

World Health Day 2014

VECTOR-BORNE DISEASES

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A Regional Overview



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What are vectors?

- Vectors are organisms that transmit pathogens and parasites from one infected person (or animal) to another.

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What are vector-borne diseases?

- Vector-borne diseases are illnesses caused by these pathogens (an agent that causes diseases) and parasites in human populations.
- They are most commonly found in tropical areas and places where access to safe drinking-water and latrines is problematic.

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Why are vector borne diseases a problem?

- Some vector borne diseases can kill eg malaria, yellow fever
- Some vector borne diseases can cause social stigma eg. cutaneous leishmaniasis
- Some vector borne diseases lead to unproductive lives eg. lymphatic filariasis
- Increasing re-emergence of diseases in areas where they did not exist
- Increase in expansion and intensification of their transmission in existing areas
- Lack of vaccine for most diseases except yellow fever
- Increasing number of outbreaks in the region

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Theme of campaign

Vector-borne diseases

Slogan

Small bite: big threat

Overall goal

The campaign aims to raise awareness about the threat posed by vectors and vector-borne diseases and to stimulate families and communities to take action to protect themselves. As vector-borne diseases begin to spread beyond their traditional boundaries, action needs to be expanded beyond the countries where these diseases currently thrive.

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Risk factors: man-made and natural

- Globalization of trade
- Travel
- Agricultural/hydropower projects
- Use of chemicals in agriculture
- Environmental challenges (climate change)
- Population movement (during conflict)
- Uncontrolled urbanization.

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Media Campaign

The 2014 campaign will spotlight some of the most commonly known vectors – such as mosquitoes, sandflies, bugs, ticks and snails – responsible for transmitting a wide range of parasites and pathogens that attack humans or animals.

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Objectives and target audiences

- families living in areas where diseases are transmitted by vectors know how to protect themselves;
- travelers know how to protect themselves from vectors and vector-borne diseases when travelling to countries where these pose a health threat;
- in countries where vector-borne diseases are a public health problem, ministries of health put in place measures to improve the protection of their populations; and
- in countries where vector-borne diseases are an emerging threat, health authorities work with environmental and relevant authorities locally and in neighboring countries to improve integrated surveillance of vectors and to take measures to prevent their proliferation.

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Overarching messages

- Mosquitoes, flies, ticks, bugs and freshwater snails can spread diseases that cause serious illness and death.
- Diseases such as malaria, dengue, leishmaniasis and yellow fever are preventable yet they have the biggest impact on some of the world's poorest people.
- More than half of the world's population is at risk of these diseases. Increased travel, trade and migration make even more people vulnerable.
- You can protect yourself and your family by taking simple measures that include sleeping under a bed net, wearing a long-sleeved shirt and trousers and using insect repellent.

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Estimated regional burden of vector-borne diseases

Disability Life Adjusted Years for 2015



Source: Global burden of disease, Health statistics and Informatics Department, WHO, Geneva, Switzerland, Oct 2008

