



Elimination of **kala-azar** as  
a public health problem  
in South-East Asia

## **Template dossier**



**World Health  
Organization**



Elimination of **kala-azar** as  
a public health problem  
in South-East Asia

## **Template dossier**



# Contents

---

Acknowledgements	iv
Introduction	1
<b>1. Description of the country context and health system capabilities</b>	<b>3</b>
1.1 General information	3
1.2 Overview of the health system with focus on endemic areas	3
<b>2. Historical data and delineation of endemic areas</b>	<b>5</b>
2.1 Historical data on kala-azar (essential)	5
2.2 Description and delineation of currently endemic areas (essential)	5
<b>3. Surveillance and elimination activities</b>	<b>7</b>
3.1 Structures and capabilities for elimination	7
3.2 Passive surveillance strategy (essential)	8
3.3 Active case detection strategy (essential)	9
3.4 Case-based surveillance and response to confirmed index cases (essential)	9
<b>4. Epidemiological data</b>	<b>10</b>
4.1 National level (essential)	10
4.2 Data reported during the past 5 years, by endemic first (subnational) level (essential)	10
4.3 Data used to calculate the elimination indicator, by endemic implementation unit (essential)	11
4.4 Kala-azar in neighbouring countries	11
<b>5. Vector control strategy and activities</b>	<b>12</b>
<b>6. Post-validation surveillance plan (essential)</b>	<b>13</b>
<b>Annexes</b>	<b>14</b>
Annex 1. Timeline for validation and revalidation of elimination of kala-azar as a public health problem	15
Annex 2. Preparation and submission of dossier, review procedures and formation of an independent validation team	16
Annex 3. Reporting templates for vector control interventions	25

# Acknowledgements

---

The World Health Organization Global Neglected Tropical Diseases Programme (WHO/NTD) is grateful to the following individuals who contributed to the preparation of this document.

## **Independent validation team (ad-hoc team constituted to validate the elimination claim for Bangladesh)<sup>1</sup>**

Fabiana Alves (Drugs for Neglected Diseases initiative, Geneva, Switzerland), RP Goswami (formerly Calcutta School of Tropical Medicine, Kolkata, India), Amresh Kumar (PATH India, New Delhi, India), Subhash Salunke (formerly Institute of Public Health, Public Health Foundation of India, Bhubaneswar, India), Surendra Uranw (B.P. Koirala Institute of Medical Sciences, Dharan, Nepal), Rajpal Yadav (formerly WHO/NTD)

## **Peer reviewers<sup>2</sup>**

Be-Nazir Ahmed (formerly Disease Control, Directorate General of Health Services, Dhaka, Bangladesh), Murari Lal Das (B.P. Koirala Institute of Health Sciences, Dharan, Nepal), AC Dhariwal (formerly National Center for Vector Borne Disease Control, New Delhi, India), Lise Grout (formerly WHO/NTD), Babu Ram Marasini (formerly Epidemiology and Disease Control Division, Kathmandu, Nepal)

## **WHO Regional Office for South-East Asia**

Aya Yajima, Zaw Lin, Bhupender Nath Nagpal.

## **WHO headquarters**

Saurabh Jain, Jose Antonio Ruiz Postigo and Daniel Argaw Dagne

The template was developed and finalized by Saurabh Jain.

## **Funding**

Funding to support the development of this document was provided by the Bill & Melinda Gates Foundation and by funds from WHO/NTD.

---

<sup>1,2</sup> Independent external experts involved in the peer review of this document completed the WHO Declaration of Interests form. The declarations were assessed by the WHO Secretariat, which found that none of the experts had declared any interest.

# Introduction

---

This template dossier complements and should be used after fulfilling the criteria and preconditions specified in the *Process of validation of elimination of kala-azar as a public health problem in South-East Asia*.<sup>1</sup> The national kala-azar programme should be in the consolidation phase of elimination; that is, the annual incidence of kala-azar in the implementation unit<sup>2</sup> is maintained below 1 case (new plus relapse) per 10 000 population for a minimum of 3 consecutive years (see Annex 1).

The template is designed to help national kala-azar elimination programmes prepare a dossier (see Annex 2) documenting the essential evidence supporting the request to the World Health Organization (WHO) to validate the status of kala-azar elimination as a public health problem in their country. The information presented in this document will help independent assessors understand the national programme's specific context, achievements and relevant epidemiological data.

The dossier should be organized according to the following sections:

1. Description of the country context and health system capabilities
2. Historical data and delineation of endemic areas
3. Surveillance and elimination activities
4. Epidemiological data
5. Vector control strategy and activities
6. Post-validation surveillance plan

Once the dossier is prepared, it should be examined and duly endorsed by the National Task Force on kala-azar elimination and/or neglected tropical diseases, or a similar body, before submission to WHO.

