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IAMAT publication
*Be Aware of
Schistosomiasis*



World Schistosomiasis Risk Chart

Geographical distribution of Schistosomiasis and principal snail vectors

2015 Edition

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SCHISTOSOMIASIS COUNTRY INFORMATION

Algeria	G1
Angola	S.h., S.m., A2 (II, V, IX)
Antigua and Barbuda	G3 (VII)
Benin	S.h., S.m., S.g., A (I, II, IX)
Botswana	S.h., S.m., D4 (II, V, IX)
Brazil	S.m., C5 (VII, X, XI)
Burkina Faso	S.h., S.m., S.g., A6 (I, II, IX)
Burundi	S.m., C7 (VI)
Cambodia	S.me., D8 (XIX)
Cameroon	S.h., S.m, S.g., A9 (I, II, III, IV, IX)
Central Africa Republic	S.h., S.m., B10 (I, II, III, IX)
Chad	S.h., S.m., F11 (I, III, IX)
China	S.j., C12 (XV)
Congo – Dem. Rep.	S.h., S.m., S.j, F13 (II, V, VI, IX)
Congo – Republic	S.h., S.m., F14 (I, II, VI)
Côte d'Ivoire	S.h., S.m., B15 (I, II, IX)
Djibouti	G16
Dominican Republic	G17
Egypt	S.h., S.m., C18 (I, VIII)
Equatorial Guinea	S.g., F19 (III)
Eritrea	S.m., C20 (XI, XII)
Ethiopia	S.h., S.m., A21 (V, VI, IX, XII)
France	S.h. D22 (XIV)
Gabon	S.h., S.m., S.g., F23 (I, III)
Gambia	S.h., S.m., A24 (I, IV, VI, IX)
Ghana	S.h., S.m., A (I, II, IX)

Guadeloupe	G25
Guinea	S.h., S.m., B26 (II, IX)
Guinea-Bissau	S.h., C27 (II)
India	G28
Indonesia	S.j. D29 (XV)
Iran	G30
Iraq	S.h., D31 (I)
Japan	G32 (XVII)
Jordan	G33
Kenya	S.h., S.m., C34 (II, V, VI, IX, XII)
Laos	S.me., D35 (XIX)
Lebanon	G36
Liberia	S.h., S.m., C37 (II, IX)
Libya	S.h., S.m., D38 (I, II, VIII)
Madagascar	S.h., S.m., E39 (VI, IX)
Malawi	S.h. S.m., A40 (II, IX)
Malaysia	G41
Mali	S.h., S.m., S.g., C42 (I, III, IX)
Martinique	G43
Mauritania	S.h., S.m., F44 (II, IV, VI)
Mauritius	G45
Montserrat	G46
Morocco	G47
Mozambique	S.h., S.m., A (II, V, IX)
Namibia	S.h., S.m., D48 (II, V, IX)
Niger	S.h., S.m., A49 (IX)

Nigeria	S.h., S.m., S.g., A (I, II, IV, IX)
Oman	S.m., D50 (XIII)
Philippines	S.j., C51 (XVI)
Puerto Rico	G52 (VII)
Rwanda	S.m., E53 (VI, IX, XII)
Saint Lucia	S.m., D54 (VII)
São Tomé and Príncipe	S.g., F55 (III)
Saudi Arabia	E56 (I, VI, XII)
Senegal	S.h., S.m., A57 (I, IV, VI, IX)
Sierra Leone	S.h., S.m., C58 (II, IX)
Somalia	S.h., C59 (VI)
South Africa	S.h., S.m., S.ma., D60 (II, V, IX)
South Sudan	S.h., S.m., A61 (I, II, IX, XII)
Sudan	S.h., S.m., A (I, II, IX, XII)
Suriname	S.m., D62 (VII)
Swaziland	S.h., S.m., S.ma., A (II, V, IX)
Syria	S.h., D63 (I)
Tanzania	S.h., S.m., C64 (I, II, V, VI, IX, XII)
Thailand	G65
Togo	S.h., S.m., A (II, III, IX)
Tunisia	G66
Turkey	G67
Uganda	S.h., S.m., A68 (II, VI, IX, XII)
Venezuela	S.m., D69 (VII)
Yemen	S.h., S.m., A70 (I, VI, VIII, IX, XIII)
Zambia	S.h., S.m., S.ma., A (II, IX)
Zimbabwe	S.h., S.m., A (II, IX)

For references to roman numerals, see Page 2.

