Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030

In 2014, the WHO Regional Committee for South-East Asia declared ‘Finishing the task of eliminating neglected tropical diseases (NTDs) and other diseases on the verge of elimination’, with a focus on lymphatic filariasis (LF), kala-azar, yaws, trachoma and leprosy, as one of the Regional Flagship Priority Programmes. This has led to substantial progress and achievements in the Region in this area of public health in the last decade. The landscape of neglected tropical diseases (NTDs) in the South-East Asia Region is changing fast while at the same time new challenges and opportunities have been emerging.

A new Roadmap for the eradication, elimination and control of NTDs – ‘Ending the neglect to attain the Sustainable Development Goals: A roadmap for neglected tropical diseases 2021–2030’ – was endorsed by the Seventy-third World Health Assembly in 2020. NTDs are an integral part of the Sustainable Development Goals (SDGs), with SDG Target 3.3 specifically aiming to end this epidemic by 2030. Achieving this target will also have a direct impact on Target 3.8, which aims to achieve universal health coverage.

Efforts to control and eliminate NTDs also drive the wider provisions of clean water, sanitation and hygiene (SDG 6), the availability of resilient infrastructure (SDG 9), sustainable cities and communities (SDG 11), climate action (SDG 13) and strong global partnerships (SDG 17). The new Roadmap set updated global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups as well as established cross-cutting targets aligned with the SDG Framework.

The draft ‘Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030’ has been developed in collaboration with Member States and partners through virtual consultations. It is intended to guide and coordinate efforts among Member States, WHO and partners in the Region to sustain progress, accelerate actions and innovate approaches to effectively implement the Roadmap 2030, encompassing all NTDs of public health importance in the Region.
The Regional Strategic Framework retains the three strategic pillars of the Roadmap 2030 and identifies strategic priorities of action for Member States, WHO and partners under each strategic pillar: (i) strengthening country ownership, leadership and stewardship; (ii) accelerating programmatic actions; and (iii) intensifying integrated and cross-cutting approaches. The Regional Strategic Framework also adapts the overarching, cross-cutting and disease-specific indicators and milestones in the regional context to achieve uniformity in monitoring the progress of implementation of the Roadmap across diseases and countries over time.

The attached Working Paper along with the draft Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030 (attached at Annexure 1), was presented to the High-Level Preparatory Meeting for its review and recommendations. The HLP Meeting reviewed the paper and made the following recommendations for the consideration of the Seventy-sixth Session of the Regional Committee:

**Action by Member States**

(1) Review and comment on the draft WHO document ‘Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030’ and support WHO in its finalization.

**Actions by WHO**

(1) Finalize the draft WHO document ‘Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030’ by incorporating the comments and feedback from Member States, and present the updated version to the Seventy-sixth Session of the Regional Committee for the South-East Asia for its endorsement.

This Working Paper and the HLP Meeting recommendations are submitted to the Seventy-sixth Session of the WHO Regional Committee for South-East Asia for its consideration and decision. The Regional Committee is requested to offer any recommendations it seems pertinent, and consider adopting the Regional Strategic Framework.
Introduction

1. Neglected tropical diseases (NTDs) are a diverse group of disease conditions that are most common in tropical and subtropical regions. These diseases most seriously impact people living without access to adequate sanitation, basic infrastructure and health services.

2. NTDs are both a cause and consequence of poverty, causing physical and intellectual impairments, preventing children from attending schools, and reducing economic productivity. People affected by NTDs are also frequently the target of stigmatization and discrimination in their communities particularly due to the associated morbidity and disabilities. Yet, they typically have little political voice in society to herald change. For these reasons, NTDs have also long been neglected in terms of investment for innovations for better tools to diagnose, treat, control and eliminate them.

3. NTDs are an integral part of the Sustainable Development Goals (SDGs), with SDG Target 3.3 specifically aiming to end this epidemic by 2030. Achieving this target will also have a direct impact on Target 3.8, which aims to achieve universal health coverage. Efforts to control and eliminate NTDs also drive the wider provisions of clean water, sanitation and hygiene (SDG 6), the availability of resilient infrastructure (SDG 9), sustainable cities and communities (SDG 11), climate action (SDG 13) and strong global partnerships (SDG 17).

4. In other words, the success in control and elimination of NTDs can act as a litmus test for progress on universal health coverage and other relevant SDGs, as the fight against NTDs is a journey to ensure that the most marginalized and neglected populations, that are most in need, are equitably reached by appropriate health services and basic infrastructure and are empowered by essential health literacy so that “no one is left behind”.

5. In the WHO South-East Asia Region, 15 out of 20 neglected tropical diseases listed below that are prioritized by the Organization are known to be present, with at least one NTD endemic in each of the 11 countries of the Region:

- Dengue/chikungunya/Zika
- Echinococcosis (cystic)
- Foodborne trematodiases
- Leishmaniasis
- Leprosy
- Lymphatic filariasis (LF)
- Mycetoma
- Rabies
- Scabies
- Schistosomiasis
➢ Soil-transmitted helminthiases
➢ Snakebite envenoming
➢ Taeniasis by T. solium/cystercerosis
➢ Trachoma
➢ Yaws

6. The SE Asia Region is home to a quarter of the world’s population, and 54% of the 1.65 billion people requiring interventions against NTDs globally (in 2021) live here. This includes 59% of the global population requiring annual mass drug administration (MDA) against LF, 66.5% of the new cases of leprosy reported through routine and active case detection globally, and 496.1 million children requiring annual or semi-annual deworming.

7. Given the major contribution of the Region towards easing the global burden of NTDs, the WHO Regional Committee for South-East Asia declared “Finishing the task of eliminating neglected tropical diseases (NTDs) and other diseases on the verge of elimination” with a focus on lymphatic filariasis (LF), kala-azar, yaws, trachoma and leprosy as one of the Regional Flagship Priority Programmes in 2014. This has led to substantial progress and achievements in the Region in this area of public health in the last decade.

8. With unprecedented achievements registered, the landscape of neglected tropical diseases (NTDs) in the South-East Asia Region is changing fast while at the same time new challenges and opportunities have been emerging. In 2020, the Seventy-third World Health Assembly endorsed a new roadmap for the eradication, elimination and control of NTDs, titled *Ending the neglect to attain the Sustainable Development Goals: A roadmap for neglected tropical diseases 2021–2030* (also called the Roadmap 2030). There is an urgent and compelling need to accelerate the control and elimination of NTDs and to sustain the gains in the South-East Asia Region over the next decade.

**Current situation, response and challenges**

9. In the same year that “Finishing the task of eliminating neglected tropical diseases (NTDs) and other diseases on the verge of elimination” was made one of the Regional Flagship Priorities (2014), a memorandum of understanding to cooperate and jointly achieve regional kala-azar elimination, originally signed by the honourable health ministers of Bangladesh, India and Nepal in 2005, was renewed and attested to by Bhutan and Thailand with the result that the high-level commitment for regional collaboration towards kala-azar elimination was bolstered and reinvigorated.

10. In 2017, the WHO Regional Office further convened a High-Level Regional Meeting of ministers and delegates as well as partners on “Keeping the Promise: ending NTDs on time in the South-East Asia Region”. This culminated in the “Jakarta Call for Action on accelerating progress towards eliminating NTDs endemic in the South-East Asia Region”.
11. Such opportunities and landmark events encouraged Member States, WHO and partner agencies to raise and sustain political commitment as well as unrelenting momentum on the elimination of these diseases among Member States and donor agencies and led to substantial progress and achievements in the Region to date, the notable ones enumerated below:

- Seven countries achieved elimination of at least one NTD as a public health problem:
  - 2016: Elimination of LF as a public health problem in Maldives and Sri Lanka; yaws free status in India
  - 2017: Elimination of LF as a public health problem in Thailand
  - 2018: Elimination of trachoma as a public health problem in Nepal
  - 2020: Elimination of trachoma as a public health problem in Myanmar
  - 2023: Elimination of LF as a public health problem in Bangladesh

- A total of 69% of LF-endemic districts across nine endemic countries met the criteria and stopped MDA and four countries are scaling up MDA using triple drug therapy to accelerate LF elimination (Fig. 1).

**Fig. 1. Proportion of the number of Implementation Units (IUs) in 9 LF-endemic countries that are under MDA or have stopped by the end of 2022**

- In the last seven years, new cases of kala-azar have been reduced by 97% across the Region (Fig. 2). By the end of 2022, the elimination target for kala-azar was achieved in endemic upazilas (district) of Bangladesh, 99.8% of endemic blocks in India (1 implementation unit remaining) and 95% of endemic districts in Nepal (2 implementation units remaining). Bangladesh has sustained the target of less than one kala-azar case per 10 000 population in all implementing units since 2017, and is finalizing a dossier to claim achievement of elimination of kala-azar as a public health problem.
Fig. 2. The number of new kala-azar cases reported in the South-East Asia Region, 2010–2022

- Bhutan, the Democratic People's Republic of Korea and Maldives continue to report less than 25 new leprosy cases per 1 million population annually since 2013 and Maldives launched the national framework targeting 100 islands leprosy free by 2023 and zero leprosy nationwide by 2030.

- Indonesia, the sole country identified as having schistosomiasis endemic in the SEAR, has successfully lowered and maintained the occurrence of the infection in the population to less than 1% from 2016 to 2021. Six villages affected by the disease have reported no human cases since 2019, while five other villages consistently documented an infection rate of less than 1% among their residents in the same period (2019-2022).

- Overall, between 2010 and 2020, the number of people requiring interventions against NTDs in the South-East Asia Region reduced by 20%.

12. With unprecedented achievements in the last decade, the NTD landscape in the South-East Asia Region is changing fast and new challenges and opportunities are arising.

- First, there is a need to continue optimizing ongoing interventions and addressing social and environmental determinants to accelerate the last mile of elimination of NTDs through innovation. This includes intensified efforts to strengthen surveillance, active case detection, treatment follow-up, targeted vector control and environmental modification for kala-azar elimination, addressing the population that never participated in mass drug administration against LF, and rollout of post-exposure prophylaxis using single dose rifampicin for leprosy elimination.
Secondly, we need to sustain essential NTD interventions and services towards and even in the post-elimination phase through integration and cross-cutting approaches. Kala-azar, LF and trachoma are presently targeted for elimination as a public health problem. However, there is a high chance that elimination as a public health problem gets mistaken for elimination of transmission and both donor fatigue and program complacency may shift attention and investment to the next unfinished agenda. There is a critical need to continue the investment in optimizing, integrating and strengthening post-validation interventions within the primary health care and health system for sustainability.

Thirdly, progressive expansion of focus on controlling all NTDs of public health importance in the Region is critical. Dengue fever has emerged as the world’s most common and rapidly spreading vector-borne disease, and while overall improvement in case-management capacity has reduced case-fatality rate to below 0.5% over the last decade, large-scale dengue outbreaks continue to affect Member States. In 2022 alone, 0.65 million cases of dengue and over 2000 deaths due to dengue was reported in the Region. The Region also has the world’s highest burden and mortality due rabies and snakebite envenoming. Based on the available data, 700 to 1200 people reportedly die of rabies in the Region annually despite efforts to ensure universal access to rabies post-exposure prophylaxis, but data is largely under-reported. The Global Burden of snakebite study estimated the highest number of deaths due to snakebite in South Asia (14,000 annually), with India having the highest estimate in the world (nearly 11,000 deaths annually). Other NTDs of public health importance in the Region includes schistosomiasis, scabies, mycetoma and neglected parasitic zoonoses such as echinococcosis, taeniasis/cysticercosis and foodborne trematodiases, all of which require holistic multisectoral approach and public and private partnership within and beyond health.

13. The draft Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030 has been developed in collaboration with Member States and partners through virtual consultations. It is intended to adapt the Roadmap 2030 in the context of the South-East Asia Region and guide and coordinate efforts among Member States, WHO and partners in the South-East Asia Region to sustain progress, accelerate actions, and innovate approaches to effectively implement the Roadmap 2030, encompassing all NTDs of public health importance in the Region.

14. The Regional Strategic Framework retains the three strategic pillars of the Roadmap 2030 and identify strategic priorities of action for Member States, WHO and partners under each strategic pillar:

➢ Strengthening country ownership, leadership and stewardship;
➢ Accelerating programmatic actions; and
➢ Intensifying integrated and cross-cutting approaches.

15. The Regional Strategic Framework adapts the overarching, cross-cutting and disease-specific indicators and milestones in the Regional context to achieve uniformity in monitoring the progress of implementation of the Roadmap across diseases and countries over time.
The way forward

16. Finalization of the Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030 and its adoption in countries for the development of national plans encompassing all endemic NTDs of public health importance and the three strategic pillars of the Regional Strategic Framework.

17. High-level political and programmatic commitment and partner collaboration to ensure continued country ownership, leadership and stewardship and sustained financing of programmes for the operationalization of the Regional Strategic Framework and national plans.

18. Strengthened and sustained human resource, health system and primary health care capacity at all levels to accelerate programmatic actions to reach everyone in need, including the disease surveillance, universal and timely access and management of quality-assured therapeutics and supplies, vector control and environmental management, effective delivery, monitoring and evaluation of public health interventions and health service delivery under the overall universal health coverage umbrella.

19. Fostering of intersectoral, multidisciplinary and intra- and inter-country coordination and collaboration within and beyond health, including community engagement and empowerment, to intensify integrated and cross-cutting approaches to improve logistic convenience, cost-effectiveness, visibility, community acceptability, synergic impacts and sustainability of interventions and health services for prevention, control and elimination of neglected tropical diseases.

20. Initiatives and partnerships for the research and development of new diagnostics, therapeutics, vaccines, tools, technologies and other innovative instruments for vector control and for operational research to enhance the efficiency and cost-effectiveness of programme delivery.

Conclusions

21. Substantial progress and achievements have been made in the Region since the Regional Committee of WHO South-East Asia Region declared “Finishing the task of eliminating neglected tropical diseases (NTDs) and other diseases on the verge of elimination” focusing of lymphatic filariasis (LF), Kala-azar, yaws, trachoma, and leprosy as one of the Regional Flagship Priorities in 2014.

