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# EYE of the EAGLE

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## THE CARTER CENTER



A South Sudanese woman washes her face. Facial cleanliness is one of the key pillars of trachoma control. (Photo: Catalin Marin)

## Program Review Emphasizes Persistence, Partnership, Passion

#### **KEY TAKEAWAYS:**

- In 2022, more than 3.2 million people were screened for trachomatous trichiasis, leading to more than 33,000 people receiving sight-saving surgery.
- Some 10.3 million people received drug treatment to control trachoma infection last year.
- The Carter Center supported the training of 23,000 people to provide health education and assisted with the construction of 8,800 latrines.

The power of persistence, partnership, and passion appeared in virtually every presentation during the Carter Center Trachoma Control Program's annual program review, held March 6 and 7.

The program review focused on achievements from 2022 to control disease transmission and halt the devastating effects of blinding trachoma in some of the world's most vulnerable populations. It also addressed opportunities for improvement and programmatic plans for the upcoming year. The Carter Center welcomed, virtually, partners from Ethiopia, Mali, Niger, South Sudan, and Sudan, including ministry and academic partners, implementing partners, and many donors.

In 2022, The Carter Center assisted the Ethiopia, Niger, South Sudan, and Sudan ministries of health in implementing the World Health Organization (WHO)-endorsed SAFE strategy to fight the world's leading cause of infectious and preventable blindness. SAFE refers to surgery, antibiotics, facial cleanliness, and environmental improvement. Collectively, over 3.2 million individuals were screened for trachomatous trichiasis (TT), the late stage of blinding



At a hospital in Khartoum, Sudan, Dr. Sahar Siddig operates on a person with the advanced stage of trachoma, called trachomatous trichiasis. In 2022, more than 33,000 people received sight-saving surgery with assistance from The Carter Center.

trachoma. These screenings led to more than 33,400 people-including an estimated 23,000 women-receiving sight-saving surgeries. Furthermore, 10.3 million individuals were provided with Zithromax<sup>®</sup> (azithromycin, donated by Pfizer Inc), to control the disease. To promote the F and E components of the SAFE strategy, The Carter Center supported the training of 23,100 people in health education and the construction of 8,871 latrines. From 1999 through 2022, more than 900,000 people received TT surgery, and over 232 million doses of azithromycin and tetracycline eve ointment have been distributed in Carter Center-assisted countries.

The power of partnership and persistence was highlighted when The Carter Center and partners celebrated Mali for having achieved all WHO thresholds for the elimination of trachoma as a public problem and submitting its validation dossier to the WHO committee. In 2022, Mali safely completed the final two surveys in Douentza and Koro districts, one of the most insecure areas in the Mopti region of central Mali, to demonstrate the elimination threshold for TT had been reached. On April 27, 2023, Mali was officially validated as having eliminated trachoma as a public health problem. The Carter Center is proud to have assisted Mali and partners since 1999.

The Carter Center remains committed to the elimination of trachoma as a public health problem globally and is a proud partner of the ministries of health in Ethiopia, Niger, South Sudan, and Sudan. The road to the trachoma endgame is fraught with challenges, but through persistence, powerful partnerships, and passion, the elimination of trachoma as a public health problem is possible.

# Ethiopian Colleague Travels to South Sudan to Train Survey Teams

#### Learning from the experiences

of other countries and partners is a vital component in the global fight to eliminate trachoma as a public health problem. The Carter Center supports trachoma control programs in South Sudan and Ethiopia, neighboring countries that both harbor some of the highest burdens of trachoma in the world. In March 2023, the two programs collaborated to implement enhanced baseline trachoma surveys in Eastern Equatoria state, South Sudan. The surveys included components new to the South Sudan teams: the collection of dried blood spots for serological analysis and ocular swabs to monitor chlamydial infection.

When introducing new sample collection techniques, good training is crucial to ensure accuracy and reliability. Enter Ambahun Chernet, senior medical laboratory technologist for The Carter Center in Ethiopia. A seasoned veteran with more than eight years of experience performing trachoma surveys in the Amhara region of Ethiopia, Ambahun traveled to South Sudan to facilitate the trainings alongside his South Sudanese counterparts. During his visit, he led sessions in the collection of dried blood spots and swabs. His arrival brought a wave of enthusiasm as he skillfully shared his knowledge and experience, equipping the South Sudanese team and supervisors with the tools to continue the training program autonomously. Ambahun noted the differences between how communities are surveyed in Ethiopia and South Sudan, particularly the subtle changes in approach given the cultural variations.

