HDI and Neglected Tropical Diseases (NTDs)

in

Togo

1997 - 2025

A Summary

Introduction

From 1997 through January 2025, HDI assisted Togo in eradicating, eliminating, controlling multiple denigrating, incapacitating, poverty-ensuring diseases.

During that period, Togo became the first country anywhere to successfully eliminate all of four Neglected Tropical Diseases. HDI was to a greater or lesser extent involved with efforts against three of them.

Through the Ministry of Health (MOH), HDI's collaboration with Togo started with the **Guinea Worm Eradication Program**, headed up by The Carter Center.

HDI then recruited Togo to start **Lymphatic Filariasis Elimination (LF)** at the same time as Ghana, that too in 1997, making these two the first in Africa to start Mass Drug Administration (MDA) with the then new two-drug combination, to prevent lymphatic filariasis parasites from being picked up and spread by mosquitoes.

With LF also gone, from the summer of 2009 until late in January 2025 HDI received USAID funding to help Togo deal with different Neglected Tropical Diseases (NTDs) that are dealt with by providing medicine to essentially the entire population in affected areas once or twice a year (MDA).

Using three medications in five combinations, with the number of tablets of each given to every person being dosed individually depending on their height, medicine was distributed to on the order of 3.2 million people each year.

Our collaboration with Togo ended abruptly when the President of the United States stopped all work funded by USAID near the end of January 2025 as the first step in dismantling that entire organization.

As requested, the pages that follow summarize HDI's activities and some of Togo's accomplishments in which HDI participated during those 27 years.

Guinea Worm Disease (Dracunculiasis) Eradication

Guinea worm eradication is proof of what one person can achieve "with a little help from his friends".

In the early 1980s Dr. Donald (Don) Hopkins from CDC and then The Carter Center, a member of HDI's Board from our start in 1990 through 2018, had decided Guinea worm disease (dracunculiasis) would be a good candidate for the next disease to tackle after smallpox had been declared as eradicated in 1979. President Jimmy Carter became an early recruit to the cause when he agreed in 1986 to help convince Pakistan's head of state and senior leadership to address the few cases that people had detected there.

HDI was incorporated in 1990 to work on Guinea Worm eradication, focusing from the start on helping to address specific problems that others were not dealing with for lack of funding or for other reasons.

HDI's first direct engagement with Togo began in 1997. One of the 11 organizational tools the smallpox program used was having external technical advisors placed in each endemic country. Their independence, the fact that they are not part of any hierarchy within the endemic country, their resulting ability to contact and work with any and all groups, and their lack of any formal power makes them effective.

In 1997, Carter Center was not yet funded by The Bill and Melinda Gates Foundation, a variety of western governments or other major donors. Carter Center had put resident technical advisors in some countries, those with the most cases. But they had insufficient resources to do so in Francophone West Africa in spite of the considerable number of cases being detected there. At that time HDI was fortunate to be solidly supported by a philanthropist (since diseased) who we could approach in such situations.

Beginning in 1997, for several years, HDI funded external resident technical advisors to be placed in three Francophone West African countries for several months prior to and during each year's peak transmission season, in Benin, Ivory Coast, and Togo. Carter Center took over after securing major donors and our philanthropist died.

When almost no Togolese Guinea worm cases remained, Togo's Ministry of Health (MOH) struggled with one fairly circumscribed area where efforts year after year were not bringing cases down sufficiently. Mr Ignace Amegbo, Togo's creative, slightly unconventional and refreshingly frank Program Manager in the Ministry of Health (HDI's resident representative some years later) raised the issue with Anders.

His analysis was that those in the persistently endemic area were a sub-population against whom others discriminated so intensely that Togolese health workers basically would not go there or work with these people.

He had an idea. A male nurse had arrived in Togo with his family a few years earlier as a refugee, after fleeing the genocide in Rwanda. They had been taken in and helped by the congregation in Mr. Amegbo's church. Members of the church, none of them rich, had been donating tinned food and other forms of assistance as best they could. He perceived Joseph Twagi (Twagirumukiza) to be a principled, bright person who was excellent with people. HDI therefore funded Joseph to live and work in Togo's remaining endemic area 24/7 for several weeks at a time, interrupted by a couple of weeks with his family in Lome from time to time. Joseph was very well accepted by that population; Togo's last focus of guinea worm disease was cleared within a year or so.

