



# Report of a WHO meeting on skin-related neglected tropical diseases in West Africa

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Geneva, 3–5 October 2022



World Health  
Organization



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## Acknowledgements

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The World Health Organization (WHO) is grateful to the participants who attended the (hybrid) meeting on skin-related neglected tropical diseases (skin NTDs) in West Africa at the World Council of Churches in Geneva, Switzerland, on 3–5 October 2022.

The report was prepared by Priya Pathak (WHO Department of Control of Neglected Tropical Diseases [WHO/NTD]), Yves Barogui and Abate Beshah (WHO

Regional Office for Africa), Ghislain Sopoh (Regional Institute of Public Health, Ouidah, Benin) and Chandrakant Revankar (Consultant and skin NTD expert, North Brunswick, United States of America). Technical oversight was provided by Kingsley Asiedu (WHO/NTD).

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## Abbreviations and acronyms

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COVID-19	coronavirus disease
MDA	mass drug administration
NTD	neglected tropical disease
RBF	results-based financing
WASH	water, sanitation and hygiene
WHO	World Health Organization



In order to contribute to improving the promotion and implementation of the integrated approach for control and management of skin-related neglected tropical diseases (skin NTDs) in co-endemic countries in the WHO African Region, the WHO Department of Control of Neglected Tropical Diseases (WHO/NTD) and the Anesvad Foundation convened a hybrid meeting of experts on skin NTDs from West Africa at the World Council of Churches in Geneva, Switzerland on 3–5 October 2022. Several aspects of the current situation and ways forward using integrated approaches and results-based financing were discussed and a number of recommendations were made by consensus.

The meeting brought together some 55 representatives from the health ministries of Benin, Cameroon, Congo, Côte d'Ivoire, Liberia, Ghana and Togo, along with NTD focal points and representatives of WHO's Regional Office for Africa and some of its country offices and WHO headquarters, as well as nongovernmental organizations and other key stakeholders. The meeting heard key testimonies from the field, as well as core considerations from policy-makers and programme implementers. The participants also discussed results-based financing as a basis for future funding support from the Anesvad Foundation.

With focus on the coordination of resources and efforts – the so-called integrated approach to control and management of skin NTDs – the meeting sought to strengthen alliances while ensuring that local field perspectives were properly explored.

Based around the core principles of WHO's high-level strategic blueprint to control, eliminate and eradicate 20 diseases and disease groups by 2030 – the NTD road map (2020) – and in light of the companion rationale for continued investment in tackling NTDs (2022), reports were presented on progress against the road map targets and the Sustainable Development Goals.

The diseases referred to under the “skin NTDs” banner cause great suffering and lead to significant economic and social hardship for millions of people worldwide. Skin NTDs predominantly affect the poorest communities worldwide, with many co-endemic diseases occurring in one area or region. This has necessitated an integrated approach to their control and management, as detailed in the strategic framework for skin-related NTDs, a companion document to the road map (2022). The skin NTD framework seeks to consolidate all aspects of treatment and management, from training health-care workers to addressing stigma, discrimination and socioeconomic disadvantages that so often compound the clinical aspects of infection.

# 01

## Introduction







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# 02

# Introduction

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Skin diseases are the third most prevalent cause of illness and one of the leading causes of disability (1). They are also among the 10 commonest causes of outpatient visits. Of the 20 diseases and disease groups known collectively as neglected tropical diseases (NTDs), more than half present with skin manifestations. These skin-related NTDs, known as “skin NTDs”, are often associated with long-term disability, stigmatization and mental health disorders.

The skin NTDs include Buruli ulcer; cutaneous leishmaniasis; mycetoma, chromoblastomycosis and other deep mycoses; leprosy (Hansen’s disease); lymphatic filariasis; onchocerciasis; post-kala-azar dermal leishmaniasis; scabies and other ectoparasitoses (including tungiasis); and yaws. They can be recognized through changes on the skin before other changes occur in the internal organs or physical disabilities develop (2–4). Given this commonality and the likely co-endemicity of many of these diseases, WHO has created a platform for skin NTDs to operationalize the cross-cutting approaches of the road map by integrating relevant activities as applicable.

Skin NTDs are historically neglected because active case detection, individual case management, significant resources and intensive effort are required to control, eliminate and eradicate them. Integrated control and management of skin NTDs offers a pathway to overcome some of these past challenges. Integration is one of the cross-cutting approaches advocated in *Ending the neglect to attain the Sustainable Development Goals: a road map for neglected tropical diseases 2021–2030* (“the road map”) (5) and forms the basis of *Ending the neglect to attain the sustainable development goals: a strategic framework for integrated control and management of skin-related neglected tropical diseases*

(“the skin NTD framework”) (6). The road map describes the integrated approaches needed to achieve the targets for 2030 through cross-cutting activities that intersect multiple diseases. It is built on three pillars that will support global efforts to overcome NTDs: accelerate programmatic action, intensify cross-cutting approaches, and change operating models and culture to facilitate country ownership.

All skin NTDs are detected similarly by examining the skin and adopting case management approaches that foster integration (2). Integration increases cost-effectiveness and expands coverage, as described in *Ending the neglect to attain the sustainable development goals: a rationale for continued investment in tackling neglected tropical diseases* (“the investment rationale”) (7). Some countries have developed integrated plans to address skin NTDs with the support of partners. The research community has also embraced the skin NTD approach, and some are currently working on projects involving multiple diseases. WHO has developed a manual and an App in both Android and iOS to help primary health workers recognize and manage the skin NTDs and other common skin conditions.

Most of the skin NTDs cannot be managed by mass drug administration (MDA) alone but require that each affected person is managed individually. To address these gaps, WHO has created a platform for the skin NTDs to operationalize the cross-cutting approaches of the road map (5). NTDs generally are moving towards greater integration. For a few skin NTDs such as yaws and scabies, for instance, there is growing evidence to support intervention with MDA, which may be integrated with that for other NTDs amenable to preventive chemotherapy (8–10).





# 02

Background and  
rationale



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03

## *Background and rationale*

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In 2000, WHO started a collaboration with the Anesvad Foundation, through the Global Buruli Ulcer Initiative, to address control of Buruli ulcer. The collaboration has now expanded beyond Buruli ulcer to encompass other skin NTDs.

In 2013, WHO adopted two key resolutions on NTDs (WHA66.12 (11) and AFR/RC63.R6 (12)) to promote an “integrated approach” to the control, elimination and eradication of skin NTDs. As a result, significant investment has been made to support affected countries in implementing activities.

Since 2015, the Anesvad Foundation has targeted interventions against skin NTDs in countries of sub-Saharan African, particularly Benin, Côte d’Ivoire, Ghana and Togo, providing financial and technical support to national programmes to promote and implement an integrated approach to controlling, eliminating and eradicating skin NTDs. However, the coronavirus disease (COVID-19) pandemic severely affected implementation of activities in 2020–2021.

In 2021, WHO launched the road map (5) and in 2022 the skin NTD framework (6), reinforcing commitment to fighting these diseases, the approach used and the new targets for control, elimination and eradication. The Regional Committee for Africa endorsed the *Framework*

*for the integrated control, elimination and eradication of tropical and vector-borne diseases in the African Region 2022–2030* during its August 2022 meeting (13).

