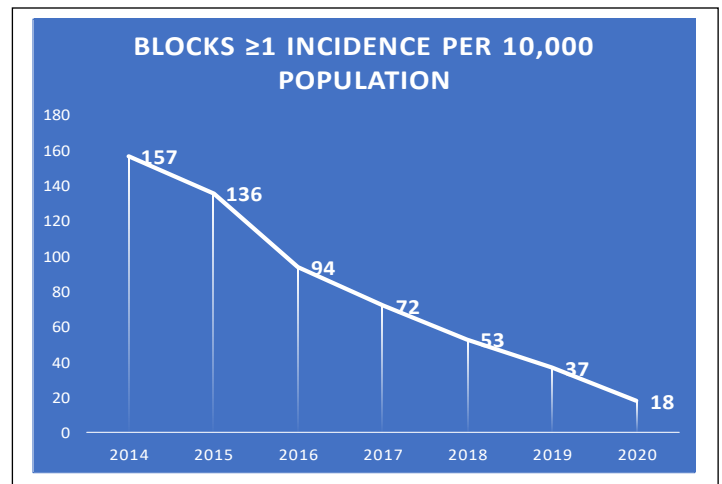
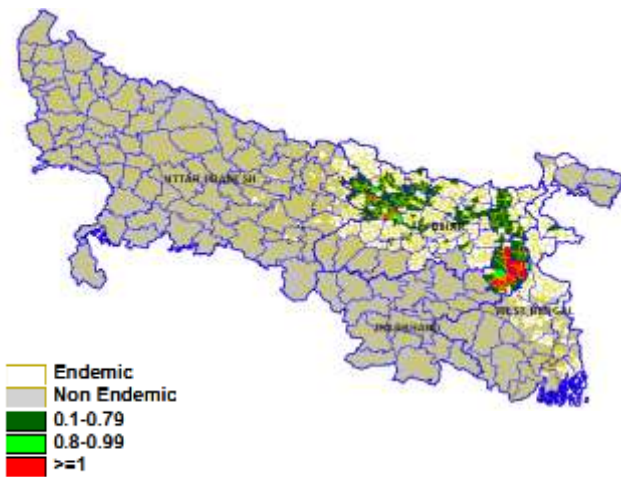


Operational definitions in kala-azar elimination programme



Directorate of National Vector Borne Disease Control Programme
Government of India, Ministry of Health & Family Welfare

Kala-azar is a notifiable disease in all kala-azar endemic states of India.

The elimination of kala-azar as a public health problem is defined as annual incidence of less than one case per 10,000 population at the block level.

Cover page: Map represents the kala-azar incidence of blocks of endemic states in 2020. Line diagram represents the number of blocks with kala-azar incidence ≥ 1 per 10,000 of population at block level from 2014 to 2020.

Type of kala-azar (KA) case

- **New case of Kala-azar:**

A confirmed case of kala-azar who has never received treatment before.

- **Relapse case:**

A kala-azar case who experiences recurrence of KA symptoms with parasitological confirmation at any point of time after previous initial cure i.e., after 15 days of the treatment when the treatment regimen is less than 5 days.

For suspected KA cases with previous history of KA, RDT should not be used for diagnosis, as it may remain positive for long period. Recurrence of symptoms may occur due to relapse or reinfection. Currently the programme does not have tools to differentiate these two. Generally, relapses occur within 6 months, but it is not uncommon to see relapses even after six months. Parasitological confirmation is essential for diagnosis of relapse.

Operationally re-infection is difficult to establish. Immunity plays a major role in disease manifestations. More than 95% of kala-azar patients treated successfully and declared final cured at 6 months post-treatment completion remain symptom free due to their immunity. Management protocol of relapse and re-infection is same, therefore, from programmatic point of view it is not important whether there is re-infection or relapse.

Origin of infection

- Imported: infection acquired outside the country of reporting
- Autochthonous: infection acquired within the country of reporting
 - o Locally imported: infection acquired within the country but outside the implementation/administrative unit of reporting.

- Locally infected: infection acquired inside the implementation/administrative unit of reporting.

KA-HIV co-infection

HIV status assessed: HIV status is considered assessed if the HIV status of the kala-azar case is known. This can be done by testing for HIV at the time of KA diagnosis or recent valid report/record.

KA-HIV co-infected: a confirmed kala-azar case in which HIV status is positive either by laboratory confirmation or documents of ART centre i.e. treatment diary.

Treatment-related definitions

Treatment completion

Treatment completion should be assessed and recorded at the end of the treatment course or at the time the patient stops the treatment.

- **Treatment completed:** The patient has completed the full course of the treatment as per the guidelines, and the clinician's prescription. Length of treatment depends on drug regimen.
- **Treatment stopped for medical reasons:** the treatment was stopped by decision of the clinician, e.g., patient suffering from side effects, treatment failure or after the death.
- **Default:** the patient does not complete the full course of the treatment due to any reason against medical advice.
- **Treatment completion unknown:** the patient completion of treatment is unknown (unrecorded). This is different from default, where the clinician/health

worker knows that the patient has not completed the treatment.

Treatment failure (non-response): Signs and symptoms persist after initial cure or recur by the end of the treatment (if treatment duration is 5 days or more) or within 15 days after treatment starts (if treatment lasts for less than 5 days).

Treatment outcomes

Treatment outcomes for kala-azar patients must be assessed twice:

A) Initial assessment: 15 days after treatment starts (if treatment is less than 5 days). The treatment outcome at initial assessment can be:-

- **Initial cure:** a full course of drugs has been completed AND the patient has clinically improved. Clinical criteria for initial cure defined as “no fever + return of appetite and/or gain in body weight+ regression of splenomegaly”. Regression of spleen is slow process and therefore, even a minor regression of spleen would be considered as the initial cure.
- **Failure (non-response):** signs and symptoms persist or recur during treatment or up to initial treatment outcome assessment
- **Lost-to-Follow-up/Unknown:** The patient does not present for initial assessment after completion of treatment, or the patient status was not recorded.
- **Death:** Death of KA diagnosed cases, whether treated or not, due to any reason related to KA or not will be considered.

