Message from Yao Sodahlon, Director

2020—Sustained Commitment to Impact in a Year of Uncertainty

In early 2020, the world was surprised by an outbreak due to a novel coronavirus. Initially thought to be something clustered, transient, and easily contained, SARS-CoV-2 spread rapidly becoming a deadly pandemic threatening all populations across the world. Despite drastic lockdown measures taken by countries to limit the spread of the disease, the death toll was high and continued to rise through 2020 and into 2021. Business and the global economy have drastically slowed down with important social consequences.

The pandemic’s impact on our efforts to control and eliminate onchocerciasis (river blindness) and lymphatic filariasis or LF (elephantiasis) was predictable. By the end of March when COVID-19 cases began to spread rapidly, the World Health Organization (WHO) issued guidance calling for neglected tropical disease (NTD) interventions to stop temporarily to limit the spread.

Despite the suspension of NTD operations in many countries, I’m pleased to report that Merck & Co., Inc.* implemented safety measures to avoid disruption in production and shipping of Mectizan®. The Mectizan Donation Program team began working remotely while continuing to interact with partners to ensure that the Mectizan requested for distribution in 2020 was supplied and available for distribution when it becomes safe to resume mass drug administration (MDA). All applications submitted for MDA in 2020 were approved to initiate the shipping process as planned before the pandemic.

In 2020, a total of 416.8 million treatments were approved. This included 355.3 million treatments in countries where LF and onchocerciasis are co-endemic and 61.5 million treatments in countries implementing “triple therapy,” also known as IDA (ivermectin [Mectizan], diethylcarbamazine [DEC], and albendazole). Haiti was a new country approved by the Mectizan Expert Committee in 2020 to receive Mectizan to launch IDA. This brings the number of countries to 15 approved to receive Mectizan for IDA since the expansion of the donation in 2017.

Unfortunately there were delays in delivering approved shipments to some destinations as freight companies reduced the number of flights due to pandemic lockdowns.

As of the end of 2020, cumulatively, more than 4.4 billion treatments have been approved by the Mectizan Donation Program, and over 10.4 billion Mectizan 3 mg tablets have been shipped to endemic countries by Merck since inception of the program in 1987.

In August 2020, WHO advised countries to undertake a risk/benefit analysis before resuming MDAs and other NTD activities. While implementing COVID-19 risk-mitigation measures, the majority of countries were able to implement MDAs. A few countries postponed their campaigns to early 2021.

To ensure safe distribution of Mectizan when MDAs resumed, MDP and Merck announced a $500,000 grant to NGO partners to fund implementation of COVID-19 risk mitigation measures. Grants up to $30,000 are available and the application process is still open; we encourage NGO partners to apply.

Dr. Yao Sodahlon

*Merck & Co., Inc. is known as MSD outside the United States and Canada.
While implementing COVID-19 risk-mitigation measures, a large number of countries were able to implement MDA in 2020.

We were delighted to share some good news in 2020. Malawi became the second country in Sub-Saharan Africa to be validated by WHO to have achieved the elimination of LF as a public health problem. We congratulate President Lazarus Chakwera, Minister of Health and Population Jappie Mhango, the NTD team, and the people of Malawi for this remarkable achievement. I look forward, when face-to-face activities are safe, to organizing a special ceremony to give a well-deserved LF elimination award to Malawi for this extraordinary achievement.

We also celebrated the approval by the member states of the World Health Organization’s NTD 2021-2030 Road Map during a special session of the World Health Assembly (WHA-73) in November 2020. In the new road map, ambitious but achievable goals have been established for NTDs, including LF and onchocerciasis.

The target for onchocerciasis elimination was upgraded from control to elimination of transmission. WHO anticipates that, by 2030, 8 more countries can be added to the 4 countries in the Americas verified for eliminating the disease. This is an achievable goal, and we will also work to help other countries make significant progress in the race to achieve this important milestone.