22. A new roadmap for eradication, elimination and control of NTDs – Ending the neglect to attain the Sustainable Development Goals: A roadmap for neglected tropical diseases 2021–2030 – was endorsed by the Seventy-third World Health Assembly in 2020, setting out updated global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups as well as cross-cutting targets aligned with the Sustainable Development Goals.

23. The draft ‘Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030’ has been developed in collaboration with Member States and partners by adapting the Roadmap 2030 in the context of the South-East Asia Region.
24. The Regional Strategic Framework is intended to guide and coordinate efforts among Member States, WHO and partners in the South-East Asia Region to sustain progress, accelerate actions, and innovate approaches to effectively implement the Roadmap 2030, encompassing all NTDs of public health importance in the Region, and retaining the three strategic pillars and regionally adapted indicators and milestones of the Roadmap 2030.

25. The Regional Committee is requested to review the draft Regional Strategic Framework for sustaining, accelerating and innovating to end NTDs in the South-East Asia Region 2023–2030 (Annexure 1), offer any recommendations it seems pertinent, and consider adopting the Regional Strategic Framework.
Annexure
Regional Strategic Framework for sustaining, accelerating and innovating to end neglected tropical diseases in the South-East Asia Region, 2023–2030
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Abbreviations and acronyms

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<th>Description</th>
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<tbody>
<tr>
<td>CFR</td>
<td>case-fatality rate</td>
</tr>
<tr>
<td>CL</td>
<td>cutaneous leishmaniasis</td>
</tr>
<tr>
<td>DPP</td>
<td>Dual Path Platform Syphilis Screen and Confirm assay</td>
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<tr>
<td>FAO</td>
<td>Food and Agriculture Organization of the United Nations (FAO)</td>
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<tr>
<td>FAT</td>
<td>fluorescent antibody test</td>
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<tr>
<td>HIV</td>
<td>human immunodeficiency virus</td>
</tr>
<tr>
<td>ICT</td>
<td>immunochromatographic test</td>
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<tr>
<td>IU</td>
<td>implementation unit</td>
</tr>
<tr>
<td>L-AmB</td>
<td>liposomal amphotericin B</td>
</tr>
<tr>
<td>LF</td>
<td>lymphatic filariasis</td>
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<tr>
<td>MDA</td>
<td>mass drug administration</td>
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<tr>
<td>M&amp;E</td>
<td>monitoring and evaluation</td>
</tr>
<tr>
<td>NTD</td>
<td>neglected tropical disease</td>
</tr>
<tr>
<td>Ov</td>
<td>Opisthorchis viverrini</td>
</tr>
<tr>
<td>PC</td>
<td>preventive chemotherapy</td>
</tr>
<tr>
<td>PCR</td>
<td>polymerase chain reaction</td>
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<tr>
<td>PEP</td>
<td>post-exposure prophylaxis</td>
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<tr>
<td>PH</td>
<td>public health</td>
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<tr>
<td>PHC</td>
<td>primary health care</td>
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<tr>
<td>PHP</td>
<td>public health problem</td>
</tr>
<tr>
<td>PKDL</td>
<td>post kala-azar dermal leishmaniasis</td>
</tr>
<tr>
<td>R&amp;D</td>
<td>research and development</td>
</tr>
<tr>
<td>RDT</td>
<td>rapid diagnostic test</td>
</tr>
<tr>
<td>SBCC</td>
<td>social and behavioural change communication</td>
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<tr>
<td>SDGs</td>
<td>Sustainable Development Goals</td>
</tr>
<tr>
<td>TDR</td>
<td>Special Programme for Research and Training in Tropical Diseases</td>
</tr>
<tr>
<td>UHC</td>
<td>universal health coverage</td>
</tr>
<tr>
<td>VL</td>
<td>visceral leishmaniasis</td>
</tr>
<tr>
<td>WASH</td>
<td>water, sanitation and hygiene</td>
</tr>
<tr>
<td>WBCT</td>
<td>whole blood clotting test</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>WOAH</td>
<td>World Organization for Animal Health</td>
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Foreword

Neglected tropical diseases (NTDs) are a group of debilitating and often devastating disease conditions that affect the most vulnerable and marginalized populations in both the WHO South-East Asia Region as well as globally. These diseases have persisted for centuries, perpetuating cycles of poverty and suffering. However, the last decade has witnessed significant strides in the fight against NTDs globally, and our Region is no exception.

The South-East Asia Region is uniquely positioned to lead the charge globally against NTDs. Since 2014, “Finishing the task of eliminating NTDs on the verge of elimination” has been a Regional Flagship Priority Programme. Through dedicated efforts, strong partnerships, and the unwavering commitment of the Region’s Member States, the Region has made steady and sustained progress.

Since 2016 seven countries have achieved elimination of at least one NTD as a public health problem. Since 2011 new cases of kala-azar have reduced by 97%. Of all LF-endemic districts across nine LF-endemic countries, 69% met the criteria and stopped mass drug administration. Between 2010 and 2020, the number of people in the Region requiring interventions against NTDs reduced by 20%.

Today, the NTD landscape in the Region is changing fast, and new challenges and opportunities have arisen. Together, we must sustain the gains, and accelerate NTD control and elimination across the Region, in line with our Flagship Priority and the new global roadmap for the eradication, elimination and control of NTDs – Ending the neglect to attain the Sustainable Development Goals: a roadmap for neglected tropical diseases 2021–2030.

Towards that goal, this Regional Strategic Framework highlights the latest scientific evidence and gaps, and incorporates lessons learnt from past endeavours and the evolving global and regional health landscape. It embraces a comprehensive, people-centred approach that goes beyond the control and elimination of diseases to address the underlying social and environmental determinants. In doing so, it aligns with the 2030 Sustainable Development Agenda and acknowledges that health is not a privilege but a right.

A key strength of the Framework is its focus on promoting a cross-cutting and integrated approach that brings together different public health programmes, governments, civil society, communities and development partners. The Framework also recognizes that NTDs are not just a health issue but a multidimensional challenge that requires multisectoral solutions. At the same time it encourages innovation, promoting research, and fostering the sharing of best practices to accelerate progress.

For the South-East Asia Region, eliminating NTDs is not just an operational goal but a moral imperative. Together, let us implement in full, and with maximum accountability, this Regional Strategic Framework to accelerate the elimination and control of NTDs for every person, everywhere across our Region, for a healthier, more equitable and sustainable future for all.

Dr Poonam Khetrapal Singh
Regional Director
WHO South-East Asia
Executive summary

Neglected tropical diseases (NTDs) are a diverse group of disease conditions that are most common in the tropical and subtropical regions. These diseases most heavily affect people living without access to adequate sanitation, basic infrastructure and health services. In addition to significant morbidity and mortality, these diseases can lead to stigma and discrimination in communities.

NTDs are an integral part of the Sustainable Development Goals (SDGs), with SDG Target 3.3 specifically aiming to end this epidemic by 2030. Achieving this target will also have a direct impact on Target 3.8, which aims to achieve universal health coverage. Efforts to control and eliminate NTDs also drive the wider provisions of clean water, sanitation and hygiene (SDG 6), the availability of resilient infrastructure (SDG 9), sustainable goals and cities (SDG 11), climate action (SDG 13) and strong global partnerships (SDG 17).

In other words, success in controlling and eliminating NTDs can act as a litmus test for progress on universal health coverage and other relevant SDGs, as the fight against NTDs is a journey to ensure that the most marginalized and neglected populations that are most in need are equitably reached by appropriate health services and basic infrastructure and are empowered by essential health literacy so that “no one is left behind”.

Home to a quarter of the world’s population, the World Health Organization (WHO) South-East Asia Region bears the world’s highest burden of NTDs today. Fifteen out of the 20 NTDs globally prioritized by WHO continue to be public health problems in the 11 Member States of the Region.

Given the major contribution of the Region towards easing the global burden of NTDs, the WHO Regional Committee for South-East Asia declared “Finishing the task of eliminating NTDs on the verge of elimination” (focusing on lymphatic filariasis [LF], kala-azar, yaws, trachoma and leprosy) as one of the Regional Flagship Priority Programmes in 2014. This has led to substantial progress and achievements in the Region in this area of public health over the past decade.

With unprecedented achievements registered, the landscape of NTDs in the South-East Asia Region is changing fast while at the same time new challenges and opportunities have been emerging. There is a need for a new vision and direction to accelerate the control and elimination of NTDs and to sustain the gains made in the South-East Asia Region in the next decade.

A new global roadmap for the eradication, elimination and control of NTDs – Ending the neglect to attain the Sustainable Development Goals: a roadmap for neglected tropical diseases 2021–2030 – was endorsed by the Seventy-third World Health Assembly in 2020, setting out updated global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups as well as cross-cutting targets aligned with the SDGs.

The Regional Strategic Framework for Sustaining, Accelerating and Innovating to end NTDs in the South-East Asia 2023–2030 was developed in collaboration with Member States and partners by adapting the Global Roadmap 2030 in the context of the SE Asia Region. This is the first Regional Strategic Framework encompassing all 15 NTDs of public health importance in the Region. It is intended to guide, coordinate and integrate efforts among Member States, WHO and partners in the South-East Asia Region to sustain progress, accelerate actions, and innovate approaches to effectively implement the Global Roadmap 2023–2030 through transformation of our efforts to combat NTDs at national and regional levels under three strategic pillars:
**Strategic pillar 1:** Strengthening country ownership, leadership and stewardship (Output 1)

**Strategic pillar 2:** Accelerating programmatic actions (Output 2)

**Strategic pillar 3:** Intensifying integrated and cross-cutting approaches (Output 3).

It also defines the overarching, cross-cutting and disease-specific indicators to achieve uniformity in monitoring the progress of implementation of the Global Roadmap across diseases and countries, adapted to the context of the South-East Asia Region. These changes are imperative across all countries where NTDs are prevalent to successfully attain the outcomes and goals outlined in the Framework.
1. Neglected tropical diseases (NTDs) in the South-East Asia Region

Neglected tropical diseases (NTDs) are a diverse group of disease conditions that are mainly prevalent in the tropical and subtropical areas and primarily affect impoverished communities that often cannot afford appropriate medical services. As can be seen in Table 1.1, many of the NTDs are vector-borne diseases transmitted to humans through insects or other vectors such as mosquitoes, sandflies or freshwater snails. Many are also zoonotic, involving bovines, sheep, dogs, pigs and cats as animal hosts or reservoirs. Most NTDs are transmitted due to a lack of safe water, proper sanitation and/or community hygiene. As such, populations without basic infrastructure such as adequate water supply and sanitation facilities and that are in frequent contact with infectious vectors, domestic animals and livestock are those that are most affected.

NTDs are both a cause and consequence of poverty, causing physical and intellectual impairment, preventing children from attending school, and reducing economic productivity. People affected by NTDs are also frequently the target of stigmatization and discrimination in their communities, particularly due to the associated morbidity and disabilities. Yet, people with NTDs typically have little political voice in society for change. For these reasons, NTDs have also long been neglected in terms of investment for innovations for better tools to diagnose, treat, control and eliminate them. In the fight against NTDs, we must ensure that marginalized and neglected populations, those most in need, are equitably reached by appropriate health services and no one is left behind.

Table 1.1. NTDs endemic in the South-East Asia Region and their causal agents, major vectors and intermediate and final hosts

<table>
<thead>
<tr>
<th>Disease</th>
<th>Causal agents</th>
<th>Major vector or intermediate hosts</th>
<th>Major final host</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dengue/chikungunya/Zika</td>
<td>Virus</td>
<td>Mosquito</td>
<td>Human</td>
</tr>
<tr>
<td>Echinococcosis (cystic)</td>
<td>Parasitic helminth</td>
<td>Sheep and other ungulates</td>
<td>Dogs and other canids</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humans (accidental intermediate host)</td>
<td></td>
</tr>
<tr>
<td>Foodborne trematodiases</td>
<td>Parasitic helminth</td>
<td>Freshwater snail, freshwater fish or crustacean</td>
<td>Mammal (dog, cat, sheep, cattle, human)</td>
</tr>
<tr>
<td>Leishmaniasis</td>
<td>Parasitic protozoa</td>
<td>Phlebotomine sandfly</td>
<td>Human</td>
</tr>
<tr>
<td>Leprosy</td>
<td>Bacteria</td>
<td>-</td>
<td>Human</td>
</tr>
<tr>
<td>Lymphatic filariasis</td>
<td>Parasitic helminth</td>
<td>Mosquito</td>
<td>Human</td>
</tr>
<tr>
<td>Mycetoma</td>
<td>Fungi</td>
<td>-</td>
<td>Human</td>
</tr>
<tr>
<td>Rabies</td>
<td>Virus</td>
<td>-</td>
<td>Dogs (and other mammals)</td>
</tr>
<tr>
<td>Scabies</td>
<td>Mite</td>
<td>-</td>
<td>Human</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>Parasitic helminth</td>
<td>Freshwater snail</td>
<td>Human, buffalo, cat, dog</td>
</tr>
<tr>
<td>Snakebite envenoming</td>
<td>Toxic venom</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Soil-transmitted helminthias</td>
<td>Parasitic helminth</td>
<td>Pig</td>
<td>Human</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Humans (cysticercosis, accidental intermediate host)</td>
<td></td>
</tr>
<tr>
<td>Taeniasis by T. solium /cysticercosis</td>
<td>Parasitic helminth</td>
<td>Pig</td>
<td>Human (taeniasis)</td>
</tr>
<tr>
<td>Trachoma</td>
<td>Bacterium</td>
<td>Eye-seeking flies (mechanical vector)</td>
<td>Human</td>
</tr>
<tr>
<td>Yaws</td>
<td>Bacterium</td>
<td>-</td>
<td>Human</td>
</tr>
</tbody>
</table>

Home to a quarter of the world’s population, the World Health Organization (WHO) South-East Asia Region bears the world’s highest burden of NTDs today. Fifteen out of 20 NTDs globally prioritized by WHO continue to be of public health problems in the 11 Member States of the Region (Box 1 and Table 1.2), with 857 million people requiring interventions for at least one NTD, which accounts for 51.8% of the global burden of NTDs (2021) (1). This includes 59% of the people requiring mass drug
administration (MDA) against lymphatic filariasis (LF) globally (519 million), 67% of the new leprosy cases detected globally (93 485) and 54% of children requiring regular deworming globally (496.1 million) based on the 2021 data (2,3). Given this major contribution of the Region to the global burden of NTDs, the Regional Committee for the WHO South-East Asia Region declared “Finishing the task of eliminating NTDs on the verge of elimination”, focusing on LF, visceral leishmaniasis (kala-azar), yaws, trachoma, and leprosy, as one of the Regional Flagship Priorities in 2014.