SCHISTOSOMIASIS RISK CODES










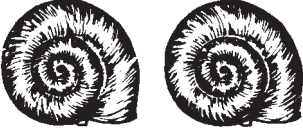





Risk of Schistosomiasis caused by:

S.h.	S. haematobium
S.m.	S. mansoni
S.j.	S. japonicum
S.me.	S. mekongi
S.mal.	S. malayensis
S.g.	S. guineensis
S.i.	S. intercalatum
S.ma.	S. mattheei (rarely transmitted to humans)

Schistosomiasis risk presence:

A	Whole country, including urban areas.	E	Most of country, except areas described.
B	Whole country, full extent of risk unknown due to incomplete mapping.	F	Full extent of risk unknown due to fragmentary research.
C	Limited to some regions, area described.	G	Schistosomiasis transmission is interrupted. Country awaiting evaluation and verification from World Health Organization for confirmation.
D	Described areas only.		

Roman numerals refer to the principal specific snail acting as intermediate host. Illustrations are actual size unless otherwise specified.

I	Bulinus truncatus		XI	Biomphalaria tenagophila	
II	Bulinus globosus		XII	Biomphalaria sudanica	
III	Bulinus forskalii		XIII	Biomphalaria arabica (No illustration available)	
IV	Bulinus senegalensis		XIV	Species not identified	
V	Bulinus africanus		XV	Oncomelania hupensis (x 2.4 natural size)	
VI	See text for intermediate snail host		XVI	Oncomelania quadras (x 2.4 natural size)	
VII	Biomphalaria glabrata		XVII	Oncomelania nosophora (x 2.4 natural size)	
VIII	Biomphalaria alexandrina		XVIII	Ferrissia tenuis (x 6.5 natural size)	
IX	Biomphalaria pfeifferi		XIX	Neotricula aperta (No illustration available)	
X	Biomphalaria straminea				

Is it safe to swim?
What about white water rafting?

Even if there is no Schistosomiasis risk in the lake, pond, river or stream, you may still be at risk of other illnesses. It may look clean, but consider industrial contamination, agricultural run-off, human or animal waste, and infections like *E. coli* and Leptospirosis before jumping in.

1 Algeria: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Schistosomiasis was previously reported in the municipality of Khemis El-Khechna (El Hamiz River dam) in the province of Boumerdès and in the oases of Djanet, Iherir and Tamadjert (Tassili N'Ajjer National Park) in the province of Illizi. Snail intermediate host: *Bulinus truncatus*.

2 Angola: *S. haematobium* is endemic throughout Angola. *S. mansoni* is endemic in the northern parts of the country, primarily in the provinces of Cabinda, Uige, Zaire, Cuanza Norte, Cuanza Sul, Malaje, and Lunda Norte.

3 Antigua and Barbuda: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Schistosomiasis was previously reported in Sweets, Liberta, Bendals and the areas surrounding the settlement of John Hughes. Snail intermediate host: *Biomphalaria glabrata*.

4 Botswana: *S. mansoni* is present in North-West District particularly along the Okavango River and marshlands, and in the villages along the Chobe River.

S. haematobium has been reported along the Limpopo River valley and its tributaries. Localized risk has been reported in Mabule (on the Molopo River), Kanye, and the northeastern areas of Southern District; Lobatse, Otse, Ramotswa, and Gaborone in South-East District; Molepolole and the southeastern areas of Kweneng District; Mochudi and southern areas of Kgatleng District; Xhumo, Nata and areas extending north between the Limpopo River and Palapye (Central District); Francistown (North-East District); Tsau, Maun, Kavimba, Kasane, and Pandamatenga (North-West District).

Note: The Districts of Kgalagadi and Ghanzi (Kalahari Desert) are risk free. Botswana has implemented an integrated Schistosomiasis elimination plan which has kept the disease under control. Risk increases with rainfall and water flow patterns.

5 Brazil: Public health control programs are ongoing and incidence rates have been reduced. *S. mansoni* is present in rural and suburban areas of the following states, especially around irrigation systems. The full extent of Schistosomiasis risk in Brazil is unknown, especially in the Amazon Basin.

• **North Region:** rural areas of the southern part of Sonora and southern part of Chihuahua, Sinaloa, Durango and Nayarit.