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Malaria



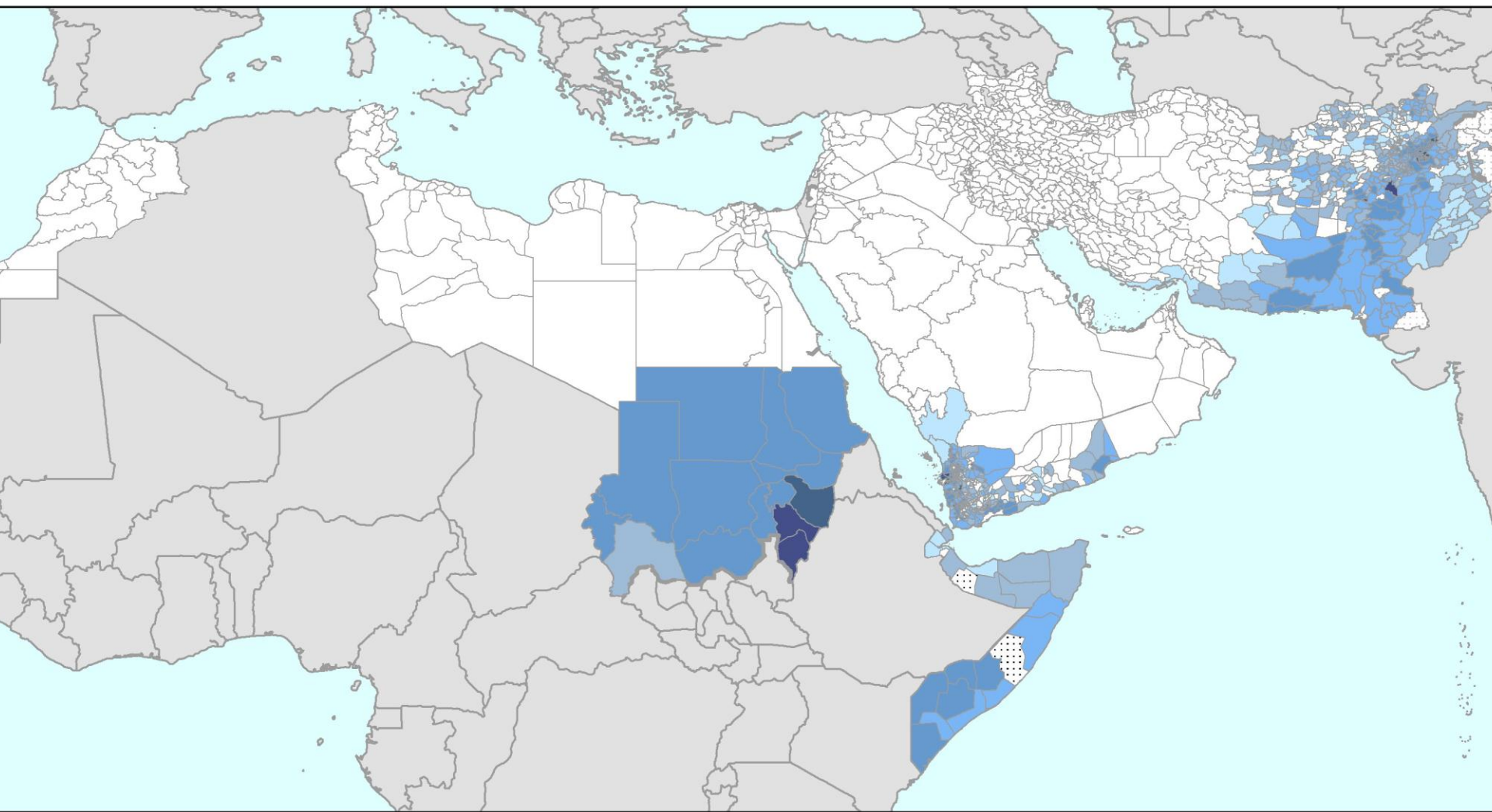
A child with cerebral malaria

Motor posturing and possible seizure in a child with cerebral malaria



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Distribution of confirmed malaria cases (per 1000 population)



Leishmaniasis

Female sandfly taking a bloodmeal during its bite

Anthropoonotic Cutaneous leishmaniasis (Afghanistan)