---

<sup>1</sup> Process of validation of elimination of kala-azar as a public health problem in South-East Asia. New Delhi: World Health Organization. Regional Office for South-East Asia; 2016 (<https://iris.who.int/handle/10665/331974>).

<sup>2</sup> The implementation unit is termed upazila in Bangladesh, block in India and district in Nepal.



PKDL from Bangladesh: confluent macular rash involving most of the face. © Dr. Dinesh Mondal



# 1. Description of the country context and health system capabilities

---

## 1.1 General information

Summarize (1–3 pages) the geographical, demographic and economic features of the country with a specific description of areas endemic for kala-azar (including historical areas and sporadic cases), referencing the population census, Demographic and Health Surveys and other relevant documents.

Include the following information and, where possible, provide indicators and/or maps on:

- Eco-geographical characteristics: rainfall, temperature, etc.
- The economy: gross domestic product, health expenditure, socioeconomic strata
- Total population and density, life expectancy
- (At-risk) population characteristics in endemic areas: sociocultural practices affecting health-seeking behaviour, marginalized communities, awareness among communities, etc.
- Indicators on poverty, development, type of housing in rural areas, household access to water and sanitation in rural areas
- Movements (inwards and outwards) of populations in areas affected by kala-azar: migrants/seasonal workers/immigrants.

## 1.2 Overview of the health system with focus on endemic areas

In narrative form, provide a brief overview (2–4 pages) of the health care system, including:

- Basic description of health system structure, roles and functions vis-à-vis endemic areas including the delivery of primary health-care services.
- Define the administrative units in the country and divisions of the health system (total number of first-level subnational (states/provinces/divisions or equivalent), second-level subnational (districts), third-level subnational (block/upazila or equivalent).
- Health staff: type and number per inhabitants, average number per type of health facility structure.
- Health management information system, data processing and analysis capabilities of disease surveillance data vis-à-vis the management information system.
- Utilization of the health-care system focusing on kala-azar: where do suspected and/or probable cases first approach which level of the health system.

- Availability of community health workers or volunteers scheme: number per inhabitants (focusing on endemic areas), their role and involvement in the national programme, any incentive or pay for performance mechanisms.
- Description of health indicators in endemic areas (e.g. for malnutrition, major communicable diseases, neglected tropical diseases).

# 2. Historical data and delineation of endemic areas

---

## **2.1 Historical data on kala-azar (essential)**

Provide a narrative of the history of kala-azar in the country (referencing relevant publications) to include:

- The historical geographical distribution of cases (maps) and disease burden (graphs).
- Geographical expansion or disappearance of the disease over a period of time up to the current status (maps and narrative).
- Description of the vectors responsible for transmission in the country including their breeding habitats, resting and biting behaviour, and efficiency. If available, information on vector abundance, insecticide susceptibility, etc. may be included.
- Historical account of the total number of new kala-azar cases, relapse cases, post-kala-azar dermal leishmaniasis cases and number of deaths due to kala-azar reported per year to the implementation units.
- Any interventions undertaken before the current national programme was launched.

## **2.2 Description and delineation of currently endemic areas (essential)**

Indicate how the country defined the current endemic areas and what criteria were used. Include:

- Enumeration, description and mapping of endemic areas (up to the implementation units).
- A list and map of endemic districts and implementation units within those districts.
- Existence of grey areas where there is no reliable information on ongoing transmission but where transmission is suspected and new cases are occurring (depending on history, reporting of cases and ecology).
- Areas reporting sporadic cases and details of programmatic actions taken in those areas to ensure that cases are not missed.
  - Indicate names by the second-level subnational (district) and the third-level subnational (block/upazila).

- Indicate whether they are enlisted as endemic implementation units. If not, specify the reasons thereof.
- Programmatic actions taken:
  - availability of rapid diagnostic tests all the time in health facilities reporting cases;
  - monthly and yearly reports on the total number of tests performed in suspected cases vs total number of positive cases and treatment provided (at least preceding 3 years including the current year);
  - establishing surveillance, recording and reporting and capacity-building of health workers; and
  - any vector control interventions undertaken.
- Description of any change in the total number of implementation units since the start of the elimination initiative in 2005:
  - due to division or creation of new districts or sub-districts or changes in health infrastructure;
  - new endemic areas/implementation units identified and added to the programme; and/or
  - previously endemic but presently excluded from the list.