In case of death, cause of death should be specified as per the WHO cause specific mortality template for kala-azar:

- Death due to KA
- Death due to HIV
- Death due to other disease
- Death due to SAE (Iatrogenic)
- Death due to non-medical condition (e.g., accident)
- Death due to unknown cause

B) Final assessment, six months after the last drug taken

- **Final cure:** a patient who after initial cure remains symptom-free at six months after the end of treatment.
- **Relapse:** a patient who experiences recurrence of KA symptoms with parasitological confirmation at any time point after initial cure.
- **Death:** any death, whether related to KA or not within six month of diagnosis and/or treatment. Death should be specified as per one of the 6 categories mentioned for death at the initial assessment.
- **Loss to follow-up:** patient could not be traced for assessment at six months.

Probable PKDL

A patient living in or having travelled to KA endemic areas presenting with a typically symmetrical multiple hypopigmented macules, papules, plaques, or nodules without loss of sensation.

PKDL can occur in patients with previous or concomitant kala-azar. In some cases, it occurs without the history of kala-azar. Serological test such as rK39 rapid diagnostic test positivity acts as a strong evidence when other diseases (for example, leprosy) are considered in the differential diagnosis, or if a history of kala-azar is uncertain.

Confirmed PKDL

A probable PKDL case confirmed parasitologically by PCR or a slit-skin smear or biopsy.

Cure of PKDL

- **Initial cure**

Clinical improvement at the end of treatment – defined as a considerable reduction in the number and size of skin lesions.

- **Final cure**

Clinical cure 12 months after the end of treatment – defined as a complete resolution of macules, papules, plaques and nodules, no new lesion, and near total re-pigmentation of maculae.

Other epidemiological definitions-

Endemic:

Full cycle of transmission has been demonstrated at any given time (maintained population of competent vector + parasite reservoir + locally-acquired cases) AND at least 1 locally-acquired case in the last 10 years.

- **Endemicity doubtful:**

- Full cycle of transmission has never been demonstrated BUT at least 1 locally-acquired case in the last 10 years.
- OR Full cycle of transmission has been demonstrated at any given time BUT no case has been reported in the last 10 years (0 case or no data).

- **Non-endemic:**

- **Previously reported cases:** Full cycle of transmission has not been demonstrated AND no locally-acquired case has been reported in the last 10 years BUT locally-acquired case has been reported earlier
- **At risk:** No locally-acquired case has ever been reported but epidemiological risk factors are present (a competent vector population, a reservoir, and appropriate environmental conditions).
- **No autochthonous cases reported** = No locally-acquired case has ever been reported

Endemicity status can be applied to any defined and circumscribed geographical area or implementation unit: countries, regions, districts, villages, community. It is advised to use the smallest geographical or administrative sub-national resolution available.

A focus is defined as any circumscribed geographical endemic area. Bear in mind that

kala-azar cases can be infected in a given focus but can be reported in another location because of travel or access to health care.

New focus: A new focus or foci is the reporting unit where kala-azar case has not been reported in last 10 years.

Operational Definition of Outbreak: Based on epidemiology situation of disease in India, following operational criteria is proposed to initiate outbreak investigations-

Endemic states (Bihar, Jharkhand, West Bengal & Uttar Pradesh).

Criteria 1:

Ten or more (*) laboratory confirmed cases reported in a given area (cluster/hamlet/village) or among a specific group of people within six months of occurrence of index case.

* Criteria proposed by joint working group based on the local epidemiological situation.

Criteria 2:

In low endemic states i.e. Uttar Pradesh & West Bengal, occurrence of 5 or more (*) laboratory confirmed cases warrants for an outbreak investigation.

It is correct that the definitions lack sensitivity and specificity: 5 or 10 cases “in a given area” may be scattered around the area without any geographical linking, or the clustering of cases on both sides of an administrative border may lead to a delay in recognizing an existing geographical linking. Therefore, such issues should not hamper the outbreak response and actions.

Non-endemic States/ Non-endemic districts/blocks of an endemic state:

Criteria 3: Occurrence of even a single laboratory confirmed case reported in a cluster/hamlet/village amounts for KA outbreak.

Definitions of recommended minimum aggregated variables for post kala-azar dermal leishmaniasis:

| | |
|-----------------------------|--|
| | |
| PKDL cases by gender | The number of PKDL cases, disaggregated by Gender (Male/Female) The sum of the number of cases in each category should be equal to the total number of PKDL cases. |
| PKDL cases by age | The number of PKDL cases disaggregated by age group (<5 years / 5-14 years / 15 years and older) The sum of the number of cases in each category should be equal to the total number of PKDL cases. |
| PKDL HIV coinfection | A case of coinfection is a HIV-positive person showing clinical signs of PKDL with serological and/or parasitological confirmation of the diagnosis. All confirmed cases should be tested for HIV. The sum of the number of cases in each category should be equal to the total sum of PKDL cases. |

Indicators

| | |
|--|--|
| Number of probable PKDL cases | |
| Number of probable PKDL female cases | |
| Number of probable PKDL male cases | |
| Number of PKDL gender unknown cases | |
| Number of probable PKDL cases in children < 5 years | |
| Number of probable PKDL cases in children 5-14 years | |
| Number of probable PKDL cases in adults > 14 years | |
| Number of probable PKDL age unknown cases | |
| Number of probable PKDL/HIV co-infection | |

Case fatality rate due to kala-azar = number of deaths within the standard period (six months)/number of total kala-azar cases

| PROBABLE CAUSE OF DEATH AMONG KA CASES | | | | |
|--|----------------------------|----------------|--------------------|--------------|
| | New (primary) cases | Relapse | Unspecified | Total |
| Total number of deaths among KA cases | | | | |
| Death due to KA | | | | |
| Death due to HIV | | | | |
| Death due to other disease | | | | |
| Death due to SAE (Iatrogenic) | | | | |
| Death due to non-medical condition (e.g. accident) | | | | |
| Death due to unknown cause | | | | |

Global Standard of aggregated Indicators recommended for kala-azar surveillance.