In 2019, WHO and the Anesvad Foundation signed an agreement under the project entitled “*Integrated approach for control, elimination and eradication of skin NTDs in co-endemic countries of West Africa and other Sub Saharan African countries 2019–2022*” to promote the skin NTD approach and support the four targeted countries in West Africa. One of the activities specified under this agreement is for WHO to organize a review meeting convening representatives from these countries and other stakeholders to share progress as well as best practices and identify solutions to common challenges encountered in the fight against skin NTDs.

On 3–5 October 2022, WHO and the Anesvad Foundation convened a meeting of representatives from the four countries with projects supported by the Anesvad Foundation (Benin, Côte d’Ivoire, Ghana and Togo) and the four invited countries (Cameroon, Congo, Liberia and Nigeria), which have been implementing integrated approaches with the support of other partners, to share their experiences and best practices.





A group of people, including a woman in a white dress with red flowers and a man in a blue and white striped shirt, are gathered outdoors in a rural setting. A large white number '03' is overlaid on a dark green background.

# 03

Meeting opening,  
objectives and  
expected outcomes



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04



## *Meeting opening, objectives and expected outcomes*

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Dr Daniel Argaw Dagne (WHO/NTD) opened the meeting and recalled the context and background of the integration concept as described in the road map (5) and the skin NTD framework (6). Dr Kingsley Asiedu (WHO/NTD) welcomed the participants to the meeting, highlighting its role and that of all participants, from national programmes to partners to WHO country offices and regional offices. Mr Iñigo Lasa (Anesvad Foundation) added his welcoming remarks. The agenda is attached as Annex 1 and the participants are listed in Annex 2.

Dr Asiedu explained the overall objective of this intercountry meeting, which was to contribute to improving the promotion and implementation of the integrated approach in co-endemic countries in the WHO African Region. He said that the meeting was a platform to share progress and achievements, constraints and challenges encountered by countries, as well as best practices and lessons learnt. It was an opportunity also to identify and propose solutions and orient co-endemic countries.

The specific objectives were:

- to share progress and achievements in promoting and implementing the integrated approach;
- to report challenges encountered in promoting and implementing the integrated approach;
- to identify and propose solutions to overcome the challenges encountered;
- to share best practices and lessons learnt that could be replicated to others; and
- to orient co-endemic countries towards improving promotion and implementation of the integrated approach.

The meeting was expected to:

- improve promotion and implementation of the integrated approach in tackling skin NTDs;
- enhance coordination and communication among co-endemic countries by promoting and implementing the integrated approach; and
- increase capacity in and ownership by co-endemic countries in the fight against skin NTDs by promoting and implementing the integrated approach.





# 04

## Anesvad Foundation approach





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05



# *Anesvad Foundation approach*

The meeting focused on the approach that the Anesvad Foundation plans to adopt in endemic countries in order to implement its projects. This theme was presented to the countries in three parts, namely: (i) the six-point theory of change proposed by the Anesvad Foundation; (ii) the theoretical approach to the results-based financing it plans to implement and the implementation strategies; and (iii) the steps for operationalization.

## 4.1 Theory of change

The theory of change has six pathways that aim to:

- give more voice to communities and affected populations;
- focus on government for policy, gender mainstreaming and funding;
- involve more civil society;
- work with private sector (companies), since the agenda 2030 involves working on all the Sustainable Development Goals;
- include knowledge management in order to improve visibility of evidence of the impact of work on control (which means involvement in research); and
- ensure good coordination with the various partners by creating impact indicators that align with skin NTD strategies (strategic alliances).

## 4.2 Results-based financing

Results-based financing (RBF), or conditional cash transfer, is a process involving multiple stakeholders, including results funders, purchasers, incentivized agents and service providers. It relies on accurate payment metrics (or indicators) and instruments for verifications. Particular attention should be paid during the process to some key drivers. These include: drawing the attention of all actors to what matters; aligning incentives to improve beneficiaries' welfare; providing greater autonomy and flexibility in developing innovative strategies; allocating resources appropriately; implementing activities; procuring goods and services; and ensuring recruitment and management of human resources to maximize results, improve accountability and support the verification process. The attention of stakeholders is focused on

beneficiaries, which requires delineation of functions or duties. Contracting is done as a governance instrument. The potential negative or unintended effects arising from the application of RBF, such as distortion in service provision, fraudulent behaviour, change in individual behaviours and inequalities, must, however, be considered.

In deploying this new strategy, key elements of the Anesvad Foundation's overall RBF (global level) strategy will need to be defined, taking into consideration the local context in the next stage of the strategy. This includes assessment of the added value of the new strategy and the conditions (technical, institutional or legal, political) for decision-making to implement RBF. The Anesvad Foundation expects to cover eight countries by 2026, with priority to be given to the public sector. Beneficiaries of the incentives, interventions to be included, and types and amounts of payments will be determined country by country, with particular attention to financial risks (over- or under-spending depending on the intervention chosen). The amount to be paid will be determined based on available cost data. There will be a need for high-quality data at the programme level. The payment system must be aligned with the public finance management system of each country. The performance indicators will be chosen on the basis of the indicators proposed by WHO in the various documents.

The measurement process and verification of results indicators will follow a two-step process: an ex-ante assessment, by an internal verifier, and an ex-post assessment by an external verifier. The role of the different parties involved (Anesvad Foundation, country partners, agents and service providers, Ministry of Health at various levels) will be defined.

## 4.3 Operationalization

Operationalization of the new skin NTD strategy will be conducted in seven steps.

- **Step 1:** Contextual analysis (epidemiological situation, human resources, financial resources, governance, etc.) to assess added value and challenges and institutional conditions



- **Step 2:** Decision and pilot project (discussion with countries)
- **Step 3:** Design of the RBF instrument and the project in general:
  - define RBF/project objectives and intervention
  - select RBF instrument, amount of funds tied to results
  - define core features: indicators and targets
  - define monitoring and verification system
  - define performance baseline indicators
- **Step 4:** Develop and sign the agreements (standard: contract with a private purchaser)
- **Stage 5:** Implementation
- **Stage 6:** Evaluation and capitalization
- **Step 7:** Strengthening and scaling up

#### 4.4 Discussion

During the discussion of the RBF strategy, the following concerns and suggestions were raised.

- The potential complexity and cost of implementing and operationalizing the system in terms of disease control, gradual implementation of the change, necessary adaptation according to the reality of each country and institution, or level of the health system.
- The difficulty of adapting RBF to more abstract themes such as the mental health component of NTDs.
- The importance of paying attention to the choice of strategies to include: definition of indicators; problems in relation to the use of public finances, role of national programmes; proposal to start with a few districts, on a pilot basis before expanding to the country.
- The importance of using the indicators available in WHO normative documents.
- The need to bring together all entities working in Anesvad Foundation-supported countries, under the coordination of national programmes, and to reflect on how Anesvad Foundation can use its resources and strengths to federate other institutions.
- On sustainability, related indicators should be proposed. Other institutions could also be involved in the initiative.



# 05

Country  
presentations





# 06



# Country presentations

Presentations were given on the four projects supported by the Anesvad Foundation and from the four invited countries.

