

Dear partners,

This second volume of our newsletter is focusing on Ethiopia, one of the most schistosomiasis-endemic countries worldwide with over 12.3 million children at risk of the disease. In 2015, the Ethiopian Federal Ministry of Health (FMoH) launched a ground-breaking national school-based deworming programme to treat at-risk school-age children for schistosomiasis and soil-transmitted helminths across the country.

The programme is well embedded into a large scale ongoing and expanding WASH programme for assuring transmission control. The GSA had the great pleasure to talk to His Excellency Dr. Kebede Worku, State Minister, Federal Ministry of Health, about this programme. You can read the interview on page 2 of this newsletter.

As you will find out, the GSA is working closely with the Ethiopian FMoH and its partners to assure that this invaluable and well documented experience will stand as an example for other large endemic countries in Sub-Saharan Africa. This is also why the GSA has initiated an exciting multi-stakeholder elimination project in the country, which is currently taking shape. You can read more about this project further below.

In order to follow our other activities in the fight against schistosomiasis, please continue to visit our website or follow us on Twitter.

With warmest regards,

Dr. Lorenzo Savioli
Dr. Johannes Waltz



LARGE-SCALE ELIMINATION OF SCHISTOSOMA MANSONI IN ETHIOPIA

A collaboration between EPHI, FMoH, GSA, Imperial College London, SCI, NHM and World Vision

Ethiopia is one of the most endemic countries for schistosomiasis in the world, and at the same time, has a Federal Ministry of Health that is firmly committed to the elimination of this disease. So far, praziquantel and its regular Preventive Chemotherapy (PC) are still at the centre of any elimination efforts to achieve the 2020 WHO road map target of at least 75% coverage of school-age children (SAC). However, in line with moving beyond the 2020 targets towards the WHO 2025 transmission control and eventual global elimination, the national deworming programme is aiming from the very beginning to include WASH (water, sanitation and hygiene) activities, additional health education and behavioural changes as well as potentially snail control in their programme. This innovative approach beyond the minimum target requested by the WHO strategy is highly commendable and needs accurate reporting and documentation. Given these conditions and its goal to eliminate schistosomiasis as a public health problem by 2025, the GSA considered this to be the perfect ground for collaborative work to study and explore in detail the impact such integrated approaches can have.

Taking to its role as facilitator of coordination and collaboration between schistosomiasis stakeholders, the GSA has thus convened a partnership project in Ethiopia which sets out to demonstrate the effectiveness of a multi-pronged schistosomiasis transmission control strategy. Through the coordinated provision of appropriate,



meaning schistosomiasis-relevant, preventive chemotherapy, WASH, health education, and snail control the partnership project aims to demonstrate the critical elements required for the elimination of schistosomiasis in selected areas of northern Ethiopia. Partners of this project include the Ethiopian Ministry of Health, the Ethiopian Public Health Institute, World Vision International, the Schistosomiasis Control Initiative, Imperial College London, and the Natural History Museum London. While at first the focus will be on the demonstration of the feasibility of elimination at the scale of multiple woredas, given sufficient interventions, the next step will then be on compiling information on cost efficiencies and best practices for schistosomiasis control and elimination.

As a first step, Dr Jack Grimes, a post-doc at Imperial College, working for the GSA on this project, travelled to Tigray with Kalkidan Mekete of the Ethiopian Public Health Institute (EPHI) and Alemshet Aschalew, World Vision International. The next step will be a meeting of all partners in Addis Ababa to further conceptualise and substantiate the individual elements of the project. This meeting is currently being planned.

The goal of the project is to work closely with existing GSA partners, and to increasingly incorporate contributions from additional partners as and when they join.

THE ETHIOPIA SCHISTOSOMIASIS CONTROL PROGRAMME - CURRENT AND FUTURE PROSPECT TOWARDS ELIMINATION

The GSA is thrilled and grateful for the opportunity to talk to His Excellency Dr. Kebede Worku, State Minister, Federal Ministry Of Health, Ethiopia about his ministry's exemplary commitment and ambitious targets to free the country from schistosomiasis. Together with our partners we are committed to play our role in this vital endeavour.

Following the motto "End the neglect, integrate, scale-up and sustain", schistosomiasis-burdened countries around the world have shown significant steps towards control and elimination. Now it is the time to change gear and accelerate on the road to elimination by implementing comprehensive strategies.



Question and Answer with His Excellency Dr. Kebede Worku, State Minister, Federal Ministry Of Health, Ethiopia.

Q. How prevalent is schistosomiasis and how many Ethiopian people are affected? (its extent of effect in Ethiopian people.)

In Ethiopia, the intestinal form of schistosomiasis is widely distributed, while the uro-genital form is restricted to foci in the rift valley region. There are an estimated 38.3 million people living in 358 schistosomiasis endemic areas, comprising 4.4million pre-school children, 12.3 million school-aged children, and 21.6 million adults. The prevalence ranges up to 75% in some districts.