# 3. Surveillance and elimination activities

---

## 3.1 Structures and capabilities for elimination (essential)

Describe the capabilities available to eliminate kala-azar as a public health problem, including:

- Regulations/legislation for kala-azar as a notifiable disease in the country.
- Structure of the kala-azar programme in the general health services of the health ministry and its institutional anchoring (e.g. the constitution of multi-disciplinary independent national coordination/advisory committee/task force or equivalent; in annex, give structure and recommendations of its meetings). Add, if a similar structure is created at the subnational level.
- Existence of a national policy document outlining the programmatic strategy, protocols, definitions, standard operating procedures and activities.
- Organization of disease surveillance, including vector surveillance and control activities.
- Material and financial resource allocations (e.g. fund allocations for activities in multi-year or similar plans) available at central and peripheral levels.
- Human resources and competencies (training, experience).
- Capacity-building policies and activities. Orientation/reorientation of skills.
- Entomology: available structure at the central and peripheral levels, trained staff, capacity-building.
- Operational capabilities: diagnosis, treatment, vector control, supply chain (diagnostics, medicines, insecticides etc.), reference laboratories.
- List of health facilities designated as diagnostic and treatment centres with their type (serological, parasitological confirmation); include a map with the sites (also including the private sector, if any).
- Mechanisms and details of private sector engagement in elimination activities, suspect referral, etc.
- Statements ensuring the availability of rapid diagnostic tests in all endemic areas and treatment availability in the country (including areas reporting sporadic cases).
  - Monthly and yearly reports of the total number of tests performed in suspected vs total number of positive cases and treatment provided (at least for the preceding 3 years including the current year)
- Programme strategic actions taken in areas reporting sporadic cases and/or non-endemic areas reporting new cases or areas with new endemicity.
  - Availability of rapid diagnostic tests all the time in health facilities reporting cases

- Monthly and yearly reports on the total number of tests performed in suspected vs total number of positive cases and treatment provided (at least for the preceding 3 years including the current year)
- Treatment of positive cases and recording and reporting
- Establishing surveillance and capacity-building of health workers
- Any vector control interventions undertaken
- Quality assurance system for leishmaniasis health products..
  - Reports of internal and external quality assurance for rapid diagnostic tests, medicines and insecticides
- Evidence for estimates of the underreporting ratio.
- Kala-azar surveillance information system:
  - A unique “patient identification code” is introduced and all cases in the country are part of the national registry of cases and double counts prevented
  - Patients are correctly registered and assigned under the implementation units catering to their residence (e.g. villages)
  - Data transmission pathways (peripheral health facility onwards), data processing, analysis capabilities and decision-making circuits.
- Recommendations and actions taken from any previous programme review missions (provide in an annex).
- List partners (national and international) and research institutes involved in kala-azar elimination and their roles and contributions.

### **3.2 Passive surveillance strategy (essential)**

The following information should be provided:

- Case definitions for a suspected, confirmed and relapse case of kala-azar and for post-kala-azar dermal leishmaniasis.
- Diagnostic algorithm for passive screening used in the country (specify the tests used). Include selection criteria for probable patients to be tested.
- Criteria to confirm relapse cases and whether relapse cases are included in the calculation of elimination indicator.
- Referral mechanisms and list of sites, with their type (serological, parasitological confirmation and management), and include a map with the sites.
- Literature or reports of cases outside the known endemic areas or implementation units and investigation summary results.
- If country is endemic for HIV, provide information on:
  - prevalence of HIV at national level
  - overlap of HIV and areas endemic for kala-azar

- reports of HIV screening of kala-azar patients and results (at least for the preceding 3 years including the current year)
- In the case of sentinel surveillance, provide the criteria used for the selection of sentinel sites.

### 3.3 Active case detection strategy (essential)

Provide the following information:

- Describe the annual active case detection methods implemented in the country. If none, give the date of the last active case detection. Include results from research studies other than programmatic screening. Also include reports of active case detection performed in areas of doubtful endemicity or in areas experiencing outbreaks (see Table 1).
- The definition of an outbreak in the country as well as reports of any outbreak in the past 3 years and reports of outbreak investigation.
- Details of any innovative or integrated approach of case detection.

**Table 1. Active screening for kala-azar and post-kala-azar dermal leishmaniasis by implementation unit**

	Year 1						Year 2
	Population targeted	No. of people actively screened	No. of suspected KA cases identified	No. of confirmed KA cases	No. of suspected PKDL cases identified	No of probable/confirmed PKDL cases	
IU 1							
IU 2							
IU 3							
IU 4							

IU: implementation unit; KA: kala-azar, PKDL: post-kala-azar dermal leishmaniasis.

### 3.4 Case-based surveillance and response to confirmed index cases (essential)

Describe the measures put in place (active screening of households and/or neighbourhoods, vector control interventions taken, monitoring activities, etc.) and the results.