| Core Indicators | Definition | Dis-aggregations | Comment |
|---|---|--|---|
| EPIDEMIOLOGY | | | |
| Number of KA cases | Number of confirmed (either laboratory or clinically) KA cases. | <ul style="list-style-type: none"> By type of patient (new/relapse) By origin (autochthonous/imported) | <ul style="list-style-type: none"> Number of KA cases disaggregated by type of patient is part of core morbidity data. This indicator is part of the SDG indicators for NTDs |
| KA elimination target ¹ | Number of <u>new autochthonous, KA-HIV</u> and relapse KA cases per 10,000 population | <ul style="list-style-type: none"> At block level level | <ul style="list-style-type: none"> KA incidence is part of the core morbidity module, based on number of new autochthonous KA cases reported. Population data at finest administrative level are required |
| Endemic areas | Number of endemic areas, i.e. areas where at least 1 <u>new autochthonous</u> KA cases has been reported during the last 10 years AND full transmission cycle is proven | <ul style="list-style-type: none"> At finest administrative level available | <ul style="list-style-type: none"> Endemic areas for KA is part of the core morbidity module, based on number of new autochthonous KA cases reported. |
| | Number of endemic areas with a KA incidence above 1/10,000 population | <ul style="list-style-type: none"> At finest administrative level available | |
| Population at risk of KA | Number of people living in an endemic area, KA | <ul style="list-style-type: none"> At finest administrative level available Eventually by category of risk (<1/10,000 / [1-2.5 / 10,000[/ [2.5-10 / 10,000[, ≥10/10,000) | <ul style="list-style-type: none"> Population at risk of KA is part of the core morbidity module, based on number of new autochthonous KA cases reported. Population data at finest administrative level are required |
| Number of KA outbreak | Number of KA outbreak reported during the year | | |
| Gender distribution of KA cases | % of female among KA cases = number of female among KA cases / total number of KA cases * 100 | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| Age distribution of KA cases | % of children under 5 years among KA cases = number of children under 5 years among KA cases / total number of KA cases * 100 | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| | % of children 5 to 14 years among KA cases = number of children 5 to 14 years among KA cases / total number of KA cases * 100 | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| | % of KA cases over 14 years of age = number of KA cases over 14 years of age / total number of KA cases * 100 | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| DIAGNOSIS | | | |
| Confirmation by rapid diagnostic tests (RDTs) | % of KA new cases confirmed by RDTs = Number of KA new cases with positive result to RDT / Total number of confirmed (either laboratory of clinically) KA new cases * 100 | <ul style="list-style-type: none"> Applies only to new KA cases | <ul style="list-style-type: none"> Data from laboratory register |
| | % of positive RDTs = Number of positive RDTs / Total number of probable KA cases tested with RDTs * 100 | <ul style="list-style-type: none"> Applies only to new KA cases | |
| Confirmation by parasitology | % of KA cases confirmed by parasitology = Number of KA cases with positive slide / Total number of confirmed (either laboratory of clinically) KA cases * 100 | <ul style="list-style-type: none"> By type of patient (new/relapse) | <ul style="list-style-type: none"> Data from laboratory register |

¹In countries where KA is targeted for elimination as a public health problem, KA incidence should be maintained below the threshold of 1 new autochthonous + relapse KA case / 10,000 population, at the implementation unit level.

| | | | |
|----------------------------------|---|---|---|
| | $\% \text{ of positive slides} = \text{Number of positive slides} / \text{Total number of probable KA cases tested for parasitology} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| Clinical confirmation only | $\% \text{ of KA cases clinically confirmed} = \text{Number of KA cases confirmed based on clinical presentation} / \text{Total number of confirmed (either laboratory or clinically) KA cases} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| KA-HIV co-infection | $\% \text{ of KA-HIV co-infection} = \text{Number of KA cases co-infected with HIV (either oral reporting or laboratory testing)} / \text{Number of KA cases assessed for HIV (either oral reporting or laboratory testing)} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| | $\text{Coverage of HIV screening} = \text{Number of KA cases assessed for HIV (either oral reporting or laboratory testing)} / \text{Total number of KA cases} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| KA and malnutrition | $\% \text{ of patients with KA and acute or severe malnutrition} / \text{Total number of KA cases} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| TREATMENT | | | |
| KA cases treated (%) | $\text{Number of KA cases who started treatment} / \text{KA cases} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| Treatment delay | Mean time elapsed between onset of symptoms and treatment, in days | <ul style="list-style-type: none"> By type of patient (new/relapse) | |
| Treatment regimen distribution | $\% \text{ of KA cases treated, by treatment regimen} = \text{Number of KA cases treated, by treatment regimen} / \text{Total number of KA cases treated} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | |
| Severe adverse events | Number of severe or life-threatening adverse events among KA cases who have received treatment | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | <ul style="list-style-type: none"> To be reported also to the national pharmacovigilance system |
| Defaulter rate (%) | $\text{Number of defaulters} / \text{Total number of KA cases treated} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | |
| Completion rate (%) | $\text{Number of KA treatments completed} / \text{Number of KA treatments started}$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | |
| INITIAL TREATMENT OUTCOME | | | |
| Failure rate | $\text{Number of failure as initial treatment outcome} / \text{Total number of KA cases treated} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | |
| Case-fatality ratio | $\text{Number of death as initial treatment outcome (related or not to KA)} / \text{Total number of KA cases} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen By death category | |
| FINAL TREATMENT OUTCOME | | | |
| Relapse rate | $\text{Number of relapse between initial and final treatment outcome} / \text{Number of KA cases treated} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | <ul style="list-style-type: none"> This is the ideal indicator in case there is a cohort follow-up or individual data are computerized for KA cases. |
| | $\text{Number of relapse between initial and final treatment outcome} / \text{Number of KA cases followed-up at 6 months} * 100$ | <ul style="list-style-type: none"> By type of patient (new/relapse) By treatment regimen | <ul style="list-style-type: none"> In case there is no cohort follow-up and only aggregated data are computerized. |
| | $\text{Number of HIV-KA cases relapsed after treatment} / \text{Number of HIV-KA cases treated}$ | <ul style="list-style-type: none"> By treatment regimen | <ul style="list-style-type: none"> Based on a cohort follow-up |
| Cure rate | $\text{number of HIV-KA cases cured} / \text{number of HIV-KA cases treated}$ | <ul style="list-style-type: none"> By treatment regimen | <ul style="list-style-type: none"> Based on cohort follow-up |
| CASE SCREENING | | | |

| | | |
|---|---|----------------------------------|
| Number of people screened actively for KA | Number of people clinically screened for KA, either clinically or with rapid diagnostic tests, outside the health facility, during active screening activities. | • Active case detection register |
| Number of people tested passively for KA | Number of people tested with RDTs at the health facility | • Laboratory register |