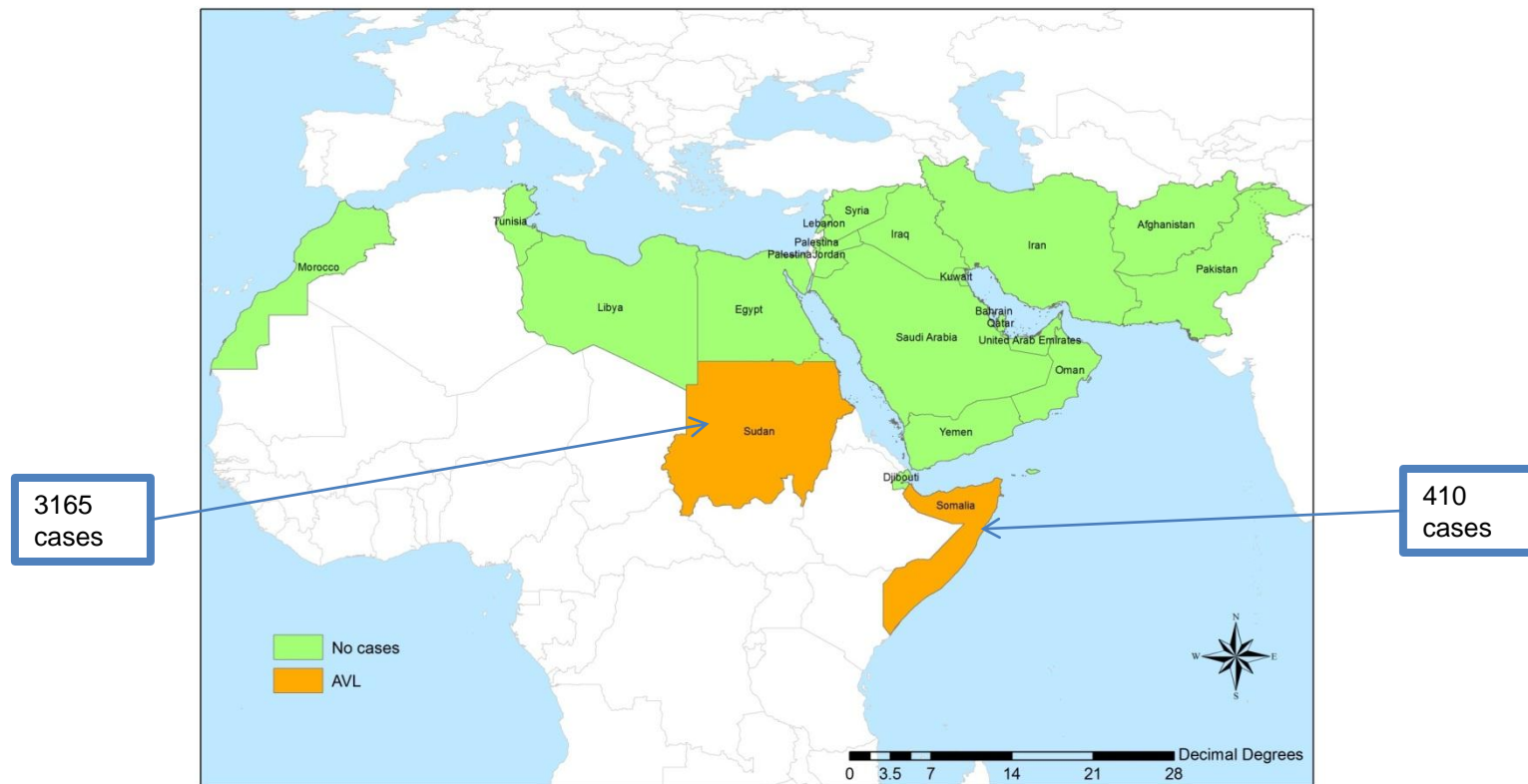
Zoonotic cutaneous leishmaniasis



Visceral leishmaniasis

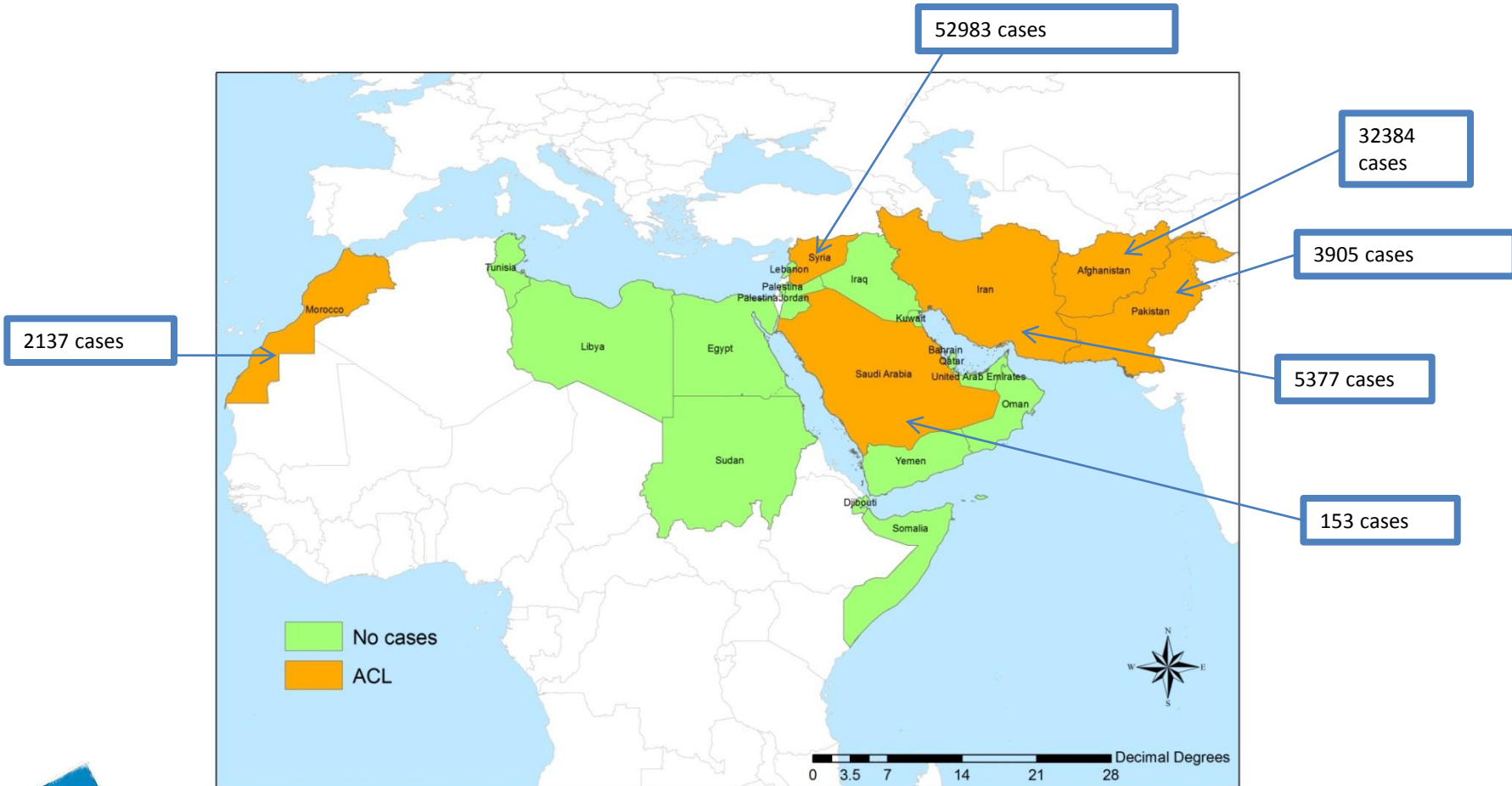
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Distribution of anthroponotic visceral leishmaniasis cases in the EMR countries (2012)



