Ghana, Mali, Malawi, Niger, Nigeria, Rwanda, Senegal, Tanzania, Togo and Uganda confirmed that mass administration with *ivermectin* for onchocerciasis could be stopped in some health districts, following epidemiological and entomological surveys measuring the impact of their interventions.

27
COUNTRIES
Onchocerciasis is endemic in 27 countries of the WHO African Region

186
MILLION
people at-risk

60.8%
Community-Directed Treatment with ivermectin reached 60.8% of persons at-risk by the end of 2015 with 113 million people treated

41
COUNTRIES
Schistosomiasis is endemic in 41 countries of the WHO African Region

201
MILLION
107 million school-aged children and 94 million adults requiring preventive chemotherapy

24
COUNTRIES
were able to provide preventive chemotherapy to 47 million school-aged children

52.2%
school-aged children (40.8% coverage), while 17 countries treated 11 million adults (11.4% coverage)

SCHISTOSOMIASIS

Schistosomiasis is a parasitic disease caused by blood flukes (trematode worms) of the genus *Schistosoma*. People become infected when larval forms of the parasite – released by freshwater snails – penetrate the skin during contact with infested water. Some become trapped in body tissues, causing immune reactions and progressive damage to organs.

Schistosomiasis is endemic in 41 countries of the WHO African Region with an estimated 107 million school-aged children and 94 million adults requiring preventive chemotherapy. In 2015, with the support of WHO, 24 countries were able to provide preventive chemotherapy to 47 million school-aged children (40.8% coverage), while 17 countries treated 11 million adults (11.4% coverage).

Furthermore, collaboration with China for schistosomiasis elimination was strengthened for building country capacity to complement preventive chemotherapy interventions with increased vector control and improved water supply, sanitation and hygiene.

42
COUNTRIES
Soil-transmitted helminthiases are endemic in 42 countries of the WHO African Region

293
MILLION
102 million pre-school-aged children and 191 million school-aged children requiring preventive chemotherapy

44.7%
In 2015, WHO supported 21 countries to provide preventive chemotherapy to 62 million pre-school-aged children (44.7% coverage)

51.4%
In 28 countries, WHO provided preventive chemotherapy to 102 million school-aged children (51.4% coverage)

HELMINTHIASES

Soil-transmitted helminthiases include three types of intestinal worms – round-worms, hook-worms and whip-worms. They are transmitted by eggs present in human faeces, which contaminate the soil in areas where sanitation is poor. Infected children are affected by malnutrition and are physically and cognitively impaired.

Soil-transmitted helminthiases are endemic in 42 countries of the WHO African Region with an estimated 102 million pre-school-aged children and 191 million school-aged children requiring preventive chemotherapy. In 2015, WHO supported 21 countries to provide preventive chemotherapy to 62 million pre-school-aged children (44.7% coverage). In 28 countries, WHO provided preventive chemotherapy to 102 million school-aged children (51.4% coverage). Water supply, sanitation and hygiene are also required to sustain the impact of preventive chemotherapy interventions for soil-transmitted helminthiases.

TRACHOMA

Trachoma is a disease of the eye caused by infection with the bacterium *Chlamydia trachomatis*, the leading cause of blindness in the African Region. It is transmitted through contact with eye and nose discharge of infected people, particularly young children. It is also spread by flies that have been in contact with the eyes and noses of infected people.

Trachoma is endemic in 25 countries of the WHO African Region with an estimated 174 million people requiring preventive chemotherapy. In 2015, in collaboration with the International Trachoma Initiative (ITI), support was given to 24 countries of the Region to provide preventive chemotherapy with *azithromycin* to 82.9 million people (48.4% coverage). For elimination of this NTD, preventive chemotherapy interventions are complemented with surgery for conjunctival scarring from *trachoma*, facial cleaning and environmental improvement of the "SAFE" strategy for trachoma elimination.

25
COUNTRIES
Trachoma is endemic in 25 countries of the WHO African Region

174
MILLION
people requiring preventive chemotherapy

30
COUNTRIES
Support was given to 30 countries of the Region to provide preventive chemotherapy

54
MILLION
people were given azithromycin (31.2% coverage)

DISEASES REQUIRING CASE MANAGEMENT

BURULI ULCER

Buruli ulcer is a chronic, debilitating skin disease caused by an environmental bacterium, *Mycobacterium ulcerans*. The organism belongs to the family of bacteria that causes tuberculosis and leprosy. The disease mainly affects children under 15 and can lead to disability if not treated promptly.

