

THE COMPELLING CASE FOR FINANCING LONDON DECLARATION NTD EFFORTS¹

A pro-poor strategy and a development best buy

Work completed this year by Erasmus indicates that NTD programs have a high return on investment and by targeting NTDs, the poor are reached globally and nationally. This makes NTD programs a pro-poor best buy.

Systematic studies of peer-reviewed literature show evidence that:

- a disproportionate share of the overall NTD burden is carried by low- and lower-middle income countries, and within countries NTDs tend to impact poorer communities;
- NTDs affect the economic livelihoods of individuals and thus households, countries, and regions – to a significant degree; and
- controlling, eliminating, or eradicating NTDs will meaningfully benefit the poorest of the world's poor.

Using data from the Institute for Health Metrics and Evaluation's 2010 Global Burden of Disease (GBD) study, researchers from Erasmus created mathematical models to forecast the health and economic impact of meeting the WHO 2020 targets.

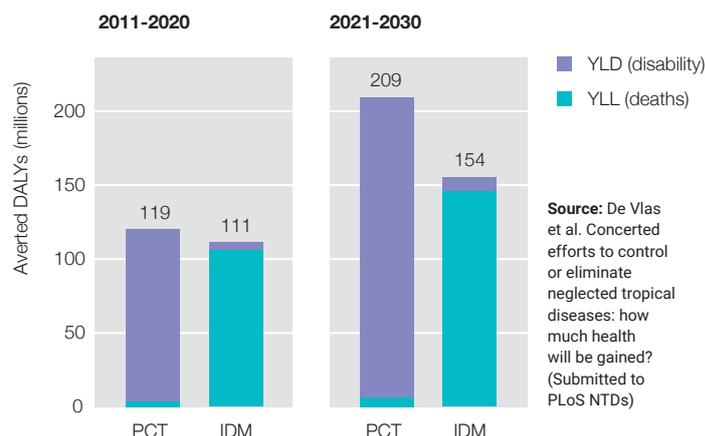
Health impact

- Between 2011 and 2030, an anticipated **600 million DALYs²** would be averted as a result of meeting the WHO 2020 targets (see Figure 1). Amongst the preventive chemotherapy treatment (PCT) NTDs, 96% of the health gains would be attributed to averted disability, and within the intensified disease management (IDM) NTDs, 95% of the impact would be realized from averted deaths.
- Included in these gains are approximately **150 million averted irreversible³ disease manifestations**, such as chronic heart disease resulting from Chagas disease, and swelling of the scrotum (*hydrocele*) and of the lower limbs (*lymphedema*) due to lymphatic filariasis.
- Additionally, **5 million deaths** could be averted, mainly from visceral leishmaniasis (VL) and human African trypanosomiasis.

Economic impact

- **For PCT-NTDs**, meeting the WHO Roadmap targets could mean that, between 2011 and 2030, **US\$565 billion could be gained in productivity alone** (see Figure 2). The lion's share of this gain (US\$434 billion)

Figure 1: Global health benefit of reaching WHO 2020 targets for all London Declaration NTDs. DALYs averted (millions) as Years Lost to Disability (YLD) and Years of Life Lost (YLL) for the period 2011-2030



would come directly from the alleviation of five STH-related conditions (see Figure 3), the majority of which would be realized in China. Achieving results like these requires scale-up that is effective and equitable. The projected **return on investment⁴ (ROI) in the kind of scale-up needed to achieve this is US\$51 for 2015-2020, and US\$184 for 2021-2030**. Even the most conservative estimate in 2011-2030 would still be a productivity gain of US\$421 billion, corresponding to an ROI of US\$30 for 2015-2020, and US\$114 for 2021-2030.

- **For IDM-NTDs**, 2011-2030 models show a **productivity gain of US\$58 billion**, over half of which can be attributed to averting VL and chronic heart disease caused by Chagas disease (see Figure 4). Averted out-of-pocket payments would total US\$35 billion. If only gains in productivity are considered, the ROI from the necessary investments is **anticipated to range from US\$1 (worst-case scenario in the period 2015-2020) to US\$9 (best-case scenario in the period 2021-2030)** and these values would further increase due to unspent out-of-pocket costs. Perhaps more importantly, these ROIs do not even include the significant health gain that could be expected from achieving the WHO 2020 targets.