List of Kala-azar Endemic Blocks in four states (N=633)

| Kala-azar endemic blocks West Bengal | | |
|--------------------------------------|----|--------------------------|
| District | SR | Block |
| Darjeeling | 1 | 1.Naxalbari |
| Darjeeling | 2 | 2.Phansidewa |
| Darjeeling | 3 | 3.Kharibari |
| Darjeeling | 4 | 4.Mirik Block |
| Darjeeling | 5 | 5.Kurseong Muni |
| Darjeeling | 6 | 6.Matigara |
| Darjeeling | 7 | 7. Siliguri SMC |
| UTTAR DINAJPUR | 8 | 1.Raiganj |
| UTTAR DINAJPUR | 9 | 2.Itahar |
| UTTAR DINAJPUR | 10 | 3.Kaliyaganj |
| UTTAR DINAJPUR | 11 | 4.Hemtabad |
| UTTAR DINAJPUR | 12 | 5.Karandighi |
| UTTAR DINAJPUR | 13 | 6.Chakulia |
| UTTAR DINAJPUR | 14 | 7.Lodhan |
| UTTAR DINAJPUR | 15 | 8.Islampur |
| UTTAR DINAJPUR | 16 | 9.Dalua (Chopra) |
| DAKSHIN DINAJPUR | 17 | 1.Hilli |
| DAKSHIN DINAJPUR | 18 | 2.Khaspur (Balurghat) |
| DAKSHIN DINAJPUR | 19 | 3.Kumarganj |
| DAKSHIN DINAJPUR | 20 | 4.Tapan |
| DAKSHIN DINAJPUR | 21 | 5.Gangarampur |
| DAKSHIN DINAJPUR | 22 | 6.Banshihari (Rashidpur) |
| DAKSHIN DINAJPUR | 23 | 7.Harirampur |
| DAKSHIN DINAJPUR | 24 | 8.Kushmandi |
| Hoogly | 25 | 1. Pandua |
| Hoogly | 26 | 2. Polba |
| Hoogly | | 3. SeramporeMnc |
| Hoogly | 28 | 4. RishraMnc |
| Hoogly | 29 | 5. Dhaniakhali |
| Hoogly | 30 | 6. BansberiaMnc |
| Hoogly | 31 | 7. Chandannagore M Corp |

| Kala-azar endemic blocks West Bengal | | |
|--------------------------------------|----|----------------------|
| District | SR | Block |
| Murshidabad | 62 | 15. Raninagar-I |
| Murshidabad | 63 | 16. Raninagar-II |
| Murshidabad | 64 | 17. Kandi |
| Murshidabad | 65 | 18. Behrampur |
| Murshidabad | 66 | 19. Beldanga-I |
| Murshidabad | 67 | 20. Lalbagh |
| Murshidabad | 68 | 21. Bharatpur II |
| Murshidabad | 69 | 22. Khargram |
| Murshidabad | 70 | 23. Hariharpara |
| Nadia | 71 | 1. Karimpur-I |
| Nadia | 72 | 2. Karimpur-II |
| Nadia | 73 | 3. Nakashipara |
| Nadia | 74 | 4. Tehatta-II |
| Nadia | 75 | 5. Ranaghat-II |
| Nadia | 76 | 6. Santipur |
| Nadia | 77 | 7. Krishnagar-I |
| Nadia | 78 | 8. Tehatta I |
| Nadia | 79 | 9. Haringhata |
| NORTH 24 PARGANAS | 80 | 1. Barasat-I |
| NORTH 24 PARGANAS | 81 | 2. Barasat-II |
| NORTH 24 PARGANAS | 82 | 3. Sandeshkhali-I |
| NORTH 24 PARGANAS | 83 | 4. Sandeshkhali-II |
| NORTH 24 PARGANAS | 84 | 5. Barrackpore-II |
| NORTH 24 PARGANAS | 85 | 6. Basirhat-II |
| NORTH 24 PARGANAS | 86 | 7. Gaighata |
| NORTH 24 PARGANAS | 87 | 8. Hingalganj |
| NORTH 24 PARGANAS | 88 | 10. Hasnabad |
| SOUTH 24 PARGANAS | 89 | 1. Basanti |
| SOUTH 24 PARGANAS | 90 | 2. Canning-I |
| SOUTH 24 PARGANAS | 91 | 3. Canning-II |
| SOUTH 24 PARGANAS | 92 | 4. Diamond Harbour-I |

| | | |
|-------------|----|----------------------|
| Malda | 33 | 1. H.C.Pur-I |
| Malda | 34 | 2. H.C.Pur-II |
| Malda | 35 | 3. Chanchal-I |
| Malda | 36 | 4. Chanchal-II |
| Malda | 37 | 5. Ratua-I |
| Malda | 38 | 6. Ratua-II |
| Malda | 39 | 7. Manikchak |
| Malda | 40 | 8. Gazole |
| Malda | 41 | 9. Bamongola |
| Malda | 42 | 10.Habibpur |
| Malda | 43 | 11.Old- Malda |
| Malda | 44 | 12.Eng.Bazar |
| Malda | 45 | 13.Kalichak-I |
| Malda | 46 | 14.Kalichak-II |
| Malda | 47 | 15. Kaliachak-III |
| Murshidabad | 48 | 1. Farakka |
| Murshidabad | 49 | 2. Samserganj |
| Murshidabad | 50 | 3. Suti-I |
| Murshidabad | 51 | 4. Suti-II |
| Murshidabad | 52 | 5.Raghunthganj-I |
| Murshidabad | 53 | 6.Raghunthganj-II |
| Murshidabad | 54 | 7. Sagardighi |
| Murshidabad | 55 | 8. Lalgola |
| Murshidabad | 56 | 9. Bhagawan-gola-I |
| Murshidabad | 57 | 10. Bhagawan-gola-II |
| Murshidabad | 58 | 11. Msd.Jiaganj |
| Murshidabad | 59 | 12. Nabagram |
| Murshidabad | 60 | 13. Domkal |
| Murshidabad | 61 | 14. Jalangi |