Buruli ulcer is found in West and Central Africa. Most affected countries are Benin, Côte d'Ivoire, Ghana, Guinea, Liberia and Togo in West Africa and Cameroon, Congo, the Democratic Republic of the Congo and Gabon in Central Africa. The number of cases of Buruli ulcer was reduced from 3433 cases in 2014 to 2790 in 2015.

This outcome results, in part, from country case management efforts (i.e.; early detection and prompt antibiotic treatment), which WHO supports. This includes treatment with a combination of *rifampicin* and *clarithromycin*.

2 790
CASES
The number of cases of Buruli ulcer was reduced from 3433 cases in 2014 to 2790 in 2015

15
AND UNDER
The disease mainly affects children under 15 and can lead to disability if not treated promptly

4
COUNTRIES
In 2015, only four countries had cases of guinea worm disease: Chad (9), Mali (5), South Sudan (5) and Ethiopia (3)

2
COUNTRIES
have never reported cases of Guinea worm during the last decades (Angola and the Democratic Republic of the Congo)

GUINEA WORM DISEASE

Guinea worm disease (dracunculiasis) is a crippling parasitic disease caused by a long, thread-like worm.

Guinea worm disease, is an NTD targeted for eradication – reducing the number of cases to zero. In 2015, only four countries had cases of guinea worm disease: Chad (9), Mali (5), South Sudan (5) and Ethiopia (3). Two countries have never reported cases of Guinea worm during the last decades (Angola and the Democratic Republic of the Congo) need to be verified for the absence of Guinea worm disease. Kenya, a previously endemic country, has not reported a single case of Guinea worm since 1994 and will be visited for certification by the International Commission for Certification of Eradication of Dracunculiasis (ICCED) in 2017.

2 733
CASES
The total number of cases in 2015 was 2733, compared to 6637 five years ago

36
COUNTRIES
Trypanosomiasis is endemic in 36 countries, among which 15 countries reported cases in 2015

TRYPANOSOMIASIS

Human African trypanosomiasis (sleeping sickness) is caused by infection with protozoan parasites belonging to the genus *Trypanosoma*, which are transmitted to humans through the bite of the tsetse fly. The disease causes damage to the central nervous system, including the brain.

Trypanosomiasis is endemic in 36 countries, among which 15 countries reported cases in 2015. Through joint efforts of WHO with HAT partners and collaborating institutions, new and safer medicines are replacing the old ones and the annual number of cases have been reducing during the last decade. The total number of cases in 2015 was 2733, compared to 6637 five years ago. In 2011, Benin, Botswana, Burundi, Equatorial Guinea, Ethiopia, The Gambia, Ghana, Guinea-Bissau, Kenya, Liberia, Mali, Mozambique, Namibia, Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Swaziland and Togo reported no new cases for over a decade. Eighty-five per cent (85%) of cases occurred in the Democratic Republic of the Congo in 2015.

LEISHMANIASIS

Leishmaniasis is caused by protozoan *Leishmanial* parasites, which are transmitted by the bite of infected sand flies. There are three main forms of leishmaniases: visceral (also known as kala-azar and the most serious form of the disease); cutaneous (the most common and affecting the skin); and mucocutaneous (affecting the skin and mucous membranes).

Visceral Leishmaniasis is endemic in 21 countries in the Region, mainly affecting East African countries. Cutaneous leishmaniasis is endemic in 24 countries, and 15 countries are endemic for both visceral and cutaneous forms. From 2004 to 2013, more than 60 000 cases of visceral leishmaniasis (in Ethiopia, Kenya, South Sudan and Uganda) and over 125 000 cutaneous leishmaniasis cases (in Algeria) were diagnosed or treated. The rollout of a new combination therapy (*paromomycin* and *ambisome*) has been successful in Ethiopia and South Sudan. The visceral leishmaniasis case fatality rate in the past three years has been below 4% in Ethiopia, South Sudan and Kenya.