NTDs are an integral part of the Sustainable Development Goals (SDGs), with SDG Target 3.3 specifically aiming to end the epidemic of NTDs by 2030. Achieving this target will also have a direct impact on Target 3.8, which aims to “achieve universal health coverage”. WHO defines universal health coverage (UHC) to mean that all people in need can access promotive, preventive, curative, rehabilitative and palliative health services of sufficient quality, without suffering financial hardship. The presence of NTDs indicates weakness in the health system and infrastructure. Efforts to control and eliminate NTDs therefore need to drive wider provision of clean water, sanitation and hygiene (Goal 6), the availability of resilient infrastructure (Goal 9), sustainable goals and cities (Goal 11), climate action (Goal 13) and strong global partnership (Goal 17) (4). In other words, success in controlling and eliminating NTDs can act as a litmus test for progress on UHC and other relevant SDGs, as the fight against NTDs is a journey to ensure that the most marginalized and neglected populations that are most in need are equitably reached by appropriate health services and basic infrastructure, empowered by essential health literacy and no one is left behind. Meanwhile, successful interventions against NTDs also contribute to meeting other SDGs, such as alleviating poverty (Goal 1) and hunger (Goal 2), enabling people to pursue an education (Goal 4) and lead productive working lives (Goal 8) and promoting equity (Goals 5 and 10) (4).

<table>
<thead>
<tr>
<th>Box 1. Neglected tropical diseases globally prioritized by WHO</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Buruli ulcer</td>
</tr>
<tr>
<td>• Chagas disease</td>
</tr>
<tr>
<td>• Dengue and chikungunya</td>
</tr>
<tr>
<td>• Dracunculiasis</td>
</tr>
<tr>
<td>• Echinococcosis</td>
</tr>
<tr>
<td>• Foodborne trematodiases</td>
</tr>
<tr>
<td>• Human African trypanosomias</td>
</tr>
<tr>
<td>• Leishmaniasis</td>
</tr>
<tr>
<td>• Leprosy</td>
</tr>
<tr>
<td>• Lymphatic filariasis</td>
</tr>
<tr>
<td>• Mycetoma, chromoblastomycosis and other deep mycoses</td>
</tr>
<tr>
<td>• Onchocerciasis</td>
</tr>
<tr>
<td>• Rabies</td>
</tr>
<tr>
<td>• Scabies and other ectoparasitoses</td>
</tr>
<tr>
<td>• Schistosomiasis</td>
</tr>
<tr>
<td>• Soil-transmitted helminthiases</td>
</tr>
<tr>
<td>• Snakebite envenoming</td>
</tr>
<tr>
<td>• Taeniasis and cysticercosis</td>
</tr>
<tr>
<td>• Trachoma</td>
</tr>
<tr>
<td>• Yaws</td>
</tr>
</tbody>
</table>
Table 1.2. Endemicity status of NTD by country in the WHO South-East Asia Region

<table>
<thead>
<tr>
<th>Disease</th>
<th>Bangladesh</th>
<th>Bhutan</th>
<th>DPR Korea</th>
<th>India</th>
<th>Indonesia</th>
<th>Maldives</th>
<th>Myanmar</th>
<th>Nepal</th>
<th>Sri Lanka</th>
<th>Thailand</th>
<th>Timor-Leste</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dengue/chikungunya/Zika</td>
<td>Present, PH importance unknown</td>
<td>Present, PH importance unknown</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Echinococcosis (cystic)</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>Endemic</td>
<td>Non-endemic</td>
<td>No data</td>
<td>Present, PH importance unknown</td>
<td>Present, PH importance unknown</td>
<td>Present, PH importance unknown</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Foodborne trematodiases (Ov)</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
</tr>
<tr>
<td>Leishmaniasis (visceral leishmaniasis/kala-azar, cutaneous leishmaniasis)</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Leprosy</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Non-endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Lymphatic filariasis</td>
<td>Elimination as PHP validated</td>
<td>Endemic, PC ongoing</td>
<td>Endemic, PC ongoing</td>
<td>Endemic, PC ongoing</td>
<td>Endemic, PC ongoing</td>
<td>Endemic, PC ongoing</td>
<td>Endemic, PC ongoing</td>
<td>Elimination as PHP validated</td>
<td>Elimination as PHP validated</td>
<td>Elimination as PHP validated</td>
<td>Endemic, post-MDA surveillance</td>
</tr>
<tr>
<td>Mycetoma</td>
<td>No data</td>
<td>No data</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Scabies</td>
<td>Endemic</td>
<td>Endemic</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Endemic, MDA ongoing</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
</tr>
<tr>
<td>Snakebite envenoming</td>
<td>Endemic</td>
<td>No data</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Non-endemic</td>
</tr>
<tr>
<td>Soil-transmitted helmintiases</td>
<td>PC ongoing</td>
<td>PC ongoing</td>
<td>PC ongoing</td>
<td>PC ongoing</td>
<td>PC ongoing</td>
<td>PC not required</td>
<td>PC ongoing</td>
<td>PC ongoing</td>
<td>PC not required</td>
<td>PC not required</td>
<td>PC ongoing</td>
</tr>
<tr>
<td>Rabies</td>
<td>Endemic</td>
<td>Endemic</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Non-endemic</td>
</tr>
<tr>
<td>Taeniasis by T. solium/cysticercosis</td>
<td>Suspected endemic</td>
<td>Endemic</td>
<td>No data</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
<td>Endemic</td>
</tr>
<tr>
<td>Trachoma</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Endemic, prevalence survey</td>
<td>Non-endemic</td>
<td>Endemic, MDA ongoing</td>
<td>Endemic, MDA ongoing</td>
<td>Endemic, MDA ongoing</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
</tr>
<tr>
<td>Yaws</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Yaws-free certified</td>
<td>Endemic, MDA ongoing</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Non-endemic</td>
<td>Endemic, prevalence survey</td>
</tr>
</tbody>
</table>


- Endemic, interventions needed or ongoing
- Pre-validation surveys needed or ongoing, or disease mapping needed
- Disease free, elimination or elimination as a public health problem status validated
- Non-endemic
- No data
2. Progress and achievements in 2014–2023

In 2013, over 700 million people in the Region required interventions against LF accounting for 59% of the global estimate (2). Over 72% of the new cases of leprosy reported globally were from the Region (2). In 2014, over 354 million children in the Region required regular deworming against soil-transmitted helminthiases, accounting for 42% of the global burden (2). Given this major contribution of the Region to the global burden of NTDs, the Regional Committee for the WHO South-East Asia Region declared “Finishing the task of eliminating NTDs on the verge of elimination” focusing on LF, kala-azar, yaws, trachoma and leprosy as one of the Regional Flagship Priorities in 2014.

In the same year, through the Dhaka Declaration, ministers of health of countries in the WHO South-East Asia Region also committed to institutionalizing a cohesive, comprehensive and integrated approach and building partnerships and capacity for controlling and eliminating vector-borne diseases in the Region (5). At its side meeting, a memorandum of understanding to cooperate and jointly achieve regional kala-azar elimination, originally signed by Bangladesh, India and Nepal in 2005, was renewed and joined by Bhutan and Thailand, to expand and sustain the high-level commitment for regional collaboration towards kala-azar elimination (6). In 2017, the Regional Office further convened a high-level regional meeting of ministers and high-level delegates from the Region as well as partners on “Keeping the Promise: ending NTDs on time in the South-East Asia Region”, which concluded with the “Jakarta Call for Action” on accelerating progress towards eliminating NTDs endemic in the South-East Asia Region (7).

Such opportunities encouraged Member States, WHO and partner agencies to raise and sustain political commitment and momentum on elimination of these diseases among Member States and donor agencies. Intensified efforts were also made to innovate tools, interventions, and strategies to accelerate elimination (Box 2), and establish the process and support countries to accelerate and validate achievement of elimination targets. This was to be done through global and regional partnerships of Member States, implementing and research and development (R&D) partners and WHO. This has led to substantial progress and achievements in the Region to date.

- Seven countries have achieved elimination of at least one NTD as a public health problem:
  - 2016: elimination of LF as a public health problem (PHP) in Maldives and Sri Lanka; India becomes yaws free (3)
  - 2017: elimination of LF as a PHP in Thailand (1)
  - 2018: elimination of trachoma as a PHP in Nepal (1)
  - 2020: elimination of trachoma as a PHP in Myanmar (1)
  - 2023: elimination of LF as a PHP in Bangladesh (1).

- Of all the LF-endemic districts across nine endemic countries, 69% met the criteria and stopped MDA and four countries are scaling up triple drug therapy MDA to accelerate LF elimination (Fig. 2.1).
In the past 7 years, new cases of kala-azar have reduced by 97% across the Region (Fig. 2.2). By the end of 2022, the elimination target for kala-azar was achieved in all endemic upazilas (districts) of Bangladesh, 99.8% of all endemic blocks in India (one implementation unit [IU] remaining) and 95% of endemic districts in Nepal (two IUs remaining). Bangladesh has sustained the target of less than one kala-azar case per 10,000 population in all IUs since 2017 and is finalizing a dossier to claim achievement of elimination of kala-azar as a PHP.

Bhutan and Maldives continue to report less than 25 new leprosy cases annually since 2013 and the Democratic People’s Republic of Korea has so far reported zero cases. Maldives launched the national framework targeting 100 islands to be leprosy free by 2023 and zero leprosy nationwide by 2030.

Indonesia, the sole country identified as being endemic for schistosomiasis in the Region, has successfully lowered and maintained the occurrence of the infection in the population to less than 1% from 2016 to 2021. Six villages affected by the disease have reported no human cases since 2019, while five other villages consistently documented an infection rate of less than 1% among their residents during the same period (2019–2022).

Overall, between 2010 and 2020, the number of people requiring interventions against NTDs in the South-East Asia Region reduced by 20%.
Over the past decade, relentless efforts to enhance tools and strategies, coupled with efficient implementation of interventions, have yielded significant progress in the elimination of priority NTDs in the South-East Asia Region. Several game-changing initiatives have emerged, and one such remarkable example is the regional effort to eliminate kala-azar in the South-East Asia Region.

Kala-azar, also known as visceral leishmaniasis, remains endemic in Bangladesh, India and Nepal, with sporadic cases reported in Bhutan, Sri Lanka and Thailand. In 2005, the Regional Kala-azar Elimination Initiative was launched, with Bangladesh, India and Nepal signing a memorandum of understanding committing to cooperate and jointly achieve regional kala-azar elimination by 2015 (6). To support this endeavour, the Regional Office established a regional technical advisory group for kala-azar elimination in 2004. This group has been instrumental in guiding the partnership by facilitating regular dialogues among national programmes, WHO, scientists, donors and implementing partners. These discussions have helped identify programmatic gaps, research priorities, and adoption of global and region-specific recommendations by national programmes, ensuring progress in a timely manner.

The Special Programme for Research and Training in Tropical Diseases (TDR) has played a key role in the past decades by coordinating and supporting research for the development of innovative tools and operational strategies to aid the kala-azar elimination initiative in the Indian subcontinent (8). Fruitful collaboration has resulted in numerous successful innovations in diagnostics and treatment, significantly contributing to progress in eliminating the disease.

One major innovation in diagnostics has been the rK39 rapid immunochromatographic test (ICT). Its high sensitivity and specificity were demonstrated through field validation, and TDR collaborated with manufacturers to develop and evaluate several prototypes of rK39-based ICT (8). As a result, WHO recommended its use for the diagnosis of kala-azar in 2006, providing a reliable point-of-care rapid diagnostic test (RDT).

Regarding treatment, pentavalent antimony was the primary choice for more than six decades, despite its toxicity, need for parenteral administration and lengthy therapy. However, TDR and other partners, such as the Drugs for Neglected Diseases initiative (DNDi), supported the development and evaluation of various treatments for kala-azar (8). This led to the introduction of improved treatment alternatives, including miltefosine, the first effective oral agent for kala-azar, and liposomal amphotericin B, which can be administered as a single dose and boasts an efficacy of over 95% (8). In 2012, WHO secured a donation of liposomal amphotericin B from Gilead Sciences, and in the same year Bangladesh adopted single-dose liposomal amphotericin B as the first-line treatment for kala-azar, a move soon followed by India and Nepal.

The availability and adoption of these tools combined with effective integrated vector management strategies have been game changers for kala-azar elimination efforts in the Indian subcontinent, enabling early detection and treatment even in remote communities. This success has further motivated implementers on the ground to strengthen and innovate active case detection in the past decade. For the successful elimination of kala-azar and other NTDs, it is evident that fostering effective regional partnerships and innovative approaches will be crucial to achieving the goals and targets set in the Global NTD Roadmap 2030 and the Regional Strategic Framework.
3. Emerging challenges and opportunities

With unprecedented achievements in the past decade, the NTD landscape in the South-East Asia Region is changing fast and new challenges and opportunities are arising. In 2021, WHO launched Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030, which set out updated global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups, as well as cross-cutting targets aligned with the SDGS (4). There is a need for a new vision and direction to accelerate the control and elimination of NTDs and to sustain gains in the Region in the next decade.