For LF, the new road map targets 81% of endemic countries for elimination as a public health problem and that treatment for LF elimination will have stopped outside of hotspots discovered during the post-treatment surveillance period.

I sincerely hope that in 2021 the world will defeat the COVID-19 pandemic and life will return to normal.

As pointed out earlier, the targets to reach for onchocerciasis and LF are ambitious in such a very short timeframe. Even so, I truly believe they are achievable as the available strategies to combat these diseases are equitable, impactful, and resilient as was demonstrated in the first year of the pandemic.

Last but not least, since we want countries to be the leading force toward the goals for 2030, a World Health Assembly (WHA) resolution calling for member states’ political commitment to work in the spirit of the 2021-2030 NTD Road Map is needed.

If together as one, we continue ensuring no one is left behind, while measuring impact of our actions to promptly readjust as required, we can rapidly and durably “Stamp Out Oncho and LF.”

Dr. Yao Sodahlon, Director
Mectizan Donation Program
Onchocerciasis-Endemic Countries

Countries where onchocerciasis has been eliminated*
- Angola
- Benin
- Brazil
- Burkina Faso
- Burundi
- Cameroon
- Central African Republic
- Chad

Countries eligible for Mectizan
- Congo
- Côte d’Ivoire
- Democratic Republic of the Congo
- Equatorial Guinea
- Ethiopia
- Gabon
- Ghana
- Guinea
- Guinea-Bissau
- Liberia
- Malawi
- Mali
- Nigeria
- Niger
- Mozambique
- Senegal

* Elimination of transmission
Message from Yao Sodahlon, Director

Onchocerciasis-Endemic Countries

Lymphatic Filariasis-Endemic Countries

2020 Elimination Progress—Overview

2020 Elimination Progress—River Blindness

2020 Elimination Progress—Lymphatic Filariasis

Influencing for Impact

COVID-19 Pandemic and MDP Operations

What’s Ahead

Countries where LF has been eliminated*

Cambodia
Cook Islands
Egypt
Kiribati
Malawi
Maldives
 Marshall Islands
Niue
Palau
Sri Lanka
Thailand
Togo
Tonga
Vanuatu
Vietnam
Wallis and Futuna
Yemen

Countries eligible for Mectizan and albendazole

Angola
Benin
Burkina Faso
Cameroon
Central African Republic
Chad
Congo
Côte d’Ivoire
Democratic Republic of the Congo
Equatorial Guinea
Ethiopia
Gabon
Guinea
Guinea-Bissau
Liberia
Mali
Mozambique
Niger
Nigeria
Senegal
Sierra Leone
South Sudan
Sudan
Tanzania
Uganda

Countries approved or eligible for IDA (Mectizan, DEC, and albendazole)*

American Samoa
Bangladesh
Brazil
Brunei Darussalam
Comoros
Dominican Republic
Eritrea
Fiji
French Polynesia
Guyana
Haiti
India
Indonesia
Kenya
Lao PDR
Federated States of Micronesia
Madagascar
Malaysia
Myanmar
Nepal
New Caledonia
Papua New Guinea
Philippines
Samoa
São Tomé & Príncipe
Timor-Leste
Tuvalu
Wallis and Futuna
Zambia
Zimbabwe

* Elimination as a public health problem

* Countries in blue italics are eligible for IDA
Message from Yao Sodahlon, Director

Onchocerciasis-Endemic Countries

Lymphatic Filariasis-Endemic Countries

2020 Elimination Progress—Overview

2020 Elimination Progress—River Blindness

2020 Elimination Progress—Lymphatic Filariasis

Influencing for Impact

COVID-19 Pandemic and MDP Operations

What’s Ahead

2020 Elimination Progress—Overview

Mectizan treatments approved in 2020

417 Million

Mectizan treatments approved from 1988 to 2020

4.4 Billion

2020 Annual Highlights
Progress Toward Onchocerciasis (River Blindness) and Lymphatic Filariasis (LF) Elimination

In 2020, the Mectizan Donation Program approved 416.8 million Mectizan treatments for mass drug administration (MDA) to eliminate lymphatic filariasis (LF) and onchocerciasis (river blindness). With the addition of Haiti, the program reached 36 countries in 2020.