After the five-day training, Ambahun stayed to shadow the teams during the first week of the surveys.



Ambahun Chernet, senior medical laboratory technologist for The Carter Center in Ethiopia (blue shirt, center) demonstrates the proper technique for collecting samples of dried blood spots.



The South Sudan team prepares to leave for the villages to conduct survey activities.

"It was good having him in the field," said Stephen Ohidor, program manager for the South Sudan Trachoma Control Program. "It helped the program staff grow, but also the benefits rolled on to the survey teams, many of whom were health professionals. These lessons will help them as they continue working for the people of South Sudan."

The collection of dried blood spots and swabs in this part of South Sudan is an exciting opportunity to monitor trachoma transmission intensity and to better understand the historical burden of trachoma in an area yet to receive trachoma interventions. Furthermore, it allows for the monitoring of other diseases of public health importance, such as malaria and other neglected tropical diseases. By working together, the Carter Center's Ethiopia and South Sudan offices are taking a regional approach to building up in-country technical capacity.

## World Health Organization Validates Mali Elimination

**On April 27**, Mali became the 17th country to be validated by the World Health Organization for eliminating trachoma as a public health problem.

Not only is this an incredible achievement due to the small number of countries meeting this standard, but Mali is also the first to do so with significant disease at baseline. A 1996–1997 survey found trachoma in nearly every region of Mali, with an estimated 10 million people at risk of blindness.

To reach elimination, Mali distributed more than 29 million doses of antibiotics, conducted nearly 90,000 eyelid surgeries to address advanced trachoma, trained more than 200 surgeons to conduct the eyelid surgeries, broadcast more than half a million radio messages about hand and face washing, and built 140,000 latrines to achieve and sustain trachoma elimination. Because of insecurity in the country, the program had to consider the feasibility of implementation while ensuring the safety of the program staff and communities.

Mali's success shows what is possible through partnership and determination to stop unnecessary blindness. The Carter Center is proud to witness Mali's achievement as a partner since 1998, when former U.S. President Jimmy Carter visited then Mali President Amadou Toumani Touré. This success has required decades of dedication, and the impact is far reaching. Mali's success "has given us all confidence to continue investing in neglected tropical diseases to ensure all families can both access and afford the care they need not only to eliminate specific diseases, but also to achieve improved public health in general," said Sadi Moussa, the Carter Center's senior country representative in Mali.

## Case Finder in South Sudan Carries Patient Down Mountain

**The fight against neglected tropical diseases** is marked by daily acts of heroism.

In partnership with the Himalayan Cataract Project and the Ophthalmological Association of South Sudan, The Carter Center in February 2023 supported the South Sudan Ministry of Health Trachoma Control Program in implementing an integrated trachomatous trichiasis and cataract surgery campaign in Eastern Equatoria state's Budi County.

Budi County's mountainous terrain and lack of roads made it difficult for patients with impaired vision to reach the surgical camp. Lodai Peter Linus, a trachoma case finder, would not be deterred. Lodai carried a vision-impaired elderly patient on his back down a mountain to ensure the woman could safely reach the camp.

"I carried her on my back to where we could meet the vehicle. I did not want to leave her, because I was confident that she was going to see if operated upon," Lodai recalled. "I also imagined what she goes through as a mother with her situation—being blind and not able to provide for her children, and the burden on the family. My hope was that she would benefit from the surgery. That is why I decided to carry her on my back rather than going back home without her being operated on."

By the end of the campaign, 169 trachoma patients and 276 cataract patients received surgery.



Lodai Peter Linus assists a vision-impaired patient down a mountain in Eastern Equatoria state, South Sudan. He wanted to ensure she reached a camp for eye surgery.

## Women Lead the Way in Trachoma Research and Care

The Carter Center's Trachoma Control Program has been a showcase for the hard work of an audacious group of strong women in the field of public health and specifically in eliminating trachoma as a public health problem.