| | | |
|-------------------|-----|------------------------|
| SOUTH 24 PARGANAS | 93 | 5. Gosaba |
| SOUTH 24 PARGANAS | 94 | 6. Patharpratima |
| SOUTH 24 PARGANAS | 95 | 7.Baruipur |
| SOUTH 24 PARGANAS | 96 | 8.Kultali |
| SOUTH 24 PARGANAS | | 9.Mahestala Mnc |
| Burdwan | 97 | 1.Bhatar |
| Burdwan | 98 | 2.Purbasthali-II |
| Burdwan | 99 | 3. Parhati (Memari-II) |
| Burdwan | | 4.Srikhanda (Katwa I) |
| Burdwan | 100 | 5.Mongalkote |
| Burdwan | 101 | 6.Kurmun (Sadar I) |
| Burdwan | 102 | 7. Monteswar |
| Burdwan | 103 | 8. Jamalpur |
| Burdwan | 104 | 9. Burdwan Muni |
| Burdwan | 105 | 10. Aushgram-II |
| Burdwan | 106 | 11. Galsi I |
| Birbhum | 108 | 1. Nalhati-I |
| Birbhum | 109 | 2. Nalhati-II |
| Birbhum | 110 | 3. Murarai-I |
| Birbhum | 111 | 4. Labpur |
| Birbhum | 112 | 5. Rampurhat-I |
| Birbhum | 113 | 6. Rampurhat-II |
| Birbhum | 114 | 7. Murarai-II |
| Birbhum | 115 | 8. Md. Bazar |
| Birbhum | 116 | 9.Mayureswar-I |
| Birbhum | 117 | 10.Mayureswar-II |
| Birbhum | 118 | 11.Bolpur |
| Birbhum | 119 | 12. Sainthia |
| Birbhum | 120 | 13. Suri I |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|----|------------|
| District | SR | Block |
| Araria | 1 | Araria |
| Araria | 2 | Bhargama |
| Araria | 3 | Forbesganj |
| Araria | 4 | Jokihat |
| Araria | 5 | Kursakanta |
| Araria | 6 | Narpatganj |
| Araria | 7 | Palasi |
| Araria | 8 | Raniganj |
| Araria | 9 | Sikti |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|----|------------|
| District | SR | Block |
| Bhagalpur | 51 | Narayanpur |
| Bhagalpur | 52 | Nath Nagar |
| Bhagalpur | 53 | Naugachiya |
| Bhagalpur | 54 | Pirpaiti |
| Bhagalpur | 55 | Rangra |
| Bhagalpur | 56 | Sabour |
| Bhagalpur | 57 | Shahkund |
| Bhagalpur | 58 | Sultanganj |
| Bhagalpur | 59 | Sunhaura |

| | | |
|---------------------------------------|----|-------------------|
| Arwal | 10 | Arwal |
| Arwal | 11 | Banshi |
| Arwal | 12 | Kaler |
| Arwal | 13 | Karpi |
| Arwal | 14 | Kurtha |
| Banka | 15 | Amarpur |
| Banka | 16 | Banka |
| Banka | 17 | Barahat |
| Banka | 18 | Belhar |
| Banka | 19 | Bounsi |
| Banka | 20 | Chanan |
| Banka | 21 | Dhoraiya |
| Banka | 22 | Fulidumar |
| Banka | 23 | Katoriya |
| Banka | 24 | Rajaun |
| Banka | 25 | Shambhuganj |
| Begusarai | 26 | Bachwara |
| Begusarai | 27 | Bakhri |
| Begusarai | 28 | Ballia |
| Begusarai | 29 | Barauni |
| Begusarai | 30 | Begusarai |
| Begusarai | 31 | Bhagwanpur |
| Begusarai | 32 | Birpur |
| Begusarai | 33 | CheriyaBariyarpur |
| Begusarai | 34 | Chaurahi |
| Begusarai | 35 | Dandari |
| Begusarai | 36 | Garhpura |
| Begusarai | 37 | Khodawandpur |
| Begusarai | 38 | Mansoorchak |
| Begusarai | 39 | Matihani |
| Begusarai | 40 | Nawkothi |
| Begusarai | 41 | Sahebpur Kamal |
| Begusarai | 42 | Samho |
| Begusarai | 43 | Teghra |
| Bhagalpur | 44 | Bihpur |
| Bhagalpur | 45 | Gopalpur |
| Bhagalpur | 46 | Gouradih |
| Bhagalpur | 47 | Ismailpur |
| Bhagalpur | 48 | Jagdishpur |
| Bhagalpur | 49 | Kahalgaoon |
| Bhagalpur | 50 | Kharik |
| Kala-azar endemic blocks Bihar | | |

| | | |
|---------------------------------------|-----|-----------------|
| Bhojpur | 60 | Aara |
| Bhojpur | 61 | Angion |
| Bhojpur | 62 | Barhara |
| Bhojpur | 63 | Bihiya |
| Bhojpur | 64 | Char Pokhari |
| Bhojpur | 65 | Garhani |
| Bhojpur | 66 | Jagdishpur |
| Bhojpur | 67 | Koilwar |
| Bhojpur | 68 | Peero |
| Bhojpur | 69 | Sahar |
| Bhojpur | 70 | Sandesh |
| Bhojpur | 71 | Shahpur |
| Bhojpur | 72 | Tarari |
| Bhojpur | 73 | Udwant Nagar |
| Buxar | 74 | Brahmpur |
| Buxar | 75 | Buxar Sadar |
| Buxar | 76 | Chakki |
| Buxar | 77 | Chougai |
| Buxar | 78 | Chousa |
| Buxar | 79 | Dumrao |
| Buxar | 80 | Itarhi |
| Buxar | 81 | Kesath |
| Buxar | 82 | Nawanagar |
| Buxar | 83 | Rajpur |
| Buxar | 84 | Simri |
| Darbhanga | 85 | Alinagar |
| Darbhanga | 86 | Bahadurpur |
| Darbhanga | 87 | Baheri |
| Darbhanga | 88 | Benipur |
| Darbhanga | 89 | Beraul |
| Darbhanga | 90 | Goura-Bouram |
| Darbhanga | 91 | Ghanshyampur |
| Darbhanga | 92 | Hanumannagar |
| Darbhanga | 93 | Hayaghat |
| Darbhanga | 94 | Jalle |
| Darbhanga | 95 | K.Asthan |
| Darbhanga | 96 | Keoty |
| Darbhanga | 97 | Kiratpur |
| Darbhanga | 98 | Manigachi |
| Darbhanga | 99 | Sadar Darbhanga |
| Darbhanga | 100 | Satighat |
| Kala-azar endemic blocks Bihar | | |