21
COUNTRIES
Visceral Leishmaniasis is endemic in 21 countries in the Region, mainly affecting East African countries

24
COUNTRIES
Cutaneous leishmaniasis is endemic in 24 countries, and 15 countries are endemic for both visceral and cutaneous forms

60 000
CASES
From 2004 to 2013, more than 60 000 cases of visceral leishmaniasis and over 125 000 cutaneous leishmaniasis cases were diagnosed or treated

4%
The visceral leishmaniasis case fatality rate in the past three years has been below 4% in Ethiopia, South Sudan and Kenya

LEPROSY

Leprosy is a chronic infectious disease caused by the bacterium *Mycobacterium leprae* and transmitted from person to person through close, regular contact. The disease mainly affects the skin, the peripheral nerves, mucosa of the upper respiratory tract and the eyes.

Leprosy is still endemic in all 47 countries of the Region despite a slow decreasing trend. Six countries signed the 2013 Bangkok Declaration towards a leprosy free-world (Côte d'Ivoire, the Democratic Republic of the Congo, Ethiopia, Madagascar, Nigeria and United Republic of Tanzania) and received special funds from the Nippon Foundation-Sasakawa Memorial Health Foundation and are implementing innovative interventions to further reduce the annual number of new cases of leprosy. In 2015, 23 723 cases of leprosy were detected, compared to 25 313 cases in 2011.

47
COUNTRIES
Leprosy is still endemic in all 47 countries of the Region

6
COUNTRIES
signed the 2013 Bangkok Declaration towards a leprosy free-world (Côte d'Ivoire, the Democratic Republic of the Congo, Ethiopia, Madagascar, Nigeria and United Republic of Tanzania)

23 723
CASES
In 2015, 23 723 cases of leprosy were detected, compared to 25 313 cases in 2011

1636
CASES

Ghana has more cases of yaws than any other country in the WHO African Region, reporting 1636 cases in 2015

9
COUNTRIES

Nine countries of the WHO African Region (Benin, Cameroon, Central African Republic, Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Liberia and Togo) are endemic for yaws.

YAWS

Yaws is a disfiguring skin disease that mainly affects children under 15. It is caused by a *Treponema* bacterium.

Nine countries of the WHO African Region (Benin, Cameroon, Central African Republic, Congo, Côte d'Ivoire, the Democratic Republic of the Congo, Ghana, Liberia and Togo) are endemic for yaws. In 2012, WHO developed the "Yaws Eradication Strategy", also referred to as "the Morges strategy", based on the use of the antibiotic *azithromycin* given by mouth as a mass treatment in communities where the disease is present. Tests to confirm the effectiveness of single dose of *azithromycin* are now ongoing.

Ghana has more cases of yaws than any other country in the WHO African Region, reporting 1636 cases in 2015. A trial with *azithromycin* is ongoing in this country to confirm its safe and effective use in mass treatment for yaws eradication.

A MAJOR NEW PARTNERSHIP TO CONFRONT NEGLECTED TROPICAL DISEASES

In May 2016, the WHO Africa Regional Director, Dr Matshidiso Rebecca Moeti, and WHO Director-General, Dr Margaret Chan, launched the Expanded Special Project for the Elimination of Neglected Tropical Diseases (ESPEN) at the 69th World Health Assembly. This five-year project was created to provide national NTD programmes with technical and fundraising support to help them control and eliminate five diseases: onchocerciasis, lymphatic filariasis, trachoma, schistosomiasis and soil-transmitted helminthiases.

These diseases affect hundreds of millions of people but could be eliminated through preventive chemotherapy for all affected communities. Their elimination would improve quality of life and the economic outlook for the African Region.

ESPEN was established as a partnership between the WHO African Regional Office, member states and partners. Its objectives are:

- Achieving full coverage among populations requiring preventive chemotherapy
- Strengthened country NTD programs
- Enhanced use of data for better decision-making and action
- Effective partnerships with countries and key stakeholders
- Strategic advocacy, communication and resource mobilization efforts.

Many of the tools necessary to control and eliminate NTDs already exist, and the drugs necessary to treat and prevent these diseases are donated by pharmaceutical companies. In 2015 alone, 1.5 billion NTD treatments were donated, largely to African countries.

STORIES FROM COUNTRIES

A new approach to reducing human African trypanosomiasis in Guinea

Guinea is the country in West Africa most heavily affected by human African trypanosomiasis (sleeping sickness), especially around the mangroves in the coastal area. A national programme that actively screened for the disease was obliged to stop its operations in 2014 and 2015 during the Ebola virus disease outbreak.