**Figure 1: Cumulative Number of Treatments Approved 1988-2020 (in Millions)**

<table>
<thead>
<tr>
<th>Year</th>
<th>River Blindness Only</th>
<th>River Blindness + LF</th>
<th>LF Only (Albendazole + Mectizan)</th>
<th>LF Only (Mectizan, DEC, Albendazole, aka IDA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>138,787,072</td>
<td>75,348,412</td>
<td>141,209,669</td>
<td>61,503,991</td>
</tr>
</tbody>
</table>

**2020 Total Treatments Approved:** 416.8 million
Despite many difficulties created by the pandemic, progress was made in the campaign to eliminate onchocerciasis (river blindness). In 2020, 214.1 million treatments were approved for use in the elimination of onchocerciasis in 24 African countries (Figure 2).

Also in 2020, 34.8 million treatments were approved to implement two rounds of MDA for onchocerciasis elimination. Twice-yearly treatment, a strategy recommended by some national onchocerciasis elimination committees (NOECs) to accelerate the elimination of onchocerciasis, is currently being implemented in 11 countries: Brazil, Burkina Faso, Ethiopia, Ghana, Nigeria, Sudan, Tanzania, Togo, Uganda, Venezuela, and Yemen.

As of the end of 2020, 15 million people no longer require treatment for river blindness as the transmission of onchocerciasis is suspected to have been either interrupted or eliminated in these communities (Table 2). This is a strong indicator of progress toward elimination!

Of those, 4.6 million still receive Mectizan as part of continued treatment for LF in co-endemic countries. Post-treatment surveillance for river blindness will begin in these communities when MDA for LF is stopped.

Figure 2: Cumulative Treatments Approved for River Blindness, 1988 - 2020 (in millions)
This table shows the population for whom treatment for onchocerciasis has been stopped since transmission is suspected to have been either interrupted or eliminated (as of December 2020).

Table 2: Mectizan Treatment Stopped for Onchocerciasis

<table>
<thead>
<tr>
<th>Country</th>
<th>Onchocerciasis foci no longer needing treatment</th>
<th>Total onchocerciasis foci</th>
<th>Population in onchocerciasis foci where treatment has stopped</th>
<th>Population in onchocerciasis foci where treatment has stopped but still under treatment for LF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mexico*</td>
<td>3</td>
<td>3</td>
<td>227,118</td>
<td></td>
</tr>
<tr>
<td>Guatemala*</td>
<td>4</td>
<td>4</td>
<td>286,521</td>
<td></td>
</tr>
<tr>
<td>Colombia*</td>
<td>1</td>
<td>1</td>
<td>1,515</td>
<td></td>
</tr>
<tr>
<td>Ecuador*</td>
<td>1</td>
<td>1</td>
<td>30,015</td>
<td></td>
</tr>
<tr>
<td>Equatorial Guinea</td>
<td>4</td>
<td>4</td>
<td>252,359</td>
<td>40,355</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>18</td>
<td>238</td>
<td>2,140,839</td>
<td>177,283</td>
</tr>
<tr>
<td>Mali</td>
<td>2</td>
<td>22</td>
<td>886,887</td>
<td></td>
</tr>
<tr>
<td>Nigeria</td>
<td>44</td>
<td>482</td>
<td>8,105,010</td>
<td>4,408,665</td>
</tr>
<tr>
<td>Venezuela</td>
<td>2</td>
<td>3</td>
<td>122,128</td>
<td></td>
</tr>
<tr>
<td>Sudan</td>
<td>6</td>
<td>8</td>
<td>261,606</td>
<td></td>
</tr>
<tr>
<td>Uganda*</td>
<td>31</td>
<td>43</td>
<td>3,079,562</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>116</strong></td>
<td><strong>809</strong></td>
<td><strong>15,393,560</strong></td>
<td><strong>4,626,303</strong></td>
</tr>
</tbody>
</table>

*In the Americas and Uganda, the geographical unit is a focus rather than a district.