Having passed the post-transmission searching process after the last case was detected in 2006, Togo was verified by WHO as being free of Guinea worm in 2011.

The sequel to this story occurred a few years later. Mr. Amegbo again approached Anders with a problem. People are people. In Togo too - where unemployment is rife and the vast majority poor - immigrants and refugees are not universally appreciated. Things were getting tense and approaching dangerous in spite of Joseph's calm, friendly, and peaceful demeanor. "We have to get Joseph and his family out of here." The faster the better.

Anders decided that "Jimmy Carter owes him one", and approached Don Hopkins. Joseph applied for entry to the US, in support of which President Carter wrote a personal letter to American immigration authorities. Joseph and his family moved to Abilene, Texas where he and his family were well received by a church congregation, where he and his wife both took work at a state institution for severely mentally handicapped people of all ages, people whom I know, also from how he talked about his job that Joseph met with respect and humanity. His oldest child, a daughter, is now a pediatrician in Texas.

(Other HDI contributions to guinea worm eradication fall outside the scope of this Togo-specific summary.)

Ending Lymphatic Filariasis (LF) Transmission in Togo

Context

While Anders worked on Guinea worm in WHO-Geneva (1995-1997), former NIH (National Institutes of Health) researcher-physician Dr. Eric Ottesen had the adjacent office, focused on lymphatic filariasis (LF), an eradicable but very different disease transmitted by mosquito bites rather than by drinking contaminated water which is the case in Guinea worm. Being a friendly soul, Eric was fun to discuss with and allowed Anders to sit in on a variety of international gatherings pertaining to LF where Anders also met researchers and leaders from the CDC, Brazil, India, Ghana, the UK, Australia, and elsewhere.

This led to two meetings organized by HDI that ended up beneficially impacting LF elimination generally, also in Togo.

First, with practical arrangements organized by James Cook University in Queensland, Australia, during the northern hemisphere summer of 1997 a group of key people from WHO, CDC-Atlanta, Don Hopkins and Anders from HDI, researchers from several continents (also from Recife, Brazil), from corporations, and ministries of health in Africa and Asia, met on Magnetic Island off the coast of Queensland to discuss next steps after a World Health Assembly* resolution targeting LF for global elimination in May that year.

Among other things, the Magnetic Island Meeting decided that LF Elimination would also strive to alleviate suffering among those who have the disease, from the outset, in addition to interrupting disease transmission. This became the first time disease alleviation was launched from the outset in a disease elimination/eradication effort, a landmark decision that has benefitted millions.

Second, HDI organized a meeting in Annecy, France where two major, competing international drug companies that on other issues were at loggerheads with each other, even in the courts, agreed to collaborate on drug donations for Mass Drug Administration to interrupt LF transmission in endemic countries.

HDI and LF Elimination in Togo

Hoping to engage France to support LF elimination efforts in Francophone West Africa, to avoid what happened with Guinea worm where France left it all to the Americans, it was decided that it would be ideal if we could start interventions in Ghana and Togo at the same time.

* The World Health Assembly is the UN-system's General Assembly of member states to discuss health, i.e. WHO's general assembly.

Another reason was that Ghana and Togo shared a transmission-area which lay as a large oval, bisected by the border between them. Mosquitoes fly and are blown by the wind. Addressing LF in one country without the other would make no sense.

In 1997, Dr. Johnny Gyapong, a renowned global-level LF-researcher based in Ghana, and Anders therefore drove from Accra to Lome to seek out whomever we could find in Togo's MOH who might be dealing with LF. Unannounced, we stumbled into the office of Dr. Yao Sodhalon. "And the rest is history." Yao has become the Director of Merck's global Mectizan Donation Program (MDP) which has donated more than 13 billion tablets of Mectizan (ivermectin), providing 5.5 billion treatments to combat river blindness and lymphatic filariasis. Generously, he is now also a member of HDI's Board, While still in Togo, with a VERY small team, Yao and then Prof. Monique Dorkenoo oversaw activities that resulted in Togo becoming the first country in Africa to be verified by WHO as being free of LF, in 2017.