Carter Center Associate Director Angelia Sanders recently completed her two-year term as chair of the International Coalition for Trachoma Control (ICTC); the second edition of the "Women and Trachoma" manual was launched this spring at the World Health Organization Alliance for the Global Elimination of Trachoma meeting in Istanbul, Turkey; program Director Kelly Callahan officially became a member of the Trachoma Expert Committee; and graduate assistant Jaymie Bromfield partnered with other female academics to complete her master's thesis.

ICTC, founded in 2004, is a collaborative group of stakeholders such as donors, academic institutions, members of nongovernmental organizations, and private industry with the shared goal of eliminating trachoma as a public health problem by 2030. In 2021, Sanders was named chair of ICTC, bringing in her nearly 20 years of public health experience, mostly focused on neglected tropical diseases in insecure settings. In March, Sanders passed the torch to former Vice Chair PJ Hooper, deputy director at the International Trachoma Initiative (ITI). Sanders will serve as immediate past chair for the next two years, and Michaela Kelly, senior program director at Sightsavers, joins ICTC as vice chair.

These appointments represent an impressive demonstration of women in leadership to further improvements in public health by reducing the global burden of trachoma.

During the 2023 WHO Alliance for the Global Elimination of Trachoma meeting, The Carter Center, ITI, and the Kilimanjaro Centre for Community Ophthalmology launched the second edition of the "Women and Trachoma" manual. Evidence shows girls are at a greater risk of Chlamydia trachomatis infection than boys; similarly, women are more likely than men to develop trachomatous trichiasis (TT), the blinding stage of the disease. The manual was developed to provide valuable insights and recommendations for improving gender-sensitive trachoma control programming.

Bromfield, the Carter Center



Some of the women who work in trachoma celebrate the launch of the revised "Women and Trachoma" manual at the 2023 WHO Alliance for the Global Elimination of Trachoma meeting in Istanbul, Turkey.



Women in leadership roles in the International Coalition for Trachoma Control include (from left) Angelia Sanders of The Carter Center, PJ Hooper of the International Trachoma Initiative, and Michaela Kelly of Sightsavers.

graduate assistant, collaborated with Johns Hopkins University on TT photography and scarring as part of her master's thesis. This project aimed to measure the severity of TT scarring using a four-point photography grading system. The eyelids of adults in East Amhara, Ethiopia, were examined for TT and pictures were taken for grading. Depending on the level of scarring, they were diagnosed accordingly, Stage 1 being less severe and Stage 4 being most severe. This scale was developed by partners at Johns Hopkins, and Bromfield received in-person training from faculty members Sheila West and Dr. Meraf Wolle on how to identify and diagnose TT scarring. This female partnership also emphasizes the strides that women of color, such as Bromfield and Wolle, are making in environmental health and paving the way for increased representation for women of various ethnic backgrounds in the field of public health. **E** 

# Annual Program Review Highlights Historic Progress

#### **KEY TAKEAWAYS**

- A total of 81.8 million treatments for neglected tropical diseases were provided with assistance by the river blindness, lymphatic filariasis, schistosomiasis, and soil-transmitted helminthiasis programs in 2022.
- Cumulative treatments for all four diseases reached over 820 million in 2022, including surpassing 500 million Mectizan® treatments for river blindness.
- 30.7 million people no longer need Mectizan treatment for river blindness in Carter Center-assisted areas, and 23.9 million people no longer need treatment for lymphatic filariasis.

**The 27th review** meeting of the Carter Center's River Blindness Elimination Program was held virtually March 8–10, 2023. Meeting participants discussed 2022 achievements, challenges, and operational research for Carter Center-assisted programs and made recommendations for 2023 activities. More than 150 people attended, including ministry of health officials, key partners, and donors.