# 4. Epidemiological data

---

## **4.1 National level (essential)**

Provide the following data at the national level, as reported since 2005 (table and graph):

- Number of probable cases tested with rapid diagnostic tests vs number of positive tests
- Number of new cases plus new relapse cases per year
- Number of deaths due to kala-azar per year
- Number of new post-kala-azar dermal leishmaniasis cases per year
- Number and proportion of new kala-azar cases tested for HIV vs number of new HIV–visceral leishmaniasis cases detected per year
- Number and ratio of cases detected by active/passive screening per year
- Number and proportion of cases confirmed by serology vs parasitology by year
- Population examined (passive/active) by year
- Number and proportion of cases treated

## **4.2 Data reported during the past 5 years, by endemic first (subnational) level (essential)**

Provide for each first subnational (state/province or equivalent) level (table and map):

- Number of probable cases tested with rapid diagnostic tests vs number of positive tests
- Number of new plus relapse cases per year
- Number of deaths due to kala-azar per year
- Number of post-kala-azar dermal leishmaniasis cases per year
- Number and proportion of cases tested for HIV vs number of HIV–kala-azar cases detected per year
- Number and ratio of cases detected by active/passive screening per year
- Number and proportion of cases confirmed by serology vs parasitology by year
- Population examined (passive/active) by year
- Number and proportion of cases that have been treated



### 4.3 Data used to calculate the elimination indicator, by endemic implementation unit (essential)

Using the template in Table 2, calculate the primary indicator of elimination for each endemic implementation unit (past 5 years).

**Table 2.** Number of kala-azar cases (new plus relapse) reported by year per implementation unit

	Year 1				Year 2				Year 3
	Population <sup>a</sup>	No. of new KA cases	No. of relapse cases	KA incidence (new plus relapse)/ 10 000 population	Population <sup>a</sup>	No. of new KA cases	No. of relapse cases	KA incidence (new plus relapse)/ 10 000 population	
IU 1									
IU 2									
IU 3									
IU 4									
IU 5									

IU: implementation unit; KA: kala-azar.

<sup>a</sup> For population, use the source considered most reliable: administrative census or other sources (immunization, other programmes, etc. and keep the same source throughout the years).

### 4.4 Kala-azar in neighbouring countries

- Describe cross-border areas and the countries involved (provide narrative/map).
- List the number of imported cases diagnosed in your country who were considered infected in neighbouring/other countries (specifying the origin), for at least the past 5 years.
- List the number of cases diagnosed in neighbouring/other countries, for at least the past 5 years.
- Include a narrative on cross-border collaboration on screening and control activities.

# 5. Vector control strategy and activities

---

Provide information on the vector control strategy and associated activities, including:

- Description of vectors of kala-azar in the country, including vector breeding habitats, resting and biting behaviour, and vector efficiency. If available, information on vector abundance, insecticide susceptibility, etc.) may be included.
- Narrative of the integrated vector management approach.
- Details on the implementation of indoor residual spraying, protocols, criteria for inclusion or exclusion of an area for spraying operations, methods and rationale for the choice of insecticides.
- Coverage reports of indoor residual spraying (population protected, structures sprayed, etc.) (see Annex 3).
- Environmental management methods such as improved housing, plastering of walls by different materials, etc.
- Any other activity/initiative relevant to elimination of kala-azar as a public health problem.