At the outset, before the drug company GSK had its albendazole donation program up and running, HDI purchased and donated albendazole for LF Elimination in Ghana and Togo until Ghana's program became too large, coveriing too much of the country for us to afford the purchases. World Bank then took over albendazole procurement for Ghana. Also, for several years Merck donated Mectizan through HDI to the tune of some $6 million/year until World Bank or perhaps WHO or direct donations to Ministries were sorted out for LF too.

HDI continued supporting LF Elimination in Togo until Mass Drug Administration (MDA) there stopped in 2009, at which point we became the channel through which USAID provided support for Integrated Control of Neglected Tropical Diseases (details below) until funding stopped abruptly and USAID was dismantled in January 2025.

In 2017 Togo became the first country in Africa to be verified by WHO as having eliminated lymphatic filariasis, thanks to impressive, focused, persistent efforts from 1997 through to 2009, by three highly dedicated professionals, Yao Sodhalon, Monique Dorkenoo (now professor), and Michel Datagni, a MOH "health technician" who then joined HDI in 2010, and rose to become became HDI's Resident Representative in Togo. He served his country with honor and distinction through HDI from 2010 until USAID funding stopped.

No child born after 2009 will ever suffer the indignities and economic disaster that LF brings. HDI is pleased to be one of the friends who helped.

(Indications are, Togo has probably completely eliminated LF-transmission, not just "eliminated it as a public health problem". But that's another discussion.)

HDI Alleviating Suffering in LF Patients - in Togo too

Support for MOH efforts to alleviate LF-suffering in Togo was part of HDI's efforts to do that across West Africa, partly to address lymphedema (swelling and "acute attacks" that can lead to "elephantiasis" of limbs or a breast), and especially by stimulating propper surgical treatment for men who have (sometimes massive) accumulations of fluid in their scrotum (hydrocele) due to LF.

In some communities up to 25% of males got LF-hydrocele, which can become so massive as to reach the floor when sitting on a chair, or literally be carried in a wheelbarrow as a man walks through his village. (We will spare you the photographs.) Even a scrotum the size of a soccer ball weighing several pounds is no advantage in the job market or social scene.

Prior to HDI's involvement, the surgical approach used to treat LF-hydrocele, typically opening the scrotal sac and the sac of fluid within it, turning the 'hydrocele sac' inside out, and sewing up the scrotum, often led to postoperative problems as well as recurrence.

In Recife, Brazil, Prof. Joaquim Noroes had developed a technique which turned out to also have been described in 1948, where he completely removes the 'hydrocele sac' while paying exquisite attention to avoid any bleeding along its edge. He also developed/refined a plastic surgery skin-transplant technique to deal with uncommon situations where the patient had "elephantiasis" changes in the scrotal skin itself.

HDI supported a superb specialist surgeon in urology, Dr. Sunny Mante of Ghana, to spend three months in Recife with Prof. Noroes to become expert in those surgical techniques, to bring especially the LF-hydrocele repair technique to Africa.

HDI then supported Dr. Mante, later also Prof. Serigne M. Gueye from Senegal, to provide training courses for surgeons and teachers of surgery in 12 countries across western Africa and in Malawi financed by NORAD, Norway's version of USAID, through HDI-Norway.

Noticing that surgeons "never" take notes, Dr. Mante and Anders also developed a handbook, an aide to memory in French and in English for distribution to surgeons when we trained them, still available free to anyone who wants it. WHO subsequently produced a similar handbook based on the one developed by HDI.

Dr. Mante conducted repeated rounds of training in Togo until **every** surgeon and teacher of surgery in Togo had learned the new technique.

USAID-supported "Integrated Control and Elimination of Neglected Tropical Diseases" in Togo - River blindness, trachoma, schistosomiasis and intestinal worms ("soil transmitted helminths") - Summer 2009 - January 2025

On behalf of a small group of Atlanta-based individuals working on "Neglected Tropical Diseases" (NTDs), in early 2009 Yao Sodhalon suggested HDI ought to apply for funding for Togo under USAID's then then fairly new funding mechanism. The initial application having been rejected, perhaps due to HDI's small size as we understood it, the Atlanta group insisted to USAID that HDI really is a serious NGO, capable of handling such a grant, its diminutive size notwithstanding. Invited to submit a new proposal, we sent a 9 kg box of documents by FedEx to USAID.