Since 1996, The Carter Center has worked with ministries of health to provide mass drug administration with ivermectin (Mectizan,<sup>®</sup> donated by Merck & Co., Inc., Rahway, New Jersey) for river blindness (onchocerciasis), together with health education, training, and impact evaluation. The Center assists the countries of Brazil, Ethiopia, Nigeria, Sudan, Uganda, and Venezuela. It previously assisted Cameroon, Colombia, Ecuador, Guatemala, and Mexico, the latter four of which have eliminated onchocerciasis transmission and received verification of elimination from the World Health Organization (WHO). In 2022, The Carter Center assisted with distributing 50.079.000 ivermectin treatments. reaching 93% of the 2022 target of 53.4 million (see Figure 1). Shipment and importation delays continued to hinder the distribution of drugs in some countries, especially Nigeria. The

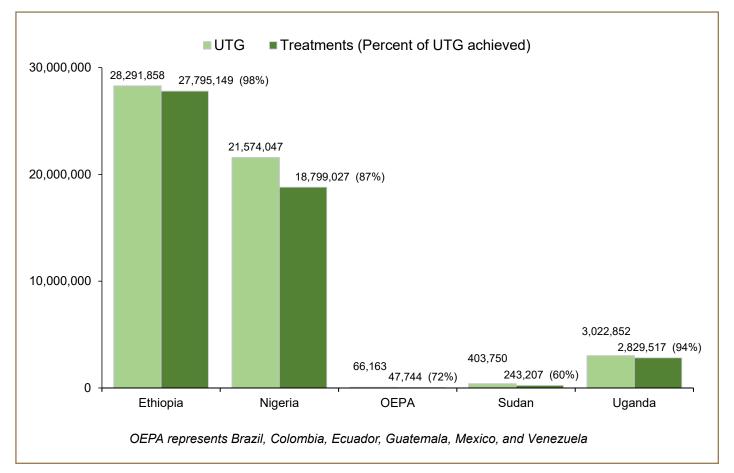


Figure 1. Ivermectin Ultimate Treatment Goals (UTG) and Treatments for Areas Assisted by The Carter Center, 2022

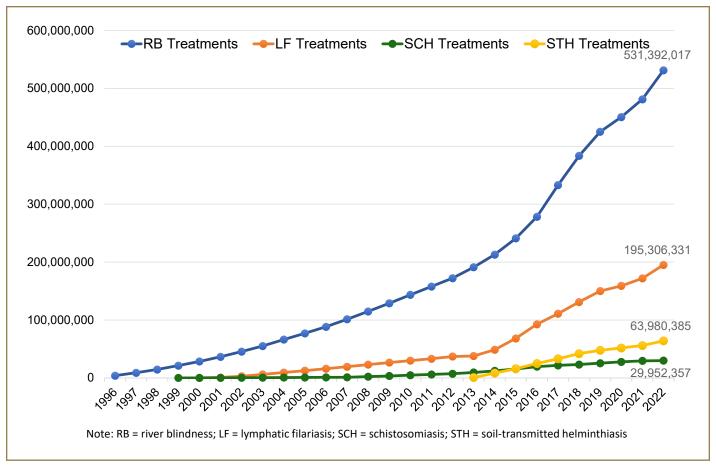


Figure 2. Cumulative Treatments of the Carter Center River Blindness Elimination Programs, 1996-2022

program has assisted with 531 million ivermectin treatments since 1996 (see Figure 2). The 2023 target is 42 million treatments for river blindness.

The River Blindness Elimination Program is an integrated program that includes lymphatic filariasis elimination in Ethiopia, Nigeria, and Sudan, and schistosomiasis and soil-transmitted helminthiasis control in Nigeria. The Carter Center assisted with 23,274,376 albendazole (donated by GSK) and ivermectin treatments for lymphatic filariasis elimination in Ethiopia, Nigeria, and Sudan, reaching 81% of the target. Nigeria's lack of drugs deeply impacted the schistosomiasis program, which assisted with 415,999 treatments, just 8% of its target. There were 8,069,550 treatments for soil-transmitted helminthiasis control, reaching 66% of the program target.

Praziquantel for schistosomiasis is donated by Merck KGaA, Darmstadt, Germany. The medicines used for soiltransmitted helminthiasis treatment are donated by GSK (albendazole) and Johnson & Johnson (mebendazole) and are provided to school-aged children. In total, the four programs assisted with 82 million treatments in 2022, with 80 million targeted for 2023. Cumulative treatments for all four diseases reached over 820 million in 2022 (see Figure 2).