There are now over 15 million people no longer needing treatment for river blindness.
Lymphatic Filariasis Elimination Campaign Adds Another Victory in 2020

The Mectizan Donation Program congratulates Malawi for becoming the second country in sub-Saharan Africa to be validated by WHO for eliminating lymphatic filariasis as a public health problem.

Malawi has a history of being a supportive partner in the effort to eliminate lymphatic filariasis (LF). We commend President Lazarus Chakwera, Minister of Health and Population Jappie Mhango, implementing partners, and the people of Malawi for this remarkable achievement that has alleviated suffering for millions and highlights the perseverance of many dedicated partners.

We look forward to celebrating this achievement in Malawi when it is safe to do so.

Since 2000, more than 2.6 billion treatments have been approved for LF elimination worldwide.
Application Approvals in 2020

A total of 216.5 million treatments were approved in 2020 for elimination of lymphatic filariasis in African countries where onchocerciasis is co-endemic.

**Application approvals for LF elimination in onchocerciasis-endemic countries under treatment with Mectizan and albendazole**

In 2020, 216.5 million Mectizan treatments were approved for countries where onchocerciasis and LF are co-endemic. Of these 216.5 million treatments, 75.3 million were approved for communities where LF and onchocerciasis are co-endemic (the remainder were approved in communities endemic for LF only).

The continuation of Mectizan treatment for LF prevents the initiation of post-treatment surveillance (PTS) for onchocerciasis, particularly in Nigeria. We encourage countries where PTS must be postponed until treatment for LF is stopped to accelerate LF elimination, so that we can celebrate the elimination of both diseases.

**Application approvals for LF elimination in non-onchocerciasis endemic countries implementing IDA “triple therapy”**

In addition to the unlimited donation of Mectizan for the global elimination of onchocerciasis and the elimination of LF in countries co-endemic for onchocerciasis, in 2017 Merck & Co., Inc. committed up to 100 million Mectizan treatments annually through 2025 for the implementation of triple therapy (ivermectin + DEC + albendazole, also known as “IDA”) to accelerate LF elimination in countries where onchocerciasis is not endemic, and meet WHO criteria making them eligible for IDA.

In 2020, 61.5 million treatments were approved for IDA in 11 countries. The Mectizan Expert Committee approved Mectizan for a third round of IDA in American Samoa after the review of the post-IDA impact assessment data showing persistence of transmission. Haiti was also approved to start IDA in 2 districts.
Program Downscaling for LF Elimination in Onchocerciasis-endemic Countries under Treatment with Mectizan and Albendazole

Malawi is the third country where this elimination strategy for LF (the distribution of Mectizan + albendazole) worked, and the disease was eliminated as a public health problem.

The number of people who no longer need treatment with Mectizan and albendazole for LF elimination increased from 165.4 million in 2019 to 178.2 million in 2020, as shown in Table 3. Among those, approximately 42 million will continue to receive Mectizan for river blindness. Treatments stopped in new districts in Nigeria, Ghana, and Mozambique.

There are now over 178 million people no longer needing treatment for LF.