| District | SR | Block |
|--------------|-----|----------------|
| Darbhanga | 101 | Singhwara |
| Darbhanga | 102 | Tardih |
| E. Champaran | 103 | Aadapur |
| E. Champaran | 104 | Areraj |
| E. Champaran | 105 | Banjaria |
| E. Champaran | 106 | Bankatwa |
| E. Champaran | 107 | Chakia |
| E. Champaran | 108 | Chauradano |
| E. Champaran | 109 | Chiraiya |
| E. Champaran | 110 | Dhaka |
| E. Champaran | 111 | Ghorasahan |
| E. Champaran | 112 | Harsiddhi |
| E. Champaran | 113 | Kalyanpur |
| E. Champaran | 114 | Kesariya |
| E. Champaran | 115 | Kotwa |
| E. Champaran | 116 | Madhuban |
| E. Champaran | 117 | Mehsi |
| E. Champaran | 118 | Motihari Sadar |
| E. Champaran | 119 | Paharpur |
| E. Champaran | 120 | Pakridayal |
| E. Champaran | 121 | Patahi |
| E. Champaran | 122 | Phenhara |
| E. Champaran | 123 | Piprakothi |
| E. Champaran | 124 | Ramgarhwa |
| E. Champaran | 125 | Raxual |
| E. Champaran | 126 | Sangrampur |
| E. Champaran | 127 | Sugauli |
| E. Champaran | 128 | Tetaria |
| E. Champaran | 129 | Turkauliya |
| Gopalganj | 130 | Barauli |
| Gopalganj | 131 | Baikunthpur |
| Gopalganj | 132 | Bhore |
| Gopalganj | 133 | Gopalganj |
| Gopalganj | 134 | Hathua |
| Gopalganj | 135 | Kataiya |
| Gopalganj | 136 | Kuchaikote |
| Gopalganj | 137 | Manjha |
| Gopalganj | 138 | Panchdeori |
| Gopalganj | 139 | Phulwaria |
| Gopalganj | 140 | Sidhwalia |
| Gopalganj | 141 | Thawe |

| District | SR | Block |
|------------|-----|-------------|
| Katihar | 151 | Amdabad |
| Katihar | 152 | Azamnagar |
| Katihar | 153 | Balrampur |
| Katihar | 154 | Barari |
| Katihar | 155 | Barsoi |
| Katihar | 156 | Dandkhora |
| Katihar | 157 | Falka |
| Katihar | 158 | Hasanganj |
| Katihar | 159 | Kadwa |
| Katihar | 160 | Katihar PHC |
| Katihar | 161 | Korha |
| Katihar | 162 | Kursela |
| Katihar | 163 | Manihari |
| Katihar | 164 | Mansahi |
| Katihar | 165 | Pranpur |
| Katihar | 166 | Sameli |
| Khagaria | 167 | Alauli |
| Khagaria | 168 | Beldaur |
| Khagaria | 169 | Chautham |
| Khagaria | 170 | Gogri |
| Khagaria | 171 | Khagaria |
| Khagaria | 172 | Mansi |
| Khagaria | 173 | Parbatta |
| Kishanganj | 174 | Bahadurganj |
| Kishanganj | 175 | Dighalbank |
| Kishanganj | 176 | Kishanganj |
| Kishanganj | 177 | Kochadhaman |
| Kishanganj | 178 | Pothia |
| Kishanganj | 179 | Terhagach |
| Kishanganj | 180 | Thakurganj |
| Lkahisarai | 181 | Barahiya |
| Lkahisarai | 182 | Halsi |
| Lkahisarai | 183 | Lakhisarai |
| Lkahisarai | 184 | Pipariya |
| Lkahisarai | 185 | Ramgarh |
| Lkahisarai | 186 | Surajgarha |
| Madhepura | 187 | Alam Nagar |
| Madhepura | 188 | Bihariganj |
| Madhepura | 189 | Chausa |
| Madhepura | 190 | Gamharia |
| Madhepura | 191 | Ghailar |

| | | |
|-----------|-----|-------------------------|
| Gopalganj | 142 | Uchkagaon |
| Gopalganj | 143 | Vijaypur |
| Jehanabad | 144 | Ghosi |
| Jehanabad | 145 | Hulasganj |
| Jehanabad | 146 | Sikariya(U/R Jehanabad) |
| Jehanabad | 147 | Kako |
| Jehanabad | 148 | Makhdumpur |
| Jehanabad | 149 | Okari |
| Jehanabad | 150 | Ratni Faridpur |

| | | |
|-----------|-----|---------------|
| Madhepura | 192 | Gwalpara |
| Madhepura | 193 | Kumarkhand |
| Madhepura | 194 | Madhepura |
| Madhepura | 195 | Murliganj |
| Madhepura | 196 | Puraini |
| Madhepura | 197 | Shankarpur |
| Madhepura | 198 | Singheshwar |
| Madhepura | 199 | Udakishanganj |
| Madhubani | 200 | Andhratharhi |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|-----|--------------|
| District | SR | Block |
| Madhubani | 201 | Babubarhi |
| Madhubani | 202 | Benipatti |
| Madhubani | 203 | Basopatti |
| Madhubani | 204 | Bisfi |
| Madhubani | 205 | Ghogardeha |
| Madhubani | 206 | Harlakhi |
| Madhubani | 207 | Jaynagar |
| Madhubani | 208 | Jhanjharpur |
| Madhubani | 209 | Kaluahi |
| Madhubani | 210 | Khajaauli |
| Madhubani | 211 | Khutauna |
| Madhubani | 212 | Ladania |
| Madhubani | 213 | Laikhnaur |
| Madhubani | 214 | Laukhi |
| Madhubani | 215 | Madhawapur |
| Madhubani | 216 | Madhepur |
| Madhubani | 217 | Pandaul |
| Madhubani | 218 | Phulpras |
| Madhubani | 219 | Rahika |
| Madhubani | 220 | Rajnagar |
| Munger | 221 | Assarganj |
| Munger | 222 | Bariyarpur |
| Munger | 223 | Dharahra |
| Munger | 224 | H.Kharagpur |
| Munger | 225 | Jamalpur |
| Munger | 226 | Munger Sadar |
| Munger | 227 | Sangrampur |
| Munger | 228 | Tarapur |
| Munger | 229 | Tetia Bamber |
| Muzaffarpur | 230 | Paroo |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|-----|-------------------|
| District | SR | Block |
| Nawada | 251 | Meskaur |
| Nawada | 252 | Nardigang |
| Nawada | 253 | Narhat |
| Nawada | 254 | Nawada |
| Nawada | 255 | PakriBarawan |
| Nawada | 256 | Rajuli |
| Nawada | 257 | Roh |
| Nawada | 258 | Sirdalla |
| Nawada | 259 | Warsaliganj |
| Nalanda | 260 | Asthama |
| Nalanda | 261 | Ben |
| Nalanda | 262 | Bind |
| Nalanda | 263 | Chandi |
| Nalanda | 264 | Ekangar Sarai |
| Nalanda | 265 | Giriyak |
| Nalanda | 266 | Harnaut |
| Nalanda | 267 | Hilsa |
| Nalanda | 268 | Islampur |
| Nalanda | 269 | Kariaparsurai |
| Nalanda | 270 | Katri Saria |
| Nalanda | 271 | Nagarnausa |
| Nalanda | 272 | Noorsarai |
| Nalanda | 273 | ParwalPur |
| Nalanda | 274 | Rahui |
| Nalanda | 275 | Rajgir |
| Nalanda | 276 | Sadar Biharsharif |
| Nalanda | 277 | Sarmera |
| Nalanda | 278 | Silao |
| Nalanda | 279 | Tharthari |
| Patna | 280 | Athamalgola |