There were several key 2022 highlights from the meeting. The River Blindness Elimination Program surpassed 500 million ivermectin treatments distributed for river blindness with Carter Center assistance—a milestone celebrated with a commemorative pin designed by Dr. Zerihun Tadesse and Anley Haile of the Carter Center's Ethiopia office. Some 20 million people live in areas that qualified to stop mass drug administration for river blindness while 11.8 million people were able to stop mass drug administration for lymphatic filariasis-both annual records for the program. The Carter Center expanded support for river blindness and lymphatic filariasis elimination in Sudan, which was celebrated in January 2023 with a ceremony attended by Paige Alexander, CEO of The Carter Center. The Center welcomed Dr. Sara Lavinia Brair as senior country representative for Sudan and Dr. Edridah Muheki Tukahebwa as country representative for Uganda.

These accomplishments would not have been possible without our ministry of health partners and a grassroots network of community-directed drug distributors and community supervisors who volunteered their time to treat their communities. A combined 416,373 drug distributors and supervisors participated in 2022, all of whom were mentored by district-level ministry of health personnel and trained with Carter Center assistance.

#### Ethiopia

Ethiopia's Federal Ministry of Health partners with The Carter Center to fight onchocerciasis and lymphatic filariasis in six of the country's 11 regions. In 2022, The Carter Center assisted in the delivery of 27,795,149 Mectizan treatments for river blindness, representing 98% of the 2022 treatment target. More than 1.3 million people qualified to stop mass drug administration for onchocerciasis and 70,425 for lymphatic filariasis in Carter Center-assisted areas. Post-treatment surveillance studies confirmed that 1 million people remain protected from lymphatic filariasis infection. These achievements were tempered by results from studies that indicated river blindness transmission may have reemerged in parts of Amhara region; investigations are underway. Nonetheless, river blindness transmission has been interrupted for around 2.9 million people, while 2.1 million are similarly free from lymphatic filariasis in Carter Center-supported areas to date. The current treatment goals for 2023 are approximately 28 million for river blindness and about 2.2 million for lymphatic filariasis. This work reflects partnerships with the Federal Ministry of Health, the Lions Clubs of Ethiopia and the Lions-Carter Center SightFirst Initiative, and The Reaching the Last Mile Fund hosted by The END Fund.

#### Nigeria

The River Blindness Elimination Program in Nigeria is an integrated neglected tropical disease program working toward elimination of onchocerciasis and lymphatic filariasis



A commemorative pin marked 500 million ivermectin treatments distributed for river blindness elimination with assistance from The Carter Center.

transmission, along with control of schistosomiasis and soil-transmitted helminthiasis in nine states. In 2022, four Carter Center-assisted states met WHO criteria to stop river blindness treatment for a combined 18.9 million people—a global record to date. Cumulatively, 24.3 million people no longer require mass drug administration (MDA) in Carter Center-assisted areas. Likewise, 11.7 million people reached the same milestone for lymphatic filariasis, bringing that disease's total stop-MDA population to 22.5 million.

The Carter Center's Nigeria program assisted with 43.7 million treatments for river blindness, lymphatic filariasis, schistosomiasis, and soil-transmitted helminthiasis in 2022, 71% of the combined target of 60.1 million. The 2023 targets total 35 million, thanks to the aforementioned stop-MDA achievements in river blindness and lymphatic filariasis.

The Carter Center also assists lymphatic filariasis morbidity management and disability prevention, which provides care for those suffering from chronic lymphatic filariasis (e.g., lymphedema, hydrocele), which persists even when transmission of the disease has been eliminated. This work in 2022 was focused in Plateau and Nasarawa states; the program supported 97 hydrocele surgeries and trained 189 health workers to lead 34 support groups for people with chronic lymphatic filariasis, comprising 997 members. In 2023, morbidity management and disability prevention work will be expanded to Ebonyi state, including a study to assess the mental health of support group members before and after participation.

The Carter Center's work in Nigeria is based on partnerships with the federal and state ministries of health; USAID's Act to End NTDs | East project, led by RTI International; and IZUMI Foundation.

## Onchocerciasis Elimination Program for the Americas (OEPA)

OEPA is a coalition led by The Carter Center that includes the ministries of health of the six originally endemic countries in the Americas, the Pan American Health Organization, WHO, and other partners. OEPA has been able to halt treatments in 94% of the population previously endemic for onchocerciasis, and four countries have received WHO verification of elimination.