## 5.1 Projects supported by the Anesvad Foundation

The Anesvad Foundation supports projects in Benin, Côte d'Ivoire, Ghana and Togo. The programme structure, epidemiological situation of skin NTDs, activities implemented and results or main achievements were presented.

The organizational structure varies in all four countries. Benin has a combined Buruli ulcer and leprosy programme. Côte d'Ivoire has separate skin NTD programmes for Buruli ulcer and leprosy. Ghana has a combined programme for Buruli ulcer and yaws, and a separate programme for leprosy. Togo has a combined NTD programme (preventive chemotherapy and case management, including skin NTDs). The programmes currently deal with Buruli ulcer, yaws and leprosy, but also scabies and other skin NTDs.

The Anesvad Foundation is supporting the following activities in all four countries: training, communication, case detection, case management for clinical diagnosis, biological confirmation, treatment, teleradiology by WhatsApp, logistics, supervision and monitoring, psychosocial component, community wound care, research projects, advocacy and health promotion on skin NTDs.

Implementation of these projects will lead to improved reference structures, better knowledge of endemicity or co-endemicity in countries, improved case detection, coordination and collaboration among stakeholders, and availability of tools for control.

The main challenges are inadequate country ownership, poor prioritization of NTD activities in districts, inadequate coverage, lack of drugs for yaws eradication interventions, and weak advocacy and partner coordination.

The key activities, achievements and challenges of each country are described below.

### 5.1.1 Benin

Dr Jean Gabin Houézo (National leprosy and Buruli ulcer control programme) presented the overall structure of the programme with its technical and decentralized structures. He explained the programme's objectives, the physiognomy of the country partnership and the history of cooperation with the Anesvad Foundation since 2002, at the health facility level, leading to the initiation of an integrated project on skin NTDs since 2016, under which various interventions have been carried out.

In Benin, seven of the nine skin NTDs are prevalent: Buruli ulcer, cutaneous leishmaniasis, leprosy, lymphatic filariasis, mycetoma and other deep mycoses, scabies and other skin ectoparasitoses, and yaws. The impact of control activities against these diseases was discussed and the associated gender considerations (series of activities carried out, particularly in schools and communities) were also explained. Other relevant activities such as support for the psychosocial component and community wound care are also done in the country. There are ongoing research projects on shortening the duration of treatment and on disability management for Buruli ulcer: cerebral palsy, disabilities, motor disabilities.

The impacts of COVID-19 on skin NTDs were particularly severe on community activities and partially affected disability care; however, there was continuity in the supply of drugs for Buruli ulcer and leprosy, and centres remained functional.

### Lessons learnt

- The vertical approach is no longer appropriate.
- Cross-cutting activities have a positive impact, for example several NTDs with cutaneous manifestations were screened and managed through the same interventions, with planning of drug needs for other skin NTDs.
- Integrated COVID-19 prevention and skin NTD control (e.g. WASH activities) is beneficial.
- Cross-cutting activities (wound care, WASH) potentiate the effectiveness of actions to combat skin NTDs and improve the impact and durability of the programme.

For the next project cycle and strategic plans, Benin is preparing a joint master plan with the national communicable disease programme and called upon partners to support operationalization of the plan in alignment with the road map.

### 5.1.2 Côte d'Ivoire

Dr Aboa Paul Koffi (National Buruli ulcer control programme) made the presentation for Côte d'Ivoire. The Intensive Case Management Skin NTD Integrated Control Project includes a proposal for rapid evaluation of yaws, a peripheral laboratory installation project and water, sanitation and hygiene (WASH) in collaboration with the Raoul Follereau Foundation.

The integrated skin NTD project targeted six health districts, 44 health areas and 60 villages. The project on rapid assessment of yaws was conducted in 15 health districts and 245 health areas. Key achievements were training of 4051 health workers, schoolteachers and community health volunteers, which helped to detect 197 cases of Buruli ulcer, 222 cases of leprosy, 16 188 suspected cases of yaws (104 confirmed by rapid diagnostic tests and 66 confirmed by dual path platform tests), 4327 cases of scabies and 20 386 cases of others skin conditions.

The main challenges were lack of leadership at central level, transport for supervision and involvement of regional teams in the supervision. Other challenges included non-integration of NTD indicators into the national reporting system and low community ownership of the fight against NTDs.

Perspectives are scaling up the NTD project and developing and implementing a specific project for yaws surveillance and other skin NTDs followed by the implementation of a project for total community treatment in highly endemic foci for yaws. The programme also plans to implement a project for other NTDs such as snakebite envenoming, mycetoma and cutaneous leishmaniasis.

### 5.1.3 Ghana

Dr Nana Konama Kotey (National Buruli ulcer control and yaws eradication programme) made the presentation for Ghana.

Control of Buruli ulcer and yaws has been integrated under the national Buruli ulcer control and yaws eradication programme since 2019. The Anesvad Foundation project in Ghana supported 15 start-up districts. The Anesvad Foundation contributed 64.23% of the budget and the remainder was provided by the Government of Ghana. The project achieved strengthened surveillance and laboratory diagnosis, improved case management at all levels, and timely

project implementation. It helped also to target advocacy and health promotion on skin NTDs and promote research on skin NTDs.

Challenges included disruptions due to COVID-19, high rates of attrition among different levels of health care workers, changes in leadership at sub-national levels, and weak oversight and ownership by regions owing to their limited involvement in the project design.

A proposed way forward is to increase participation at regional level and by partners in scaling up the projects and to lobby for the inclusion of skin-NTD-specific indicators into holistic/key performance assessment to maximize integration and advocacy at all levels.

### 5.1.4 Togo

Ms Massoubayo P'Niwe Patchali (National NTD programme) presented the situation analysis for Togo.

In 2021, the skin NTD project – supported by the Anesvad Foundation and the German Leprosy and Tuberculosis Relief Association (DAHAW) – detected 132 leprosy cases and 19 cases of Buruli ulcer (78.9% confirmed by polymerase chain reaction [PCR]). Three districts (Mö, Wawa and Tone) were confirmed as endemic for yaws. Strengthening of monitoring and evaluation at all levels was also an outcome of this project.

Challenges included lack of availability of drugs and weak advocacy and partner coordination for yaws eradication. Lessons learnt were better coordination and use of resources; improved political will; strategic innovations (teledermatology, food kits, pooling of resources, with the use of TB fuel for case monitoring, etc.). Areas where improvement could be made included actions in silent districts, capitalization of the work of community health workers and absence of data triangulation.

Future activities include finalizing the main strategies of the NTD strategic plan such as strengthening the health system for clinical and biological diagnosis for skin NTDs; preventing disabilities, rehabilitation and psychological care; strengthening implementation of cross-cutting aspects for skin NTDs (gender; WASH, scientific research; human rights for people affected skin NTDs) as well as the governance system and leadership; and encouraging communication and logistics (medicines, laboratory information, education, communication [IEC] materials, transport, equipment).

## 5.2 Invited countries

Four countries (Cameroon, Congo, Liberia and Nigeria) presented their approaches to tackling skin NTDs. The approach varies from country to country.