• **Northeastern Region:** Maranhão, Piauí, Ceara, Rio Grande do Norte, Paraíba, Pernambuco, Alagoas, Sergipe, Bahia.

• **Southeastern Region:** Minas Gerais, Espírito Santo, Rio de Janeiro.

• **South Region:** São Paulo, Paraná (including localized risk at Iguazu Falls), Santa Catarina, Rio Grande do Sul.

6 Burkina Faso: *S. haematobium* and *S. mansoni* are endemic throughout the country. *S. guineensis* is also present. Burkina Faso has implemented a national plan to control and eliminate Schistosomiasis resulting in reduced prevalence of the disease.

7 Burundi: *S. mansoni* is endemic along Lake Tanganyika and the Rusizi Plain, including the capital Bujumbura (provinces of Bujumbura Mairie, Bujumbura Rural and Bururi). Risk is also present in the villages around Lake Cyohoha Sud and Lake Rwihinda (province of Kirundo) and has also been reported from the provinces of Chibitoke and Ruyigi. Additional snail intermediate hosts: *Biomphalaria choanomphala* and *Biomphalaria stanleyi*.

Note: The highlands of central, eastern and southern Burundi are considered risk free. Burundi has implemented a national plan to control and eliminate Schistosomiasis resulting in reduced prevalence of the disease.

8 Cambodia: *S. mekongi* is present in Stung Treng District (Stung Treng Province) and Kratié Province in the towns and villages along the Mekong River.

Note: Cambodia has implemented a plan to control and eliminate Schistosomiasis in affected regions resulting in reduced prevalence of the disease. However, the lack of improved sanitation and living conditions increase the risk of re-infection.

9 Cameroon: *S. haematobium* and *S. mansoni* are endemic throughout Cameroon. *S. haematobium* is highly endemic in the regions of Far North and North (Sahel area), and in the regions of Southwest and Littoral. *S. mansoni* is highly endemic in the regions of Far North, North, Adawama and Southwest. *S. guineensis* has been reported in the regions of Centre and Littoral.

10 Central African Republic: *S. mansoni* is endemic throughout the country. The full extent of Schistosomiasis risk in the country is unknown.

11 Chad: *S. haematobium* is endemic in the southern departments, including Moyen-Chari, Logone Occidental, Tandjilé, Mayo-Kebbi Est, Hadjer-Lamis, N'Djamena, and Chari-Baguimi (western border with Cameroon) as well as the northwestern region of Tibesti and eastern region of Wadi Fira.

The full extent of Schistosomiasis risk in Chad is unknown. Travellers should consider all oases as well as temporary and permanent bodies of water at risk.

12 China: Extensive Schistosomiasis control programs have successfully eradicated *S. japonicum* from many previously endemic areas. Cases are reported from along the Yangtze River, including tributaries and adjacent lakes of the following provinces: Jiangsu, Anhui, Jiangxi (around Lake Poyang and on the eastern border with Zhejiang and Fujian), Hubei (area north of Wuhan as far as Xiangyang and in the south just before the Three Gorges Dam), and in Hunan (around Lake Dongting and the area of Changsha). Cases are also reported in Sichuan Province in the irrigation system around Chengdu and in the area of Xichang between the Yalong and Anning rivers. In Yunnan province, cases are reported from the area surrounding Lijiang, including the Yangtze and Mekong (Lancang) River valleys, and further south to Lake Erhai and Weishan.