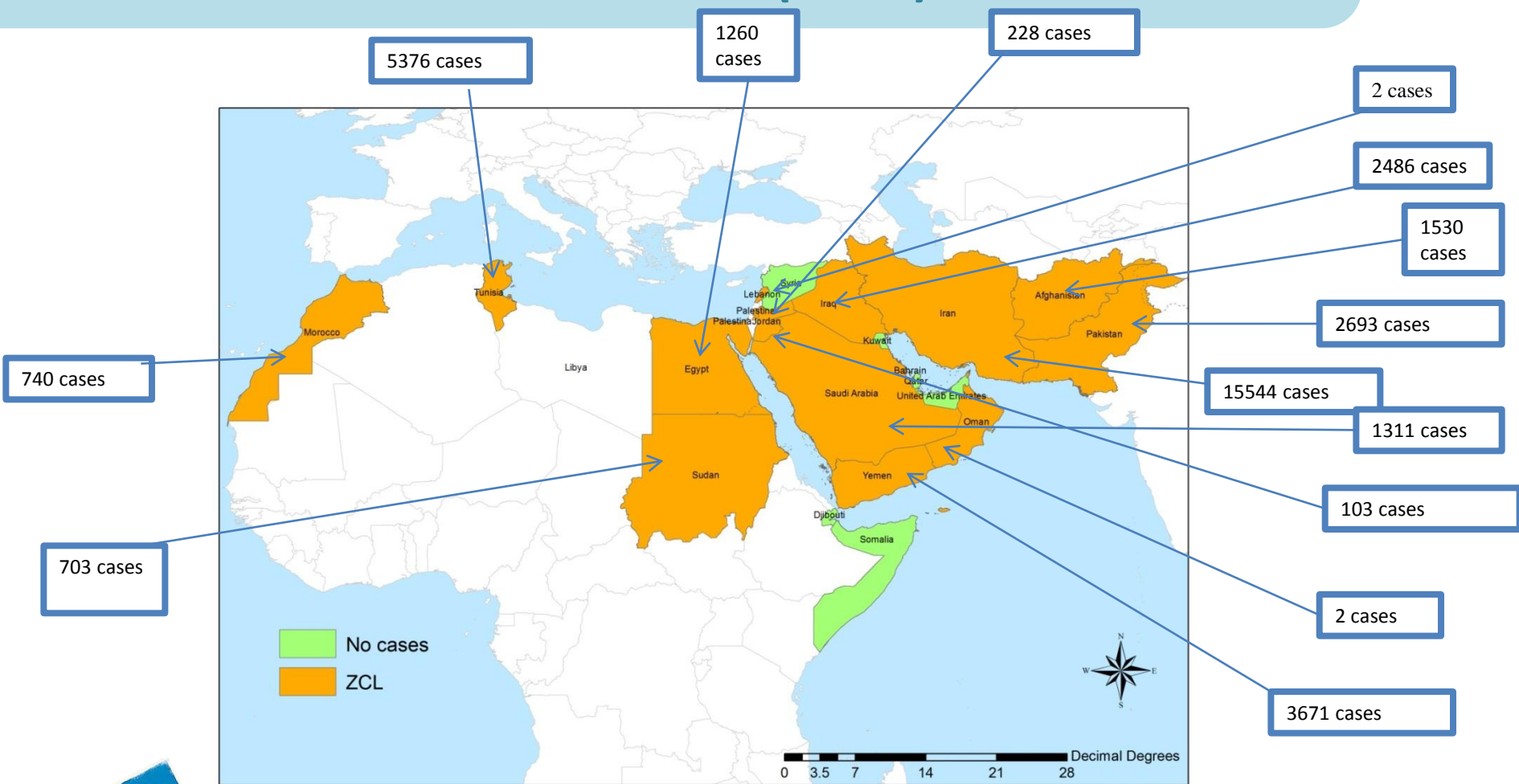
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Distribution of anthroponootic cutaneous leishmaniasis cases in the EMR countries (2012)



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Distribution of zoonotic cutaneous leishmaniasis cases in the EMR countries (2012)



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Schistosomiasis



Hepatosplenic schistosomiasis is a consequence of a fibrotic reaction around egg granulomas in the liver



Sudanese kids showing red (with blood) urine due to urinary schistosomiasis

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Schistosomiasis endemic countries



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Lymphatic filariasis



Chronic
lymphoedema



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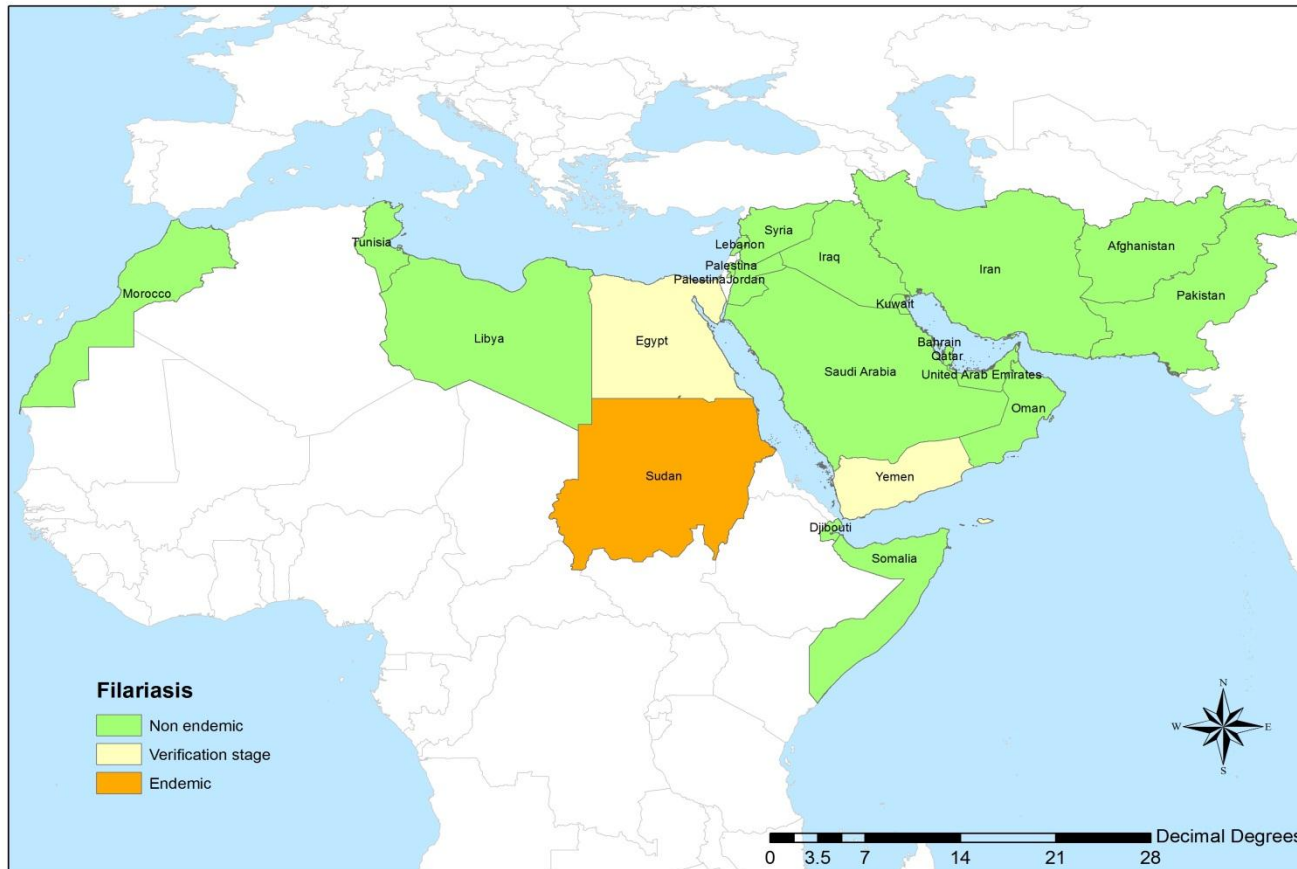
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Lymphatic filariasis endemic countries