Cameroon has adopted an integrated approach for control and management of Buruli ulcer, leprosy and yaws. Nigeria has added lymphatic filariasis to these three diseases. Congo has programmes not only for skin NTDs (Buruli ulcer, leprosy and yaws) but also for other NTDs (onchocerciasis and loiasis, scabies, soil-transmitted helminthiasis, schistosomiasis, snakebite envenoming and rabies). Liberia has adopted a similar (hybrid) approach (Buruli ulcer, leprosy, hydrocele, lymphoedema and yaws).

The programmes in the four countries are currently supported by the following partners:

- in Cameroon, by the Organisation de Coordination pour la lutte contre les Endémies en Afrique centrale [Coordination Organization for the Control of Endemic Diseases in Central Africa] (OCEAC), KfW Development Bank, FAIRMED, CPC, WHO and EMS;
- in Congo, by OCEAC and WHO;
- in Liberia, by WHO, effect hope, American Leprosy Missions, Liverpool School of Tropical Medicine (LSTM), GLRA, Sightsavers and the Schistosomiasis Control Initiative; and
- in Nigeria, by the German Leprosy and Tuberculosis Relief Association (GLRA).

Each country presented the status and outcomes of their projects in terms of scaling up interventions to achieve better coverage, strengthening state ownership and partnership, sustaining achievements, preparing NTD master plans and increasing community involvement. Grant negotiations and equitable fund allocation for integrated packages of NTD interventions were also discussed.

### 5.2.1 Cameroon

Dr Earnest Njih Tabah (National yaws, leishmaniasis, leprosy and Buruli ulcer control programme) presented the endemicity and co-endemicity status of skin NTDs in Cameroon.

All 199 health districts are endemic for at least one skin NTD and 120 districts for two or more. Implementation of integrated control of skin NTDs is anchored to national policies and is aligned with the road map. Cameroon has developed a national master plan for the elimination of NTDs; a draft national strategic plan for integrated control of skin NTDs and morbidity related to lymphatic filariasis for 2020–2024 (the National Strategic Plan) has been validated. Disease-specific sub-targets for 2030 have been set in alignment with the skin NTD framework and the road map.

During 2021–2024, two major projects funded by OCEAC and KfW within the framework of the NTD Project for the CEMAC (countries of the Economic and Monetary Community of Central Africa) Sub-Region are

being implemented by CNLP2LUB, with the support of FAIRMED, CPC, WHO and EMS. Both projects target the eradication of yaws in 10 health districts near the Congo basin, and integrated community-based case detection and surveillance of skin-presenting NTDs in 20 health districts of Cameroon. Technical support is provided by the national programmes.

The plans are to conduct a second round of azithromycin MDA within the framework of the yaws eradication project and to scale up the implementation of the National Strategic Plan in alignment with the road map and the skin NTD framework. They also expressed interest, in discussion with Anesvad Foundation and other partners, to cover 30 or more co-endemic districts that are not yet covered for integrated surveillance of skin NTDs and integrated case management.

### 5.2.2 Congo

Dr Gilius Axel Aloumba (National leprosy, yaws and Buruli ulcer control programme) presented the situation of skin NTDs in the Congo.

Leprosy and yaws are prevalent in the north of the country, whereas Buruli ulcer occurs further south. Other NTDs include onchocerciasis, loiasis, scabies, soil-transmitted helminthiasis, schistosomiasis, snakebite envenoming and rabies. Of the country's 10 health departments, 4–5 have co-endemic NTDs. The national programme is formalized, with financing from OCEAC, and WHO.

Major achievements include the administrative establishment of the programme, production and supply of tools, training of actors, public awareness, confirmation of cases, and availability of reagents and medicines. The national programme conducted the first mass distribution of azithromycin, achieving 96.5% coverage with active screening for yaws during MDA.

Challenges include lack of resources and weak infrastructure, which could be overcome by strengthening state ownership and partnerships and sustaining achievements.

### 5.2.3 Liberia

Dr Moses Kerkula (WHO/Liberia) presented the skin NTD situation in Liberia on behalf of Mr Emerson J. Rogers (Ministry of Health of Liberia).

The integrated NTD programme was established in 2012 and a 5-year NTD master plan (2016–2021) was developed. In 2016, a national strategic plan for integrated case management of five NTDs (Buruli ulcer, leprosy, hydrocele, lymphoedema and yaws) was prepared.

Activities to date include consolidating case management training manuals and posters, and integrating trainings and case detection activities. Ongoing implementation research (REDRESS) is evaluating existing health systems interventions for the management of severe stigmatizing skin diseases using a person-centered approach in order to develop a strong and sustainable research infrastructure for multidisciplinary applied health research. A comprehensive intervention manual to detect, refer and manage NTDs including the integration of mental health support and stigma reduction has been developed as a part of this project.

Challenges include the intermediary role of implementing partners and the low priority given to certain interventions, e.g. hydrocele surgery. Future prospects include integration of NTDs into existing health system, which will demand persistence, negotiation and dialogue at all levels. Integration will be realized at all levels in order to maximize resources (human resources, finance, health management information system), effective use of logistics, equitable allocation of funds for integrated packages of NTD interventions and to secure domestic funding.

Key activities for the future include strengthening community engagement and public-private partnerships. It will also be important to ensure alignment of partners with national priorities and agendas and focus advocacy on domestic resource mobilization for the national NTD programme.

#### 5.2.4 Nigeria

Dr Anthony Meka (German Leprosy and Tuberculosis Relief Association, Enugu, Nigeria) presented for Nigeria. A 12-year (2012–2024) project for combating Buruli ulcer and selected endemic skin NTDs in Nigeria, which first targeted Buruli ulcer, now includes leprosy, yaws and advanced lymphatic filariasis. Leprosy and Buruli ulcer were initially combined; advanced lymphatic filariasis and yaws were added in 2017. Large numbers of cases of scabies are detected in Nigeria.

The case-finding approach is usually through advocacy, training, community skin camps, school screenings, collaboration with secondary and tertiary health facilities, community involvement and establishing communities of practice via groups on the WhatsApp platform. Case management approaches include chemotherapy, wound care and surgery in collaboration

with the National Orthopaedic Hospital Enugu, the Ondo State Trauma and Surgical Centre and the Federal Medical Centre in Abeokuta.

Successes include active community involvement, increased awareness of skin NTDs at all levels, especially at community level in response to youth involvement and empowerment within the endemic communities. Self-care (including scar care) is encouraged as a mechanism to prevent recurrent ulceration. There are five well-established referral facilities to manage complicated cases of skin NTDs and two well-established PCR laboratories to confirm Buruli ulcer. Prevention of disability initiatives, school programmes and nutritional support activities are also encouraged.

Challenges include suboptimal coordination, irregular supply of medicines and dwindling funding for service delivery vis-à-vis progressive increases in case detection (demand-supply imbalance).

Looking forward, there is a need to strengthen the national programme with the support of partners and to establish a deliberate plan for increased community involvement in order to mop up the large numbers of complicated skin NTD cases in endemic communities.