Q. How much attention is given to Schistosomiasis by the government??

From 2012 onwards, the government of Ethiopia has conducted extensive mapping to identify the burden and distribution of NTDs in almost all districts of the country. Once the burden was identified, NTDs were included in the Health Sector Development Program (HSDP-IV) and later covered more extensively in the 5-year Health Sector Transformation Plan (2016-2020). Detailed strategies and interventions were then included in first NTDs master plan (2013-2015) and more ambitiously in the second edition of the master plan (2016-2020).

The latter of which, most importantly, highlights ambitious, yet achievable, control and elimination targets for NTDs by 2020 - with nationwide programme implementation for schistosomiasis from 2016 onwards aiming for eventual nationwide elimination as a public health problem by 2020.

Q. What activities have been done so far in the area of schistosomiasis??

Ethiopian Public Health Institute (EPHI), following a direction from the Ministry and support from our partners, conducted district level mapping for schistosomiasis and soil transmitted helminthiasis from 2013 onwards. This exercise has enabled us to identify the distribution of the diseases in almost all of the districts in the country. Consequently, through the financial and technical support from CIFF, End Fund and SCI, the Ministry was able to design and intensify SCH/STH morbidity control activities in all endemic districts qualified for treatment. During the first year of the project implementation (2015/16), the programme was able to treat more than 6.7 million people for SCH with a therapeutic coverage of 77%.

Q. What is the future prospect of the schistosomiasis programme??

We believe that concerted partnerships and effective coordination of initiatives and action by all stakeholders are the key issues for achieving successful control and elimination targets against schistosomiasis. In addition to implementing MDAs in all endemic districts, strengthening the implementation of additional interventions, most notably, hygiene and sanitation practices and initiating vector control measures, further enhance the Ethiopian schistosomiasis programme to achieve its elimination target by 2020.

ETHIOPIA FACTS & FIGURES



Country / Geographic Information

Landlocked country with 6 neighbouring countries: Eritrea to the north, Djibouti to the northeast, Somalia to the east, Kenya to the south, South Sudan and Sudan to the west and northwest, respectively.

Area: 1,104,300 km² of which 1 million km² are land.
Terrain: Diverse terrain, divided by the Great Rift Valley; the lowest point Danakil Depression at 125m, the highest point at Ras Dejen at 4,533m.



Population Information

Total Population: 99,465,819
Rural Population: 75 Million
Population living in SCH endemic areas: 38.3 million
School-aged children (SAC) living in SCH endemic areas: 12.3 million
Pre-SAC living in SCH endemic areas: 4.4 million
Adults living in SCH endemic areas: 21.6 million
Life expectancy: 61.48 years (59.11 for men/63.93 for women)



Government

Type: Federal Republic
President: Mulatu Teshome Wirtu
Prime Minister: Hailemariam Desalegn
Health Minister: H.E. Dr. Kesetebirhan Admasu



Challenges

Physician density: 0.03 per 1000 population.
The minimum threshold required to ensure high coverage with essential health interventions is 2.3 per 1000 population ratio

Population living with unimproved sanitation facilities in 2015:
Urban: 73%
Rural: 72%

Unimproved sanitation facilities: "use of any of the following facilities: flush or pour-flush not piped to a sewer system, septic tank or pit latrine; pit latrine without a slab or open pit; bucket; hanging toilet or hanging latrine; shared facilities of any type; no facilities; or bush or field."



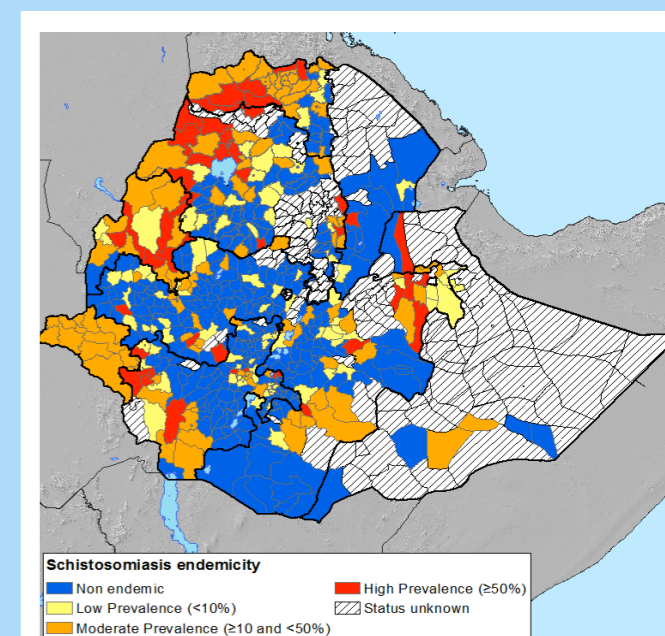
Literacy and school enrolment

Total adult literacy rate: 49.1% (57.2% for men; 41.1% for women)

Gross enrolment rate in primary education: 87%
Gross enrolment in lower secondary education: 38%

SCHISTOSOMIASIS DISTRIBUTION PATTERNS

Ethiopia is endemic for both *Schistosoma mansoni* and *Schistosoma haematobium*. Their distribution can be seen on the map to the right. The geographical difference in prevalence may be explained by the Ethiopian terrain, altitude, population-densities and presence of the intermediate snail host. It has been found that *S. mansoni* occurs mainly between 1300m and 2000m altitude in agricultural communities along streams (*S. mansoni* can, however, also be found down to 800m altitude), while *S. haematobium* is typically found below 800m altitude^{1,2}. Since much of Ethiopia is above this level, *S. mansoni* is much more prevalent in the Ethiopian population.