| | | |
|-------------|-----|-----------|
| Muzaffarpur | 231 | Aurai |
| Muzaffarpur | 232 | Bandra |
| Muzaffarpur | 233 | Bochaha |
| Muzaffarpur | 234 | Gaighat |
| Muzaffarpur | 235 | Kanti |
| Muzaffarpur | 236 | Katra |
| Muzaffarpur | 237 | Kurhani |
| Muzaffarpur | 238 | Marwan |
| Muzaffarpur | 239 | Minapur |
| Muzaffarpur | 240 | Motipur |
| Muzaffarpur | 241 | Muraul |
| Muzaffarpur | 242 | Mushhari |
| Muzaffarpur | 243 | Sahebganj |
| Muzaffarpur | 244 | Sakra |
| Muzaffarpur | 245 | Saraiya |
| Nawada | 246 | Akberpur |
| Nawada | 247 | Govindpur |
| Nawada | 248 | Hisua |
| Nawada | 249 | Kashichak |
| Nawada | 250 | Kawakol |

| | | |
|-------|-----|-------------------------|
| Patna | 281 | Bakhtiyarpur |
| Patna | 282 | Barh |
| Patna | 283 | Belchi |
| Patna | 284 | Bihta |
| Patna | 285 | Bikram |
| Patna | 286 | Danapur |
| Patna | 287 | Daniyama |
| Patna | 288 | Dhanarua |
| Patna | 289 | Dhulhinbazar |
| Patna | 290 | Fatuha |
| Patna | 291 | Ghoshwari |
| Patna | 292 | Khusrupur |
| Patna | 293 | Maner |
| Patna | 294 | Masaurhi |
| Patna | 295 | Mokama |
| Patna | 296 | Naubatpur |
| Patna | 297 | Paliganj |
| Patna | 298 | Pandararak |
| Patna | 299 | Patna Sadar/Corporation |
| Patna | 300 | Phulwari Sharif |

| Kala-azar endemic blocks Bihar | | |
|---------------------------------------|-----------|-----------------------|
| District | SR | Block |
| Patna | 301 | Punpun |
| Patna | 302 | Sampatchak |
| Purnea | 303 | Aamour |
| Purnea | 304 | Barhara Koti(B.Kothi) |
| Purnea | 305 | Baisa |
| Purnea | 306 | Banmankhi |
| Purnea | 307 | Baisee |
| Purnea | 308 | Bhawanipur |
| Purnea | 309 | Dagaruwa |
| Purnea | 310 | Dhamdhaha |
| Purnea | 311 | Jalalgarh |
| Purnea | 312 | K.Nagar |
| Purnea | 313 | Kasba |
| Purnea | 314 | Purnea East |
| Purnea | 315 | Rupauli |
| Purnea | 316 | Shri Nagar |
| Saharsa | 317 | BanmaItahri |
| Saharsa | 318 | Mahisi |
| Saharsa | 319 | Nauhatta |
| Saharsa | 320 | PanchGachiya |

| Kala-azar endemic blocks Bihar | | |
|---------------------------------------|-----------|---------------|
| District | SR | Block |
| Saran | 351 | Garkha |
| Saran | 352 | Ishuapur |
| Saran | 353 | Lahladpur |
| Saran | 354 | Maker |
| Saran | 355 | Marhaura |
| Saran | 356 | Mashrakh |
| Saran | 357 | Nagra |
| Saran | 358 | Panapur |
| Saran | 359 | Parsa |
| Saran | 360 | Sonepur |
| Saran | 361 | Ekma |
| Saran | 362 | Jalalpur |
| Saran | 363 | Manjhi |
| Saran | 364 | Revilganj |
| Saran | 365 | Sadar Chapra |
| Saran | 366 | Taraiya |
| Sheikhpura | 367 | Ariari |
| Sheikhpura | 368 | Barbigaha |
| Sheikhpura | 369 | Chewara |
| Sheikhpura | 370 | Ghat Kusumbha |

| | | |
|------------|-----|-------------------------|
| Saharsa | 321 | Patarghat |
| Saharsa | 322 | Sadar Prakhanda Saharsa |
| Saharsa | 323 | Salkhua |
| Saharsa | 324 | Simri Bakhtiyarpur |
| Saharsa | 325 | Sonbarsa |
| Saharsa | 326 | Saur Bazar |
| Samastipur | 327 | Bibhutipur |
| Samastipur | 328 | Bithan |
| Samastipur | 329 | Dalsingh Sarai |
| Samastipur | 330 | Hasanpur |
| Samastipur | 331 | Kalyanpur |
| Samastipur | 332 | Khanpur |
| Samastipur | 333 | Mohaddin Nagar |
| Samastipur | 334 | Mohanpur |
| Samastipur | 335 | Morwa |
| Samastipur | 336 | Patori |
| Samastipur | 337 | Pusa |
| Samastipur | 338 | Rosera |
| Samastipur | 339 | Samastipur |
| Samastipur | 340 | Sarai Ranjan |
| Samastipur | 341 | Shivajinagar |
| Samastipur | 342 | Singhia |
| Samastipur | 343 | Tajpur |
| Samastipur | 344 | Ujjiyarpur |
| Samastipur | 345 | Vidyapatnagar |
| Samastipur | 346 | Warisnagar |
| Saran | 347 | Dighwara |
| Saran | 348 | Amnaur |
| Saran | 349 | Baniyapur |
| Saran | 350 | Dariyapur |