In 2016, after the threat of Ebola subsided, and with support from CDS, the national coordination team for sleeping sickness developed and began implementing a new strategy to streamline detection and treatment. "In the past, active screening was performed by medical surveys, in which a large mobile team spent just one day in villages where there was a known risk for the disease," says Dr Camara Mamadou, who coordinates Guinea's efforts on human African trypanosomiasis. "The problem with this approach was that people in the villages did not understand the goal and could be mistrustful and uncooperative."

The new strategy – which was tested in four coastal villages in 2016 – mobilizes a community health worker, a health worker from a nearby health centre and a third health worker from the prefecture of Dubreka, near Conakry. They spent a week in the village and went door-to-door – even sleeping there at night – visiting each household and performing diagnostic tests for sleeping sickness. At the end of the week, individuals who tested positive were visited by a team who confirmed the diagnosis with a parasitological test. They were then accompanied to the treatment centre in Dubreka for further testing and treatment.

Of 1378 children and adults tested in the four villages, 35 were found to be infected. "I believe this pilot showed that door-to-door screening – combined with control of the tsetse flies that transmit it – will be important in eliminating sleeping sickness in the mangroves of Guinea," Dr Mamadou says. WHO helped design the strategy and conduct the training, supplied diagnostic materials and drugs and assisted with supervisory field visits.

Eliminating leprosy in the Democratic Republic of the Congo, one village at a time

Leprosy has affected human beings for thousands of years and, until the 21st century, disabled millions of people. Today, as a result of global campaigns led by WHO and other partners, only a dozen countries worldwide are affected. In the African Region, the goal is to eliminate this disease by 2020.

In the Democratic Republic of the Congo (DRC), eight provinces still have pockets of leprosy: Tanganyika; Haut-Katanga; Tshuapa; Equateur; Maindombe; Tshopo; Bas-Uélé and Haut-Uélé. In 2015, with funding from the Nippon Foundation/ Sasakawa Memorial Health Foundation and technical support from CDS and the WHO DRC Country office, the national leprosy programme embarked on an intensive search for people affected by leprosy in 22 health zones within the eight provinces. The goal was to increase detection of leprosy by 50%, compared with 2013.

Before beginning the search, administrators, nurses and community health workers in all eight provinces received appropriate briefings or training. Additionally, social mobilization via radio announcements or door-to-door visits was conducted in all the communities where the search was to take place.

The results were impressive: every province except one (Maindombe) exceeded the expected 50% increase in case detection with three provinces (Haut-Uélé, Tshopo, and Tshuapa) reaching a 300% increase or more. A total of 1201 people were diagnosed with leprosy and received treatment with the combination therapy recommended by WHO.

"We learned several important lessons from this project," says Dr JN Mputu Luengu, Director of the DRC national leprosy programme. "Most importantly, to eliminate leprosy, we need to go door to door in affected communities."

Another important lesson was that in pygmy villages – where it has been especially difficult to reach people affected by leprosy – engagement with community health workers was a key to success. The team also recognized that leprosy outreach campaigns are more successful when held outside the fishing and caterpillar-hunting seasons in DRC, because during those times many people are not at home and are difficult to reach.

PROTECTION OF THE HUMAN ENVIRONMENT

GOAL FOR 2016: SEIZE THE OPPORTUNITY

Where things stood in 2016: Although countries in the African Region still faced massive challenges, a new level of commitment to addressing the environmental determinants of human health emerged. Adoption of the Sustainable Development Goals (SDGs) at the United Nations in September 2015 provided new incentives for African countries to confront the environmental challenges facing the Region and affecting people's health. Adoption of the SDGs also brought into focus the unfinished agenda of the 2008 Libreville Declaration on Health and Environment in Africa, a framework that African countries and their development partners agreed on to address the impact of environmental determinants of human health.

A 2013 evaluation of the Declaration revealed that the major health and environment challenges remained: provision of safe drinking water, sanitation and hygiene services; management of water, soil and air pollution; vector control; management of chemicals and wastes; food safety; and health in the workplace. It was also recognized that unplanned urbanization, uncontrolled rapid population growth and urban migration were increasing pressure on already overburdened health systems.

What needs to be done: In the African Region, 23% of deaths can be attributed to factors in the environment. Sweeping action is needed to reduce the environmental impact on health and lifespan.