### 5.3 Actions to improve sustainability

The projects in the various countries have had variable impacts, notably in terms of their sustainability and perennity. Measurement of integration is an issue. The following actions are needed to improve sustainability:

- Enhance collaboration with governments.
- Strengthen the NTD control programmes.
- Encourage governments to contribute funding beyond staff salaries, water and electricity; countries must provide financial contributions to implement activities.
- Include partner-supported projects in the National Strategic Plan and among the priorities defined by the country.
- Involve the government in the national monitoring system.

It was decided to reflect on the formulation of a specific or composite indicator for measuring integration. Yaws surveillance area should be sufficiently widened to create buffer zones.



# 06

Other topics discussed  
during the meeting





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07

## *Other topics discussed during the meeting*

### **6.1 Economic evaluation of integrated skin NTD approaches**

Dr Xiaoxian Huang (WHO/NTD) presented a proposed “economic evaluation” of an integrated approach to tackling skin NTDs. The approach aims to add value by saving costs through addressing several diseases and improving services coverage. For this purpose, the *relevant domains of integration* to be assessed should be clearly defined (5,6). The three targeted domains are (i) the activity domain (logistics, training and assessment), (ii) the policy domain (joint advocacy, technical and financial guidance, planning and coordination) and (iii) the organizational structure domain (merging several programs into a common structure).

The skin NTD framework (6) will serve as a reference guideline for the economic evaluation. The operational steps for implementing the assessment will comprise (i) defining the participating countries and the strategy to be assessed, (ii) selecting two groups (one where integration is in practice and the other for control), (iii) measuring the baseline indicators, and (iv) implementing the integrated intervention or strategy. The final indicators will be measured after implementation.

The following questions were raised during the discussion. Which countries are interested in this assessment and which questions need to be addressed? The four pillars of the Global Leprosy Programme framework were suggested, using available tools.

Which kind of indicators should be prioritized (quantitative or qualitative indicators)?

### **6.2 Capacity-building initiatives: the skin NTDs App and online courses**

Dr José Antonio Ruiz Postigo (WHO/NTD) presented on this topic and demonstrated the skin NTDs App. A current weakness of the application is that it deals with only skin NTDs; another application

on SkinApps is being designed and will need to be harmonized. Currently, a beta version, integrating artificial intelligence is available, but hundreds of images are needed to properly train the artificial intelligence (14,15).

The WHO online courses were also introduced to participants. To date, 10 courses are available, with more than 15000 participants. Three other course are in the pipeline (on Buruli ulcer, cutaneous leishmaniasis and lymphatic filariasis). The course on Buruli ulcer was launched online before the end of the meeting (16).

Questions raised after the presentation concerned:

- involvement of health worker training structures in countries in the design of these tools;
- testing by colleagues; pilot use carried out in the field;
- raising awareness about the application and collecting feedback for improvement; and
- availability of training certificates.

### **6.3 Mental health and NTDs**

Dr Julian Eaton (CBM Global) made two presentations: the first on justifying the place of mental health in skin NTD control and the second on the results of the neglected mind–skin link. The first presentation considered how best to address the mental health needs of persons affected by NTDs in programmatic contexts.

#### **6.3.1 Justification of the place of mental health**

Skin NTDs induce significant social distress and impact participation in social life. However, control measures are available. In 2020, WHO published a manual towards a person-centred approach to the mental health of people affected by NTDs (17). Some NTDs have direct manifestations on the brain (onchocerciasis for example) while others have an indirect effect (17).



### 6.3.2 Neglected mind-skin link study

The objectives of this study were to characterize the link between NTDs and mental health and to assess the feasibility and accessibility of a model of basic interventions for support. The study site and study methods were explained. The study revealed high rates of depression, anxiety and reduced well-being as well as stigma and exclusion. It also revealed financial concerns and economic needs including the need for self-care products and free treatment.

After the study, an essential care package to support patients was provided and a workshop was implemented to assess its feasibility. The main remaining question is how to train front-line health workers in mental health management.

### 6.4 The road map and the skin NTD framework

Dr Kingsley Asiedu (WHO/NTD) presented the three pillars of the road map that will support global efforts to control, eliminate and eradicate NTDs (5):

- Accelerate programmatic action.
- Intensify cross-cutting approaches.
- Change operating models and culture to facilitate country ownership.

The skin NTD framework (6), a companion document to the road map launched on 8 June 2022, encourages integration along several dimensions, namely:

- across NTDs (the framework includes at least nine diseases or groups of diseases based on their similar skin manifestations and co-endemicity);
- within national health systems and among other sectors; and
- details areas of integration.

Countries are encouraged also to promote the use of digital health tools for diagnosis and training, wound management, teledermatology and contact tracing.

A governance structure/organogram of national NTD programmes had been suggested to countries (Fig. 1). Then, programmes can be structured as follows:

- **NTD manager:** to coordinate implementation and ensures overall planning, with coordinator for case management and preventive chemotherapy NTDs, support staff, reference laboratory (BU-LABNET), research team and entomologists
- **Cross-cutting technical support team:** to include clinicians, technical officers, laboratory professionals, health information officers, logistics officers, training officer, Monitoring and Evaluation (M&E) officer
- **National task force:** to include subgroups on preventive chemotherapy and case management NTDs to help where available.

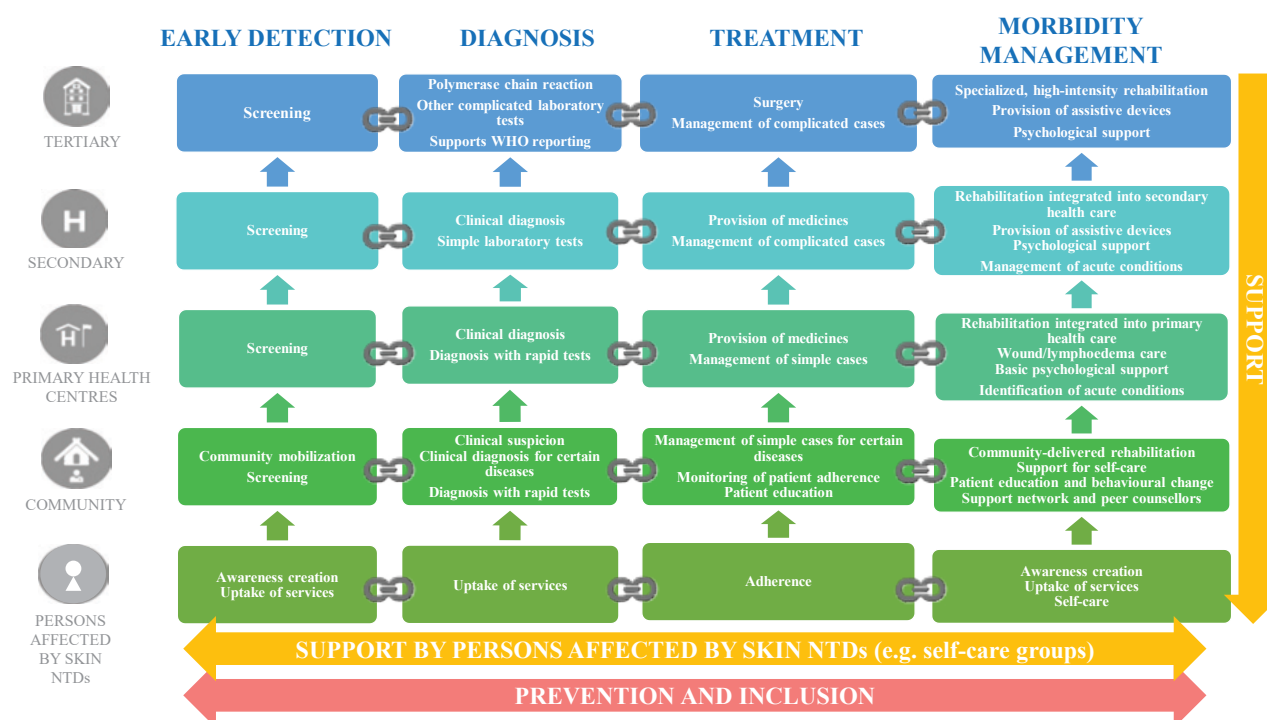


Fig. 1. Service responsibilities by levels (6)