| | | |
|------------|-----|-----------------|
| Sheikhpura | 371 | Sheikhpura |
| Sheikhpura | 372 | Sheikhopursarai |
| Sheohar | 373 | DumriKatsari |
| Sheohar | 374 | Piprahi |
| Sheohar | 375 | Purnahiya |
| Sheohar | 376 | Sheohar |
| Sheohar | 377 | Tariyani |
| Sitamarhi | 378 | Bairgania |
| Sitamarhi | 379 | Bajpatti |
| Sitamarhi | 380 | Bathanaha |
| Sitamarhi | 381 | Belsand |
| Sitamarhi | 382 | Bokhara |
| Sitamarhi | 383 | Chaurat |
| Sitamarhi | 384 | Dumra |
| Sitamarhi | 385 | Mejor Ganj |
| Sitamarhi | 386 | Nanpur |
| Sitamarhi | 387 | Parihar |
| Sitamarhi | 388 | Parsauni |
| Sitamarhi | 389 | Pupri |
| Sitamarhi | 390 | Riga |
| Sitamarhi | 391 | Runni Saidpur |
| Sitamarhi | 392 | Sonvarsa |
| Sitamarhi | 393 | Suppi |
| Sitamarhi | 394 | Sursand |
| Siwan | 395 | Basatpur |
| Siwan | 396 | Bhagwanpur |
| Siwan | 397 | Goriyakothi |
| Siwan | 398 | Lakri Nabiganj |
| Siwan | 399 | Maharajganj |
| Siwan | 400 | Nautan |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|-----|--------------|
| District | SR | Block |
| Siwan | 401 | Ander |
| Siwan | 402 | Barharia |
| Siwan | 403 | Darauli |
| Siwan | 404 | Daraundha |
| Siwan | 405 | Guthani |
| Siwan | 406 | Hassanpura |
| Siwan | 407 | Hussain Ganj |
| Siwan | 408 | Mairwa |
| Siwan | 409 | Pachrukhi |

| Kala-azar endemic blocks Bihar | | |
|--------------------------------|-----|---------------|
| District | SR | Block |
| W. Champaran | 451 | Mainatar |
| W. Champaran | 452 | Majhauria |
| W. Champaran | 453 | Narkatiyaganj |
| W. Champaran | 454 | Nautan |
| W. Champaran | 455 | Piprasi |
| W. Champaran | 456 | Ramnagar |
| W. Champaran | 457 | Sikata |
| W. Champaran | 458 | Thakraha |

| | | |
|--------------|-----|--------------|
| Siwan | 410 | Raghunathpur |
| Siwan | 411 | Siswan |
| Siwan | 412 | Siwan sadar |
| Siwan | 413 | Ziradei |
| Supaul | 414 | Basantpur |
| Supaul | 415 | Chhatapur |
| Supaul | 416 | Kishanpur |
| Supaul | 417 | Marauna |
| Supaul | 418 | Nirmali |
| Supaul | 419 | Pipra |
| Supaul | 420 | Pratapganj |
| Supaul | 421 | Raghopur |
| Supaul | 422 | Sarai Garh |
| Supaul | 423 | Supaul |
| Supaul | 424 | Triveniganj |
| Vaishali | 425 | Bhagwanpur |
| Vaishali | 426 | BidduPur |
| Vaishali | 427 | Chehra Kala |
| Vaishali | 428 | Desri |
| Vaishali | 429 | Goraul |
| Vaishali | 430 | Hajipur |
| Vaishali | 431 | Jandaha |
| Vaishali | 432 | Lalganj |
| Vaishali | 433 | Mahnar |
| Vaishali | 434 | Mahua |
| Vaishali | 435 | PatehiBelsar |
| Vaishali | 436 | Patepur |
| Vaishali | 437 | Raghopur |
| Vaishali | 438 | Rajapakar |
| Vaishali | 439 | SahdeiBujurg |
| Vaishali | 440 | Vaishali |
| W. Champaran | 441 | Bagaha-I |
| W. Champaran | 442 | Bagaha-II |
| W. Champaran | 443 | Bairia |
| W. Champaran | 444 | Bettiah |
| W. Champaran | 445 | Bhitaha |
| W. Champaran | 446 | Chanpatia |
| W. Champaran | 447 | Gaunaha |
| W. Champaran | 448 | Jogapatti |
| W. Champaran | 449 | Lauria |
| W. Champaran | 450 | Madhubani |

| Kala-azar endemic blocks Jharkhand | | |
|---|-----------|--------------|
| District | SR | Block |
| Sahibganj | 1 | Sahibganj |
| | 2 | Borio |
| | 3 | Mandro |
| | 4 | Barhait |
| | 5 | Pathna |
| | 6 | Barharwa |
| | 7 | Rajmahal |
| | 8 | Udhwa |
| | 9 | Taljhari |
| Godda | 10 | Godda |
| | 11 | Poraiyahat |
| | 12 | Pathargama |
| | 13 | Meharma |
| | 14 | Mahagama |
| | 15 | Boarijore |
| | 16 | Sundarpahari |
| | 17 | Thakurgangti |
| Pakur | 18 | Maheshpur |
| | 19 | Pakuria |
| | 20 | Pakur |
| | 21 | Hiranpur |
| | 22 | Littipara |
| | 23 | Amrapara |
| Dumka | 24 | Dumka |
| | 25 | Jama |
| | 26 | Shikaripara |
| | 27 | Raneshwar |
| | 28 | Masalia |
| | 29 | Kathikund |
| | 30 | Gopikandar |
| | 31 | Ramgarh |
| | 32 | Jarmundi |
| | 33 | Saraiahhat |

| Kala-azar endemic blocks in Uttar Pradesh | | |
|--|-----------|--------------|
| District | SR | Block |
| Kushinagar | 1 | Kubersthan |
| | 2 | Kasya |
| | 3 | Tamkuhi |
| | 4 | Tarya Sujan |
| | 5 | Dudhi |
| | 6 | Fazilnagar |
| | 7 | Vishnupura |
| Ballia | 8 | Baina |
| | 9 | Kotwa |
| | 10 | Reoti |
| | 11 | Dubhar |
| | 12 | Narhi |
| | 13 | Maniyar |
| Deoria | 14 | Bankata |
| | 15 | Deshi Deoria |
| | 16 | Mahen |
| | 17 | Pather Deva |
| Gorakhpur | 18 | Sardarnagar |
| Sultanpur | 19 | Bhadaiya |
| Jaunpur | 20 | Dobhi |
| Ghazipur | 21 | Manihari |
| | 22 | Mohamadabad |

