Sustainability and financing of neglected tropical diseases (NTDs) and malaria elimination programmes: The urgent need for harmonization and a joint framework for cross-border collaboration

Abstract

Neglected Tropical Diseases (NTDs) and malaria remain major public health challenges in Africa, disproportionately affecting vulnerable and marginalized populations. Despite measurable progress towards elimination, inadequate financing, emerging biological threats, climate change, conflict, and population mobility threaten recent gains. Sustainable elimination requires structural integration of NTDs and malaria services within primary health care (PHC)-centered health systems, strengthened domestic financing, and harmonized cross-border collaboration within the East, Central and Southern Africa Health Community (ECSA-HC). In this paper, we propose a health system architecture that embeds NTDs and malaria services within national universal health coverage benefit packages, integrated surveillance systems, and unified supply chains. Strong regional and national political stewardship and coordinated regional frameworks are essential to safeguard elimination gains and accelerate progress toward the 2030 targets.

Introduction

Neglected Tropical Diseases (NTDs) are a diverse group of 21 preventable, treatable, and often chronic conditions, most of them infectious, affecting people in tropical and impoverished regions, mostly in Africa. These diseases, which thrive where water, sanitation, and healthcare are limited, often cause severe illness. The diseases are called "neglected" because they affect, almost exclusively, poor, marginalized populations with limited access to healthcare and, consequently, receive low priority in national, regional, and global health agendas [1].

Approximately 1 billion people are affected globally, and 1.4 billion people require NTD interventions annually [1]. The health burden is substantial, with approximately 120,000 deaths and 14.1 million disability-adjusted life years (DALYs) lost annually[1,2]. The economic burden of NTDs is also significant, with loss of productivity, catastrophic out-of-pocket expenditures, and a high risk of impoverishment[1,2]. NTDs also have a societal burden, including reduced educational and professional attainment and a psychological burden due to disfigurement, disability, stigmatization, social exclusion, and discrimination[1,2].

Malaria is a severe, potentially fatal, yet preventable and treatable disease caused by Plasmodium parasites, most commonly P. falciparum (most severe) and Plasmodium vivax. High-risk areas for malaria transmission include tropical and sub-tropical regions, particularly in Africa, which account for the majority of cases and deaths globally[3]. Prompt treatment with Artemisinin-based combination therapies (ACTs) is critical to prevent severe and fatal outcomes, while prevention includes using insecticide-treated mosquito nets, indoor residual spraying, intermittent preventive treatment in pregnancy and childhood, vaccination, chemoprophylaxis for travelers, and seasonal chemoprevention in certain parts of Africa[3].

A critical target of NTD control and elimination is to reduce the number of people requiring NTD interventions (SDG 3.3.5) by 90% by 2030 compared to 2010 levels[2]. However, as of 2024, only 36% of this target had been achieved. As of April 2026, 61 countries had eliminated at least one NTD, against the 100-country target set for 2030[1,2].

Between 2018 and 2023, funds invested in NTDs annually declined by 41%, from approximately US$400 million to US$285 million, against an estimated conservative need of US$485 million per year related to service delivery only and to a limited group of 17 NTDs. These estimates include funds committed, disbursed, or received but do not reflect pledges not yet linked to a specific project[1,4].

Progress has also been made towards elimination of malaria. Since 2000, 2.3 billion cases and 14 million deaths have been averted. As of April 2026, 47 countries have been certified malaria-free. Between 2000 and 2024, the number of malaria-endemic countries fell sharply, dropping from 108 to 80, while the number of countries with fewer than 10 000 cases rose from 27 to 46, of which 37 reported fewer than 1000 cases. Nevertheless, in 2024, malaria still accounted for an estimated 282 million cases and 610,000 deaths[3].

Malaria funding has also plateaued over the last decade. Funds mobilized in 2024 amounted to US$ 3.9 billion, against the target annual global investment of US$ 9.3 billion set by the Global Technical Strategy

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for the year 2025[3,5]. Between 2010 and 2024, 67% of malaria funding came from international sources and 33% from domestic contributions; nevertheless, the latter had progressively increased and attained 44% in 2024[3].