The main findings from this modeling, including impact at country level, can be viewed online at www.unitingtocombatntds.org

1. Findings of the study "Health and socioeconomic impact of achieving the WHO targets for London Declaration NTDs" by Erasmus MC and Erasmus University Rotterdam (Netherlands), to be published as a collection in PLoS NTDs.
 2. DALYs are a measure of life years lost from disease, adjusted for assumptions about disability as well as the impact of age and future time.
 3. Surgery can be helpful for hydrocele cases, as well as pacemakers and heart transplantation for chronic heart disease due to Chagas. Still, for most people in

developing countries these interventions are normally not available.
 4. The investment costs for the calculation of the ROI came from recent WHO estimates published in the Third Report on Neglected Tropical Diseases. The investment costs calculated by the WHO combined targets for the number of people requiring interventions with benchmarks for the cost per person of delivering those interventions, for the period 2015-2020 and 2021-2030. Therefore, the first period for which the ROI was calculated starts in 2015 instead of 2011.

Figure 2. Global economic benefit of reaching WHO 2020 targets for 5 PCT-NTDs, lower and upper estimates from sensitivity analysis, for the period 2011-2030 (billions US\$ international)

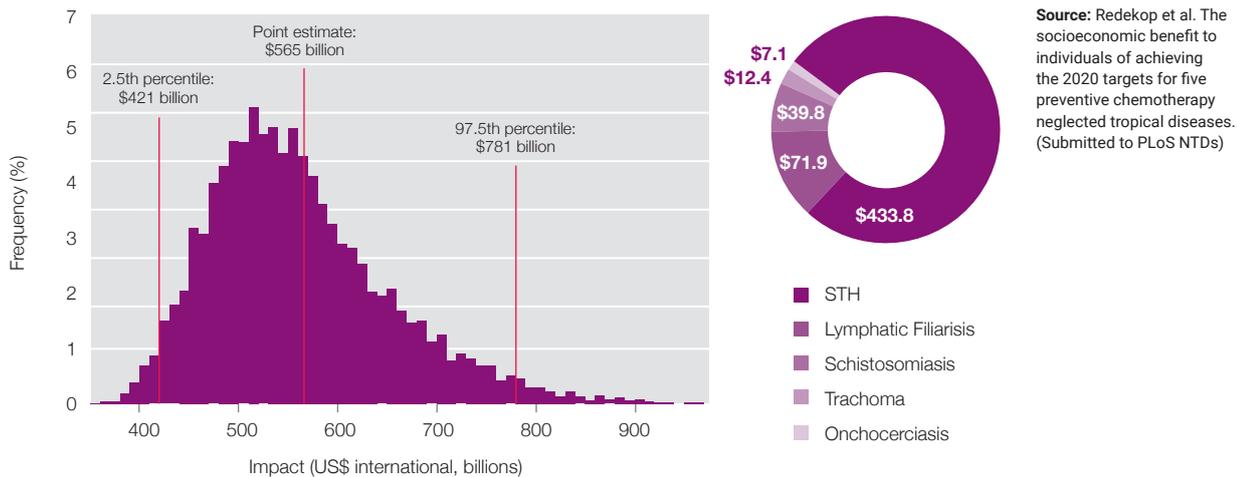


Figure 3. Global economic benefit of reaching WHO 2020 targets for STH, lower and upper estimates from sensitivity analysis, and point estimates per STH-related condition for the period 2011-2030 (billions US\$ international)