## 6.5 The global leprosy strategy and the skin NTD framework

Dr Venkata Ranganadha Rao Pemmaraju (Global Leprosy Programme, WHO Regional Office for South-East Asia) presented the WHO global leprosy strategy (18).

The strategy was launched on the occasion of World Leprosy Day on 15 April 2022. It is one of the disease-specific strategies that underpins the road map. The vision is “towards zero leprosy”. The strategy encourages shifts in leprosy control by moving towards reducing new cases to zero (interruption of transmission) and moving beyond medical aspects of leprosy to cover social aspects, including combatting stigma and discrimination.

The four strategic pillars of the strategy all align with the skin NTD framework:

- Implement country-owned national plans.
- Scale up leprosy prevention alongside integrated active case detection.
- Manage leprosy and its complications and prevent new disability.
- Combat stigma and ensure human rights are respected.

The key activities of each pillar are early diagnosis supported by awareness raising, contact surveillance, treatment of reactions when needed, and prevention with single-dose rifampicin. Most interventions can be integrated approach with other locally prevalent NTDs.





# or

Specific discussions  
on key topics





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08

# Specific discussions on key topics

Two topics were discussed.

## 7.1 NTD indicators by country

Indicators are already defined in the M&E framework companion document to the road map (10). Countries should adapt targets according to local endemicity, resources and horizons of their respective strategic plans. Additional process indicators can be defined by countries according to activities implemented.

## 7.2 Priority activities for integration

Each country presented the current situation and feasibility of integrating other interventions. Countries were asked to continue the exercise and send feedback to the WHO team for workup and planning in the upcoming days.

### Priority activities for countries

**Objective:** To detect, treat and report

### Integrated activities

1. Integrated active case-finding
2. Integrated training at all levels (from community level to referral health centres)
3. Integrated surveillance, monitoring and supervision
4. Integrated social mobilization (sensitization)
5. Integrated prevention of disabilities and rehabilitation

### Patient-specific activities

1. Case confirmation
2. Comprehensive case management (medicines, wound and lymphoedema care, surgery, mental health)

### Programme support

1. Strengthen logistics for programme activities (supply chain and medicines, laboratory tests, transport adapted to the country context e.g. boat for Congo).

## 7.3 Indicators for key activities

Activities	Key indicators	Observations
Integrated active case-finding	<ul style="list-style-type: none"><li>• <b>Process indicators</b><ul style="list-style-type: none"><li>• Number and proportion of people screened</li><li>• Number and proportion of people with skin diseases</li><li>• Number and proportion of people with skin NTDs (specify by NTD)</li><li>• Number and proportion of people with other skin conditions</li></ul></li><li>• <b>Impact indicators</b><ul style="list-style-type: none"><li>• Number and proportion of people with disabilities or deformities at the time of diagnosis (specify by NTD)</li></ul></li></ul>	<i>All indicators should be reported by age, sex and geographical location</i>
Integrated training	<ul style="list-style-type: none"><li>• <b>Process indicators</b><ul style="list-style-type: none"><li>• Number and proportion of peripheral health care workers who received integrated training on skin NTDs</li><li>• Number and proportion of village volunteers who received integrated training on skin NTDs</li></ul></li></ul>	<i>All indicators should be reported by age, sex and geographical location</i>



Activities	Key indicators	Observations
	<b>• Impact indicators</b> <ul style="list-style-type: none"> <li>• Number and proportion of confirmed cases among suspected cases by health workers</li> <li>• Number and proportion of confirmed cases among suspected cases by village volunteers</li> <li>• Number and proportion of people with disabilities or deformities at the time of diagnosis (specify by NTD)</li> <li>• Number and proportion of patients cured without disabilities</li> </ul>	
Integrated surveillance, monitoring and supervision		
Integrated surveillance and monitoring	<ul style="list-style-type: none"> <li>• Availability of integrated tools at all levels</li> <li>• Use of DHIS2 for reporting and data analysis at least at national, regional and district levels</li> <li>• Completeness and timeliness of data</li> <li>• Mapping</li> </ul>	
Supervision	<ul style="list-style-type: none"> <li>• Number and proportion of health workers and village volunteers supervised per year</li> <li>• Number and proportion of integrated supervisory visits</li> <li>• Number of supervision reports</li> </ul>	<i>All indicators should be reported by age, sex and geographical location</i>
Integrated social mobilization (sensitization)	<b>• Process indicators</b> <ul style="list-style-type: none"> <li>• Availability of integrated IEC material and other tools for social mobilization</li> <li>• Number and proportion of integrated social mobilization activities implemented</li> <li>• Number and proportion of villages visited by district</li> <li>• Total population covered out of targeted population</li> <li>• List of topics covered by social mobilization activity</li> <li>• Activity reports</li> </ul>	<i>All indicators should be reported by age, sex and geographical location</i>
	<b>• Impact indicators</b> <ul style="list-style-type: none"> <li>• Number and proportion of self-reporting</li> <li>• Number or proportion of case detected early</li> <li>• Community knowledge about skin NTDs (<i>assessment through periodic KAP surveys</i>)</li> </ul>	
Integrated prevention of disabilities and rehabilitation	<ul style="list-style-type: none"> <li>• Number and proportion of patients cured without disabilities</li> <li>• Number and proportion of patients that benefit from assistive technology</li> <li>• Number and proportion of patients that practiced self-care</li> </ul>	
Case confirmation	<ul style="list-style-type: none"> <li>• Number and proportion of laboratory-confirmed cases (optional for leprosy)</li> </ul>	<i>All indicators should be reported by age, sex and geographical location</i>
Comprehensive case management (medicines, wound and lymphoedema care, surgery, mental health)	<ul style="list-style-type: none"> <li>• Availability of medicine and other supplies for treatment</li> <li>• Treatment completion rate</li> <li>• Number and proportion of people treated <ul style="list-style-type: none"> <li>– Medicine</li> <li>– Wound and lymphoedema care</li> <li>– Surgery</li> <li>– Physiotherapy</li> <li>– Mental health and psychosocial support</li> </ul> </li> </ul>	<i>All indicators should be reported by age, sex and geographical location</i>
Strengthen logistics for programme activities	<ul style="list-style-type: none"> <li>• Supply chain and medicines: <ul style="list-style-type: none"> <li>– Availability of integrated functional supply chain management system</li> </ul> </li> <li>• Laboratory tests <ul style="list-style-type: none"> <li>– Availability of a functional network for sample collection, samples transport, testing and reporting</li> <li>– Availability of laboratory equipment and supplies</li> </ul> </li> <li>• Transport <ul style="list-style-type: none"> <li>– Availability of transport means; vehicle, motorbike, boat (depending on country context)</li> </ul> </li> </ul>	
Strengthen national programme	<ul style="list-style-type: none"> <li>• Human resources <ul style="list-style-type: none"> <li>– Number of NTD programme staff</li> </ul> </li> <li>• NTD structure and mechanism for coordination <ul style="list-style-type: none"> <li>– Availability of NTD organizational structure</li> <li>– Availability of national integrated NTD master plan</li> <li>– National coordination meeting reports</li> </ul> </li> </ul>	

DHIS: District Health Information System; IEC: information, education, communication; KAP: knowledge, attitudes, practices; NTD: neglected tropical disease.