Table 3: Mectizan Treatment Stopped for LF

<table>
<thead>
<tr>
<th>Country</th>
<th>LF districts no longer needing treatment</th>
<th>Total LF districts</th>
<th>Population in LF districts no longer needing treatment</th>
<th>Population still receiving treatment for onchocerciasis in districts where LF treatment is stopped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>44</td>
<td>48</td>
<td>5,057,463</td>
<td>2,802,423</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>62</td>
<td>70</td>
<td>19,385,410</td>
<td>293,773</td>
</tr>
<tr>
<td>Cameroon***</td>
<td>161</td>
<td>162</td>
<td>19,578,628</td>
<td>9,432,961</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>19</td>
<td>82</td>
<td>1,410,491</td>
<td>1,233,208</td>
</tr>
<tr>
<td>Ghana</td>
<td>106</td>
<td>118</td>
<td>13,996,297</td>
<td>3,171,699</td>
</tr>
<tr>
<td>Guinea Bissau</td>
<td>30</td>
<td>109</td>
<td>732,451</td>
<td>0</td>
</tr>
<tr>
<td>Malawi*</td>
<td>29</td>
<td>29</td>
<td>19,060,720</td>
<td>2,550,099</td>
</tr>
<tr>
<td>Mali**</td>
<td>75</td>
<td>75</td>
<td>21,197,708</td>
<td>6,554,127</td>
</tr>
<tr>
<td>Mozambique</td>
<td>18</td>
<td>114</td>
<td>3,149,717</td>
<td>0</td>
</tr>
<tr>
<td>Niger</td>
<td>44</td>
<td>55</td>
<td>15,141,592</td>
<td>0</td>
</tr>
<tr>
<td>Nigeria</td>
<td>38</td>
<td>584</td>
<td>9,120,416</td>
<td>989,081</td>
</tr>
<tr>
<td>Senegal</td>
<td>3</td>
<td>50</td>
<td>587,544</td>
<td>0</td>
</tr>
<tr>
<td>Sierra Leone</td>
<td>9</td>
<td>14</td>
<td>5,440,662</td>
<td>3,843,146</td>
</tr>
<tr>
<td>Tanzania</td>
<td>105</td>
<td>120</td>
<td>25,760,960</td>
<td>6,467,793</td>
</tr>
<tr>
<td>Togo*</td>
<td>9</td>
<td>9</td>
<td>1,604,204</td>
<td>1,214,599</td>
</tr>
<tr>
<td>Uganda**</td>
<td>64</td>
<td>64</td>
<td>16,893,464</td>
<td>3,099,588</td>
</tr>
<tr>
<td>Yemen*</td>
<td>11</td>
<td>11</td>
<td>125,341</td>
<td>74,713</td>
</tr>
<tr>
<td>Total</td>
<td>827</td>
<td>1,714</td>
<td>178,243,067</td>
<td>41,727,210</td>
</tr>
</tbody>
</table>

* Validated by WHO as having achieved elimination as public health problem
** All endemic districts are under post-treatment surveillance (PTS)
*** All endemic districts were thought to be eligible to go under PTS but one has not yet passed the required evaluations
A Lifelong Commitment Pays Off in the Campaign Against River Blindness

When Jacob Danboyi Righain was in college, his father began to lose his sight. The problem was diagnosed as onchocerciasis (river blindness), but—in a time before the necessary drugs were available—it was too late to halt the progression of the illness.

“And so,” Jacob recalls, “I took it upon myself to work extra, to ensure that others are prevented from becoming blind.”

When the Nigerian government started distributing Mectizan for prevention of river blindness, it established a system for mass drug administration that was later adapted for use to control other neglected tropical diseases (NTDs) as well.

Now serving as the NTD Coordinator for Nasarawa State in central Nigeria, Jacob has devoted his adult life to improving the health of his fellow citizens.

After many years of effort, in 2017 Jacob had the joy of seeing Nasarawa State declared free from transmission of the parasite that causes river blindness.

He explains with a smile, “They say, ‘How did you do it?’ And I tell them it’s just commitment. Commitment.”

“I took it upon myself to work extra, to ensure that others are prevented from becoming blind.”

– Jacob Danboyi Righain

We invite you to view our Stamp Out Oncho! film.

vimeo.com/536862657

Take a deeper dive into the story of Nasarawa’s success in this award-winning short film. Find it at vimeo.com/536862657.
In 2020, the COVID-19 pandemic resulted in important challenges throughout the year for MDP and our country partners.