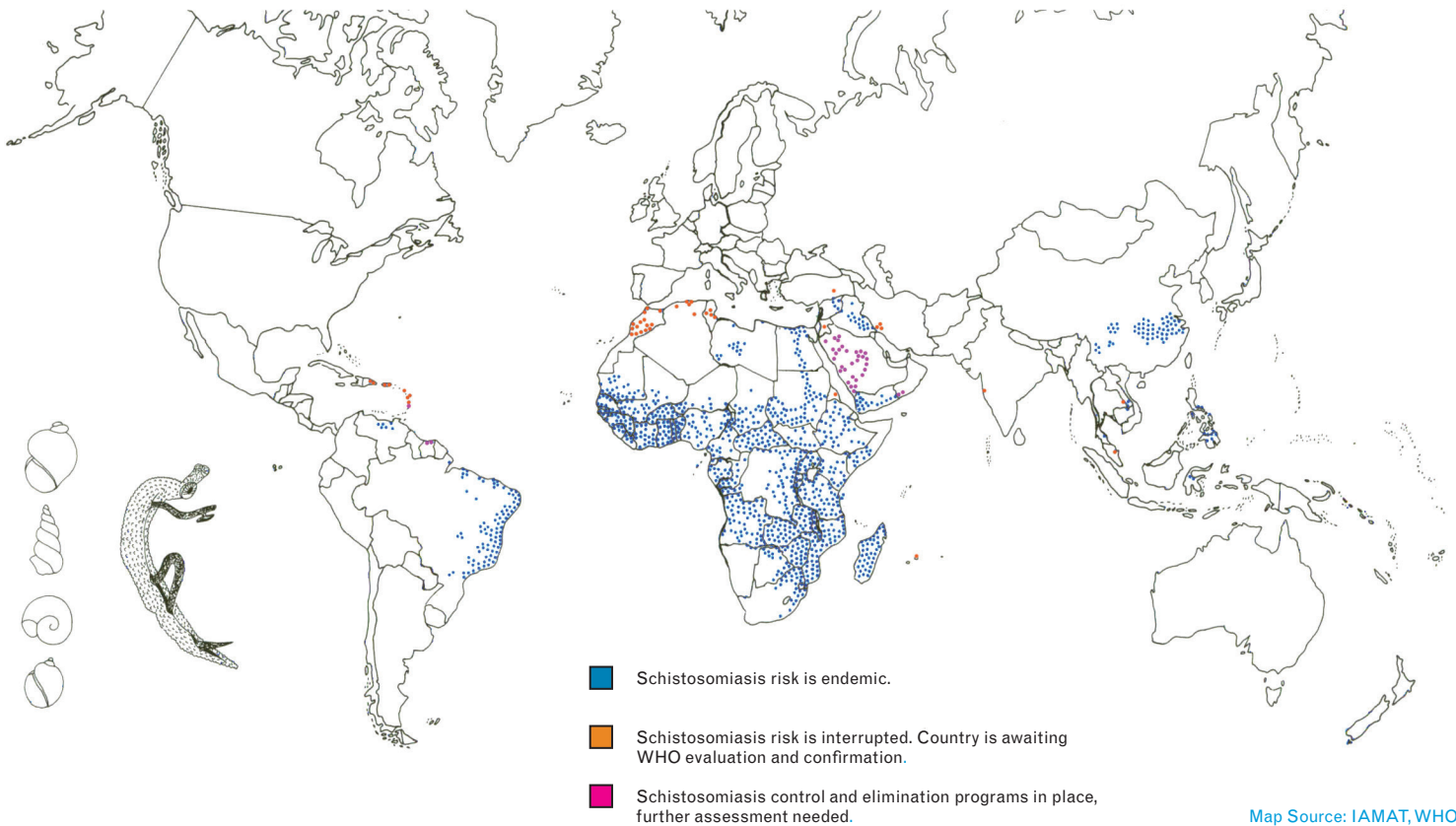
13 Congo - Dem. Rep.: *S. haematobium* and *S. mansoni* are endemic in the provinces of Orientale, Maniema, Katanga, Kinshasa, and Bas-Congo. Cases are reported from Lake Kivu and Lake Tanganyika. *S. intercalatum* has been reported from the provinces of Orientale and Maniema.

The full extent of Schistosomiasis risk in the Democratic Republic of Congo is unknown. Additional snail intermediate hosts for *S. mansoni*: *Biomphalaria choanomphala*, *Biomphalaria smithi* and *Biomphalaria stanleyi*.

14 Congo - Republic: *S. haematobium* is endemic in the departments of Lékoumou, Niari, Kouilou, Pointe Noire, Bouenza, Pool, and Brazzaville. The department of Sangha is non-endemic.

The full extent of *S. mansoni* and *S. haematobium* risk in the Congo is unknown. Snail intermediate host for *S. mansoni*: *Biomphalaria camerunensis*.

15 Côte d'Ivoire: *S. mansoni* and *S. haematobium* are endemic throughout the country. The full extent of Schistosomiasis risk in Côte d'Ivoire is unknown, especially in parts of the following regions: Zanzan, Vallée du Bandama, N'zi-Comoé, Lagunes, and Haut-Sassandra.



16 Djibouti: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Snail intermediate host: *Bulinus truncatus*.

17 Dominican Republic: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Cases were previously reported in the eastern interior region in the provinces of Hato Mayor, El Seibo, and La Altagracia (in the area of Higüey). Snail intermediate host: *Biomphalaria glabrata*.