## 7.4 WHO supportive role and areas

WHO's supportive role and areas of support include:

- **advocacy** (road map, skin NTD framework, Regional Framework for Tropical and Vector-Borne Diseases, Global Leprosy Strategy, World NTD Day);
- **communication** (WHO websites, social media and network: Twitter, Facebook, Weekly Epidemiological Record, country profiles, Global Health Observatory, global NTD report, etc.);
- **coordination** (NTD coordination mechanism, joint annual NTD review and planning meetings, biannual skin NTD meetings, etc.);
- **technical assistance** (development of policy guidance, national NTD multi-year plan, training, planning, M&E, support through Regional Programme Review Groups and consultants); and
- **logistic support** (supply of medicines and diagnostics, laboratory confirmation, etc.).

## 7.5 Summary of statements from partners

The following partners (listed alphabetically) briefly introduced their areas of support to countries and expressed their interest in implementing integrated interventions against NTDs in line with the road map and the skin NTD framework towards control, elimination and eradication of NTDs:

- Actions Transforming Lives (ACTS)
- American Leprosy Missions
- Community Mental Health Technical Group (CBM Global)
- DAHW Togo
- effect hope
- FAIRMED
- GLRA
- OCEAC
- Raoul Follereau Foundation
- REDRESS (International Public Health, LSTM)
- Tropical Health



A background image showing a person's arm and hand holding a newspaper, with the person's face partially visible in profile. The image is partially obscured by a dark green diagonal overlay.

# OS

## Recommendations





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# *Recommendations*

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## **8.1 To countries**

- Adapt the road map and the skin NTD framework to the country context to facilitate planning, implementation and monitoring of interventions against NTDs.
- Allocate domestic funding for NTDs to ensure sustainability of programmes.
- Establish teams of technical experts nationally and subnationally to support implementation of integrated activities against skin NTDs.
- Ensure a national NTD governance structure is in place to provide oversight of activities.

## **8.2 To partners**

- Support national NTD programmes to guide effective implementation of the skin NTD framework.
- Identify with countries which key activities for integration of skin NTDs should be linked to results-based financing and other activities that can be funded through traditional mechanisms.
- Advocate for allocation of domestic funding for NTDs to ensure sustainability of programmes.

## **8.3 To WHO**

- Support countries to implement the road map and the skin NTD framework.
- Define key indicators to monitor progress in the implementation of integrated approach.
- Support countries to strengthen monitoring, advocacy and resource mobilization.
- Strengthen laboratory capacity in countries in order to confirm cases.
- Ensure supply of medicines and diagnostic tests for skin NTDs including for post-exposure chemoprophylaxis of leprosy contacts.
- Provide technical support for antimicrobial resistance surveillance of NTD medicines.
- Conduct an economic evaluation to generate evidence of the cost-effectiveness of the integrated approach.
- Advocate for allocation of domestic funding to complement partner funding for NTDs to ensure sustainability.



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# Agenda

Day/Time	Topic	Speaker
<b>Monday, 3 October 2022 (Day 1)</b>		
09:00–09:15	Welcome, introductory remarks and meeting objectives	Raman Velayudhan Daniel Argaw Dagne Iñigo Lasa
09:15–10:00	Overview of Anesvad Foundation skin NTD projects in West Africa	Iñigo Lasa
10:00–10:40	Benin (30 min presentation + 10 min Q&A)	Jean Gabin Houézo
10:40–11:20	Côte d'Ivoire (30 min presentation + 10 min Q&A)	Mamadou Kaloga
11:20–12:00	Ghana (30 min presentation + 10 min Q&A)	Nana Konama Kotey
14:00–14:40	Togo (30 min presentation + 10 min Q&A)	Massoubayo P'Niwe Patchali
14:40–16:20	Brief presentations by invited countries (15 min + 10 min Q&A): • Cameroon • Congo • Liberia • Nigeria	Earnest Njih Tabah Axel Aloumba Emerson Rogers Anthony Meka
16:20–17:00	Discussion Closure of the day	All WHO/Anesvad Foundation
<b>Tuesday, 4 October 2022 (Day 2)</b>		
09:00–09:30	Recap of the first day followed by discussions	Rapporteur
09:30–10:00	Anesvad Foundation new strategy 2023–2026	Anesvad Foundation
10:00–11:00	Anesvad Foundation methodology – results-based financing for the new skin NTD strategy (30 min presentation + 30 min Q&A)	Tropical Health
11:00–11:30	Economic evaluation of integrated skin NTD approach	Xiaoxian Huang
11:30–12:00	Capacity-building – Online courses and skin NTDs App	José Postigo
14:00–14:30	Mental health and NTDs	Julian Eaton
14:30–15:00	Road map and skin NTD framework	Kingsley Asiedu
15:00–15:30	Global Leprosy Strategy and skin NTD framework	Venkata Pemmaraju
15:30–17:00	Key topics (moderated discussion): NTD indicators by country; priority activities for integration; case detection; social mobilization; surveillance and monitoring of the project; advocacy and communication to promote the project objectives; country ownership and sustainability	All
17:00	Informal discussion	All
<b>Wednesday, 5 October 2022 (Day 3)</b>		
09:00–09:30	Recap of the second day followed by discussion	Rapporteur
09:30–11:00	Strategic meetings by country – next plans: content (core and optional activities); timelines for developing country projects	Anesvad Foundation
11:30–12:00	WHO supportive role and areas: advocacy, communication and coordination; technical assistance; logistic support; monitoring and evaluation	WHO
14:00–15:00	Conclusions and recommendations Closure and next steps	WHO Anesvad Foundation



# List of participants

## Endemic countries

### Benin

Mr Albert Fatolou, National leprosy and Buruli ulcer control programme, Abomey-Calavi Atlantique

Dr Jean Gabin Houézo, National leprosy and Buruli ulcer control programme, Abomey-Calavi Atlantique

Professor Ghislain Emmanuel Sopoh, Regional Institute of Public Health of Ouidah, University of Abomey-Calavi, Cotonou

### Cameroon

Dr Earnest Njih Tabah, National yaws, leishmaniasis, leprosy and Buruli ulcer control programme, Yaoundé

### Congo

Dr Gilius Axel Aloumba, National leprosy, yaws and Buruli ulcer control programme, Brazzaville