Challenges and threats for NTDs and malaria programmes

Key challenges faced by NTDs and malaria elimination programmes include insufficient funding, inadequate and often irregular country ownership, suboptimal inclusion in health sector plans and national budgets[2], uneven commitment across NTDs, difficulties in generating and collecting good-quality and timely data, decreasing capacities and expertise, gaps in knowledge, tools and processes including diagnostics, medicines, and supply chains, migration and population displacement, climate change, and conflict. For malaria elimination there are also major threats, including parasite resistance to artemisinin and partner medicines, mosquito resistance to insecticides, and gene deletions affecting detection of parasites by commonly used rapid-diagnostic tests (RDTs), expansion of Anopheles stephensi, inadequate health systems, insufficient human resources, extreme weather events, public health emergencies, and rising health commodity prices[3]. Overall, NTD and malaria interventions depend on strong and resilient health systems, a requirement to achieve universal health coverage (UHC)[6].

Opportunities to address the challenges and threats

Despite these challenges and threats, opportunities exist to improve delivery of malaria and NTD interventions, including:

- Advocacy to galvanize increased domestic financing at national and sub-national level, and scale up of social insurance schemes.
- Diversifying external funding sources from multilateral/bilateral donors and the private sector; nurturing and protecting existing commitments to key strategic areas such as access to medicines, diagnostics and commodities (e.g. insectice-treated nets); exploring innovative financing platforms; seizing funding opportunities by linking malaria and NTD elimination to global public health initiatives such as UHC, primary health care (PHC) and climate change.
- Engaging academia and research institutes in setting research agendas and supporting the development of new tools (e.g. medicines and diagnostics).
- Collaborating with training institutions to efficiently strengthen workforce capacity for NTD and malaria elimination, including by virtual training approaches.
- Use of innovation, information technology and digital tools to improve surveillance, and data reporting and analysis.
- Strengthening community systems for prevention, detection, and response, as integral to a wider health system.
- Integrating NTDs and malaria programmes into broader health systems strengthening to achieve UHC, guided by systems thinking and integrated service delivery principles[7-9].

Integrating NTD and malaria programmes into health systems strengthening: A deep dive

In today's challenging global health financing landscape, integration of NTD and malaria elimination programmes within broader health systems strengthening is no longer optional—it's fundamental, it is necessary, it actually reflects common sense. With 47 and 61 countries having achieved elimination of malaria and at least one NTD, respectively, we cannot risk losing these hard-won gains due to declining donor support. The era of relying solely on external funding has ended. We must redesign health systems to ensure sustainable delivery of NTD and malaria services through comprehensive integration, transforming how we plan, finance, and deliver care to the most vulnerable populations. From a health systems perspective, integration means breaking down programme silos by assimilating disease-specific planning, financing, implementation, and service delivery into comprehensive health services and essential public health functions (EPHFs)[9].

Critical Domains for NTD and Malaria Services Integration

It is therefore critical to ensure the integrated delivery of NTD and malaria programmes so that populations in need receive a continuum of preventive and curative services according to their needs, throughout their life course, and across different levels of the health system. This should not merely be about co-delivering services at the same location. Rather, true integration implies fundamental system transformations that create broad health dividends for entire populations through interdependent building blocks reflecting critical domains[9-11]. Integration will strengthen continuity of care for beneficiaries, reduce duplication for providers, and enhance coherence for policymakers.

- **Leadership, governance, planning, budgeting and financing:** Sector-wide planning and unified policymaking under government stewardship, aligned with national master plans [8].
- **Monitoring, evaluation, accountability, and learning (MEAL):** Integrated surveillance and health information systems across programmes and system levels [12].
- **System functions:** Harmonized management of human resources, procurement, logistics, and supplies [9].
- **Service delivery:** Comprehensive NTD and malaria services included in UHC benefit packages and embedded within strong community-based and PHC platforms [9].
- **Multisectoral approaches:** Collaboration beyond the health sector to address social and environmental determinants of health [9].