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Onchocerciasis

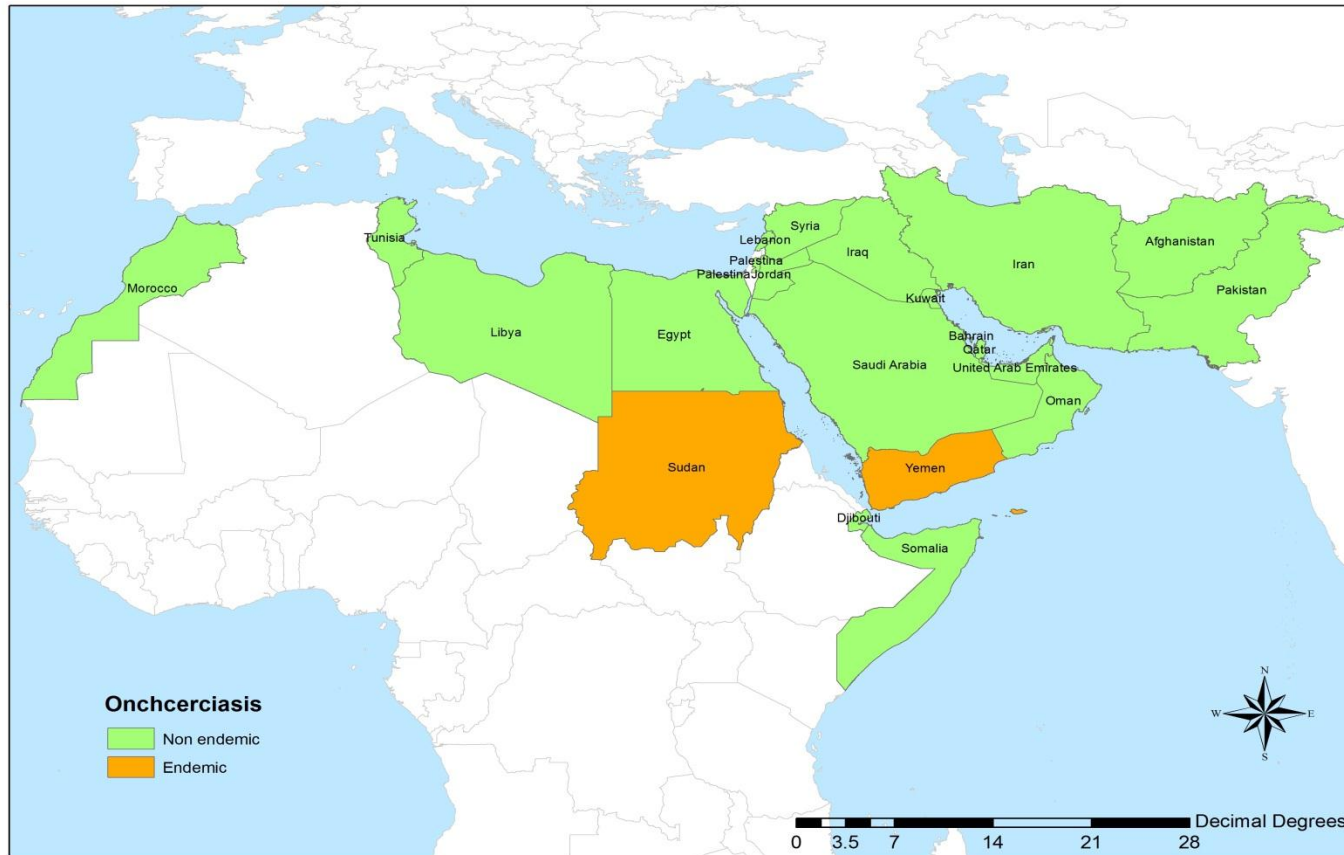


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Onchocerciasis endemic countries