We initially received a "Fixed Obligation Grant" for some months in the summer of 2009, during which time we set up an office in Lome and USAID's then prime contractor RTI (Research Triangle International) sent someone to inspect our administrative arrangements, filing system, accounting system, and operations generally. She was apparently a bit skeptical as to whether we would at all pass the inspection. But she came.

No corrective recommendations having been made, the Fixed Obligation Grant was converted to a multi-year USAID sub-contract under RTI.

In late 2015/early 2016, USAID shuffled their country-allocations, and Togo (thus also HDI) was transferred from RTI to FHI (Family Health International), later called FHI360.

When USAID "re-competed" the NTD project in 2018, FHI invited HDI to be part of its multi-country, multi-agency consortium. The proposal accepted, HDI's USAID-funded support for Togo continued, initially for five years from October 2018, later extended to May 2026. Much important work was scheduled for 2025, including impact-surveys to see whether it is now safe to stop doing MDA for river blindness in more of Togo.

As we know, this all came to an abrupt halt on Monday, January 27, 2025. It subsequently emerged that the American President's "Stop Work Order" was actually effective as of January 23, 2025, though FHI's staff too had all gone to work on Friday the 24th and Monday the 27th. Several had perhaps even worked during the weekend. HDI paid its people for all of January anyway.

A few details about support on specific diseases (2009 - Jan. 2025)

River blindness (onchocerciasis)

HDI helped Togo distribute tablets to roughly 3.2 million people annually from 2009 through January 2025. We also assisted in planning and implementing numerous disease impact-assessments, including "Stop-MDA Surveys" such as those that confirmed in 2022 that it would be safe to stop MDA in almost all of Togo's Maritime Region, all thanks to USAID, i.e. the people of the United States.

Previously, areas in Africa large enough to feed 17-18 million people had been abandoned because of river blindness, with up to 30% of adults and up to 40% of older adults in some communities having been blinded. River blindness was the world's second most common infectious cause of blindness. Togo, in the heart of West Africa's originally endemic areas, began spraying rivers to kill the black fly vector that breeds on vegetation overhanging river rapids in 1974, as one of the seven original Onchocerciasis Control Program (OCP) countries, using a chemical called Abate (temephos).

When HDI became involved in the summer of 2009, river blindness transmission was being interrupted through Mass Drug Administration (MDA) using the donated drug Mectizan (ivermectin), distributed to high proportions (>80%-90%) of the population in endemic areas, once or twice yearly, depending on the level of endemicity.

On January 23, 2025, when USAID was destroyed, new Stop-MDA Surveys were budgeted, planned, approved, ready to go for 2025. Those might probably have shown it would be safe to stop MDAs in additional parts of Togo, which would have been wonderful for those donating the drugs, for MOH and funders, and especially for the many thousands who probably no longer need this drug.

Trachoma

Trachoma, the world's most common infectious cause of blindness, caused by bacteria, is one of four "Neglected Tropical Diseases" that Togo has "eliminated as a public health problem" - the first country anywhere to successfully deal with as many as four of them.

Because Togo had essentially eliminated trachoma before we became engaged, HDI's contribution was limited. We pulled together national and international trachoma experts, including from WHO-Geneva, for a meeting to assess all available data from previous studies of trachoma endemicity in different parts of Togo.

When that meeting recommended additional, targeted surveys to clarify the situation in a few areas, HDI assisted in planning, training, and supported implementation of the recommended studies, follow-up with the external experts and a few additional confirmatory studies on what turned out to be false positives, investigated by using a different technique, and collaborated on data-collection within Togo's health system to ensure that all who had early symptoms of trachoma from infections reported during previous years received eyelid surgery to prevent blindness.

HDI then assisted as MOH prepared Togo's "dossier", based on which WHO in May of 2022 declared that Togo had eliminated trachoma as a public health problem, the third country in Africa to do so.

Later, we helped plan and conduct a "post-validation surveillance" study integrated within a river blindness impact assessment, thus optimizing use of funds by surveying two diseases for essentially the cost of one, using a recently developed finger-prick blood-test to test for previous exposure to the trachoma bacterium in young children. We published that two-for-one methodology in November, 2025; https://verixiv.org/articles/2-339/v2) in the "Gates Foundation Gateway", made possible because one of the co-authors receives funding for other work under a Gates Foundation grant to CDC. Due to USAID's dismantling in January, the actual results as concerns any recurrence of trachoma are not available, and they may perhaps never become available, though the collected blood-samples do exist.