# 6. Post-validation surveillance plan (essential)

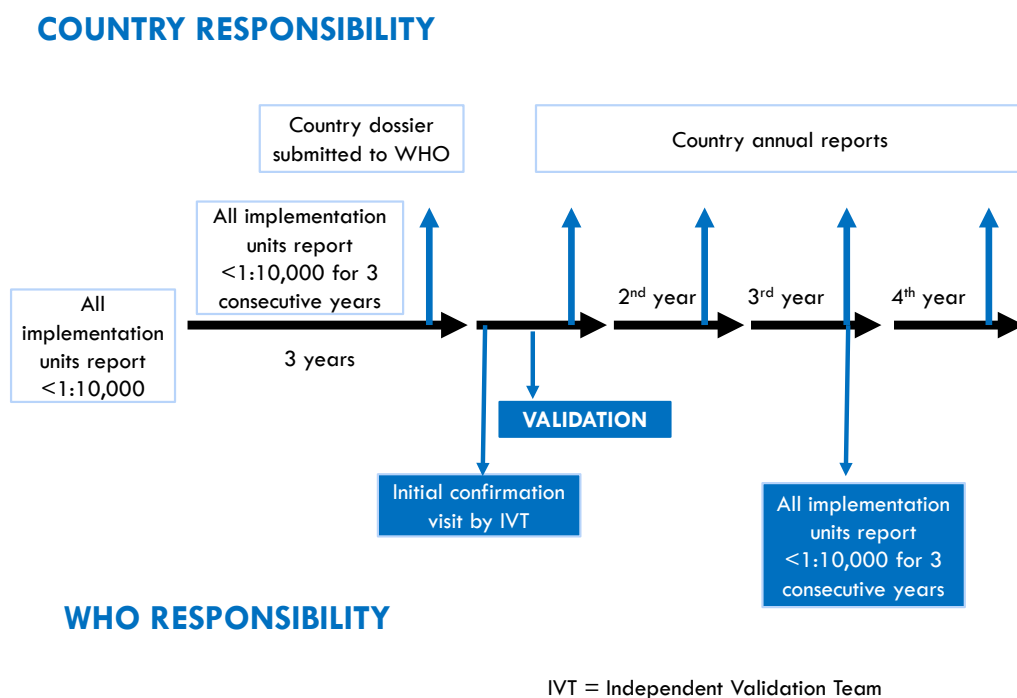
---

This dossier refers to the validation of elimination of kala-azar as a public health problem. The status of elimination must be followed by maintaining adequate awareness regarding the disease among communities and the availability of services, surveillance and response activities, the data of which must be reported annually to WHO. These actions can maintain the acquired elimination status and advance towards the elimination of transmission in due course when the necessary tools are available.

Describe the post-validation surveillance activities planned for the next 5 years. Include sentinel sites, vector control and other strategies. Specify the available resources and the partners involved. A statement of commitment is needed as part of the dossier.



# Annex 1. Timeline for validation and revalidation of elimination of kala-azar as a public health problem



Source: Process of validation of elimination of kala-azar as a public health problem in South-East Asia. New Delhi: World Health Organization Regional Office for South-East Asia; 2016 (<https://iris.who.int/handle/10665/331974>).

# Annex 2. Preparation and submission of dossier, review procedures and formation of an independent validation team

---

## **Preparation and submission of dossier**

- Member States seeking official acknowledgement from the World Health Organization (WHO) as having met the criteria for elimination of kala-azar as a public health problem should submit a dossier to the Organization documenting the measures taken and the evidence supporting the claim.
- Member States should reference the *Process of validation of elimination of kala-azar as a public health problem in South-East Asia*<sup>1</sup> and this WHO dossier template for guidance and ensure that the information presented meets the minimum necessary criteria to support the claim.
- If desired, Member States may request feedback on the draft country dossier from the Regional Technical Advisory Group (RTAG) on kala-azar through the WHO Regional Office before official submission.

## **Review procedures and the formation of an independent validation team**

- The Member State should submit the completed dossier (one hard copy and one electronic copy) to the WHO Country Office for the attention of the WHO Representative. The Country Office should acknowledge receipt of the dossier to the Member State and forward it to the focal point for kala-azar in the WHO Regional Office. The WHO Regional Office should then notify the Global Neglected Tropical Diseases Programme at WHO headquarters.
- Once a dossier is received, the Regional Office will set up an ad hoc independent validation team (IVT) and will plan out a validation schedule in line with the processes described in the WHO publication on the *Process of validation of elimination of kala-azar as a public health problem in South-East Asia*.<sup>1</sup>

## **Membership**

The WHO Regional Office will be responsible for appointing and convening the IVT upon the submission of country dossiers.

Membership of the IVT will comprise:

- 4–5 experts identified from a panel of experts selected by the WHO Regional office for South-East Asia
- Members should be experts on kala-azar, including public health/epidemiology, case management, surveillance and vector control

---

Source: Process of validation of elimination of kala-azar as a public health problem in South-East Asia. New Delhi: World Health Organization Regional Office for South-East Asia; 2016. (<https://iris.who.int/handle/10665/331974>).

- Members should not have supported the development of the dossier under review, and should be considered independent and have no conflict of interest with regard to the statements made in the dossier
- Members will be invited to participate as individuals, not as representatives of an organization, institution or government. Nomination of proxies will therefore not be permitted.
- WHO staff from the Regional Office and the headquarters will be the Secretariat.

The composition and size of the IVT may vary from one country to another. The experts selected should be independent in their assessment and views, and potential conflicts of interest, such as the nomination of a national from the Ministry of Health or national programme of the country under review as a member of the validation team, should be avoided.