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Dengue

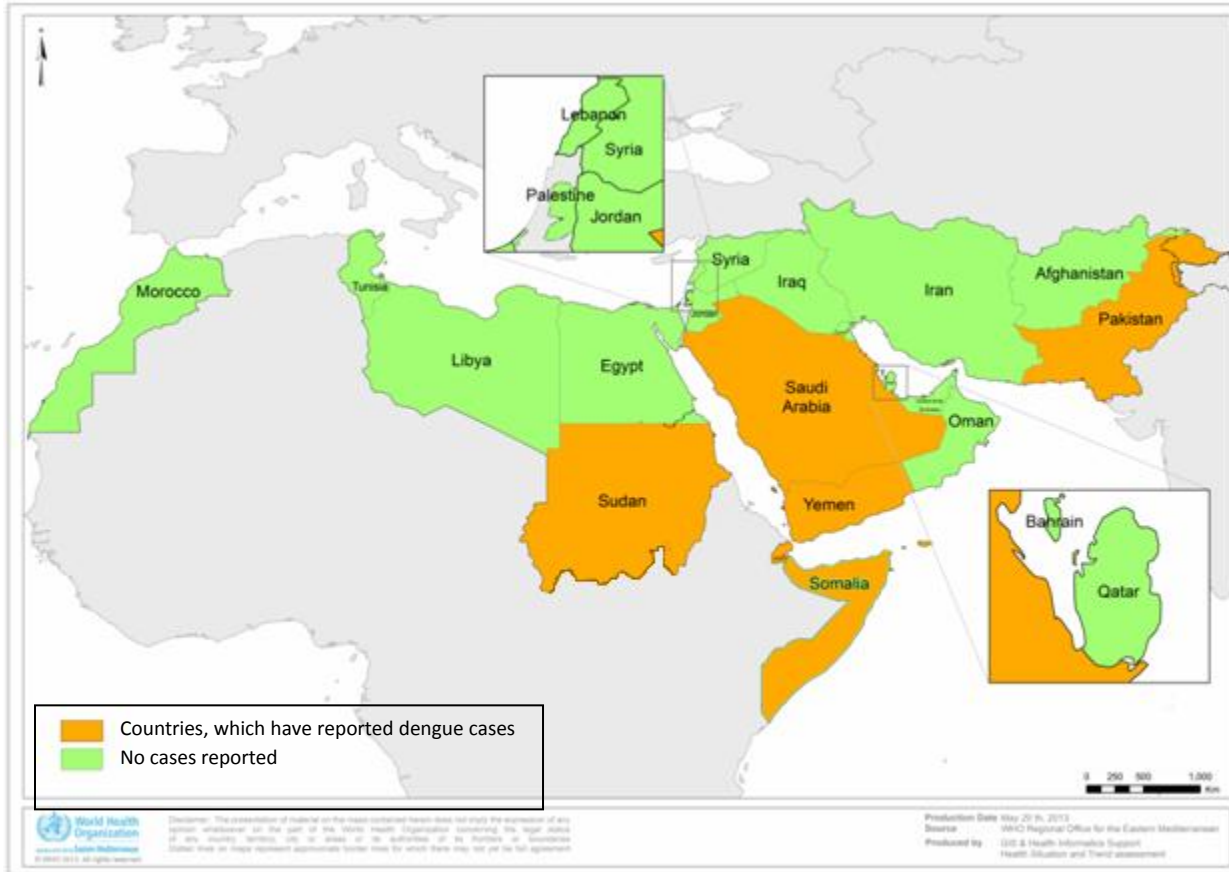


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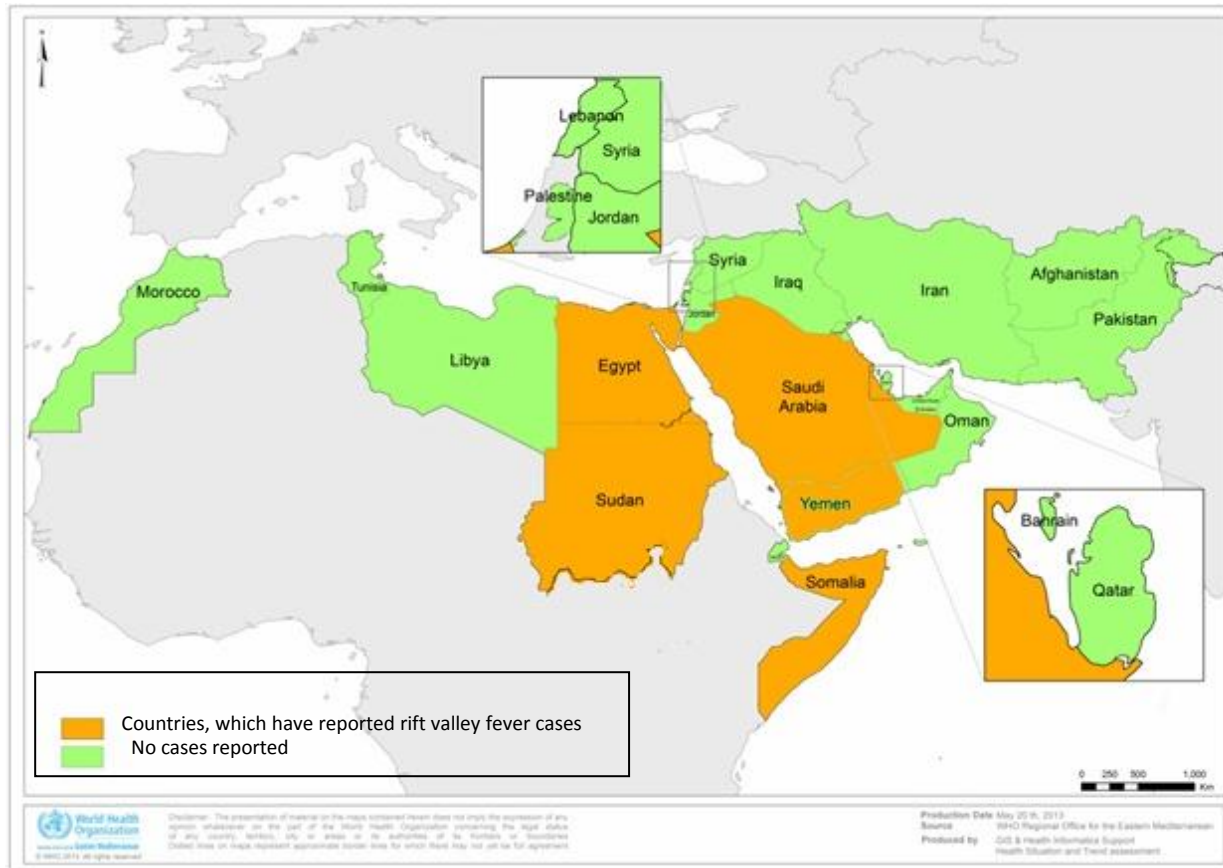
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Dengue outbreaks