Schistosomiasis (Bilharzia)

Schistosomiasis is a worm contracted when people are in rivers, streams, lakes for bathing, play, washing laundry and many other activities, water where very common snails live. The parasites get into the water as eggs in urine or feces from humans or animals; they mature in the snails, are shed, and enter humans through the skin when people are in the water. Among its many symptoms, schistosomiasis leads to lesions on the cervix of girls and women, which among much else increases the risk of HIV transmission.

Previously thought to be a disease one could only hope to control, its transmission has been so greatly reduced in many areas by annual Mass Drug Administration (MDA) using a (mostly) donated drug (praziquantel), supplemented by building latrines and other interventions, that 'schisto' is now targeted for elimination, at least for "elimination as a public health problem" in many places.

In Togo, schisto prevalence in even some formerly highly affected parts of the country was significantly reduced from its initial mapping through to 2015 and then 2021, by 73.4% from a baseline prevalence of 22.2% to 5.9% in 2021, with further reductions almost to zero in parts of the country although 10 districts still had hot-spots areas where prevalence had plateaued at a higher level. A new survey in 2023 showed further reductions in some but not all of the hotspots, indicating that additional interventions will be needed there, in addition to ensuring high drug-distribution coverage in the population.

With assistance in survey-design, assessment, and implementation from people in CDC and HDI, based on its considerable progress, Togo was striving to further intensify interventions, aiming to eliminate schisto as a public health problem in most or all affected areas when USAID was abruptly dismantled.

Control of intestinal worms ("Soil Transmitted Helminths")

HDI's USAID-financed assistance to Togo's Neglected Tropical Diseases effort also included "controlling" three intestinal worms, especially hookworm, tapeworm, and ascaris (a round-worm), which lead to reduced intellectual development in children and much else including anemia in children and adults. As expected, reductions here have been less dramatic. But from baseline to 2021 there was a 35% reduction in school-aged children infected by any of the three, a reduction of 31% in those affected by hookworm (the most common one in Togo), an 80% reduction in tape-worm prevalence, but a non-significant change in ascaris prevalence because that was so low at the outset that these studies cannot measure differences at that level

HDI-contributions to articles from Togo in the medical literature

With and in most cases led by Togolese colleagues, HDI has participated in writing several medical journal articles from Togo and/or where Togo was part of the basis for them, from 2011 - 2025:

Capacity building for the modified filarial hydrocelectomy technique in West Africa. Mante SD, Gueye SM. Acta Trop. 2011 Sep;120 Suppl 1:S76-80. doi: 10.1016/j.actatropica.2010.09.008. Epub 2010 Oct 29. PMID: 20920453.

A success story: Togo is moving toward becoming the first sub-Saharan African nation to eliminate lymphatic filariasis through mass drug administration and countrywide morbidity alleviation. Sodahlon YK, Dorkenoo AM, Morgah K, Nabiliou K, Agbo K, Miller R, Datagni M, Seim A, Mathieu E. PLoS Negl Trop Dis. 2013 Apr 11;7(4):e2080. doi: 10.1371/journal.pntd.0002080. PMID: 23593512; PMCID: PMC3623714.

[Lymphatic filariasis transmission assessment survey in schools three years after stopping mass drug treatment with albendazole and ivermectin in the 7 endemic districts in Togo] ***in French*****: Enquête d'évaluation de la transmission de la filariose lymphatique en milieu scolaire, 3 ans après l'arrêt du traitement de masse à l'albendazole et à l'ivermectine dans les 7 districts endémiques du Togo.** Dorkenoo AM, Sodahlon YK, Bronzan RN, Yakpa K, Sossou E, Ouro-Medeli A, Teko M, Seim A, Mathieu E. Bull Soc Pathol Exot. 2015 Aug;108(3):181-7. French. doi: 10.1007/s13149-014-0408-z. Epub 2014 Dec 4. PMID: 25476256.