3.1. Optimizing ongoing interventions and addressing social and environmental determinants in the last mile of elimination of NTDs through innovation

After a decade of efforts on kala-azar elimination in the South-East Asia Region, the last 1% of the IUs in the Indian subcontinent is left to achieve and sustain the target threshold for elimination as a public health problem. However, despite substantial progress, a few gaps and challenges remain. This includes post kala-azar dermal leishmaniasis (PKDL) and kala-azar–HIV coinfection cases that are recognized as important disease reservoirs of the parasite but in which the current rK39 RDT has limited use; PKDL cases require a long treatment duration, which leads to poor treatment completion and diagnosis, and treatment of kala-azar–HIV coinfection requires specialized capacity at secondary and tertiary healthcare facilities (9–12). Despite a substantial reduction in the overall incidence in the Region, kala-azar outbreaks continue to be reported. In Nepal, endemicity of the disease is geographically expanding to hilly and mountainous districts that were formerly considered non-endemic (13). Intensified and innovative efforts are needed to strengthen routine surveillance, active case detection and treatment follow up to ensure complete case management, outbreak investigation and targeted vector control with indoor residual spraying (6).

Regional intensification of efforts at LF elimination has also led to substantial achievements but also to programmatic fatigue in many parts of the endemic countries. The presence of a substantial number of individuals who have never been treated during the decade of annual MDA is increasingly recognized (14,15). These individuals may act as reservoirs of transmission in areas where LF transmission continues despite many rounds of annual MDA. Identifying and addressing such “never treated” populations is a priority for accelerating LF elimination in the coming years.

Despite a gradual overall decline in the leprosy burden in the Region, proportions of new child leprosy cases and those with Grade 2 disability remain relatively high in many countries, indicating late case detection and ongoing transmission. There is a critical need to strengthen regional partnerships to enhance cross-learning and to revitalize national leprosy elimination efforts across the Region, and also to facilitate the adoption of newer strategies to enhance early case detection and response actions rather than continuing with business as usual. In 2018, WHO issued a new guideline to recommend single-dose rifampicin for post-exposure prophylaxis (SDR-PEP) targeting households, neighbours and social contacts of index cases as a new strategy to accelerate elimination of leprosy (16). The SDR-PEP strategy is considered as a game changer but so far, adoption of this new strategy in the Region has been slow.

In intensification of ongoing efforts, communities must be engaged and their environmental and social determinants must also be addressed more actively by involving relevant stakeholders within and beyond health. NTDs remain prevalent due to persistent behavioural, environmental and social risk...
factors such as a lack of appropriate health-seeking behaviour and poor housing and environmental hygiene. Impacts of public health interventions are sustainable only when people understand the need, demand the services, and own and drive changes that prevent continued transmission. Effective social and behavioural change communication and community empowerment should be considered a cost-effective and sustainable solution to address the social determinants of health that accelerate and sustain eradication, elimination and control of NTDs. Eradication, elimination and control of communicable diseases are global public goods that benefit the population as a whole. Completing the unfinished business of eliminating all such NTDs through intensified efforts and innovation should be an ethical priority of NTD communities in the South-East Asia Region.

3.2. Sustaining essential NTD interventions and services in the elimination phase through integration and cross-cutting approaches

In countries that have achieved elimination of an NTD as a public health problem, efforts are needed to sustain the elimination status in the post-elimination phase, with a focus on integration of surveillance and response with other disease programmes and the health system, while accelerating research and development (R&D) of new tools and strategies to make further progress.

Kala-azar, LF and trachoma are presently targeted for elimination as public health problems, as there are no appropriate tools to achieve and/or verify interruption of transmission. Similarly, validation of elimination of dog-mediated human rabies as a public health problem does not represent an end to programme activities. A country previously endemic for rabies that has successfully reached this global milestone needs to maintain its efforts to distinguish non-canine and non-indigenous infections and avoid reintroduction of the virus, working towards interrupting rabies transmission at the source. Therefore, a system for continued surveillance, case-finding and targeted response after validation of such a status needs to be established. However, there is a high chance that elimination as a public health problem gets mistaken for elimination of transmission and both donor fatigue and programme complacency may shift attention and investment to the next unfinished agenda (8). Therefore, there is a critical need to continue investment in optimizing, integrating and strengthening post-validation interventions within primary health care (PHC) and the health system for sustainability, and in accelerating R&D of new tools and strategies to further progress towards interruption of transmission.

For any NTDs, at present, there is limited evidence for WHO to recommend any specific post-validation surveillance strategy. It is, however, clear that the post-validation strategy will need to be country-specific and feasible to maintain government and donor commitment, and thus integrated with other existing platforms and mainstreamed in health system functions. There is an urgent need for countries, with the support of research and implementation partners, to generate the evidence needed to determine feasible, cost-effective and sustainable post-validation surveillance options for NTDs and build necessary diagnostic, entomological and analytical capacity to sustain implementation of such options (17).

3.3. Expanding the focus on controlling all NTDs of public health importance through a holistic multisectoral approach

While Member States in the Region have made rapid progress in eliminating kala-azar, LF, trachoma and yaws as per the Regional Flagship Priority, efforts are progressively expanding to focus on the next unfinished agenda in the control and elimination of other NTDs of public health importance in the South-East Asia Region.
The Region is one among the most affected by snakebite envenoming, with nearly 70% of annual global snakebite deaths occurring in South Asia alone (18,19). The global burden of snakebite study estimated that the highest number of deaths due to snakebite was in South Asia (14 000 annually), with India having the highest estimate in the world (nearly 11 000 deaths annually) (18). In 2022, the Regional Office launched the Regional Action Plan for prevention and control of snakebite envenoming in the South-East Asia Region 2022–2030 (20). It aims to reduce the number of deaths and cases of disability associated with snakebite envenoming by 50% in the South-East Asia Region by 2030 through community engagement and empowerment to prevent snakebites and provide effective first-aid, health systems strengthening to ensure access to life-saving treatment and care and coordinated technical support to improve the availability of quality, effective, safe and affordable antivenoms.

The South-East Asia Region also bears the highest burden of dog-mediated human rabies in the world. More than 1.4 billion people in the Region are at risk of rabies infection, and approximately 45% of worldwide rabies deaths occur in Asia (21). Based on the available data, 700–1200 people reportedly die of rabies in the Region annually, despite efforts to ensure universal access to rabies post-exposure prophylaxis (PEP), but data are largely underreported. In 2019, WHO, the Food and Agriculture Organization of the United Nations (FAO), World Organization for Animal Health (WOAH) and Global Alliance for Rabies Control jointly launched Zero by 30: the global strategic plan to end human deaths from dog-mediated rabies by 2030 (22). This target is specifically included in WHO’s new global NTD roadmap 2021–2030. To accelerate elimination of rabies in the Region, the Regional Office established the Regional Technical Advisory Group on dog-mediated human rabies in 2023 to guide WHO and Member States in providing evidence-based recommendations on strategies to accelerate the progress in eliminating dog-mediated human rabies in the Region towards the 2030 global elimination targets. The Gavi Board has also approved the unpausing of the new Gavi vaccine programmes, including rabies PEP in Gavi-eligible countries, and initiated the programme design phase. This will provide an opportunity for countries to access rabies vaccines, which will not only accelerate reaching zero rabies deaths but also improve rabies data reporting and prompt prevention of rabies in dogs.

Dengue fever has emerged as the world’s most common and rapidly spreading vector-borne disease. The Region accounts for more than half of the worldwide dengue burden, and the presence of all four serotypes has made these nations hyperendemic. While overall improvement in case management capacity has reduced the case fatality rate to below 0.5% over the past decade, large-scale dengue outbreaks continue to affect Member States. In 2022 alone, 0.65 million cases of dengue and over 2000 deaths due to dengue were reported in the Region. To review the regional dengue situation regularly and advise WHO and Member States on evidence-based strategies to accelerate prevention and control of dengue and other arboviral diseases in the Region, the Regional Office re-established the Regional Technical Advisory Group on Dengue and other arboviruses in 2021 and is currently developing a new Regional Strategic Plan for the prevention and control of dengue in the South-East Asia Region in 2023.

Schistosomiasis in the Region is confirmed to be endemic only in a small region in Indonesia – two districts in Central Sulawesi, with about 20 000 people at risk. Sustained efforts through the Integrated Schistosomiasis Control Programme implemented over the past three decades helped to reduce the prevalence of schistosomiasis substantially. Indonesia launched the 2018–2025 National Roadmap for Schistosomiasis Eradication Programme, focused on an integrated control programme encompassing MDA, veterinary public health and vector (snail) control with environmental management. Having sustained a low prevalence for many years, the country is moving towards interruption of transmission.
In 2021, WHO launched a Strategic Framework for integrated control and management of skin-related NTDs, advocating for an integrated approach to diagnosis, control and management of skin NTDs (23). Integrated approaches not only improve the efficiency and cost-effectiveness of interventions and service delivery but also reduce stigma and discrimination and improve community and patients’ acceptance of interventions and services. Skin-related NTDs of public health importance in the Region include scabies and mycetoma, in addition to yaws, leprosy, cutaneous leishmaniasis and PKDL, and LF. Scabies is widely prevalent across the Region whereas mycetoma has been reported in India and Thailand, but data are limited on the true burden and geographical distribution of these diseases (24,25). WHO recommends MDA using ivermectin as a public health control strategy against scabies, and the progressive scale up of triple drug therapy MDA using ivermectin for elimination of LF in the Region provides an opportunity to assess and bring ancillary impacts on scabies (26). The Regional Office is developing a regional integrated skin NTD toolkit by regional adaptation of the Global Strategic Framework. It is working with Member States and partners to scale up the integrated approach to skin NTDs across the Region.

Finally, one of the most neglected NTDs are other parasitic zoonoses such as taeniasis/cysticercosis, echinococcosis and foodborne trematodiases. Taenia solium is known to be the cause of over 30% of epilepsy cases through neurocysticercosis in many endemic areas where adequate sanitation is lacking and people and roaming pigs live in close proximity (27). Human infection with Echinococcus granulosus leads to the development of one or more hydatid cysts located most often in the liver and lungs. Echinococcosis is often expensive and complicated to treat and may require extensive surgery and/or prolonged drug therapy. Opisthorchis viverrini, the liver fluke, one of the parasites causing foodborne trematodiases, is classified as a carcinogenic agent as it may cause bile duct cancer (cholangiocarcinoma). All such diseases are reported in some countries in the South-East Asia Region but data on disease endemicity and their public health importance remain limited. Control and prevention of these diseases require intersectoral collaboration among the public health, animal health, food safety and WASH sectors. In 2018, the Regional Tripartite, composed of the regional offices for South-East Asia and the Western Pacific, FAO and WOAH in the Asia Pacific jointly organized a meeting to accelerate prevention and control of neglected foodborne parasitic zoonoses and brought together national focal points from various sectors (28). Following the meeting, the Regional Tripartite closely collaborated and developed a series of resource materials to accelerate disease mapping in a standardized manner and control and prevention through the One Health approach, targeting the human health, animal health, environment and food safety sectors (29).

Control and elimination of all such diseases require holistic multisectoral actions, such as veterinary public health, enhancement of the water supply and sanitation coverage, increased access to vaccines and antisera, food safety, vector control interventions and social and behavioural change communication (SBCC), for all vulnerable and affected populations. The need for holistic multisectoral action goes beyond containment and elimination of transmission of NTDs. Many NTDs cause debilitating residual morbidities and disabilities, which remain even after countries have achieved elimination targets. The delivery of public health interventions and services by other programmes or sectors, such as vector control, water and sanitation, health education, disability and psychosocial care must be strengthened through strong and sustained multisectoral partnerships.

In 2021, WHO launched Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030 (Roadmap 2030), pursuant to decision EB146(9) of the Executive Board at its 146th session in February 2020. This culminated in the endorsement of the document by the Seventy-third World Health Assembly in November 2020 (4). The Roadmap followed WHO’s first roadmap – Accelerating work to overcome the global impact of neglected tropical diseases – which was published in 2012 and has led to substantial progress to date. It aims to facilitate alignment among Member States and other stakeholders and accelerate progress towards the prevention, control, elimination and eradication of the 20 NTDs and disease groups now prioritized by WHO and the attainment of the SDGs.

The Roadmap 2030 set out updated global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups as well as cross-cutting targets aligned with the SDGs. It is built on three pillars that will support global efforts to control, eliminate and eradicate NTDs.

**Pillar 1. Accelerate programmatic actions against NTDs**, including to reduce incidence, prevalence, morbidity, disability and death. To do so will require scientific advances, new interventions and tools, strengthening strategies and service delivery, and enablers.

**Pillar 2. Intensify cross-cutting approaches** by integrating interventions for several NTDs and mainstreaming them into national health systems, and coordinating with related programmes (e.g. water, sanitation and hygiene [WASH], vector control and other programmes).

**Pillar 3. Strengthening country ownership, leadership and stewardship**, clarifying the roles of organizations, institutions and other stakeholders, their culture and perceptions and aligning them to meet the 2030 targets.

The Regional Strategic Framework is intended to adapt the Roadmap 2030 in the context of the South-East Asia Region and guide Member States, WHO, and other donors and partners to work together for implementation of the Roadmap 2030 across all levels in the South-East Asia Region.
5. Regional Strategic Framework for Sustaining, Accelerating and Innovating to end NTDs in the South-East Asia Region 2023–2030

5.1. Vision

A South-East Asia Region free of burden of neglected tropical diseases

5.2. Goal

To accelerate and sustain the eradication, elimination and control of neglected tropical diseases in the South-East Asia Region to attain the Sustainable Development Goals by 2030

Table 5.1. Neglected tropical diseases targeted for eradication, elimination and control

<table>
<thead>
<tr>
<th>Eradication</th>
<th>Elimination of transmission</th>
<th>Elimination as a public health problem</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yaws</td>
<td>Leprosy Schistosomiasis</td>
<td>Leishmaniasis (visceral/kala-azar)</td>
<td>Dengue and chikungunya Echinococcosis (cystic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lymphatic filariasis Rabies Soil-transmitted helminthiases Trachoma</td>
<td>Foodborne trematodiases</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Leishmaniasis (cutaneous)</td>
<td>Mycetoma Scabies Snakebite envenoming</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Taeniasis/cysticercosis</td>
</tr>
</tbody>
</table>

5.3. Outcomes, outputs and strategic priorities of action

The Regional Strategic Framework aims to guide and coordinate efforts among Member States, WHO and partners in the South-East Asia Region to sustain progress, accelerate actions, and innovate approaches to effectively combat NTDs and achieve their elimination and control goals by 2030. In alignment with the global target, there are two primary expected outcomes that will be observed throughout the journey towards the goal.