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Rift valley fever outbreaks

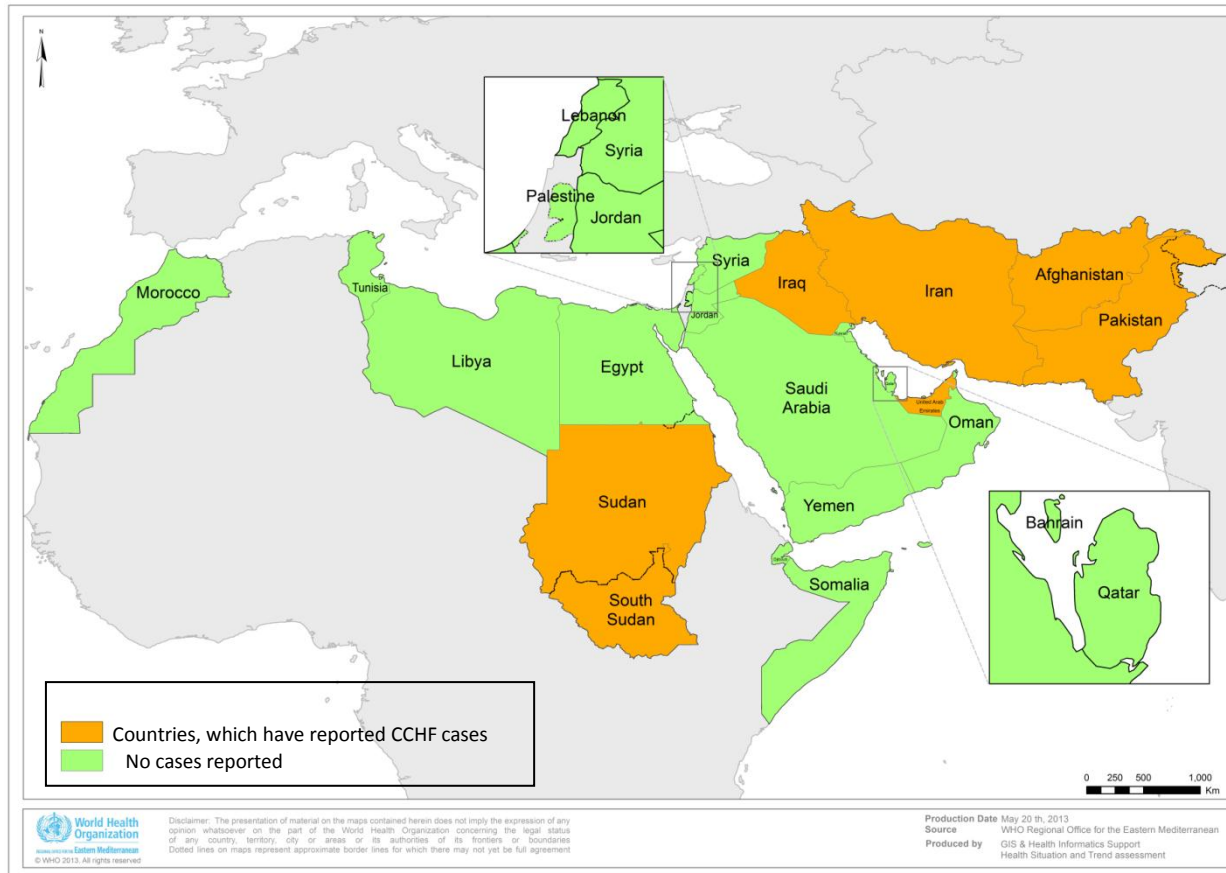


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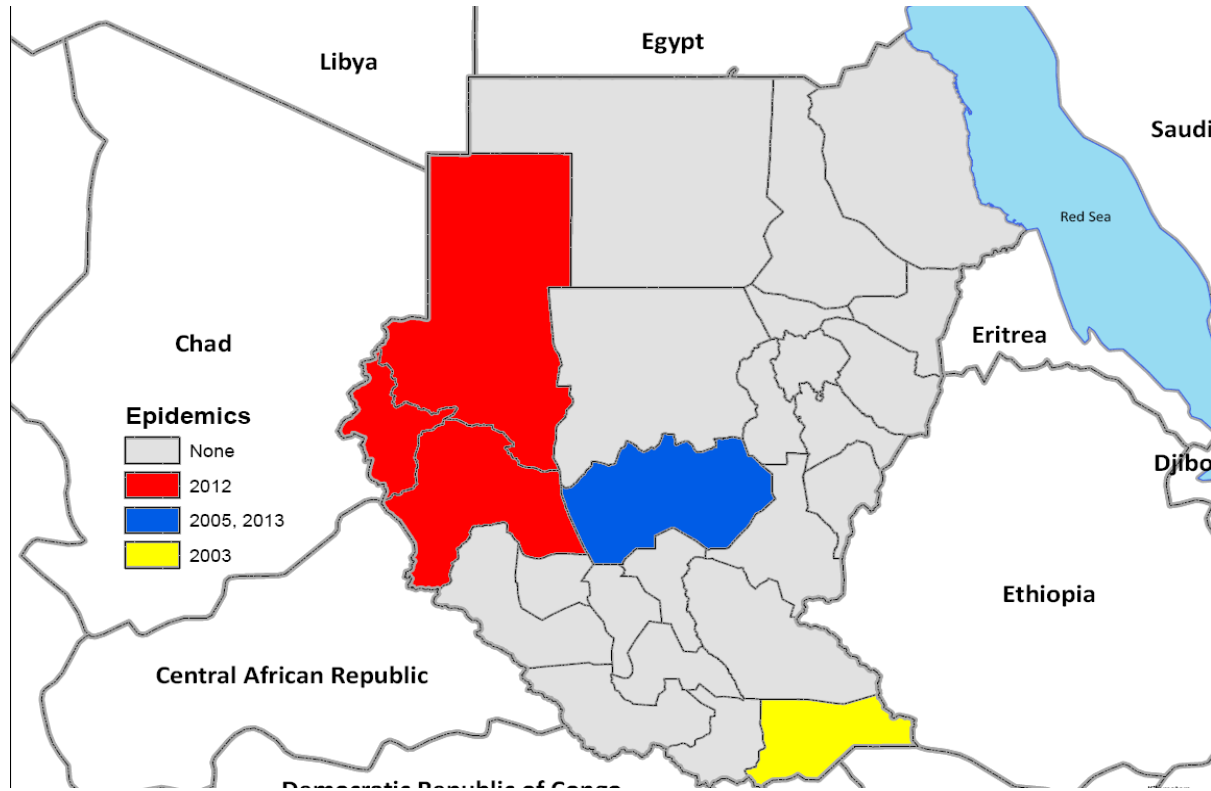
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Crimean Congo hemorrhagic fever outbreaks



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Yellow fever outbreaks since 2000



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Chikungunya

- In 2010, chikungunya was first reported in the Yemen with over 15,000 suspected cases and 104 deaths resulting from severe cases although the reasons for these deaths could not be established.
- In 2012, Yemen recorded its second outbreak from chikungunya with over 230 suspected cases.

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What can communities do?

	Malaria	Dengue	Lymphatic filariasis	Leishmaniasis	chikungunya	Yellow fever	Schistosomiasis	CCHF
Source reduction	x	x	x		x	x		
Environmental manipulation	x		x				x	
LLINs	x		x	x				
Chemical repellents	x		x	x				x

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What can decision makers do?

	Malaria	Dengue	Lymphatic filariasis	Leishmaniasis	Chickungunya	Yellow fever	Onchocerciasis	Schistosomiasis
Irrigation management and design	X						X	X
Waste Management			X					
Home improvement	X			X				
Natural enemy conservation	X	X			X	x		X
Biological larvicides	X	X	X		X	X	X	

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What the decision makers can do?

	Malaria	Dengue	Lymphatic filariasis	Leishmaniasis	Chickungunya	Yellow fever	Schistosomiasis	Onchocerciasis
IRS	X			X				
Larviciding	X	X	X		X	X		X

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What is integrated vector management?

Definition:

A rational decision-making process for the optimal use of resources for vector control

Key elements:

- Advocacy, social mobilization (school children, religious leaders, CBOs, CSOs) and legislation
- Collaboration with the health sector and with other sectors (agriculture, municipalities)
- Integrated approach
- Evidence-based decision making
- Capacity building

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Global policy commitment to control vector-borne diseases

2007