- **Water and sanitation:** Sub-Saharan Africa fell short of the Millennium Development Goal (MDG) target for drinking water, with 319 million people still using unimproved drinking water sources in 2015, the most recent year for which data are available. Overall, 68% of the population had access to improved drinking water sources. This figure, however, hides huge social inequalities and inequities. Only 56% of people in rural areas had access to improved drinking water, compared to 87% in urban areas. In rural areas, 93% of people relied on surface water.
- **Sanitation facilities:** Between 1990 and 2015 (the MDG era), an estimated 695 million people in sub-Saharan Africa had unimproved access to sanitation.
- **Air pollution:** Household air pollution generated from cooking – mainly with solid fuels such as wood, crop waste, animal dung, charcoal or coal – caused an estimated 578 000 premature deaths and 5% of the disease burden in the African Region in 2015. Ambient air pollution caused nearly 3.2 million deaths.
- **Vector-borne diseases:** The Region is affected by many vector-borne diseases, including malaria, dengue, schistosomiasis, Zika, yellow fever and neglected tropical diseases such as human African trypanosomiasis, all of which have the potential to be intensified by climate change.

ROLE OF THE PROTECTION OF THE HUMAN ENVIRONMENT PROGRAMME

The WHO African Region's role is to provide guidance and technical support to Member States to formulate and implement policies, strategies and action plans for addressing challenges related to the interface between health and the environment and monitoring and evaluating their impact.

Access to safe drinking water and safe sanitation

- Monitoring water supply and sanitation, including efforts and approaches to extend and sustain water, sanitation and hygiene services
- Water safety and sanitation safety planning

Addressing the health impact of air pollution

- Monitoring of air quality and associated health impacts following WHO air quality guidelines
- Promoting the use of clean and safe energy sources

Management of chemicals and wastes

- Monitoring of chemicals of public health concern, following the 2005 International Health Regulations
- Establishment or strengthening of national poison centres

Climate change and health

- Vulnerability and adaptation assessment (susceptibility of a population or region to the health risks of climate change, and of policies and programmes that could increase resilience)
- Surveillance and early warning system strengthening on climate change-related health impacts and events

Integrated vector management

- Country support to monitor implementation of long-lasting insecticidal mosquito nets and indoor residential spraying for malaria control
- Prevention and management of insecticide resistance
- Scale-up of integrated vector management for prevention and control of emerging and re-emerging public health challenges, including arboviruses (i.e.; Ebola, dengue, Zika and yellow fever).

In the African Region, 23% of deaths can be attributed to factors in the environment

KEY ACHIEVEMENTS ON PROTECTION OF THE HUMAN ENVIRONMENT IN 2016: HIGHLIGHTS

Human and financial resource mobilization

After submission of a grant proposal, the Global Environment Facility agreed to fund the following:

- Scale-up of integrated vector management and chemical surveillance in 10 African countries in the context of the Sustainable Development Goals
- Support for recruitment of three staff members to work on water and sanitation, climate change and health, and vector control to strengthen CDS capacity.

Water sanitation and hygiene

Twenty cadres from 8 countries – **Chad, Ethiopia, Ghana, Guinea, Liberia, Mali, Senegal** and **Sierra Leone** – received hands-on training to undertake assessment and management of water, sanitation and hygiene conditions in health-care facilities in the context of infection prevention and control. A new tool, WASH FIT (Water and Sanitation for Health Facilities Improvement Tool), was introduced in these countries.

Water safety planning

A national training-of-trainers event on water safety planning and climate resilience was held in **Kenya** in February. As a direct output from the workshop, a national water safety planning steering committee was established, and an urban and rural pilot programme was developed.

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A national water safety planning sensitization workshop was held in **Mali** in March 2016. This event brought together government ministries, national laboratories, water suppliers and managers as well as NGOs from the water, sanitation and hygiene sector. The workshop formed part of a broader programme to facilitate the translation of Sustainable Development Goal targets into national policy. A key output from this workshop was the initiation of a national water safety planning steering committee for Mali and planning for a water safety planning pilot programme for urban and rural water utilities.

Vector control

CDS produced an atlas of vector resistance to insecticides using the data from 36 countries.

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With technical and financial support from CDS, **Eritrea, Ethiopia, Mozambique** and **Zambia** began implementing vector control programmes planned in line with insecticide resistance management approaches. **Benin, Burkina Faso, Niger, Nigeria** and **Zimbabwe** developed insecticide resistance management plans.