**Outcome 1.** At least 90% reduction in people requiring interventions against NTDs in the South-East Asia Region by 2030 compared to the 2010 baseline

**Outcome 2.** At least 10 countries have eliminated at least one NTD.

These two main outcomes of the Regional Strategic Framework will be achieved by focusing on the accomplishment of three key outputs given below, which serve as important strategic pillars to attaining the desired outcomes.

**Output 1.** Country ownership, leadership and stewardship strengthened (Strategic pillar 1)

**Output 2.** Programmatic actions accelerated (Strategic pillar 2)

**Output 3.** Integrated and cross-cutting approaches intensified (Strategic pillar 3)
The theory of change illustrates the connections between the desired transformations to be accomplished by 2030, the main approaches specified in the Regional Strategic Framework for facilitating those transformations at national and regional levels, and the essential elements for monitoring and evaluating progress towards the 2030 targets (Fig. 5.1). It employs a causal framework to outline the pathways through which the desired goals will be achieved. These changes are imperative across all countries where NTDs are prevalent to successfully attain the objectives outlined in the Framework.

The section below discusses the strategic actions that must be prioritized by Member States with support of WHO and partners to achieve each output and the outcome targets being proposed in this Framework.

**Strategic pillar 1. Strengthen country ownership, leadership and stewardship (output 1)**

Country ownership, leadership and stewardship at all levels with support of WHO and partners are pivotal for success in elimination and control of NTDs (Fig. 5.2). Strong political commitment to
prioritize the health and well-being of the population affected by NTDs is essential for mobilizing resources, establishing policies, and creating an enabling environment for sustainable interventions. Political leadership helps garner support from stakeholders, both domestically and internationally, and encourages collaboration among different sectors and agencies. Country ownership promotes the allocation of domestic resources for NTD programmes. When governments prioritize NTD programmes, they are more likely to dedicate funds from their national budgets to support interventions. This reduces dependency on external funding and increases the sustainability of programmes over the long term.

Fig. 5.2. Key stakeholders that need to be involved for achieving each output and the outcome targets being proposed in this Framework

To design and implement effective strategies tailored to the specific needs of the population, deep understanding is invaluable of the unique context of the population affected by NTDs, including the social, cultural, economic and environmental factors that influence NTD transmission and control. Local ownership hence ensures that interventions are relevant, appropriate, and sustainable. Additionally, country ownership facilitates the integration of NTD activities into existing health systems, ensuring better coordination and efficient use of resources. Country ownership promotes the establishment of robust surveillance systems, data collection mechanisms, and monitoring frameworks. This enables countries to track the impact of interventions, make evidence-based decisions, and ensure accountability of the results. Finally, country ownership also empowers communities to actively participate in NTD elimination efforts. When communities are engaged and involved in decision-making processes, they become stakeholders and partners in implementing interventions. Community ownership fosters greater acceptance, participation and sustainability of interventions, as local knowledge and practices are considered in programme design and implementation.

Proposed actions at the country level

1) Ensure that national and subnational-level focal points are designated for elimination and control of all NTDs endemic in the country.

2) Ensure that updated policies, guidelines and costed strategic plans are available and implemented for the elimination and control of all NTDs endemic in the country, in line with the
global and regional disease-specific strategic/action plans/guidelines. Refer to Table 5.2 and the Annex.

3) Establish an overarching multisectoral governance mechanism for all endemic NTDs, such as an NTD task force and national steering committee, or incorporate NTDs into existing mechanisms at all levels, with disease-specific or thematic subgroups where needed, to engage relevant stakeholders within and beyond health to jointly plan, coordinate, monitor and evaluate progress.

4) Convene regular orientation and coordination meetings among the national, provincial/state, and district NTD focal points to facilitate programme ownership and stewardship at all levels of the health systems and provide opportunities for joint planning and review, continuous capacity development and cross-learning of good practices.

5) Innovate and strengthen financing mechanisms to support NTD programme implementation, sustainable procurement, capacity-building, research and innovation through:
   a. mainstreaming NTD programmes in the overall national health plans;
   b. convening regular high-level advocacy on NTDs;
   c. promoting financing by subnational governments;
   d. mobilizing resources through public–private partnerships.

6) Map relevant stakeholders, including sectors within and beyond health, civil society organizations, academic and medical institutions for endemic NTDs and establish collaboration mechanisms such as memoranda of understanding to complement in-house capabilities in delivery and monitoring of NTD interventions and services, research and innovation.

7) Convene regular participatory orientation, training, planning and monitoring with community health workers and other influential community members, local leaders and civil society at local levels for the prevention and control of NTDs and NTD-related stigma and discrimination in the local context.

8) Promote meaningful and effective participation of people and families affected by NTDs in policy-making, advocacy and public representations, programme planning and monitoring, and delivery of NTD interventions and services and social and health communications.
Table 5.2. Public health interventions and services for each NTD, both at community and health-facility level, and relevant stakeholders within and beyond health

<table>
<thead>
<tr>
<th>Diseases</th>
<th>Community Surveill and Mgt</th>
<th>All levels of health care</th>
<th>Intensified disease management</th>
<th>Community (Social and Behavioural change communication)</th>
<th>Preventive chemotherapy</th>
<th>Vector control</th>
<th>Veterinary public health</th>
<th>WASH Safe water</th>
<th>Improved sanitation</th>
<th>Community hygiene/ environmental management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dengue/chikungunya/ Zika</td>
<td>ACD Population surveys</td>
<td>Vector/ MX</td>
<td>Passive surveillance</td>
<td>Case management / treatment</td>
<td>Wound care</td>
<td>Surgery</td>
<td>Rehabilitation (inc. counselling, assistive device)</td>
<td>Social and Behavioural change communication</td>
<td>Preemptive chemotherapy</td>
<td>Vector control</td>
</tr>
<tr>
<td>Echinococcosis (cystic)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Foodborne trematodiases (Ov)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Lymphatic filariasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Mycoses</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Other relevant stakeholders within health</td>
<td>Other PH outreach programm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Social and Behavioural change communication</td>
<td>Preventive chemotherapy</td>
<td>Vector control</td>
<td>Veterinary public health</td>
</tr>
<tr>
<td>Relevant stakeholders beyond health</td>
<td>Local authorities</td>
<td>Education, WASH, Local authorities</td>
<td>Local authorities</td>
<td>Local authorities</td>
<td>Social welfare</td>
<td>Local authorities</td>
<td>Education, Communication, Local authorities</td>
<td>Education, Local authorities</td>
<td>Environment, WASH, Public works, Agriculture and fisheries, Local authorities</td>
<td>WASH, public works</td>
</tr>
</tbody>
</table>

*through the E component of the SAFE (Surgery, Antibiotics, Facial cleanliness, and Environmental changes) strategy

ACD: active case detection; DHS: Demographic and Health Survey programme; NCD: noncommunicable diseases; NHIS: National Health Information System; MX: xenomonitoring; Ov: Opisthorchis viverrine; PH: public health; PHL: public health laboratories; TB: tuberculosis; VPD: vaccine-preventable disease; WASH: water, sanitation and hygiene
Strategic pillar 2: Accelerate programmatic actions (Output 2)

The eradication, elimination and control of NTDs are achieved by reaching disease-specific goals and targets. These goals and targets are ambitious and will require focused efforts to accelerate programmatic actions against each NTD, guided by disease-specific strategies. Programmatic actions against NTDs encompass interventions aimed at reducing incidence, prevalence, morbidity, disability and mortality.

To accelerate them will require scientific advances, new interventions and tools, strengthening strategies and service delivery and enablers. This entails investing in research, development and innovation for more sensitive diagnostics and multiplex diagnostic platforms, especially for near-elimination diseases. There is also a need for more effective, safe and affordable therapeutics and vaccines that can be integrated into PHC services for many NTDs. Furthermore, cost-effective tools for vector surveillance and control are essential. Operational and implementation research are also crucial. They help to establish the baseline prevalence of certain NTDs, understand community perception and acceptance of NTD interventions, and improve the delivery of interventions and health-care services.

NTDs disproportionately impact regions with weak health systems and inadequate infrastructure. Strengthening the relevant components of the health system is vital to achieving NTD elimination and control. This involves improving accessibility, affordability and availability of essential medicines and diagnostics, enhancing laboratory and health information systems, bolstering the capacity of the health workforce, and ensuring adequate financing at all levels. By strengthening the health system's capacity to address NTDs, we move closer to the vision of UHC and the SDGs.

The current status of each NTD endemic in the South-East Asia Region and key strategic priorities to accelerate programmatic actions for each of these are summarized in the Annex.

Proposed actions at the country level

9) Complete and/or update **mapping of the disease burden and geographical distribution** of all NTDs endemic or suspected in the country. Refer to Table 1.2 and the Annex.

10) Create and sustain a **pool of NTD-specific experts as a task force at the national and subnational levels**, comprising clinicians, academicians, epidemiologists, public health specialists and laboratory experts, to guide and support the national and subnational programmes in diagnosis, treatment, programme delivery, monitoring and evaluation (M&E) and research.

3) Regularly conduct **independent disease-specific or integrated NTD programme review**, integrating multiple coendemic diseases where appropriate, to appraise the strengths, weaknesses and best practices of implementation of the current programme at the national, subnational and service delivery levels as part of the strategic planning process.

4) Develop and monitor **disease- and country-specific measurable indicators and year-wise milestones** to monitor and evaluate programme delivery, including training, programme review, advocacy, resource mobilization, supply chain management, and interventions and service delivery.
5) **Develop a step-wise plan** for improving the coverage and quality of surveillance as well as collaboration mechanisms across different surveillance systems, sectors and geographical levels towards **collaborative surveillance for evidence-based coordinated actions** for NTDs.

6) **Ensure strengthening of laboratory and diagnostic capacity** for NTDs at the national and subnational levels as well as **national public health laboratory networks** for all endemic NTDs. This should include supply chain management of diagnostic kits and supplies and sample transport. Ensure coordinated and integrated capacity-building as part of overall health systems strengthening.

7) Progressively **scale up and strengthen national and subnational surveillance networks across partners, sectors and organizations** to ensure that all relevant facilities, including those in the private sector and non-health sectors, promptly report data to national NTD surveillance systems.

8) **Leverage technologies to improve data collection, reporting, analysis and sharing** across all levels and interoperability between systems (e.g. electronic data collection, real-time data visualization dashboards, digital tools for active case detection, contact tracing and treatment follow up) in collaboration with WHO and other partner organizations.

9) **Strengthen cross-border notification and joint risk assessment** through establishing protocols for enabling secure access to data, sharing information and joint responses with the support of WHO and other partner organizations.

10) Ensure **continuous and systematic capacity development of the health workforce** at all levels. This should include building strong frontline health workers and the local public health workforce on all aspects of NTD interventions and services through disease-specific and cross-cutting learning and training opportunities at all levels of health systems. ☞ Refer to Table 5.2.

11) Ensure that **social and behavioural change communication (SBCC)** is an integral part of both disease-specific and integrated NTD national strategic plans and strategies, and that **health workforce capacity to facilitate SBCC** is cultivated at all levels of the health system in collaboration with partner organizations.

12) Strengthen **access to safe, effective and quality medicines, diagnostics, biologicals and other essential health products** for endemic NTDs. Conduct regular landscaping of the procurement and supply chain management network and inventory and improve annual **forecasting, procurement and supply chain management**. ☞ Refer to Table 5.3.

13) **Foster operational and implementation research** through collaboration with academia and other stakeholders to establish and operationalize **innovative tools and strategies for enhancing NTD interventions and service delivery**.

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**Table 5.3. Therapeutics, vaccines and diagnostic equipment and supplies required through the health system for NTDs in the South-East Asia Region (excluding insecticides/molluscicides for vector control measures)**
### Disease Therapeutics and vaccines

<table>
<thead>
<tr>
<th>Disease</th>
<th>Therapeutics and vaccines</th>
<th>Diagnostics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individual case management</td>
<td>Public health control</td>
</tr>
<tr>
<td>Dengue and chikungunya</td>
<td>Supportive medication, including crystalloids, colloids and blood products that should be available for patients and during outbreak</td>
<td></td>
</tr>
<tr>
<td>Echinococcosis (cystic)</td>
<td>Albendazole</td>
<td>Sheep vaccine</td>
</tr>
<tr>
<td>Foodborne trematodiases (Ov)</td>
<td>Praziquantel</td>
<td>Praziquantel</td>
</tr>
<tr>
<td>Leishmaniasis (visceral leishmaniasis/ kala-azar, cutaneous leishmaniasis)</td>
<td>Liposomal amphotericin B, miltefosine, paromomycin, amphotericin B deoxycholate</td>
<td>rk39 RDT, microscopy, immunoassay, PCR</td>
</tr>
<tr>
<td>Leptospirosis</td>
<td>Multi-drug therapy</td>
<td>Rifampicin (single dose)</td>
</tr>
<tr>
<td>Lymphatic filariasis</td>
<td>Albendazole, DEC and ivermectin</td>
<td>RDT, microscopy, PCR</td>
</tr>
<tr>
<td>Mycetoma</td>
<td>Antifungal, antibiotics</td>
<td>Microscopy, PCR, imaging</td>
</tr>
<tr>
<td>Rabies</td>
<td>Vaccine and immunoglobulin/ monoclonal antibodies (PrEP)</td>
<td>Canine vaccine</td>
</tr>
<tr>
<td>Scabies</td>
<td>Ivermectin, permethrin, benzyl benczoate</td>
<td>Ivermectin, permethrin, benzyl benczoate</td>
</tr>
<tr>
<td>Schistosomiasis</td>
<td>Praziquantel</td>
<td>Praziquantel</td>
</tr>
<tr>
<td>Soil-transmitted helminthias</td>
<td>Albendazole or mebendazole</td>
<td>Albendazole or mebendazole</td>
</tr>
<tr>
<td>Snakebite envenoming</td>
<td>Snake antivenom</td>
<td>20WBCT, immunoassay</td>
</tr>
<tr>
<td>Taeniasis by T. solium/cysticercosis</td>
<td>Albendazole, praziquantel, anti-inflammatory drugs (corticosteroids) and antiepileptic medicines</td>
<td>Praziquantel, niclosamide</td>
</tr>
<tr>
<td>Trachoma</td>
<td>Azithromycin, tetracycline eye ointment</td>
<td></td>
</tr>
<tr>
<td>Yaws</td>
<td>Azithromycin</td>
<td></td>
</tr>
</tbody>
</table>

DPP: dual path platform syphilis screen and confirm assay; RDT: rapid diagnostic test; Ov: Opisthorchis viverrine; PCR: polymerase chain reaction; PEP: post-exposure prophylaxis; PrEP: pre-exposure prophylaxis; 20WBCT: 20-minute whole blood clotting test.