The last active transmission zone in the Americas is in the Amazon Rainforest bordering Brazil and Venezuela, called the Yanomami Focus Area after the indigenous people residing there.

In 2022, OEPA assisted Brazil and Venezuela with 47,744 Mectizan treatments, representing 72% of the treatment target. Brazil achieved 58% of its goal, while Venezuela achieved 84% of its goal. Venezuela offered standalone treatments and resumed four-times-per-year treatment in 67 priority communities. In Brazil, Mectizan treatments were offered twice per year, primarily alongside essential health services, as has been the case since the onset of the COVID-19 pandemic. In addition to resource prioritization for the pandemic, both countries faced challenges with fuel supply and available flight hours to visit many endemic communities.

The 2023 treatment target for OEPA is 67,708 treatments and includes a four-times-per-year treatment approach in three priority subareas of Venezuela.

The OEPA program was supported by USAID's Achieve Onchocerciasis Elimination in the Americas and Merck & Co., Inc. (Rahway, N.J.).

#### Sudan

Since 1997, The Carter Center has assisted the Sudan Federal Ministry of Health in eliminating onchocerciasis transmission. The Galabat focus in Gedaref state completed post-treatment surveillance activities in 2022 and was declared "transmission eliminated" in February 2023. It joins the Abu Hamad focus, which was declared "eliminated" in 2015. Transmission likely continues in Khor Yabus and Radom foci. In 2022, the Center expanded assistance to the Ministry of Health to eliminate river blindness and lymphatic filariasis through a grant from the Reaching the Last Mile Fund, housed within the END Fund and led by His Highness Sheikh Mohamed bin Zayed Al Nahyan, the president of Abu Dhabi. In 2022, The Carter Center assisted with distributing 243,207 semiannual river blindness treatments in the Radom focus, representing 60% of the national treatment target. Insecurity continued to impede access to the Khor Yabus focus, preventing mass drug administration. The program also assisted with 4,375,042 annual lymphatic filariasis treatments in 30 endemic districts in eight states, reaching 79% of the treatment target. As of 2022, 54 of the 65 districts endemic for lymphatic filariasis

(83%) have received at least one round of MDA. Since 2022, this work has been supported by The Reaching the Last Mile Fund hosted by The END Fund.

#### Uganda

In 2007, Uganda became the second African country, after Sudan, to declare a goal of national river blindness transmission elimination. In 2022, the Lhubiriha focus was reclassified to "transmission suspected interrupted," meaning Uganda no longer contains any foci of ongoing transmission. Three additional foci, Budongo, Bwindi, and Maracha-Terego, completed post-treatment surveillance and were reclassified from "transmission interrupted" to "transmission eliminated," bringing the total number of transmission-eliminated foci to 14, covering 5.5 million people. The Carter Center assisted with the semiannual distribution of 2,829,517 Mectizan treatments, reaching 94% of the target, plus another 173,277 passive treatments and 191,882 treatments for refugees. The 2023 semiannual treatment target is 3.1 million, with treatments occurring in the Madi-Mid North focus bordering South Sudan and the Lhubiriha focus bordering the Democratic Republic of Congo. Transmission in both foci is suspected to be interrupted. The Carter Center's work in Uganda is based on partnerships with the Ministry of Health; USAID's Act to End NTDs | East project, led by RTI International; and the ELMA Foundation.



Community drug distributor Kate Orji goes door to door to administer drug treatment to fight river blindness in Imo state, Nigeria.

## River Blindness Transmission Eliminated in Sudan's Galabat Focus

**In February** the Sudan Federal Ministry of Health announced the elimination of river blindness transmission from the Galabat focus in Gedaref state.

Galabat is the second focus in Sudan to eliminate transmission of the disease; the first was the Abu Hamad focus, which in 2015 became the first focus in Africa to achieve elimination according to World Health Organization (WHO) guidelines. About 265,000 people are now protected from the disease in the two foci.