18 Egypt: Egypt has implemented Schistosomiasis control and elimination initiatives resulting in reduced prevalence of the disease. Cases are reported from the Nile Delta region, including in the areas of Faiyum and the Suez Canal zone, and along the Nile River down to the Aswan Dam area.

19 Equatorial Guinea: *S. guineensis* has been reported in the area of Bata.

The full extent of Schistosomiasis risk in the Equatorial Guinea is unknown.

20 Eritrea: *S. mansoni* is endemic in the regions of Gash-Barka, Anseba, Debub, Maekel, and Northern Red Sea especially around irrigation projects.

21 Ethiopia: *S. mansoni* is endemic in Ethiopia, including in the Omo, Awash, and Blue Nile river valleys. *S. haematobium* is also present, specifically in the lower Awash Valley, along the Shebelle River in Ogaden (Somali Region) on the border with Somalia, and in the western part of the country on the border with South Sudan. Additional intermediate snail host for *S. haematobium*: *Bulinus abyssinicus*.

22 France: Local transmission of *S. haematobium* was reported recently from Corsica. Travellers swimming in the Cavu River (commune of Zonza) north of Porto Vecchio were diagnosed with Schistosomiasis. Public health authorities are conducting epidemiological investigations to determine transmission patterns, including the intermediate snail host involved.

23 Gabon: Risk of *S. haematobium* has been identified in the provinces of Estuaire, Moyen Ogooué, Ngounié, Nyanga, and Ogooué-Lolo. *S. guineensis* has also been reported throughout the country. The full extent of Schistosomiasis risk in the Gabon is unknown.

24 Gambia: *S. haematobium* and *S. mansoni* are endemic along the Gambia River basin. Snail intermediate host for *S. haematobium*: *Bulinus jousseaumei*.

25 Guadeloupe: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Cases were previously reported from the entire island of Grande-Terre and the coastal areas of Basse-Terre. Snail intermediate host: *Biomphalaria glabrata*.

26 Guinea: *S. haematobium* and *S. mansoni* are endemic throughout Guinea, although the full extent of Schistosomiasis risk is unknown, specifically in the regions of Mamou and Faranah.

27 Guinea-Bissau: *S. haematobium* is endemic in Guinea-Bissau, particularly in the valleys of the Cacheu and Géba rivers, and along the border with Guinea. There is no Schistosomiasis risk on the islands in the Bijagós Archipelago.

28 India: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in the area around Gimvi (district of Ratnagiri, Maharashtra) in the hills along the Konkan coast south of Mumbai. Snail intermediate host: *Ferrissia tenuis*.

29 Indonesia: Only the province of Central Sulawesi is considered endemic. Risk is present in the Lindu Valley and localized around Lake Lindu (Anca, Langko, Tomado and Puro'o) and in the Napu Valley (about 50 km southeast of Lindu Valley (Wuasa, Maholo, Winowanga, Alitupu and Watumaeta). Indonesia has implemented a plan to control and eliminate Schistosomiasis in the area, resulting in reduced prevalence of the disease. Snail intermediate host: *Oncomelania hupensis lindoenis*.

30 Iran: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in the plains of the province of Khuzestan on the southwestern border with Iraq, specifically Sūsangerd (Dasht Mishan), Khorramshahr, Hamidiyeh, Ahvaz, Dezful, Shushtar, Mian Ab, Haft Tapeh, including the Sardasht area. Snail intermediate host: *Bulinus truncatus*.

31 Iraq: Iraq has implemented a Schistosomiasis control and elimination program resulting in reduced prevalence of the disease. *S. haematobium* cases have been reported along

the entire Euphrates and Tigris (as far north as Samarra) river systems, their tributaries, irrigation canals, marsh areas, and urban areas. Isolated cases have been reported in the area of Tall Kayf (Nineveh Governorate) and in Al Qa'im (Al-Anbar Governorate).

Note: The mountainous regions of the northeastern part of the country bordering Iran, namely the provinces of Erbil, Kirkuk, and Sulaymaniyah are risk free.

32 Japan: Transmission of *S. japonicum* has been interrupted in humans and the disease is considered eradicated from Japan. However, the intermediate snail host *Oncomelania nosophora* is present in the Kofu basin (Yamanashi Prefecture) and along the Obitsu River (Chiba Prefecture). Monitoring programs continue to be in place.