World health Assembly resolution (WHA60.13) - urging Member States in which leishmaniasis to undertake actions to deal with the major factors underlying the failure to control the disease.

2009

World health Assembly (WHA62.1) - prevention of avoidable blindness and visual impairment, endorsing the Action plan for the prevention of avoidable blindness and visual impairment

2013

World Health Assembly resolution (66.12) - Member states urged to expand and implement as appropriate interventions against neglected tropical diseases

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Global policy commitment to eliminate vector borne diseases

1997

World Health Assembly Resolution (50.29) - encourages Member States to eliminate lymphatic filariasis as a public-health problem.

2012

World health Assembly resolution (WHA65.19) - on the elimination of schistosomiasis, through strengthened health systems and preventative measures.

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Regional policy commitment to control vector borne diseases

2005

EM/RC52/R.6 - shift to a genuine integrated vector management approach.

2006

EM/RC54/R.3 - Neglected tropical diseases: an emerging public health problem in the Eastern Mediterranean Region

2007

EM/RC54/R.4 - Growing threat of viral hemorrhagic fevers in the Eastern Mediterranean Region: a call for action

2011

EM/RC58/R.4 - Dengue: call for urgent interventions for a rapidly expanding emerging disease

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Regional policy commitment to eliminate vector borne diseases

2000

EM/RC47/R.11 - Elimination of Lymphatic Filariasis in the Eastern Mediterranean Region

2008

EM/RC55/R.9 - Malaria elimination in the Eastern Mediterranean Region: vision, requirements and strategic outline

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Conclusions

- Vector borne diseases are expanding
- Countries need to be vigilant through strengthening surveillance systems to detect emerging outbreaks at an early stage.
- Political will is crucial to address the technical, policy and managerial challenges at all levels
- Integrated vector management offers an opportunity to tackle vector borne diseases efficiently.

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