### Strategic pillar 3: Intensify integrated and cross-cutting approaches (Output 3)

NTDs primarily afflict impoverished populations where safe water supply and sanitation is lacking, disease vectors and animal reservoirs prevail, and access to health care is inadequate. At the same time, eradicating, eliminating and controlling many NTDs require similar public health interventions and health services across and beyond NTDs. To combat these diseases effectively, it is crucial to integrate the delivery of interventions and health services across multiple diseases, thereby improving cost-effectiveness, logistic convenience, acceptability and political attention.

Addressing NTDs requires the involvement of not only health systems but also the broader public and private sectors, both within and beyond the health-care domain (Fig. 5.3). Effective intersectoral coordination, collaboration and cooperation are thus crucial to foster collective action towards achieving the 2030 goals. However, the modality of coordination depends on the purpose, scope and relevant stakeholders of the activities involved. For integrated delivery of NTD interventions, operational collaboration with other programmes is necessary, such as integrated MDA, integrated active case detection, integrated skin NTD screening, and integrated vector management. For NTD interventions currently managed outside the health system and PHC functions, mainstreaming NTDs into essential health system/PHC functions would ensure the sustainability of such interventions while strengthening the health system’s capacity to address NTDs. This may involve integrating patients with leprosy and LF morbidity into general surgical and rehabilitation services or incorporating NTDs into the national health plan to secure sufficient domestic funding for NTDs. On the other hand, for delivering veterinary public health, water, sanitation and hygiene (WASH) or food safety interventions, NTD programmes should advocate for and seek strategic collaboration with other sectors to ensure provision of interventions that benefit NTDs through their existing platforms.
Fig. 5.3. Areas that require concerted action (adapted from (4))

Therefore, it is vital to review all essential public health interventions and health services for each endemic NTD, identify feasible options for integration, mainstreaming and coordination with other programmes and sectors within and beyond health. In addition, there is a need to determine appropriate stakeholders, and establish optimal modalities for intersectoral coordination, collaboration and cooperation.

Proposed actions at country level

1) Establish and/or reactivate a focal point and an intersectoral task force for coordination among disease-specific programmes and with other relevant stakeholders and partners to advance integrated and cross-cutting approaches.

2) Identify opportunities (i) to integrate delivery of NTD interventions that are common across multiple diseases and (ii) to mainstream health services for NTD management within the health system/PHC functions to enhance coverage, efficiency, quality and sustainability of NTD interventions and service delivery. These should be based on cost–effectiveness, synergic impacts, political advantages, logistic convenience, acceptability and safety (Fig. 5.4). Refer to Table 5.2.
3) Leverage the good practices, lessons learnt and success stories from other public health programmes involving large-scale community outreach such as immunization, tuberculosis, NCD programmes.

4) **Foster operational research** through collaboration with academia, the private sector, and other stakeholders to **innovate tools and strategies for effectively operationalizing integrated delivery of NTD interventions and services**, including integrated surveillance towards and beyond validation and/or verification of elimination and disease-free status.

5) **Develop integrated strategic action plans** for accelerating and sustaining elimination and control of NTDs, accounting for **disease-specific, cross-cutting and overarching goals, targets and strategies**, noting gaps in the coverage, efficiency, quality and sustainability of NTD interventions and service delivery and relevant health system capacity. Specify priority actions to address such gaps with an **emphasis on integration, mainstreaming and strengthening of NTD interventions and service delivery within national health systems**.

6) Operationalize implementation of the integrated strategic action plans through development of a **legal framework, platforms, policies and standard operating procedures**, and capacity development of the health workforce to facilitate integrated and cross-cutting approaches.

7) **Mainstream and integrate NTD data into national health information systems** and build capacity at all levels to manage, analyse, visualize and communicate data for coordinated response actions.

8) **Strengthen intersectoral collaboration to jointly address and monitor common environmental determinants of health** for endemic NTDs (e.g. access to basic water and sanitation, poor housing, solid waste management, drainage and animal husbandry practices) at all levels, by developing, implementing and monitoring tailor-made intersectoral actions, particularly at the local levels such as municipalities/districts/wards and schools.
9) Strengthen monitoring of the social determinants by regularly conducting gender and equity analysis/assessment to ensure that no one is left behind by NTD programmes (e.g. gender, age groups, social class, income, education, religion, ethnic minority, migrant status, place of residence) and promoting social participation to tackle such inequities through integrated and coordinated approaches across diseases where possible.

Box 3. Strategic priorities for WHO with partners

To achieve the goals and targets of the Global NTD Roadmap 2030 and Regional Strategic Framework, concerted action will be required from a wide variety of partners. These include WHO, other international organizations, donors, nongovernmental organizations, civil society organizations, WHO collaborating centres and other academia and medical/research institutes, and the private sector, to support governments at all levels, communities, families and persons affected by NTDs in implementing the priority areas of action described above. The overall strategic priorities by WHO and partners to accelerate progress in countries are given below, whereas the Annex lists disease-specific strategic priorities for WHO with the support of partners.

- Establish and operationalize the mechanism for regular reporting of key indicators/key data elements from countries to WHO for all NTDs and develop a regional/national NTD data dashboard to enhance strategic use of health intelligence for actions. Visualize the progress towards the 2030 goals for advocacy and resource mobilization.

- Develop necessary evidence-based guidance and tools that accelerate programmatic actions and intensify integrated and cross-cutting approaches. Provide technical and capacity-building support to countries for strengthening the delivery of NTD interventions and services based on country needs.

- Continue to convene regional technical advisory groups and regional programme review group meetings regularly to review progress and challenges and provide necessary technical and strategic guidance to accelerate programmatic actions.

- Facilitate exchange of information and cross-learning of good practices across countries and regions through regular convening of programme managers’ meetings.

- Facilitate intra- and intercountry cross-border collaboration for surveillance, notification, joint risk assessment and response.

- Establish a mechanism to ensure uninterrupted supply of quality-assured medical products, particularly those that are required in small quantities in countries but are essential for the prevention and treatment of NTDs, such as pooled procurement.

- Support and facilitate operational and implementation research through collaboration among national NTD programmes, implementation and research partners to establish and operationalize new tools for enhancing NTD interventions and service delivery. Validate the feasibility of options for integration of various NTD interventions and service delivery options.

- Continue to facilitate and support donation of selected NTD medicines and diagnostics to countries.
• Organize regular high-level advocacy missions at all levels of society to ensure the inclusion of NTDs in the public health agenda and secure political commitment for increased and sustained domestic resources for NTDs, including mobilization of local, regional and global resources.

• Develop investment cases for priority NTDs, identify funding gaps and mobilize pooled resources from national and international partners for providing technical support, ensuring sustained access to essential NTD medicines and supplies. Resources will also be needed for strengthening countries’ health system capacity to deliver high-quality public health interventions and health-care services at all levels and accelerating research and innovation.

• Support countries in establishing and strengthening intersectoral and multidisciplinary collaboration at all levels to operationalize implementation of the integrated strategic action plans and jointly address common social and environmental determinants of health for NTDs.

• Convene a regular partnership forum of national NTD programmes, R&D, academic and implementation partners, donors and other relevant agencies to regularly share programmatic and knowledge gaps and research updates, advocate for concerted actions, mobilize resources and accelerate research and innovation.

5.4. Monitoring and evaluation plan

The Global NTD Roadmap 2030 defines the overarching, cross-cutting and disease-specific indicators to achieve uniformity in monitoring the progress of implementation of the Global Roadmap across diseases, regions and countries over time. These indicators were adapted to the regional context. Those highlighted in green are Global NTD Roadmap 2030 indicators to monitor and evaluate progress in implementation. Those highlighted in yellow are indicators adapted to the context of the Region.

WHO will monitor and report on progress in achieving the milestones and targets annually. WHO also invites Member States to adopt these targets and milestones, wherever applicable, when they develop country-specific NTD roadmaps.

Table 5.4. Targets and milestones of the Global NTD Roadmap 2030

Overarching targets and milestones

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline</th>
<th>2026 milestone</th>
<th>2030 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage reduction in people requiring interventions against NTDs compared to the 2016 baseline</td>
<td>27.1% (2021)</td>
<td>50%</td>
<td>90%</td>
</tr>
<tr>
<td>Number of countries that have eliminated at least one NTD</td>
<td>7 (2023)</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

Cross-cutting targets and milestones

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Baseline</th>
<th>2026 milestone</th>
<th>2030 target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integrated approaches</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of countries that adopt and implement integrated strategies for skin NTDs</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Number of countries that have an integrated national roadmap or strategic plan for NTDs*</td>
<td>0</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
</tbody>
</table>

**Multisectoral coordination**

<table>
<thead>
<tr>
<th>Access to at least basic water supply, sanitation and hygiene in areas endemic for NTDs</th>
<th>92% (2021)</th>
<th>95%</th>
<th>100%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Percentage of countries with NTDs integrated in national health development strategies/plans*</th>
<th>20% (2022)</th>
<th>50%</th>
<th>90%</th>
</tr>
</thead>
</table>

**Universal health coverage**

<table>
<thead>
<tr>
<th>Percentage of countries that include NTD interventions in their package of essential services and budgeting for them*</th>
<th>0%</th>
<th>40%</th>
<th>90%</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Percentage of countries with guidelines for management of NTD-related disabilities within national health systems*</th>
<th>80% (2022)</th>
<th>90%</th>
<th>90%</th>
</tr>
</thead>
</table>

* Encompassing all relevant NTDs of public health importance in each country

## Disease-specific targets and milestones

<table>
<thead>
<tr>
<th>Disease</th>
<th>Indicator</th>
<th>Baseline</th>
<th>2026 milestone</th>
<th>2030 target</th>
</tr>
</thead>
</table>

### Targeted for eradication

#### Yaws

Number of countries certified free of transmission

<table>
<thead>
<tr>
<th>1 (India)</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
</table>

### Targeted for elimination (interruption of transmission)

#### Leprosy

Number of countries with zero new autochthonous leprosy cases

<table>
<thead>
<tr>
<th>1</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
</table>

Annual number of new leprosy cases detected

<table>
<thead>
<tr>
<th>124 377 (2022)</th>
<th>80 000</th>
<th>45 000</th>
</tr>
</thead>
</table>

Rate (per million population) of new leprosy cases with Grade 2 disability

<table>
<thead>
<tr>
<th>1.83 (2022)</th>
<th>1.00</th>
<th>0.12</th>
</tr>
</thead>
</table>

Rate (per million children) of new child cases with leprosy

<table>
<thead>
<tr>
<th>13.9 (2022)</th>
<th>6.00</th>
<th>0.77</th>
</tr>
</thead>
</table>

Number of countries with laws that discriminate against persons affected by leprosy

<table>
<thead>
<tr>
<th>3</th>
<th>2</th>
<th>0</th>
</tr>
</thead>
</table>

### Schistosomiasis

Number of countries verified for elimination (interruption of transmission)

<table>
<thead>
<tr>
<th>0</th>
<th>0</th>
<th>1 (Indonesia)</th>
</tr>
</thead>
</table>

### Targeted for elimination as a public health problem

#### Leishmaniasis (visceral, kala-azar)

Percentage of endemic countries achieving <1% case-fatality rate due to primary visceral leishmaniasis

<table>
<thead>
<tr>
<th>50%</th>
<th>70%</th>
<th>100%</th>
</tr>
</thead>
</table>

Number of countries validated for elimination as a public health problem (defined as <1 case [new and relapse] per 10 000 population at subnational level)

<table>
<thead>
<tr>
<th>0</th>
<th>3</th>
<th>5</th>
</tr>
</thead>
</table>

Percentage of PKDL cases detected (VL post-treatment follow up 3 years) and treated

<table>
<thead>
<tr>
<th>ND (2023)</th>
<th>70%</th>
<th>100%</th>
</tr>
</thead>
</table>

#### Lymphatic filariasis

Number of countries validated for elimination as a public health problem

<table>
<thead>
<tr>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>

Reduction in population requiring MDA compared to the 2010 baseline

<table>
<thead>
<tr>
<th>41% (2022)</th>
<th>70%</th>
<th>100%</th>
</tr>
</thead>
</table>

Number of countries implementing post-MDA or post-validation surveillance nationwide

<table>
<thead>
<tr>
<th>5</th>
<th>6</th>
<th>9</th>
</tr>
</thead>
</table>

Number of countries with available essential package of care for MMDP activities in all areas that have known patients with lymphoedema and hydrocele