Dr Lambert Kitembo, Ministry of Public Health, Brazzaville

### Côte d'Ivoire

Dr Nda Kouassi Marcellin Assie, National leprosy elimination programme, Abidjan

Professeur Mamadou Kaloga, National Buruli ulcer control programme, Abidjan

Dr Aboa Paul Koffi, National Buruli ulcer control programme, Abidjan

Dr Yao Didier Koffi, National Buruli ulcer control programme, Abidjan

### Ghana

Dr Nana Konama Kotey, National Buruli ulcer control and yaws eradication programme, Accra

Dr Benedict Okoe Quao, National leprosy control programme, Accra

## Liberia

Mr Karsor K. Kollie, Neglected tropical disease programme, Monrovia

Mr Emerson Jandah Rogers, Ministry of Health, Monrovia

## Togo

Dr Piham Gnossiké, National programme for neglected tropical diseases, Lomé

Ms Massoubayo P'Niwe Patchali épse Awesso, National programme for neglected tropical diseases, Lomé

## Nongovernmental organizations and other institutions

### Actions Transforming Lives

Mr Thomas Borwah, Actions Transforming Lives, Monrovia, Liberia

### American Leprosy Missions

Dr Sundeep Chaitanya Vedithi, Department of Biochemistry, University of Cambridge & American Leprosy Missions, Cambridge, United Kingdom of Great Britain and Northern Ireland

Ms Stefanie Weiland, American Leprosy Missions, AIM Initiative, Greenville, United States of America

### Anesvad Foundation

Ms Elsie Ansareo, International Cooperation, Anesvad Foundation, Bilbao, Spain

Ms Marlen Eizaguirre Marañón, International Cooperation, Anesvad Foundation, Bilbao, Spain

Mr Mikel Edeso Egia, International Cooperation, Anesvad Foundation, Bilbao, Spain

Ms Leire Fernández, International Cooperation, Anesvad Foundation, Bilbao, Spain

Ms Beatriz Gómez, International Cooperation, Anesvad Foundation, Bilbao, Spain

Mr Iñigo Lasa, General Manager, Anesvad Foundation, Bilbao, Spain

Ms Larraitz Ventoso Cenzano, International Cooperation, Anesvad Foundation, Bilbao, Spain

### **Anesvad Foundation country focal points**

Dr Patrick Nsiire Agana, Anesvad Foundation, Tamale, Ghana

Mr Amari Jules César Akpa, Anesvad Foundation, Abidjan, Côte d'Ivoire

Dr Flora Sylvie Houndjrebo Balle, Anesvad Foundation, Cotonou, Benin

### **CBM Global**

Dr Julian Eaton, CBM Global, Cambridge, United Kingdom of Great Britain and Northern Ireland

Mr Philip Ode, CBM Global, Nigeria Country Office, Abuja, Nigeria

### **effect hope**

Mr Phillip Maneesh, International Health Programmes, effect hope, Markham, Canada

Ms Anna Wickenden, International Health Programmes, effect hope, Markham, Canada

### **FAIRMED**

Mr Smith Afanji, FAIRMED NTD Programme, Yaoundé, Cameroon

Ms Marguerite Belobo Mbia épouse Belibi, FAIRMED, Yaoundé, Cameroon

Mr Bharath Kumar Sundar, Programme unit, FAIRMED, Bern, Switzerland

Dr Alphonse Um Boock, FAIRMED, Yaoundé, Cameroon

### **German Leprosy and Tuberculosis Relief Association**

Mr Denis A. Yawovi Gadah, German Leprosy and Tuberculosis Relief Association, Lomé, Togo

Dr Anthony Meka, German Leprosy and Tuberculosis Relief Association, Enugu, Nigeria

Dr Saskia Kreibich, Medical and Social Projects Department, German Leprosy and Tuberculosis Relief Association, Würzburg, Germany

### **Organisation de Coordination pour la lutte contre les Endémies en Afrique centrale [Coordination Organization for the Control of Endemic Diseases in Central Africa] OCEAC**

Dr Marielle Patty Ngassa, MTN OCEAC-KfW project, Yaoundé, Cameroon

Dr Bonaventure Savadogo, MTN OCEAC-KfW Regional Project Coordinator, Yaoundé, Cameroon

### **Raoul Follereau Foundation**

Dr Roch Christian Johnson, Fondation Raoul Follereau, Paris, France

### **REDRESS**

Dr Laura Dean, Liverpool School of Tropical Medicine, Liverpool, United Kingdom of Great Britain and Northern Ireland

Mrs Julie Irving, International Public Health, Liverpool School of Tropical Medicine, Liverpool, United Kingdom of Great Britain and Northern Ireland

### **Tropical Health**

Mr Thomas Engels, Tropical Health LLP, London, United Kingdom of Great Britain and Northern Ireland

Ms Caroline Vanderick, Tropical Health LLP, London, United Kingdom of Great Britain and Northern Ireland

### **Skin NTD experts**

Dr Chandrakant Revankar, Consultant, North Brunswick, United States of America

Dr Peter Steinmann, Swiss Tropical and Public Health Institute Associated Institute of the University of Basel, Allschwil, Switzerland

### **WHO regional and country offices**

Dr Mahoutondji Yves Thierry Barogui, Leprosy, Buruli ulcer & Yaws, Neglected Tropical Diseases, WHO Regional Office for Africa, Libreville, Gabon

Dr Abate Mulugeta Beshah, Tropical and Vector borne Diseases, WHO Regional Office for Africa, Brazzaville, Congo

Dr Moses Kerkula Jeuronlon, Technical units, WHO Country Office, Monrovia, Liberia

Dr N'goran Raphaël N'Dri, Technical units, WHO Country Office, Abidjan, Côte d'Ivoire

Dr Etienne Nnomzo'o, Technical units, WHO Country Office, Yaoundé, Cameroon

Dr Felicia Owusu-Antwi, Technical units, WHO Country Office, Accra, Ghana

Dr Cyr-Judicaël Passi-Louamba, Technical units, WHO Country Office, Brazzaville, Congo

Dr Raoul Saisonou, Technical units, WHO Country Office, Cotonou, Benin

Dr Venkata Ranganadha Rao Pemmaraju, Global Leprosy Programme, WHO Regional Office for South-East Asia, New Delhi, India

### **WHO headquarters**

Dr Kingsley Asiedu, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Daniel Argaw Dagne, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Xiaoxian Huang, Strategic Information and Analytics, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Jonathan King, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Pamela Sabina Mbabazi, Strategic Information and Analytics, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Filip Meheus, Economic Evaluation and Analysis, WHO Health Systems Governance and Financing, Geneva, Switzerland

Dr Priya Pathak, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr José Antonio Ruiz Postigo, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Dieudonné Sankara, Prevention, Treatment and Care, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland

Dr Raman Velayudhan, Veterinary Public Health, Vector Control and Environment, WHO Department of Control of Neglected Tropical Diseases, Geneva, Switzerland







Global Neglected Tropical Diseases Programme  
20 Avenue Appia  
1211 Geneva 27  
Switzerland

[neglected.diseases@who.int](mailto:neglected.diseases@who.int)  
<https://www.who.int/teams/control-of-neglected-tropical-diseases>