33 Jordan: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported from Wadi Al Hasa and Ghor Al Safi (Karak Governorate) and in agricultural villages in the southern Jordan Valley near the Dead Sea. Snail intermediate host: *Bulinus truncatus*.

34 Kenya: *S. haematobium* and *S. mansoni* are endemic in Kenya, especially in the irrigated agricultural zones and densely populated urban and suburban areas around Lake Victoria, adjacent islands, and on the Kano Plain (districts of Bondo, Kisumu East, Kisumu West, Nyando, Rachuonyo, Homa Bay, and Suba in Nyanza Province).

Risk is also present on the plains to the north, east, and northeast of Nairobi, especially in the districts of Kitui and Machakos; the lower valley of the Tana River in the southeastern part of the country extending from the towns of Garissa to Hola; the Indian Ocean coastal areas from Lamu to the border with Tanzania, including the area of Mombasa; Lake Jipe and surrounding areas, including Taveta, Wundanyi, and Voi. Localized risk exists in Wajir and Wajir Bor in North Eastern Province and in Kimilili in Western Province. Additional snail intermediate hosts: *Bulinus ugandae*, *Bulinus tropicus* and *Bulinus nasutus* for *S. haematobium*; *Biomphalaria choanophala* for *S. mansoni*.

35 Laos: Risk of *S. mekongi* is present on Khong Island in the Mekong River bordering Cambodia as well as in the districts of Pak Sé and Champassak further north.

36 Lebanon: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in the area of the

Litani River delta near Sarafand between Tyre and Sidon. Snail intermediate host: *Bulinus truncatus*.

37 Liberia: *S. haematobium* and *S. mansoni* are endemic in the interior counties of Nimba, Bong, Gbarpolu, and Lofa. The full risk status for Grand Gedeh and River Gee counties is unknown.

Note: The coastal counties are considered risk free.

38 Libya: Libya has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. *S. mansoni* cases have been reported in the area of Tawergha (approximately 50 km south of Misrata). *S. haematobium* has been reported in Al Fuqaha.

39 Madagascar: *S. haematobium* is highly endemic in the northern, western, and southern areas of Madagascar. *S. mansoni* is endemic throughout the country except in the northern province of Antananarivo.

Madagascar experiences high rates of internal migration which facilitates the spread of Schistosomiasis. Travellers should consider the entire island at risk. Additional snail intermediate host for *S. haematobium*: *Bulinus obtusispira*.

40 Malawi: *S. haematobium* and *S. mansoni* are endemic throughout the country, including Lake Malawi.

41 Malaysia: Public health authorities report no new human cases *S. malayensis* and await WHO evaluation and verification. Cases were previously reported in the areas of Jurantut and Kuala Tahan (Pahang State) near Orang Asli indigenous settlements. Cases have also been reported from the states of Perak and Kedah. In Sabah, risk was reported in the areas of Kota Kinabalu, Sandakan, Tawau. Snail intermediate host: *Robertsiella kaporensis*.

42 Mali: *S. haematobium* is highly endemic throughout Mali, especially in the highly populated areas of the Niger and Sénégal river basins and their tributaries. High incidence rates have been reported from the urban areas of Bamako, Ségou, and Mopti regions. The risk status in the region of Kidal is unknown. *S. mansoni* has also been reported throughout the country. *S. guineensis* is also reported. Travellers should consider the entire country at risk.

43 Martinique: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Snail intermediate hosts: *Biomphalaria glabrata* and *Biomphalaria straminea*.

44 Mauritania: *S. haematobium* is present in the southern part of Mauritania. The highest rates are reported from populated areas along the Sénégal River, the Karakoro River valley including the settlements along their tributaries and diversion canals. Other regions reporting cases include Inchiri, western Hodh Ech, Chargui, southwestern Hodh el Gharbi, western Adrar, Assaba, and western Tagant. *S. mansoni* has been reported in the southern region of Trarza along the Sénégal River. The full extent of Schistosomiasis risk in the Mauritania is unknown.

The nomadic life of Mauritanian herdspeople facilitates the spread of infection. Travellers should consider all oases and settlement areas at risk. Additional snail intermediate host: *Bulinus umbilicatus*.

45 Mauritius: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in the districts of Pamplemousses, Port Louis and Grand Port. Snail intermediate host: *Bulinus cercinus*.