The accomplishment in Galabat, which started annual mass treatment with Mectizan<sup>®</sup> (donated by Merck & Co. Inc., Rahway, New Jersey) in 2007, is the



(From left) Dr. Heitham Awadallah, Sudan's acting minister of health; Dr. Charles Mackenzie, representative of The END Fund; and Dr. Sara Lavinia Brair, Sudan senior country representative for The Carter Center, celebrate the elimination of river blindness transmission from the Galabat focus in Sudan.



result of the partnership between the federal and state ministries of health in Sudan, locality and administration unit workers, The Carter Center, the Mectizan Donation Program, and community volunteers, as well as successful binational collaboration with bordering Ethiopia.

The declaration of elimination was made based on post-treatment surveillance conducted in Galabat in 2022 after treatments were stopped in 2018. Laboratory testing found no evidence of parasite infection in 4,479 children aged 5–10 years old or in 10,525 black flies, easily surpassing the WHO elimination thresholds.

The Carter Center remains committed to assisting Sudan's Federal Ministry of Health to interrupt river blindness transmission in the country's two remaining foci and to obtain WHO verification that the disease has been eliminated nationwide and hopes for a swift resolution to the ongoing conflict in Sudan.

Since 2022, this work has been supported by The Reaching the Last Mile Fund hosted by The END Fund.

A Sudanese health worker measures a man for river blindness treatment.

## Helicopter Access Improves in Venezuela's Chalbaud Area



A helicopter brings treatment for river blindness and other essential supplies to a community in the remote Chalbaud area of Venezuela.

**The Chalbaud area** of Venezuela, close to Brazil's border in the southern part of the two countries' shared river blindness transmission zone, is difficult to reach.

It is far from the origin points of previously available private helicopter operators, it lacks landing strips for fixed-wing aircraft, and recently it has been inaccessible to the Carter Center's Onchocerciasis Elimination Program for the Americas (OEPA). Staff members were unable to visit communities on foot due to intercommunal conflict and illegal mining in surrounding areas.

As a result, communities in this remote area have not received adequate treatment for river blindness. Three communities never received treatment because health teams could not reach them regularly by air, river, or land.

However, the national program recently identified a private helicopter company, and a new, more direct access route has been used. Previous helicopter flights had to pass through Puerto Ayacucho to obtain special permits; thankfully, these are no longer necessary. The Venezuela Ministry of Health now expects to be able to provide regular high-coverage treatment with Mectizan<sup>®</sup> (donated by Merck & Co. Inc., Rahway, New Jersey), thanks to this change and support from OEPA to pay for these flights.

The OEPA program receives generous support from USAID's Achieve Onchocerciasis Elimination in the Americas award.



Many areas where the indigenous Yanomami people live are remote and difficult to access.

# Dominican Republic Opens New Lab on World Malaria Day

# With support from The Carter Center,

the Ministry of Public Health in the Dominican Republic inaugurated a new molecular surveillance laboratory in Santo Domingo on April 25, World Malaria Day. The lab will help the country eliminate malaria and lymphatic filariasis.

The Carter Center works with the Dominican Republic and Haiti to eliminate both diseases in both countries, which together make up the island of Hispaniola.



A ribbon-cutting ceremony in April marks the opening of a new molecular surveillance lab in the Dominican Republic. The lab will help the country to control and eliminate vector-borne diseases like malaria and lymphatic filariasis.

The Dominican

Republic reported just 336 cases of malaria in 2022; it aims to eliminate the disease by 2025. Haiti reported 14,090 malaria cases in 2022; the total for the island represents a 31.7% increase from 2021. A re-mapping survey is underway to confirm elimination of lymphatic filariasis transmission in the Dominican Republic, while gains are being made in Haiti.

"We must use every tool available to reach elimination, and the molecular biology laboratory will be a powerful one," said Dr. Luccene Desir, who manages the Carter Center's work in Hispaniola.

Support for the Carter Center's Hispaniola work is provided by the Global Institute for Disease Elimination, GLIDE. **E** 

### Guinea Worm Disease Update

		January-July 2023*
	January-July 2022	
	Human Cases	Human Cases
Chad	4	4
South Sudan	1	0
Mali	0	0
Ethiopia	0	0
Central African Republic	1	0
Angola	0	0
Cameroon	0	1
Total	6	5
*Provisional		

For comprehensive information, see the Guinea Worm Wrap-Up newsletter at www.cartercenter.org.

## THE CARTER CENTER



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