Reframing the challenge: System architecture for NTD and malaria delivery

We must shift from thinking about "mainstreaming" NTDs and malaria programmes as add-ons to asking a fundamental question-what health system architecture is required to deliver these services routinely and at scale, and sustainably? NTDs and malaria are excellent stress tests of the health systems because they require strong PHC, community-level delivery, reliable supply chains, integrated surveillance and response, long-term financing and stewardship, and multisectoral coordination including water sanitation and hygiene (WASH), vector control, and environmental management. If a health system can deliver NTD and malaria services effectively, it's usually performing well across multiple dimensions and therefore contributing to close the UHC gap. This reframing moves us from viewing NTDs and malaria as special programmes to recognizing them as core services that reveal and strengthen fundamental system capabilities. The architecture must support routine delivery through existing platforms rather than perpetual parallel structures. It shifts the narrative from "mainstreaming" to "architectural redesign". NTDs and malaria are not peripheral add-ons; they are core services revealing and contributing to system strength.

The urgent need for harmonization and better cross-border collaboration

Strengthened cross-border surveillance for malaria and NTDs is an example of integration that is expected to support elimination efforts across programmes and neighbouring areas. These efforts are supported by the WHO international health regulations[13] and the Yaoundé and Kigali declarations, which reinforce political commitment for collective action[14,15]. Alignment with the AU Roadmap to 2030 and beyond further strengthens regional accountability[16]. On 21 May 2025, a high-level side event on NTDs elimination and cross-border collaboration held at the margins of the World Health Assembly (WHA), adopted "a Call for Action" endorsed by several health Ministers. One of the key recommendations was to sign joint memoranda of understanding (MoUs) for cross-border collaboration to combat NTDs[17], whose scope is currently being broadened so as to include malaria. The benefits of such collaboration are numerous, including: addressing disease burden; emphasizing persistent inequities and the need for sustained investment and coordinated action; and recognizing that NTDs and malaria cross political boundaries through human and animal movement, trade, migration, displacement, and seasonal travel—making regional coordination essential. Moreover, such harmonized efforts will support elimination efforts that require interruption of transmission across neighboring areas, where progress on one side of a border depends on progress on the other side of the border, thus reducing risk of its resurgence. While we call upon ECSA-HC to ensure that countries formulate joint MoUs or protocols of collaboration, it is expected that these efforts will eventually lead to a unified ECSA-HC framework. Such a framework will elevate NTDs and malaria on national and regional health agenda, facilitate alignment of strategies, timelines, and operational plans across countries, and enhance partnership building and accountability among neighboring countries under one coordinated mechanism. Such ECSA-HC collaborative framework will coordinate cross-border NTD and malaria elimination efforts, through designated focal points, harmonized plans, shared data, jointly-mobilized resources, and facilitated movement of health teams and supplies, in collaboration with WHO and Africa CDC.

Summing up

Both NTDs and malaria significantly affect people and communities living in poverty and situations of vulnerability, further impoverishing families and households, reducing productivity, discouraging investment, and weakening national economies. We contend that sustainable NTD and malaria elimination programmes require a PHC-centered system design focused on integration. Cross-border collaboration within ECSA-HC is an example of such integration; it is essential for safeguarding gains and accelerating progress toward the 2030 targets. The era of vertical, exclusively donor-dependent elimination programmes is ending. Sustainability can be achieved with a blend of increased domestic financing and tailored donor support. The future of NTD and malaria elimination lies in resilient, integrated, domestically financed health systems capable of delivering equitable services at scale.

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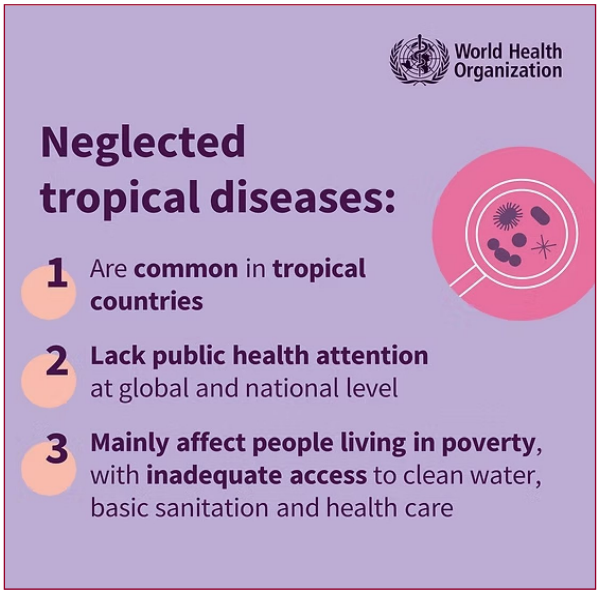
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