Climate change

With technical and financial support from CDS, **Benin, Burkina Faso, Guinea** and **Mali** completed comprehensive assessments of the risks posed by climate variability and change on population health and health systems. Based on the evidence from these assessments and those completed in 2015 in **Ethiopia, Ghana, Madagascar, Malawi, Tanzania** and **Zambia**, CDS produced a regional synthesis report. The aim of this document is to guide countries on adapting to current and future impacts of climate change on the health and well-being of their populations.

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In collaboration with the WHO Health Emergency Cluster, CDS helped build technical capacity in 11 countries in southern and eastern Africa to plan and respond to the health impacts of El Niño-induced extreme climate events (drought, heavy rains and flooding). The consolidated regional El Niño response plan, spearheaded by the Regional Inter-Agency Standing Committee, Southern Africa, was developed with the contribution of Regional Economic Communities.

STORIES FROM COUNTRIES

Angola: addressing the yellow fever outbreak

In December 2015, the National Directorate of Public Health in the Republic of Angola was notified that several people in Luanda, the country's largest city, had died following an illness that involved high fever, jaundice and bleeding. The illness was confirmed as yellow fever by a WHO reference laboratory in Dakar, Senegal. By the end of January,72 suspected cases and 21 deaths had been reported from 5 districts of Luanda and 3 other provinces.

WHO and its partners swung into action with an emergency vaccination campaign. This campaign prevented further spread of the disease and saved lives, but there remained a need for a deeper examination of why the outbreak occurred in the first place.

Yellow fever is a vector-borne disease, carried by *Aedes aegypti* mosquitoes. The risk of yellow fever transmission in cities can be reduced through vector management: eliminating potential mosquito breeding sites by applying larvicides to water storage containers and other places where standing water collects. Insecticide spraying to kill adult mosquitoes during urban epidemics can help reduce the number of mosquitoes, thus reducing potential sources of yellow fever transmission.

In February 2016, CDS sent an expert consultant to Angola for a 3-month stay. His mission was to investigate and document the extent of *Aedes* infestation in areas affected by the yellow fever outbreak and help the Government of Angola plan and introduce integrated vector control with a focus on community action. His task was also to assist in advocacy, community engagement and mobilization to reduce people's contact with mosquitoes.

The consultant and two CDS staff, who had travelled to Angola because of a simultaneous malaria outbreak, worked with the health ministry to develop an integrated vector control plan. The team identified areas where prompt intervention was needed – such as ensuring water delivered by truck did not contain mosquito larvae and that people took some simple actions to avoid mosquitoes breeding inside or outside their homes.

CDS recommended that Angola's health ministry undertake strong and sustained action against yellow fever vectors during at least 1 to 2 months to stem the risk of additional yellow fever outbreaks. An important lesson learned was that community involvement is critical. Door-to-door visits to show people what they needed to do to reduce mosquito breeding sites was a key strategy.

CHALLENGES TO REDUCING ENVIRONMENTAL IMPACT ON HEALTH IN THE AFRICAN REGION

- Environmental impacts on health are linked to virtually every aspect of society: agriculture and food production; education; employment; living and working conditions; access to health services; housing; unplanned urbanization and urban migration; and uncontrolled rapid population growth. Sweeping social changes are therefore needed to fully address them.
- Climate change is incurring a new and diverse set of environmental impacts, increasing pressure on already overburdened and fragile health systems.
- The health sector remains separate from the environment sector in many respects.
- National investment of domestic resources into health and environment activities is low. Resources are mainly directed towards treatment of conditions related to environmental impact rather than to prevention.

Climate change is incurring a new and diverse set of environmental impacts

WHAT IS INTEGRATED VECTOR MANAGEMENT?

Integrated Vector Management is an approach developed by WHO to improve the efficacy, cost-effectiveness, ecological soundness and sustainability of disease-vector control. The goal is to prevent transmission of vector-borne diseases such as malaria, dengue and yellow fever.

A guiding principle is that effective control is not the sole preserve of the health sector but requires collaboration with various other sectors together with public and private agencies and institutions.

There are five key elements for successful Integrated Vector Management:

- **Advocacy, social mobilization and legislation**, which includes establishment or strengthening of regulatory and legislative controls for public health and empowerment of communities.
- **Collaboration within the health sector and with other sectors**, which means considering all options for collaboration within and between public and private sectors and strengthening channels of communication among policymakers and vector-borne disease control programmes.
- **Integrated approach** in which efforts combine approaches for tackling more than one disease and both nonchemical and chemical vector control methods (for example, modification of breeding environments versus using insecticides) are applied.
- **Evidence-based decision-making** based on local vector ecology, epidemiology and resources, guided by research and subject to routine monitoring and evaluation.
- **Capacity building** by developing infrastructure, financial resources and adequate human resources.