<p>| 4 | 6 | 9 |</p>
<table>
<thead>
<tr>
<th>Rabies</th>
<th>Number of countries that have achieved zero human deaths from rabies</th>
<th>0</th>
<th>2</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of countries that have reached 70% vaccination coverage of dogs in priority areas</td>
<td>ND</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Soil-transmitted helminthiases</td>
<td>Number of countries sustaining deworming for school-age children with effective coverage (75%)</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Number of countries sustaining deworming for preschoolers with effective coverage (75%)</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Number of countries that have conducted impact assessment and reduced treatment frequency at least once</td>
<td>4</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Trachoma</td>
<td>Number of countries validated for elimination as a public health problem</td>
<td>2</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Targeted for control</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dengue and chikungunya</td>
<td>Dengue: case-fatality rate due to dengue</td>
<td>0.3% (2022)</td>
<td>0.15%</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>Chikungunya: percentage of countries where laboratory surveillance can detect and report cases</td>
<td>80% (2022)</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Zika: percentage of countries where laboratory surveillance can detect and report cases</td>
<td>70% (2022)</td>
<td>80%</td>
<td>100%</td>
</tr>
<tr>
<td>Leishmaniasis (cutaneous)</td>
<td>Percentage of countries in which 95% of reported cases are treated</td>
<td>ND</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>Mycetoma</td>
<td>Number of countries in which mycetoma is included in national control programmes and surveillance systems</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Neglected parasitic zoonoses</td>
<td>Echinococcosis (cystic): number of countries where the need for public health interventions has been assessed</td>
<td>0</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Foodborne trematodiases: number of countries with intensified control in hyperendemic areas</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Taeniasis by T. solium/cysticercosis: number of countries with intensified control in hyperendemic areas</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Scabies</td>
<td>Percentage of countries having incorporated scabies management in the universal health coverage package of care</td>
<td>90%</td>
<td>90%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Number of countries using MDA intervention in highly endemic areas</td>
<td>0</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Snakebite envenoming</td>
<td>Percentage of countries having achieved reduction in mortality by 50% compared to 2020 baseline</td>
<td>ND</td>
<td>60%</td>
<td>100%</td>
</tr>
<tr>
<td></td>
<td>Percentage of countries with national strategic plan for snakebite envenoming control developed and implemented</td>
<td>30%</td>
<td>60%</td>
<td>100%</td>
</tr>
</tbody>
</table>

MDA: mass drug administration; MMDP: morbidity management and disability prevention; ND: no data; PKDL: post kala-azar dermal leishmaniasis; VL: visceral leishmaniasis
References


Annex: NTD profiles for the South-East Asia Region

Diseases targeted for eradication

Yaws

Current status in 2023

Three countries (India, Indonesia and Timor-Leste) were known to be endemic for yaws, but India became the first country in the world to be certified for achieving a yaws-free status in 2016.

Indonesia developed a national roadmap for eradication of yaws in 2016 and completed disease mapping in 2017, which classified 79 districts in 18 provinces as endemic. Azithromycin and rapid diagnostic tests were made available at the provincial and district levels for routine surveillance. Total community treatment with azithromycin was also initiated. Since then, the number of reported cases has declined.

Timor-Leste conducted a nationwide mapping survey in 2017–2018, which detected only two confirmed yaws cases. In 2019, Timor-Leste established routine yaws surveillance through health facilities and no case has been detected so far. A nationwide serosurvey to verify the absence of yaws transmission is planned.

Strategic priorities for Member States

1. Ensure uninterrupted supply and universal access of diagnostics and azithromycin in endemic areas through the health system.
2. Strengthen and sustain surveillance for early detection of cases and targeted treatment where needed, combined with social and behaviour change communication (SBCC) and improvement in community hygiene.
3. Strengthen laboratory capacity for monitoring antimicrobial resistance.
4. Conduct population-based serosurveys to verify the interruption of transmission.
5. Develop a dossier for certification of a yaws-free status.
6. Sustain surveillance, diagnosis and case management capacity beyond certification through an integrated skin NTD approach.

Strategic priorities for WHO and partners

1. Mobilize resources and support countries in capacity-building and implementation of priority areas.
2. Develop criteria for certification of a yaws-free status and standardized serosurvey methodology for verifying the interruption of transmission.
3. Develop a dossier template for certification of a yaws-free status.
4. Facilitate certification of a yaws-free status.

Key WHO strategic documents

Diseases targeted for elimination

Leprosy

Current status in 2023

Leprosy is endemic in 10 Member States, while the Democratic People’s Republic of Korea has been reporting zero cases over the past 10 years. 66.5% of the new leprosy cases reported globally in 2021 were from this Region. Six countries in the Region (Bangladesh, India, Indonesia, Myanmar, Nepal and Sri Lanka) are identified among the 23 global priority countries for leprosy.

The reported number of new cases in the Region is slowly declining in the past 15 years, from 174,118 in 2006 to 143,787 in 2019, with India accounting for 80% of regional burden. In 2020–2021, the reported number of new cases halved, most likely due to the impact of the COVID-19 pandemic (85,687 in 2020 and 93,485 in 2021). The proportion of children (<15 years of age) among new leprosy cases has been constantly declining, from 9.08% in 2015 to 7.41% in 2019 and 6.06% in 2021, indicating reduction in recent transmission of leprosy.

Strategic priorities for Member States

1. Ensure uninterrupted supply of and universal access to MDT throughout the health system.
2. Strengthen surveillance for early detection and prompt management of cases, including immunological reactions and adverse drug reactions.
3. Scale up post-exposure prophylaxis.
4. Strengthen laboratory capacity for monitoring antimicrobial resistance.
5. Strengthen, scale up and mainstream interventions to prevent disability and alleviate morbidity, including surgery, rehabilitation, psychosocial care and stigma reduction, access to safe water and hygiene in PHC functions.
7. Involve specialist skin clinics and medical academic institutions in diagnosis, treatment and rehabilitation services as per national protocol.
8. Enhance awareness through community engagement activities to enhance seeking of immediate medical help for suspected cases in the community.

Strategic priorities for WHO and partners

1. Facilitate donation of MDT and supply of single-dose rifampicin.
2. Mobilize resources and support countries in capacity-building and implementation of priority areas.
3. Facilitate intra- and intercountry cross-border collaboration.
4. Support countries close to elimination in accelerating elimination and verification of elimination.

9. Make progress on subnational verification of interruption of transmission.
10. Abolish/repeal laws discriminatory against persons affected by leprosy.

Key WHO strategic documents

Diseases targeted for elimination

Schistosomiasis

Current status in 2023

Schistosomiasis in the Region is known to be endemic only in a small region in Indonesia – two districts in Central Sulawesi, with about 20,000 population at risk. Sustained efforts through the Integrated Schistosomiasis Control Programme implemented in the past three decades successfully lowered and maintained the occurrence of the infection in the population to less than 1% from 2016 to 2021. Six villages affected by the disease have reported no human cases since 2019, and five other villages consistently documented an infection rate of less than 1% among their residents in the same period (2019–2022). Having sustained a low prevalence in the past several years, the country is moving towards interruption of transmission, focusing on an integrated control programme encompassing MDA, veterinary public health and vector (snail) control with environmental management.

<table>
<thead>
<tr>
<th>Strategic priorities for Member States</th>
<th>Strategic priorities for WHO and partners</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Sustain preventive chemotherapy with effective coverage in all endemic areas.</td>
<td>1. Develop criteria and a standardized survey methodology for verification of elimination of schistosomiasis.</td>
</tr>
<tr>
<td>2. Strengthen surveillance with introduction of advanced diagnostic techniques in the pre-verification phase.</td>
<td>2. Develop a dossier template for verification of elimination of schistosomiasis.</td>
</tr>
<tr>
<td>3. Strengthen and sustain intersectoral collaboration to initiate treatment and monitoring of animals and livestock, build latrines in farms, eliminate open defecation, and control snails in farms and irrigation channels.</td>
<td>3. Develop guidance on treatment and monitoring of animals and livestock against schistosomiasis and support countries in operationalization.</td>
</tr>
<tr>
<td>4. Strengthen and sustain efforts to eliminate snail foci at the community level through effective SBCC.</td>
<td>4. Support countries in strengthening pre- and post-verification surveillance.</td>
</tr>
</tbody>
</table>

5. Support countries in facilitation of intersectoral collaboration.

6. Facilitate research and innovation on new diagnostic tools and strategies for pre-verification surveillance, snail control and effective and feasible treatment of animal reservoirs.

Key WHO strategic documents


Diseases targeted for elimination as a public health problem

Leishmaniasis (visceral, kala-azar)

Current status in 2023

By the end of 2022, the elimination target for kala-azar was achieved in all endemic upazilas of Bangladesh. 99.8% of all endemic blocks in India and 95% of endemic districts in Nepal. Bangladesh has sustained the target of less than 1 kala-azar case per 10 000 population in all implementation units since 2017 and is developing a dossier to claim achievement of elimination of kala-azar as a public health problem in 2023.

The Regional Strategic Framework for accelerating and sustaining kala-azar elimination in South-East Asia 2022–2026 was developed and launched by the Regional Office in consultation with Member States. In 2023, Bhutan developed a national guideline for the prevention, diagnosis and management of leishmaniasis. Sri Lanka is also developing a national strategic plan for leishmaniasis elimination.

Strategic priorities for Member States

1. Ensure uninterrupted supply of and universal access to medicines and RDTs throughout the health system.
2. Strengthen surveillance for early detection and prompt management of kala-azar and PKDL cases and vector control.
4. Engage the community through SBCC to improve community hygiene and housing and seeking of immediate medical help for suspected cases.
5. Establish a post-validation strategy to sustain effective surveillance, case management and vector control through novel and integrated approaches.
6. Develop a dossier for validation of elimination as a public health problem.
7. Sustain surveillance, diagnosis and case management capacity beyond validation through an integrated approach to skin NTDs.

Strategic priorities for WHO and partners

1. Support countries to establish a mechanism to ensure uninterrupted supply of medicines.
2. Facilitate research and innovation in new diagnostic tools and strategies for post-validation surveillance through integrated approaches.
3. Develop guidance on post-validation surveillance.
4. Support countries in capacity-building and implementation of the strategic priorities.
5. Facilitate intra- and intercountry cross-border collaboration.
6. Facilitate validation of elimination as a public health problem.

Key WHO strategic documents


References


Diseases targeted for elimination as a public health problem

**Lymphatic filariasis (LF)**

**Current status in 2023**

LF is endemic in nine countries in the Region. Four countries (Bangladesh, Maldives, Sri Lanka and Thailand) have so far achieved elimination of LF as a public health problem. Timor-Leste has carried out MDA with triple drug therapy in 2019 and stopped MDA nationwide in 2021 after passing a transmission assessment survey. The next transmission assessment survey is planned in 2023. The remaining implementation units in the four remaining endemic countries are progressively expanding MDA with triple drug therapy. By the end of 2022, 740 out of 1072 implementation units in nine endemic countries (69%) passed at least one transmission assessment survey and stopped MDA.

**Strategic priorities for Member States**

1. Strengthen and scale up MDA with triple drug therapy in all endemic implementation units with effective coverage.
2. Improve the quality of LF surveys and impact assessment. Also improve LF microscopy.
3. Strengthen, scale up and mainstream comprehensive morbidity management and disability prevention (MMDP) services such as hydrocele surgery, rehabilitation, psychosocial care and stigma reduction in PHC functions.
4. Strengthen vector control and vector surveillance through an integrated vector management approach.
5. Intensify community engagement through SBCC to enhance participation in MDA, vector control and seeking of medical support for MMDP.
6. Develop a dossier for validation of elimination as a public health problem.
7. Develop and implement national strategic plans for post-validation surveillance and report data to WHO annually.

**Strategic priorities for WHO and partners**

1. Facilitate donation of medicines and RDT.
2. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.
3. Facilitate validation of elimination as a public health problem.
4. Facilitate research and innovation on new diagnostic tools and strategies for post-validation surveillance.
5. Develop guidance on post-validation surveillance, including xenomonitoring.
6. Facilitate intra- and intercountry cross-border collaboration.
7. Support entomological capacity-strengthening through an integrated vector management approach.
### Key WHO strategic documents


### Diseases targeted for elimination as a public health problem

#### Rabies

**Current status in 2023**

Rabies is endemic in eight of the Region’s 11 Member States, threatening more than 1.4 billion people. Based on the available data, 700–1,200 people reportedly died of rabies in the period of 2015–2019 in the Region annually but rabies is underdiagnosed and underreported. In 2020, the number of reported rabies cases dropped, presumably due to the impact of the COVID-19 pandemic.

All endemic countries have or are currently updating national strategic plans for rabies elimination. Treatment guidelines have been established in all countries and PEP is widely available in public health facilities free of charge but that of rabies immunoglobulin varies by country. Intradermal vaccination is practised in most of the countries; however, there is a need to further increase capacity and adopt the shortened WHO-recommended one-week vaccination regimen. Surveillance and laboratory capacity, both for human and veterinary sectors, as well as mass dog vaccination coverage and engagement with sectors beyond human and animal health need to be strengthened in all countries.

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1. Strengthen and sustain integrated capacity for bite case management in PHC functions, including collaborative surveillance and a data-sharing mechanism between the human and veterinary health sectors at all levels.

2. Ensure an uninterrupted supply of and universal access to PEP, including rabies immunoglobulin, throughout the health system.

3. Strengthen engagement of communities at risk on prevention and prompt management of animal exposure, including awareness-raising about the need for PEP and how to access it, bite prevention, and responsible pet ownership, through SBCC and facilitation by local governments.

4. Collaborate with the veterinary sector to achieve and sustain effective mass dog vaccination coverage and dog population management.

5. Enhance legislation and regulations to reinforce responsible pet ownership, pet vaccination and dog population management.

6. Strengthen laboratory and diagnostic capacity for prompt detection and referral of rabies (both in humans and animals).