### **Scope of work**

- The overall objective of the IVT is to determine whether the information contained in the dossier supports the claim of elimination as a public health problem according to the criteria outlined by WHO. The IVT will evaluate the completeness, accuracy and reliability of the information in the dossier and will ascertain whether the surveillance system and health information system are adequate and able to detect any re-emergence or introduction of the disease to newer areas before reaching above the elimination threshold levels.
- Members of the IVT will elect a Chair from among their number. The Chair will be responsible for chairing IVT meetings; considering requests made by the Secretariat for observers to join group meetings; coordinating and completing, with other members, a report on the country visit (if a visit is deemed necessary) to the Member State, before members depart from the country; and signing off the summary report to WHO.
- The members of the IVT will examine the dossier on a voluntary basis independently, maintaining the highest ethical standards and declaring any conflict of interest prior to participation in collective discussions.
- The members will review the evidence about the achievement of elimination of kala-azar as a public health problem and will also assess the quality of the surveillance and its preparedness to detect any upsurge of the disease above the elimination threshold.
- The individual reviewer will prepare a report based on the dossier and country visit (see Appendix 1). These individual reports will be shared with the other members of the IVT as well as the WHO Secretariat. Clarification and/or any gap in the data or additional information considered as needed will be requested to the Secretariat and, if necessary, a discussion with the country programme manager will be planned. Initially, the process of validation is expected to be performed through the analysis of the country dossier complemented by clarifications. A visit to the country can be considered upon request by the IVT if deemed necessary.

During the country visit, the team will visit the health facilities, validate all the records and reports and assess the country's preparedness for the post-validation scenario.

- IVT members will make collective discussions to develop a summary report and obtain consensus and recommend that WHO either: (i) validates the claim of elimination as a public health problem; or (ii) postpones such a decision until more evidence is provided in the dossier to demonstrate that elimination has occurred. In either case, the recommendation must be adequately justified.

- The IVT will also provide a summary report (see Appendix 2) of deliberations with clear recommendations including:
  - a) Conclusions, in which the IVT discusses the compliance of the data with the elimination criteria set by WHO and expresses its opinion on whether or not to validate the claim.
  - b) Recommendations to the country: in case of validation, recommendations should focus on post-validation surveillance activities; in case of postponement, recommendations should focus on what steps the country should take in order to meet the elimination targets in the future, including a clear description of any reasons for postponement outlining the additional evidence needed in the dossier to be returned to the country.
- Secretariat functions will be assured by WHO throughout the process. It will:
  - a) Provide the dossier and other information needed to each IVT member.
  - b) Organize discussions of the IVT via teleconference, videoconference or face-to-face meetings, inviting observers where this is considered desirable and agreed by the IVT's Chair.
  - c) Specify the responsibilities and decision-making processes of the IVT.
  - d) Liaise with the Member State authorities in order to obtain any additional information requested by the IVT.
  - e) Collate the independent reviews of IVT members and ensure the preparation of a summary report.
  - f) Obtain sign-off of the summary report by members.
  - g) Process and permanently archive the summary report.
- Each Team member will:
  - a) Keep confidential the contents of the dossier and all other information to which IVT members are given access, including the deliberations and recommendations of the IVT, discussing them only with relevant WHO staff and other IVT members. Information should not be discussed directly with the Ministry of Health of the Member State, or with any other organization or person.
  - b) Review the dossier independently, within the specified timeframe and following the directions given for this task.
  - c) Discuss the dossier collectively, via video conference, teleconference or face-to-face meeting.
  - d) Participate in a country visit (if deemed necessary).
  - e) Review the draft summary report within the specified timeframe.

### **Processing of recommendations**

The following actions are taken after the IVT has signed off the summary report:

- If the IVT recommends postponement of validation of elimination, the summary report will be forwarded by the WHO Regional Office to the Member State with clarification of what additional evidence is required prior to validation.



- If the IVT recommends validation of the claim, the summary report will be forwarded by the WHO Regional Office with the request for acknowledgement of the achievement to WHO.
- At the discretion of the WHO Director-General, the official acknowledgment to the country will be provided through a letter of notification presented to the Member State by the WHO Regional Office.
- Validation will be acknowledged by the following additional ways:
  - i) Reported in the disease-specific global progress update published annually in the Weekly Epidemiological Record by WHO headquarters;
  - ii) Noted by updating the status in the Global Health Observatory by WHO headquarters.