46 Montserrat: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Cases were previously reported in Trant's, Farm, Bethel, Bramble and Tuitts. Snail intermediate host: *Biomphalaria glabrata*.

47 Morocco: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. The last cases were reported from the provinces of Beni Mellal, Chtouka Ait Baha, El Kelaa Des Sraghna, Errachidia, and Tata. Snail intermediate host: *Bulinus truncatus*.

48 Namibia: *S. haematobium* and *S. mansoni* are highly endemic in the northern regions of Kavango and Zambezi, affecting the villages along the Cubango, Chobe, and Zambezi rivers. *S. haematobium* is also endemic in the region of Omusati.

49 Niger: *S. haematobium* and *S. mansoni* is highly endemic throughout Niger, especially in the Niger River basin and surrounding areas, including the capital Niamey.

50 Oman: Oman has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. Cases have been reported in the Governorate of Dhofar, primarily affecting the provinces of Salalah, Taqah and Sadah.

51 Philippines: Risk is present on the following islands:

- **Luzon:** The Irosin-Juban valley on the southern tip of the island (Sorsogon province) and in the northeastern municipality of Gonzaga (Cagayan province).
- **Mindoro:** Area surrounding Lake Naujan, including the villages of Pola, Victoria and Naujan (Oriental Mindoro province).
- **Samar:** The entire western coastal area from Allen to Basey (Western Samar province) and along the northern coast from Lavezares to Palapag, extending south to Las Navas (Northern Samar province).
- **Leyte:** The entire island (Leyte province) except for the southern quarter (the area south of Julita and MacArthur).
- **Bohol:** Northern coastal areas of Talibon and Trinidad (Bohol province).
- **Negros:** Municipality of Calatrava (Negros Occidental province).
- **Mindanao:** Villages along the Bay of Panquil from Tangub City to Lala and around Dipolog City (Misamis Occidental, Lanao del Norte and Lanao del Sur provinces); in all villages in the Agusan River valley from Butuan to Compostela Valley province; in the northern coastal peninsula area from Butuan to Tago, including the area around Lake Mainit (Surigao del Norte and Surigao del Sur provinces); in the area around Davao and Tagum City on the Bay of Davao (Davao del Sur and Davao del Norte provinces). Additional localized cases are present in Malaybalay and Maramag (Bukidnon province) and Pikit (Cotabato province). Cases have also been reported from South Cotabato, Maguindanao, and Sultan Kudarat provinces.

52 Puerto Rico: Public health authorities report no new human cases of *S. mansoni* and await WHO evaluation and verification. Snail intermediate host: *Biomphalaria glabrata*.

53 Rwanda: *S. mansoni* is endemic throughout the country – including lakes Muhazi, Kivu, Rweru, Mugesera, Burera, and Ruhondo.
Note: Akagera National Park and the following districts are considered risk free: Kayonza and Gatsibo (East Province), Rulindo (North Province), Kicukiro and Nyarugenge (Kigali Province), Kamonyi, Ruhango, Nyanza, Huye, and Nyamagabe (South Province).
Additional snail intermediate hosts: *Biomphalaria choanophala*, *Biomphalaria stanleyi*, and *Biomphalaria smithi*.

54 Saint Lucia: Saint Lucia has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. The last cases were reported from the quarters of Labourie, Micoud, and Vieux Fort.

55 São Tomé and Príncipe: Risk is present throughout the island of São Tomé. The highest incidence rates are reported from the districts of Lobata, Água Grande and Mé-Zóchi. The full extent of Schistosomiasis risk on the island of Príncipe is unknown.

56 Saudi Arabia: Saudi Arabia has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. *S. haematobium* and *S. mansoni* has been reported throughout the country except in the regions of Eastern, Al-Qassim and Northern Borders. Additional snail intermediate hosts for *S. haematobium*: *Bulinus beccarii* and *Bulinus wrighti*.

57 Senegal: Risk of *S. haematobium* and *S. mansoni* is present throughout the country. High incidence rates occur along the entire Sénégal River valley including the area of Lac de Guiers in the northwestern part of Saint-Louis Region. Additional snail intermediate hosts for *S. haematobium*: *Bulinus jousseaumei*.

58 Sierra Leone: *S. mansoni* is endemic throughout the country. High risk areas include the districts of Bombali, Koinadugu, Kono, Kailahun, Kenema, Tonkolili, and Western Area Rural. *S. haematobium* has also been reported in the districts of Koinadugu, Tonkolili, Kenema, and Western Area Rural.