A nationwide integrated evaluation of progress with onchocerciasis, schistosomiasis, soil-transmitted helminth and lymphatic filariasis control in Togo. Bronzan, R.N., Agbo, Y.M., Layibo, Y., Datagni, G.M., Halatoko, W., Yakpa, K.G., Sognikin, K.S., Karabou, P., Seim, A. and Dorkenoo, A.M., 2015, October. Am J Trop Med. Hyg. (Vol. 93, No. 4, pp. 152-152).

Investment success in public health: An analysis of the cost-effectiveness and cost-benefit of the Global Programme to Eliminate Lymphatic Filariasis. Turner HC, Bettis AA, Chu BK, McFarland DA, Hooper PJ, Mante SD, Fitzpatrick C, Bradley MH. Clin Infect Dis. 2017 Mar 15;64(6):728-735. doi: 10.1093/cid/ciw835. PMID: 27956460; PMCID: PMC5404931.

Impact of community-based integrated mass drug administration on schistosomiasis and soil-transmitted helminth prevalence in Togo. Bronzan RN, Dorkenoo AM, Agbo YM, Halatoko W, Layibo Y, Adjeloh P, Teko M, Sossou E, Yakpa K, Tchalim M, Datagni G, Seim A, Sognikin KS. PLoS Negl Trop Dis. 2018 Aug 20;12(8):e0006551. doi: 10.1371/journal.pntd.0006551. PMID: 30125274; PMCID: PMC6124778.

Comparison of platforms for testing antibodies to Chlamydia trachomatis antigens in the Democratic Republic of the Congo and Togo. Gwyn S, Awoussi MS, Bakhtiari A, Bronzan RN, Crowley K, Harding-Esch EM, Kassankogno Y, Kilangalanga JN, Makangila F, Mupoyi S, Ngondi J, Ngoyi B, Palmer S, Randall JM, Seim A, Solomon AW, Stewart R, Togbey K, Uvon PA, Martin DL. Sci Rep. 2021 Mar 31;11(1):7225. doi: 10.1038/s41598-021-86639-8. Erratum in: Sci Rep. 2021 Sep 1;11(1):17780. doi: 10.1038/s41598-021-97582-z. PMID: 33790370; PMCID: PMC8012353.

Restarting Neglected Tropical Diseases Programs in West Africa during the COVID-19 Pandemic: Lessons learned and best practices. Kabore A, Palmer SL, Mensah E, Ettiegne-Traore V, Monteil R, Sintondji F, Tine J, Tesfaye D, Ogoussan K, Stukel D, Fuller BB, Sanchez K, Pou B, Dembele B, Weaver A, Reid S, Milord MD, Kassankogno Y, Seim A, Shott J. Am J Trop Med Hyg. 2021 Oct 20;105(6):1476-1482. doi: 10.4269/ajtmh.21-0408. PMID: 34670193; PMCID: PMC8641318.

Progress from morbidity control to elimination as a public health problem of schistosomiasis and the status of soil-transmitted helminth infection in Togo: a second impact assessment after ten rounds of mass drug administration. Dorkenoo AM, Phillips AE, Klein L, Lack F, Ataba E, Yakpa K, Tagba AE, Assoti BE, Sossou E, Tchalim M, Datagni G, Seim A, Milord MD, Kassankogno Y. Parasit Vectors. 2023 Sep 4;16(1):314. doi: 10.1186/s13071-023-05882-2. PMID: 37667301; PMCID: PMC10478252.

Reaching elimination of onchocerciasis transmission with long-term vector control and ivermectin treatment in West Africa: The example of Togo. Basanez, M.G., Amaral, L., Bronzan, R., Seim, A., Milord, M.D., Padjoudoum, K., Telou, I., Agoro, S., Datagni, M., Gnossike, P. and Hamley, J., Apr 2025. Preprint. Nature Communications; Peer-Review ongoing.

Integrating surveillance for trachoma after its elimination as a public health problem with onchocerciasis Stop-MDA surveys: Togo's approach to conduct trachoma post validation surveillance. Milord MD, Kamau E, Arnold BF, Martin D, Gwyn S, Seim A, Datagni M, Gass K, Palmer S, Alaglo K, Gnossike P. Gates Foundation Gateway (VeriXiv). 2025 Nov 14;2:339.