STORIES FROM COUNTRIES

Building resilience to climate change in Tanzania

In western Tanzania, farming communities live side by side with the Maasai, a people who follow a traditional pastoralist lifestyle and whose livelihood depends on raising and grazing cattle. Both farmers and the Maasai are vulnerable to human African trypanosomiasis (sleeping sickness), a disease for which tsetse flies are the vector. These flies are also the vector for the disease in cattle called nagana by local people.

In 2016, a group of researchers undertook a study in the regions bordering on Lake Manyara and the Tarangire National Park. Their purpose was to assess the vulnerability of communities to human African trypanosomiasis and improve their resilience, using an eco-health framework.

Eco-health is a new approach to assessing the possible impacts of climate change on vector-borne diseases. Lack of knowledge in this area is a serious obstacle to evidence-based health policy change. It takes new types of transdisciplinary research on specific issues to understand what these actual impacts might be.

The Tanzania research study is part of a programme entitled Population health vulnerabilities to vector-borne diseases: increasing resilience under climate change conditions in Africa. The work is supported by the Special Programme for Research and Training in Tropical Diseases (TDR), which is hosted by WHO in Geneva, and CDS, with funding from the International Development Research Centre (IDRC), Canada.

The overall goal of this research programme is to generate new evidence on risks of vector-borne disease and vulnerabilities in the context of climate change. The project has been helping build the resilience of communities, assisting policymakers in responding to climate change-related health issues and building research capacity for the future. In addition, the programme is expected to contribute new knowledge, enhance collaboration and develop policy advice products that can be used throughout Africa.

The Tanzania study found that people in the region sometimes confuse tsetse with other biting insects and are unfamiliar with transmission of human African trypanosomiasis and with the use of restricted application of pesticides (application of acaricides only to the parts of cattle where tsetse flies prefer to feed). The authors of the study recommend greater community involvement in vector and disease control operations; in particular, by engaging with elders, who are in a position to influence behavior, and with women. They also recommend strengthening meteorological monitoring in western Tanzania. Given that climate change projections are uncertain, they advise managing short-term climate risks and increasing the resilience of communities.

A LOOK AHEAD...

The most recent statistics indicate that overall, life is improving in Africa. Childhood mortality plunged by half between 1990 and 2015, according to UN reports on the Millennium Development Goals. Last year the World Bank reported that Africa's rate of extreme poverty had fallen from 56% in 1990 to 43% in 2012. There is a widespread sense of increased opportunities for improved health and well-being for the African populations.

A 2016 report by the McKinsey Global Institute predicts a potentially bright economic future for the continent. While many countries are dealing with the complex challenges of an aging population, Africa has a growing, young and dynamic population and is expected to have a larger workforce than China or India by 2034. Technology is unlocking opportunities for consumers and businesses and has the potential to lift millions more from poverty and the improve socioeconomic status of individuals and families.

Yet, Africa still faces health challenges that could slow or thwart progress – the continued burden of communicable diseases, combined with the growing burden of noncommunicable diseases, new outbreaks and emerging diseases. To meet the Sustainable Development Goals (SDGs) we must step up our efforts on various fronts: strengthen health systems; increase domestic financing; and adopt, implement and enforce policies and laws and that enable people to lead healthy and productive lives.

HERE IS AN ASPIRATIONAL VISION FOR 2020 – A CRITICAL BENCHMARK YEAR FOR THE SDGS

By strengthening our existing partnerships and building new ones, we aspire to work with countries to achieve the targets related to HIV, hepatitis and tuberculosis, therefore preventing millions of deaths; and to eliminate malaria in front-line countries and put many more on the path to elimination.

We aim to eradicate guinea-worm disease and yaws and eliminate lymphatic filariasis, onchocerciasis, schistosomiasis and blinding trachoma.

We hope to be able to work with partners and countries across the region to take substantive action on provision of safe drinking water, sanitation and hygiene services; management of water, soil and air pollution; to accelerate and sustain integrated vector control measures; improve food safety and management of chemicals and wastes; and ensure health-promoting policies are enforced in the workplace.

We look forward to working with our Member States and partners to achieve these goals.

World Health Organization
REGIONAL OFFICE FOR Africa