59 Somalia: *S. haematobium* is endemic in the southern regions of Hiran, Benaadir, Gedo, Lower Juba, Middle Juba, Lower Shabele, and Middle Shabele especially in the agricultural areas of the Shabeelle and Jubba river valleys. Additional snail intermediate host: *Bulinus abyssinicus*.

60 South Africa: *S. haematobium* and *S. mansoni* are endemic in KwaZulu-Natal Province, including the entire plain and coastal areas (limited to the west by the Drakensberg Escarpment) and extending south along the coast into Eastern Cape Province to the area of Port St. Johns.

Risk is also present in the province of Limpopo (including Kruger National Park) extending from the Limpopo River basin and its tributaries south to the northern part of the Witwatersrand mountains. In North West Province, cases have been reported from Marico, Swartruggens and Rustenburg district with localized infections in Koster, Wolmaransstad and Bloemhof on the Vaal River and in Piet-Retief district (Mpumalanga Province) in the eastern part of the state on the border with Swaziland.

61 South Sudan: *S. haematobium* and *S. mansoni* are present throughout the country and highly endemic in the Upper Nile region (Unity State). *S. mansoni* is highly prevalent in West Equatoria region..

62 Suriname: Suriname has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. Cases have been reported in the central part of the coastal region in the cultivated areas surrounding Paramaribo, extending from the marsh areas north of Wageningen (Nickerie District) to the delta area of the Commewijne.

63 Syria: Syria has implemented Schistosomiasis control and elimination programs resulting in reduced prevalence of the disease. Cases have been reported in the northern part of the country along the Balikh and lower Euphrates river basins; in the Ar Raqqah area extending north to Tel Abiad and south along the Euphrates River valley to Al-Bukamal on the border with Iraq.

64 Tanzania: *S. haematobium* and *S. mansoni* are endemic in Tanzania. High incidence rates are reported on the shores and islands of Lake Victoria, and further inland in the region of Shinyanga and in the eastern part of the country specifically in Tanga and Dar Es Salaam regions. Cases are also reported from Lake Malawi and Lake Tanganyika. In Zanzibar (Unguja and Pemba islands) Schistosomiasis is also endemic, but control and elimination programs have recently been implemented. Additional snail intermediate hosts: *Bulinus nasutus* for *S. mansoni* and *Biomphalaria choanophala* for *S. haematobium*.

65 Thailand: Public health authorities report no new human cases of *S. mekongi* and await WHO evaluation and verification. Cases were previously reported in the region of Chong Mek (near the confluence of the Mun and Mekong rivers) in Ubol Ratchathani province on the border with Laos. Snail intermediate host: *Neotricula aperta*.

66 Tunisia: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in the Governorate of Gabès (Al-Hammah, Matmata and Al-Zar At) and in the Governorate of Gafsa (commune of Degache). Snail intermediate host: *Bulinus truncatus*.

67 Turkey: Public health authorities report no new human cases of *S. haematobium* and await WHO evaluation and verification. Cases were previously reported in villages on the southeast border with Syria, mainly in the Nusaybin area (Mardin Province) and Aşkale (Şanlıurfa Province). Snail intermediate host: *Bulinus truncatus*.

68 Uganda: *S. haematobium* and *S. mansoni* are endemic in Uganda. The highest incidence rates are reported from the shores of Lake Albert, the Albert Nile (White Nile) River, Lake Kyoga, and the eastern shores of Lake Victoria. Cases are reported from Lake Nyinambuga (Kabarole District). Additional intermediate snail hosts: *Bulinus nasutus* for *S. haematobium* and *Biomphalaria choanophala* for *S. mansoni*.

69 Venezuela: Risk of *S. mansoni* is limited to the highly populated agricultural areas surrounding Lake Valencia (states of Carabobo and Aragua). Cases have also been reported along the area from Valencia in the west to La Victoria in the east and south to Belén. Localized risk has also been reported in the parish of Caraballeda (Vargas State), Cúa on Rio Tuy and Guatire (Miranda State).

70 Yemen: *S. haematobium* and *S. mansoni* are endemic in Yemen. The highest incidence rates are reported from the governorates of Hajjah and Ta'izz. Additional snail intermediate hosts for *S. haematobium*: *Bulinus beccarii* and *Bulinus wrighti*.

This information has been compiled from various sources, including IAMAT's own research. Please contact us for a list.

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