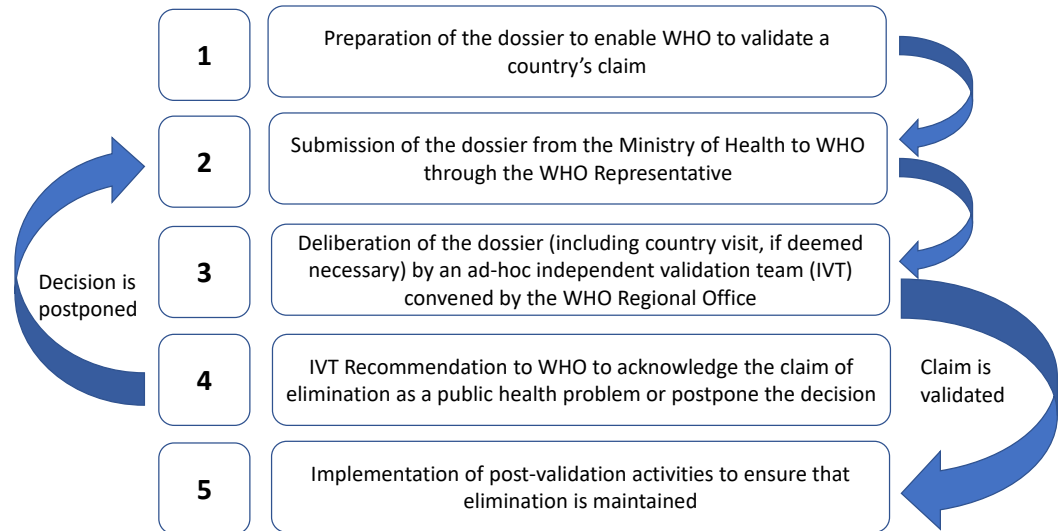
### **Post-validation activities**

The following actions are taken after the IVT has signed off the summary report:

- Validation implies a potentially reversible state, and all stakeholders should bear this in mind in their communications at all stages.
- Countries should continue to conduct post-validation surveillance and ensure integration of kala-azar services as recommended by the IVT. A commitment to continue post-validation surveillance should be stated in the dossier. The following are some key factors:
  - The currently available tools are not optimal for preventing infection and interrupting transmission of the parasite. Therefore, new cases of kala-azar will continue to occur for the foreseeable future, though at low or very low levels.
  - Post-kala-azar dermal leishmaniasis, a dermal sequela of kala-azar, typically occurs within 1–10 years after apparent cure of kala-azar in up to 15% of cases. Sporadically, it has also been reported in patients without any history of kala-azar.
  - In areas endemic for HIV and *Leishmania*, HIV-infected patients are particularly vulnerable to kala-azar as an opportunistic infection and are more likely than individuals without HIV to develop kala-azar from a dormant infection or as a clinical manifestation after *primary Leishmania* infection.
  - Cases of post-kala-azar dermal leishmaniasis and coinfection with kala-azar and HIV have been recognized as important disease reservoirs of the parasite and are thus likely to serve as potential reservoirs of transmission, if untreated.
- Annual surveillance data should be reported to WHO. Where these data indicate that the incidence of kala-azar has recrudesced above elimination thresholds, WHO should be consulted on an appropriate response. Recrudescence above original elimination target thresholds will be noted by a change in endemicity status in the Global Health Observatory and in the Weekly Epidemiological Record.
- With the agreement of the Member State – and after the Director-General has acknowledged the elimination of kala-azar as a public health problem – the dossier may be made available on the WHO website as a reference document.

The figure below shows the five steps required to validate the elimination of kala-azar as a public health problem in a country.

**Main steps for validation of elimination of kala-azar as a public health problem**



# Appendix 1. Individual reviewer's report

---

Country:

Date (dd/mm/yyyy):

Author:

## **Summary**

Summarize the report with the main conclusions and recommendations.

## **Narrative report**

Please provide a brief narrative summary of your evaluation of the information documented in the dossier.

## **General comments**

Please provide a general comment indicating if the dossier is well documented and covers all the components of the WHO "Template dossier for the elimination of kala-azar as a public health problem in South-East Asia" and "Process of validation of elimination of kala-azar as a public health problem in South-East Asia" with all the relevant data to support evidence. Identify any essential data lacking.

## **Review of the dossier**

In your review, we ask you to carefully evaluate the information presented relating to the following components.

### **1. Description of the country and its capabilities (general information, the health system)**

Please comment on the main aspects concerning the relevant historical, eco-geographical and cultural data that could significantly influence the kala-azar situation, identifying any data and information that are lacking.

### **2. Historical data and delineation of endemic areas**

Please comment on the historical data and the delineation of areas endemic for kala-azar, highlighting any relevant aspects that could impact the elimination of the disease. Identify any data that are lacking, taking into account that the information included in this point is essential.

### **3. Surveillance and elimination activities (structure, capabilities and active and passive screening strategies)**

Please comment on the main aspects concerning the capacities and strategies for elimination and surveillance of kala-azar, the activities performed and the progress achieved in the elimination

process, describing the strengths and the weaknesses. Identify any data that are lacking, taking into account that the information included in this point is essential.

#### 4. Epidemiological data

Please comment in the main findings of the epidemiological data and trends for kala-azar. Identify any data that are lacking, taking into account that the information included in this point is essential.