Grants for COVID-19 Mitigation Efforts

In October, the Mectizan Donation Program and Merck & Co., Inc. announced a grant opportunity for non-governmental organization (NGO) partners working to eliminate onchocerciasis and lymphatic filariasis. This ongoing grant opportunity provides funding to members of the NGO Coordination Group for Onchocerciasis Elimination and/or LF NGO Network up to $30,000 to mitigate the transmission of SARS-CoV-2, the virus that causes COVID-19, when implementing mass drug administration (MDA) with Mectizan. Funding remains available in 2021 for eligible NGOs; please refer to the grant application found on the MDP website.

Mectizan Expert Committee (MEC) Statement on Mectizan Use during the COVID-19 Pandemic

The MEC reminded country partners that Mectizan is donated only for the elimination of onchocerciasis and lymphatic filariasis:

“The COVID-19 pandemic has brought interest from the media and an increase in publications on the action of ivermectin on SARS-Cov-2 viral replication. While we recognize the importance of COVID-19 interventions, Mectizan is donated strictly and solely for onchocerciasis and lymphatic filariasis elimination in the 50 endemic partner countries that have applied and been approved for Mectizan by the MEC. Merck manufactures Mectizan, and Mectizan is approved for use, in the appropriate dose, specifically for the treatment of onchocerciasis (river blindness) and lymphatic filariasis (elephantiasis).

“The Mectizan Donation Program provides treatments with the clear understanding that donated Mectizan will only be used for these two diseases through mass drug distribution programs. Use of donated Mectizan for any other indication and at unauthorized doses is strictly prohibited and can be dangerous.”

MDP is also working closely with national program managers, WHO HQ, and WHO AFRO to prevent diversion of Mectizan for COVID-19.
What’s Ahead

MDP to Establish Updated Agreement with Partner Countries to Reach 2021-2030 Elimination Goals

A new five-year agreement between countries and the Mectizan Donation Program to replace the current agreement is coming soon.

The agreement is meant to define roles and responsibilities of the signatories (the Mectizan Donation Program, the Ministry of Health, and Ministry of Finance) to facilitate access to Mectizan and the safe and effective distribution of the drug to accelerate the elimination of onchocerciasis and lymphatic filariasis.

The new agreement is expected to be in effect in 2022.

Future Milestones

ONCHO GOALS: The 2021-2030 WHO NTD Road Map targets for verification of elimination of river blindness transmission:

<table>
<thead>
<tr>
<th>Year</th>
<th>Countries (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>4 countries (12%)</td>
</tr>
<tr>
<td>2023</td>
<td>5 countries (13%)</td>
</tr>
<tr>
<td>2025</td>
<td>8 countries (21%)</td>
</tr>
<tr>
<td>2030</td>
<td>12 countries (31%)</td>
</tr>
</tbody>
</table>

LF GOALS: The 2021-2030 WHO NTD Road Map targets for validation of elimination of LF as a public health problem:

<table>
<thead>
<tr>
<th>Year</th>
<th>Countries (Percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>19 countries (26%)</td>
</tr>
<tr>
<td>2023</td>
<td>23 countries (32%)</td>
</tr>
<tr>
<td>2025</td>
<td>34 countries (47%)</td>
</tr>
<tr>
<td>2030</td>
<td>58 countries (81%)</td>
</tr>
</tbody>
</table>
The Mectizan Donation Program is an international program to eliminate river blindness and lymphatic filariasis, primarily funded by Merck & Co., Inc.*, with support from GlaxoSmithKline.

Through the Mectizan Donation Program, Merck & Co., Inc.* donates Mectizan® for the elimination of the transmission of onchocerciasis and for the elimination of lymphatic filariasis (LF) as a public health problem. For the elimination of LF where onchocerciasis is co-endemic in Africa and Yemen, Mectizan is co-administered with albendazole, donated by GSK. In countries eligible for “triple therapy,” Mectizan and albendazole are co-administered with diethylcarbamazine (DEC) to accelerate LF elimination in some communities.

All photos ©Mectizan Donation Program unless otherwise noted.

*Merck & Co., Inc. is known as MSD outside the USA and Canada.