Key WHO strategic documents


Diseases targeted for elimination as a public health problem

Soil-transmitted helminthiases (STH)

Current status in 2023

Annual or semi-annual preventive chemotherapy (deworming) is required in eight countries in the Region, with 496.1 million children requiring preventive chemotherapy (54% of the global burden) across the Region.¹

Substantial progress has been made to institutionalize regular deworming for children, with Bangladesh, Bhutan, DPR Korea, Myanmar and Timor-Leste sustaining over 80% national coverage annually, though national coverage among preschoolers is generally less than that of school-aged children. Bangladesh, Bhutan and Timor-Leste have recently conducted impact assessments and have updated or are planning to update their deworming strategies.

Strategic priorities for Member States

1. Enhance regular deworming coverage for school-aged children, preschoolers and women of reproductive age through effective collaboration with other relevant programmes/ministries (e.g. maternal and child health, nutrition, immunization, education).
2. Conduct regular impact assessment and undertake evidence-based revision of treatment strategies.
3. Collaborate with the WASH sectors and implement SBCC to improve sanitation coverage and eliminate open defecation in areas with persistently high prevalence of soil-transmitted helminthiases.
4. Complete mapping of the burden and geographical distribution of strongyloidiasis to determine the need for public health interventions and initiate MDA where needed or leverage ongoing MDA with triple drug therapy against LF to assess its impacts on strongyloidiasis transmission.

Strategic priorities for WHO and partners

1. Mobilize resources and support countries in implementation of impact assessment and mapping of strongyloidiasis.
2. Facilitate intersectoral collaboration with other relevant programmes/ministries, including WASH sectors in countries.
3. Support strengthening of deworming for preschoolers and women of reproductive age in collaboration with other relevant programmes and ensure regular data reporting to WHO.

Key WHO strategic documents

Diseases targeted for elimination as a public health problem

Trachoma

Current status in 2023

Trachoma was known to be a public health problem in three countries of the Region (India, Myanmar and Nepal). Nepal and Myanmar achieved elimination of trachoma as a public health problem in 2019 and 2020, respectively. India remains the only known endemic country in the Region yet to eliminate trachoma. The country, however, claims to have already achieved the elimination threshold for active trachoma. India is completing a 24-month pre-validation survey throughout the country in 2023. Timor-Leste has been suspected of having trachoma but a study conducted in 2018 seeking evidence to justify undertaking of population-based trachoma surveys in Timor-Leste did not find any such evidence.5

Strategic priorities for Member States

1. Complete pre-validation surveys (India) and a serosurvey (Timor-Leste) to make the case for elimination of trachoma as a public health problem.
2. Develop a dossier and submit to WHO for validation of elimination as a public health problem.

Strategic priorities for WHO and partners

1. Facilitate validation of elimination as a public health problem.
2. Develop guidance on post-validation surveillance.

Key WHO strategic document


### Diseases targeted for control

**Dengue, chikungunya and Zika**

#### Current status in 2023

There has been an increase in both the scale and frequency of dengue outbreaks in the Region during the past 10 years. In particular, five Member States, namely India, Indonesia, Myanmar, Sri Lanka and Thailand, are among the 30 most highly endemic countries in the world. Despite the continued efforts of public health agencies, the number of dengue cases in the Region increased by more than threefold over the past decade, from 0.19 million cases in 2011 to 0.68 million cases in 2019, although it is notable that the case-fatality rate (CFR) has reduced to below 0.5% due to the improvement in case management. In 2020–2021, the number of dengue cases dropped, presumably due to the impact of the COVID-19 pandemic, but the number of cases jumped back to 0.65 million and over 2000 deaths were reported in 2022 across the Region. Chikungunya and Zika have been reported from eight and three countries, respectively.

#### Strategic priorities for Member States

1. Ensure uninterrupted supply of and universal access to RDT and vector control supplies throughout the health system.
2. Establish and strengthen collaborative surveillance with the epidemiological bureau, health emergency programmes, laboratories, entomological team and the private sector.
3. Strengthen case management capacity at all levels of the health system.
4. Strengthen SBCC and health education at all levels as part of the arboviral disease control programme for sustained prevention of Aedes mosquito breeding.
5. Strengthen laboratory capacity and the network for confirmatory diagnosis and serotyping of arboviral diseases.
6. Engage urban planning and public works departments to shape infrastructure for preventing mosquito breeding, and an adequate drainage system and waste management.

#### Strategic priorities for WHO and partners

1. Establish and operationalize the mechanism of regular data reporting from countries to WHO and visualize them in the regional dashboard.
2. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.
3. Update case management guidelines and develop operational toolkits.
4. Develop guidance on collaborative surveillance for arboviral disease, vector surveillance and SBCC.
5. Enhance integrated vector management across the Region.
7. Facilitate cross-border collaboration for exchange of experiences and lessons learnt.
8. Facilitate intersectoral collaboration with other relevant programmes/ministries for sustainable prevention and control of arboviral diseases.

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Key WHO strategic documents

Diseases targeted for control

Echinococcosis (cystic)

Current status in 2023

Cases of cystic echinococcosis have been reported from Bangladesh, Bhutan, India and Nepal but the extent of the problem is unknown. A hospital-based study in north India estimated the yearly total number of diagnosed cases without surgery to be 17,075 and the total number of cases with surgical/interventional procedures to be 5,646.7

The priority is to strengthen surveillance to ensure reporting of the number of cases through the health system to determine the need for public health interventions.

Strategic priorities for Member States
1. Establish surveillance to ensure reporting of cases through the health system to determine the need for public health interventions and classify risk areas.
2. Determine the need to receive WHO donation of albendazole for case management.

Key WHO strategic documents

Strategic priority for WHO and partners
1. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.

Key WHO strategic documents

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Diseases targeted for control

**Foodborne trematodes: Opisthorchiasis**

**Current status in 2023**

Foodborne trematodiases known to be present in the Region includes opisthorchiasis caused by Opisthorchis viverrine and fascioliasis caused by Fasciola spp., but only opisthorchiasis in Thailand is identified as a public health problem. O. viverrine is classified as a carcinogenic agent causing bile duct cancer (cholangiocarcinoma) and the northeast region of Thailand where opisthorchiasis is prevalent has the highest incidence of cholangiocarcinoma in the world.

A control programme involving anthelminthic drugs, novel intensive health education in communities and schools, ecosystem monitoring and active community participation (known as Lawa model) has been implemented to control opisthorchiasis in Thailand (34). Fascioliasis is sporadically reported across India but its true burden and the need for public health interventions is yet unknown and treatment (triclabendazole) is not available in the country.

### Strategic priorities for Member States

1. Sustain One Health interventions (preventive chemotherapy and veterinary public health interventions) and monitor and evaluate their impacts.
2. Conduct systematic review and mapping of fascioliasis in priority countries, particularly India, to determine the need for public and veterinary health interventions.

### Strategic priorities for WHO and partners

1. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.
2. Facilitate donation of medicines for individual case treatment and public health control as needed.
3. Facilitate One Health collaboration with the veterinary and agricultural sectors in partnership with FAO and WOAH.

### Key WHO strategic documents

Diseases targeted for control

Leishmaniasis (cutaneous)

Current status in 2023

Cutaneous leishmaniasis (CL) is known to be endemic in Bangladesh, India, Nepal and Sri Lanka, with sporadic cases reported in Bhutan and Thailand.

There are currently no national programmes for control of CL in endemic countries. However, Bhutan has developed a national guideline for the prevention, diagnosis and management of leishmaniasis in 2023. Sri Lanka is also developing a national strategic plan for leishmaniasis elimination.

Strategic priorities for Member States

1. Review the disease burden and geographical distribution of CL.
2. Develop a strategy for control of CL and national guidelines/standard operating procedures for diagnosis and management.
3. Strengthen the surveillance system for CL to ensure reporting of cases, including from the private sector, dermatologists, skin clinics and medical colleges.
4. Strengthen prompt management of cases and vector control.
5. Ensure an uninterrupted supply of and universal access to medicines throughout the health system.
6. Roll out an integrated approach to skin NTDs to strengthen the capacity for detection, diagnosis and management of cases.

Strategic priorities for WHO and partners

1. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.
2. Finalize the regional integrated skin NTD toolkit and roll out across the Region.

Key WHO strategic documents

Diseases targeted for control

Mycetoma

Current status in 2023

Mycetoma was first reported in the mid-19th century in Madurai, India, and hence was initially called Madura foot. Currently, accurate data on its incidence and prevalence are not available. However, it is known to be endemic in tropical and subtropical areas in the so-called “mycetoma belt”, which includes India and Thailand.8

Strategic priorities for Member States

1. Establish surveillance to ensure reporting of cases through the health system to determine the need for public health interventions and classify risk areas.
2. Roll out an integrated approach to skin NTDs to strengthen the capacity for detection, diagnosis and management of cases.

Strategic priorities for WHO and partners

1. Finalize the regional integrated skin NTD toolkit and roll out across the Region.
2. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.

Key WHO strategic document


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Diseases targeted for control

Scabies

Current status in 2023

Scabies is considered endemic in all countries of the Region. The exact burden of scabies in the Region is unknown due to poor or absence of surveillance. However, the Global Burden of Disease Study 2015 reported that Indonesia, Timor-Leste and Myanmar in the Region were among the 10 countries with the highest age-standardized scabies burden of disability-adjusted life years (DALYs) per 100,000 people.\(^9\)

There are no national scabies control programmes across the Region. However, Timor-Leste integrated scabies mapping as part of the LF transmission assessment survey in 2020–2021, and Bangladesh is also planning to initiate baseline survey and MDA against scabies in Cox’s Bazar in 2023.

Strategic priorities for Member States

1. Establish surveillance to ensure reporting of cases through the health system or conduct mapping of the burden and geographical distribution of scabies to determine the need for public health interventions and classify risk areas.
2. Initiate, strengthen and scale up MDA in highly endemic areas, or ongoing MDA with triple drug therapy against LF to assess its impact on scabies transmission.
3. Roll out an integrated approach to skin NTDs to strengthen the capacity for detection, diagnosis and management of cases.
4. Enhance awareness through community engagement activities to enhance seeking of immediate medical help for suspected cases in the community and prevention, control and management of scabies.

Strategic priorities for WHO and partners

1. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.
2. Finalize the regional integrated skin NTD toolkit and roll out across the Region.

Key WHO strategic document


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Diseases targeted for control

Snakebite envenoming

Current status in 2023

The South-East Asia Region is one among the most affected, with nearly 70% of annual global snakebite deaths occurring in South Asia alone.10 Snakebites are often seasonal with highest incidence occurring during the monsoons. Accurate measures of the snakebite burden are lacking in most countries of the Region due to underreporting. An estimated 808 000 snakebite deaths occurred in India from 2001 to 2014 based on verbal autopsy data from India’s longitudinal Million Death Study.11 The incidence in 2015 was estimated at 1.1–1.8 million snake bites with 0.77–1.24 million cases of envenoming and annual mortality of 58 000. In Sri Lanka, there are an estimated 110 000 snakebites resulting in 45 000 envenomings and 400 deaths.12, 13 In Bangladesh, data from a national survey published in 2010 estimated 590 000 snakebites annually and 6041 deaths.14 For some countries, no national data are currently available. In 2022, the Regional Office launched a Regional Action Plan for the prevention and control of snakebite envenoming in the South-East Asia 2022–2030, aiming to accelerate progress in reducing snakebite-related death and disability by 50% by 2030, in line with the Global Strategy.

Strategic priorities for Member States

1. Establish and strengthen surveillance systems to monitor the burden and evaluate the progress of interventions, including monitoring of post-bite complications and disabilities.
2. Strengthen engagement of communities at risk on snakebite prevention and first-aid care through SBCC and ensure the availability of rapid transport and appropriate

Strategic priorities for WHO and partners

1. Establish and operationalize the mechanism of annual data reporting from countries to WHO and visualize them in the regional dashboard.
2. Finalize toolkits for effective communication and training on snakebite prevention and case management, encompassing all literacy levels.

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prehospital care from at-risk communities to health facilities.
3. Strengthen the capacity of the health workforce at all levels and referral systems for effective first-aid and case management.
4. Improve the availability of quality, effective, safe and affordable antivenoms in the health system through collaborative partnerships with the relevant sectors/departments (e.g. Department of Wildlife and Forestry, Procurement, regulatory authority, manufacturers).
5. Continually update the WHO herpetological map to identify locally prevalent snake species of medical importance and model the at-risk population and antivenom need.

3. Mobilize resources, facilitate public-private partnerships and support countries in capacity-building and implementation of the strategic priorities.
5. Support baseline assessment on the regional and national burden of snakebite and envenoming.
6. Support actions to improve the quality, safety and effectiveness of existing antivenoms, strengthening production systems and working with partners to ensure access to high-quality, geographically representative immunizing venoms.

Key WHO strategic documents

Diseases targeted for control
Taeniasis by *T. solium*/cysticercosis

Current status in 2023

There are many countries endemic for *T. solium*, with India having the highest burden in the Region. It was estimated that in 2011, human neurocysticercosis-associated active epilepsy caused an annual median loss of INR 12.03 billion (US $185.14 million). The disease was also prevalent in Nepal, but the current status is not known. Neither India nor Nepal have national control programmes in place.

In Indonesia, the disease appears limited to Bali and Papua, and a national plan has been developed. There are reports of the disease in Bangladesh, mainly among tribal people.

The disease is maintained in areas where roaming pigs are kept and those are the areas that should be targeted for control.

Strategic priorities for Member States

Strategic priorities for WHO and partners

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1. Complete mapping of the burden and geographical distribution to classify risk areas and determine the areas in need of public health interventions.

2. Pilot One Health interventions (preventive chemotherapy and veterinary public health interventions involving pig vaccination and treatment) and monitor and evaluate their impact in hyperendemic areas through intersectoral collaboration with the veterinary and agricultural sectors.

3. Develop and implement a strategic plan to scale up intensified control interventions through the One Health approach.

1. Mobilize resources and support countries in capacity-building and implementation of the strategic priorities.

2. Facilitate One Health collaboration with the veterinary and agricultural sectors in partnership with FAO and WOAH.

Key WHO strategic documents