#### 5. Vector control strategy and activities

Please comment on the vector control strategies and activities performed in the country and their impact on control and elimination of the disease, identifying any data that are lacking.

#### 6. Post-validation surveillance plan

Please comment on the preparedness of the surveillance system to detect and contain any re-emergence/outbreak/buildup of cases threatening to cross the threshold of elimination of the disease, taking into account its quality, extension, monitoring and sustainability. Take into account also that the information included in this point is essential. Identify any information that is lacking.

#### Conclusions and recommendations

Please clearly state your conclusions, highlighting the main reasons that led to the recommendations, considering the evidence provided by the data presented and the arrangements for a kala-azar surveillance system after the validation of elimination of kala-azar as a public health problem.

<b>Recommendation to WHO</b>	
------------------------------	--

The recommendation must be formulated in two ways: to either “validate the claim of elimination of kala-azar as a public health problem” or “postpone until further information is provided.”

Title (Mr/Ms/Mrs/Dr)	Name of the reviewer	Affiliation	Signature

## Appendix 2. Report of the reviewing independent validation team

---

Country:

Date (dd/mm/yyyy):

Author:

### **Overall comments**

### **Review of the dossier**

Including the following components.

**1. Description of the country and its capabilities (general information, the health system)**

**2. Historical data and delineation of endemic areas**

**3. Surveillance and elimination activities (structure, capabilities and active and passive screening strategies)**

**4. Epidemiological data**

**5. Vector control strategy and activities**

**6. Post-validation surveillance plan**

**Conclusions and recommendations**

<b>Recommendation to WHO</b>	
------------------------------	--

Title (Mr/Ms/Mrs/Dr)	Name of the reviewer	Affiliation	Signature
1			
2			
3			
4			
5			
6			

# Annex 3. Reporting templates for vector control interventions team

Table A1.1. Indoor residual spraying: form for collecting data in primary health-care centres or equivalent

Reporting format for indoor residual spraying (PHC or equivalent), Name of district:																		
Round (1st or 2nd):		Insecticide used (%):										Spray period: from (dd/mm/yyyy): to:						
		No. of villages targeted for IRS		No. of villages targeted		No. of targeted structures (houses and animal shelters)		No. of targeted structures sprayed		No. of houses sprayed		Coverage						
Name of PHC or equivalent unit	Total population of the PHC or equivalent	No. of villages targeted	No. of villages	Population targeted	No. of targeted structures	No. of targeted structures (houses and animal shelters)	No. of targeted structures sprayed	No. of houses sprayed	% of houses sprayed	No. of rooms sprayed	No. of rooms fully sprayed	No. of houses partially sprayed	Percentage of rooms completely sprayed	Population in-sprayed houses	Percentage of population protected	Estimated quantity required (kg)	Quantity used (kg)	Unused quantity (kg)
1	2	3	4	5	6	8	9	10	11	12	13	14	15	16	17	18	19	20
1																		
2																		
3																		
4																		
5																		
Total																		
Daily summary:																		
No. of all structures covered:		No. of houses closed:																
No. of houses sprayed:		Quantity of insecticide received (kg):																
Percentage of houses sprayed:		Quantity of insecticide used (kg):														Signature of supervisor		
No. of people covered:		Balance available (kg):																

IRS: indoor residual spraying; PHC: primary health centre.

Source: Operational manual on leishmaniasis vector control, surveillance, monitoring and evaluation. Geneva: World Health Organization; 2022 (<https://iris.who.int/handle/10665/265615>).

Table A1.2. Indoor residual spraying: form for collecting data in districts

Reporting format for indoor residual spraying (district). Name of district:																				
Round (1st or 2nd):		Insecticide used (%):										Spray period: From (dd/mm/yyyy): To:								
Name of district	Population of district	Targeted population	No. of PHCs or equivalent in the district	Targeted		No. of PHCs or equivalent	No. of villages	No. of targeted structures (houses and animal shelters)	No. of targeted structures (houses and animal shelters) sprayed	No. of houses sprayed	No. of houses sprayed	Coverage				Insecticide stock position				
				No. of PHCs	No. of villages							% of houses sprayed	No. of rooms	Rooms fully sprayed	No. of houses partially sprayed	% of rooms fully sprayed	Population in sprayed houses	% of population protected	Estimated quantity required (kg)	Quantity used (kg)
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1																				
2																				
3																				
4																				
5																				
Total																				
Summary:																				

PHC: primary health centre.

Source: Operational manual on leishmaniasis vector control, surveillance, monitoring and evaluation, Geneva: World Health Organization; 2022 (<https://iris.who.int/handle/10665/265615>).









**Global Neglected Tropical Diseases Programme**

World Health Organization  
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>