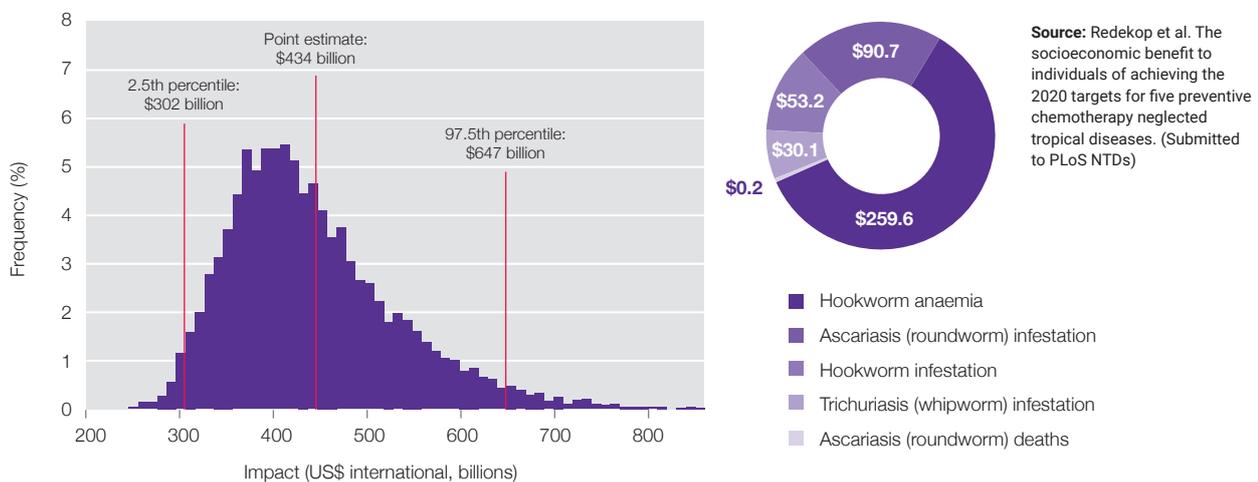
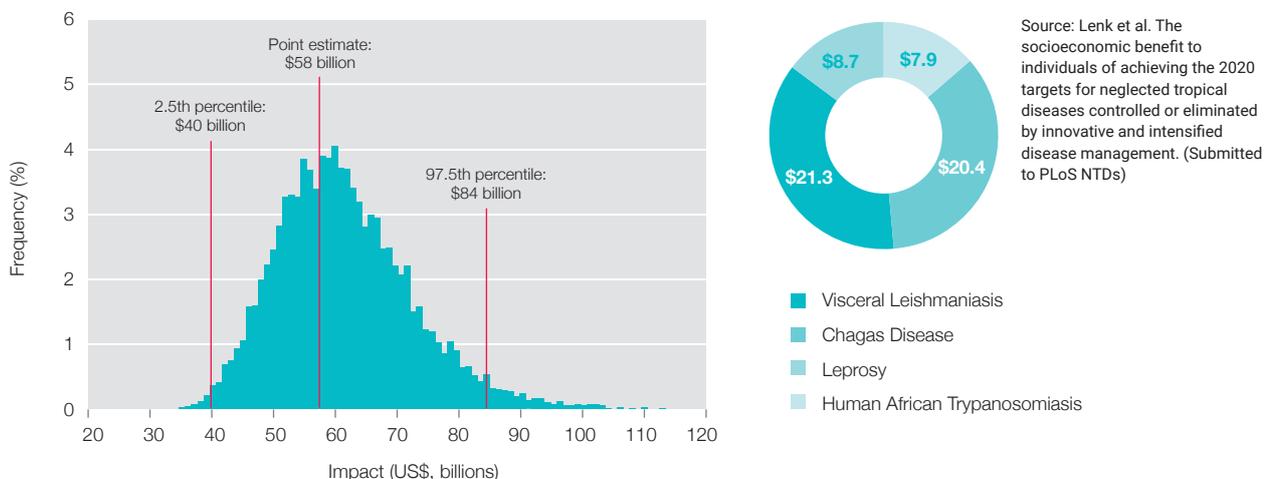


Figure 4. Global economic benefit of reaching WHO 2020 targets for 4 IDM-NTDs, lower and upper estimates from sensitivity analysis, for the period 2011-2030 (billions US\$ international)



Taken together, the London Declaration NTDs constitute a disability and mortality burden of the same order of magnitude as HIV/AIDS, tuberculosis, or malaria. However, the costs associated with reaching the WHO 2020 targets are relatively modest when compared

to these “big three”, while the benefits are enormous, providing a compelling case that the WHO Roadmap makes a highly cost-effective initiative, with far-reaching global health, societal, and economic impacts.