Current burden of schistosomiasis in Ethiopia

Source: Federal Democratic Republic of Ethiopia – Ministry of Health²

¹Kloos, H., Lo CT, Birrie H., Ayele T., Tedla, S., Tsegay, F. (1988). Schistosomiasis in Ethiopia. Soc Sci Med., 26(8):803-27.

²Federal Democratic Republic of Ethiopia – Ministry of Health. (2016). Second Edition of National Neglected Tropical Diseases Master Plan. Addis Ababa

MOVING FROM SMALL-SCALE TO NATIONAL-LEVEL AGAINST SCHISTOSOMIASIS: THE ETHIOPIAN CASE-STUDY

Large-scale mapping exercises between 2013 and 2015 allow for a current estimated 38.3 million people who live in endemic areas, comprising 4.4 million pre- school children, 12.3 million school-aged children, and 21.6 million adults.¹

These mapping exercises have been part of Ethiopia's continuously increasing efforts over the last decade to fight both schistosomiasis and soil-transmitted helminths (STH). 2007, for example, saw the initiation of a deworming programme reaching 1 million school-aged children and in 2013, following the launch of the FMOH's First NTD Master Plan in July of that same year (2012-2015), 1.07 million children were treated for both schistosomiasis and STH using drugs donated through the World Health Organization. An important step was taken in 2015, when in April 2.9 million school-aged children, both enrolled and non-enrolled, received treatment against both schistosomiasis and STH. In November of the same year, thanks to the national deworming programme, officially launched in August 2016 by the Federal Ministry of Health as part of their Second NTD Master Plan (2016-2020), approximately 5 million school-aged children received praziquantel for schistosomiasis. This new national deworming programme is a fully-costed five-year programme, thanks to a consortium of funders and partners, such as the Schistosomiasis Control Initiative, Partnership for Child Development, Evidence Action, and The Carter Center, with the goal to control the morbidity associated with schistosomiasis and STH and eliminate schistosomiasis where it is no longer a public health problem by 2020.

This upscale has also been accompanied by an increase in praziquantel production and donation. In 2016, Merck made its biggest ever donation of praziquantel to Ethiopia, with 14 million tablets being delivered, allowing the treatment of approximately six million children².

In addition to Preventive Chemotherapy with praziquantel, the programme also looks to build collaborative partnerships to

address hygiene and sanitation, health education and behavioural change, as well as community advocacy. All of these activities are carried out in collaboration with the respective communities. While the focus is currently on children, school-age children in the case of schistosomiasis to immediately reduce morbidity and spread of the infection targeting the most important high risk group, the FMOH is planning to expand its activities to cover adults in priority hot spots as well to assure a more profound effect on transmission.

Challenges in the fight against schistosomiasis remain however. Activities related to water, sanitation, and hygiene (WASH) require more attention, since there is still a lack of hand-washing facilities and an insufficient number of latrines in schools. Furthermore, it seems that available latrine facilities are still poorly utilised at the community-level, which points to the need for further community-level education and behaviour-change campaigns. Furthermore, despite the current focus on school-aged children, it is still a challenge to reach also those school age children who are not enrolled at school³.



¹Federal Democratic Republic of Ethiopia – Ministry of Health. (2016). Second Edition of National Neglected Tropical Diseases Master Plan. Addis Ababa.

²Merck. Press Release - Ethiopia Receives 14 Million Praziquantel Tablets. (July, 2016). Available at: http://www.merck.de/company.merck.de/de/images/PR_Ethiopia_2016_final_tcm1613_155674.pdf

³Ethiopian contribution. (2015). Meeting with NTD Programme Managers, Cotonou, Benin.



LOOKING AHEAD

The GSA continues its active schedule in the second half of the year. This includes a review of the programme milestones of the London Declaration Scorecard at the 6th Annual Meeting of the NNN in Washington, an active role at the COR-NTD meeting as well as the ASTMH Meeting.

The GSA continues to work on the elimination project in Ethiopia in close collaboration with the Ethiopian FMOH and EPHI, as well as other partners. We will keep you updated with our progress over the coming months. Finally, the GSA is happy to announce that a Special Issue of “Infectious Diseases of Poverty” will come out at the beginning of next year, entitled “Schistosomiasis Research: Providing the Tools Needed for Elimination”.

