

Global Polio Eradication

*Advanced Vaccinology (ADVAC),
Veyrier-du-Lac, 22 May 2014*



Eradication

In 1988, the World Health Assembly, the governing body of the World Health Organization (WHO) resolved to eradicate poliomyelitis by the year 2000.

The polio program

25 years

> 200 countries

> 20 million volunteers

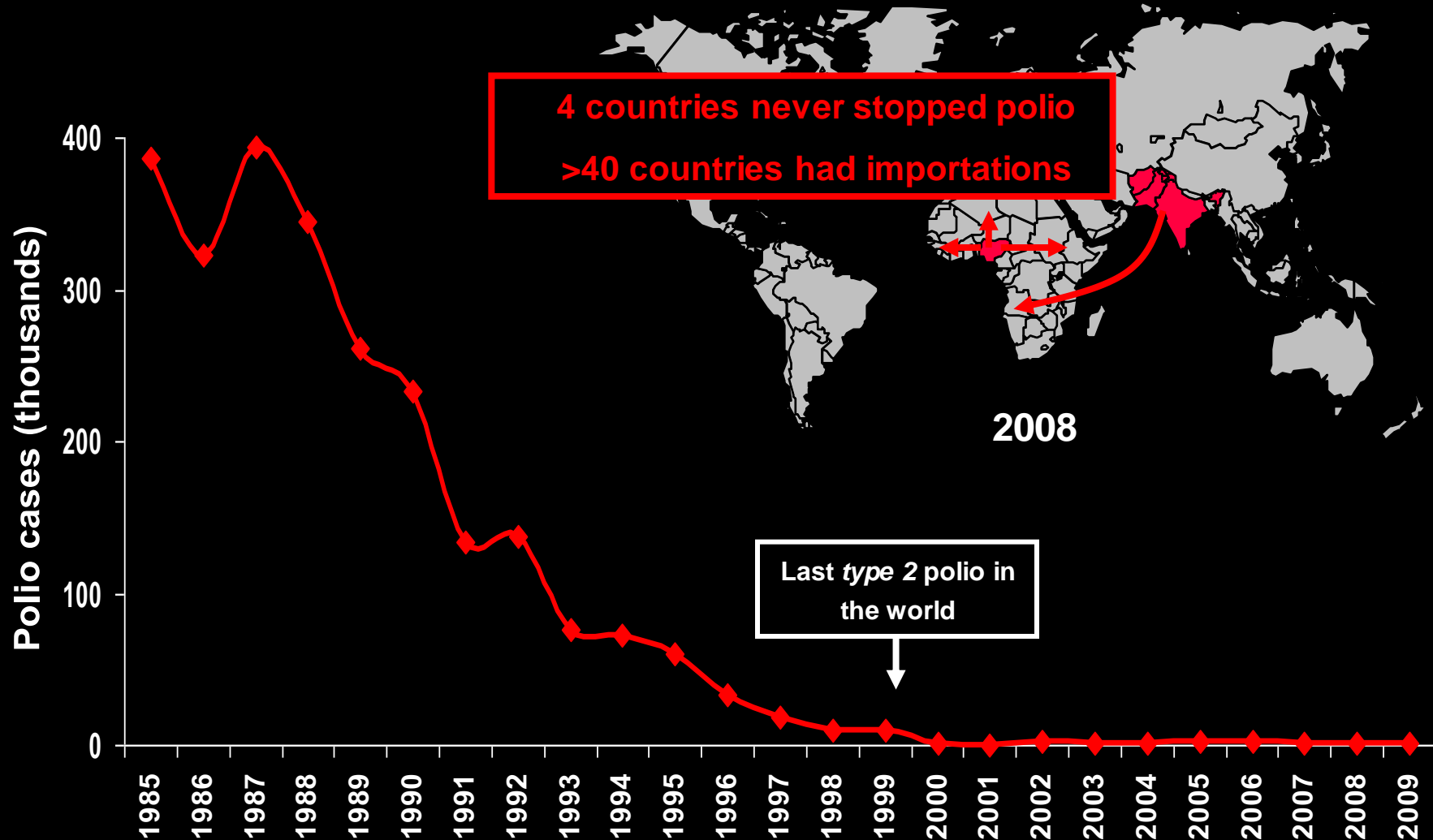
2.5 billion children immunized



Polio eradication strategies



Polio eradication: *Historical context*



World Health Assembly, 25 May 2012

*"DECLARES polio eradication an **emergency**
for global public health...*

*...urges the Director-General to rapidly
finalize a **polio endgame plan**".*

Progress

Wild Poliovirus Cases, Year-to-Date (Jan- Apr) 2012-14

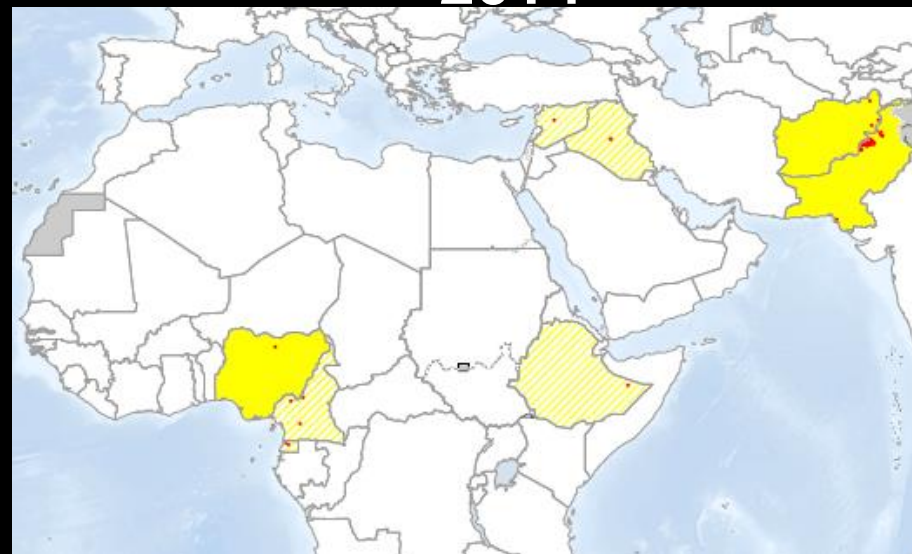
2012



2013



2014

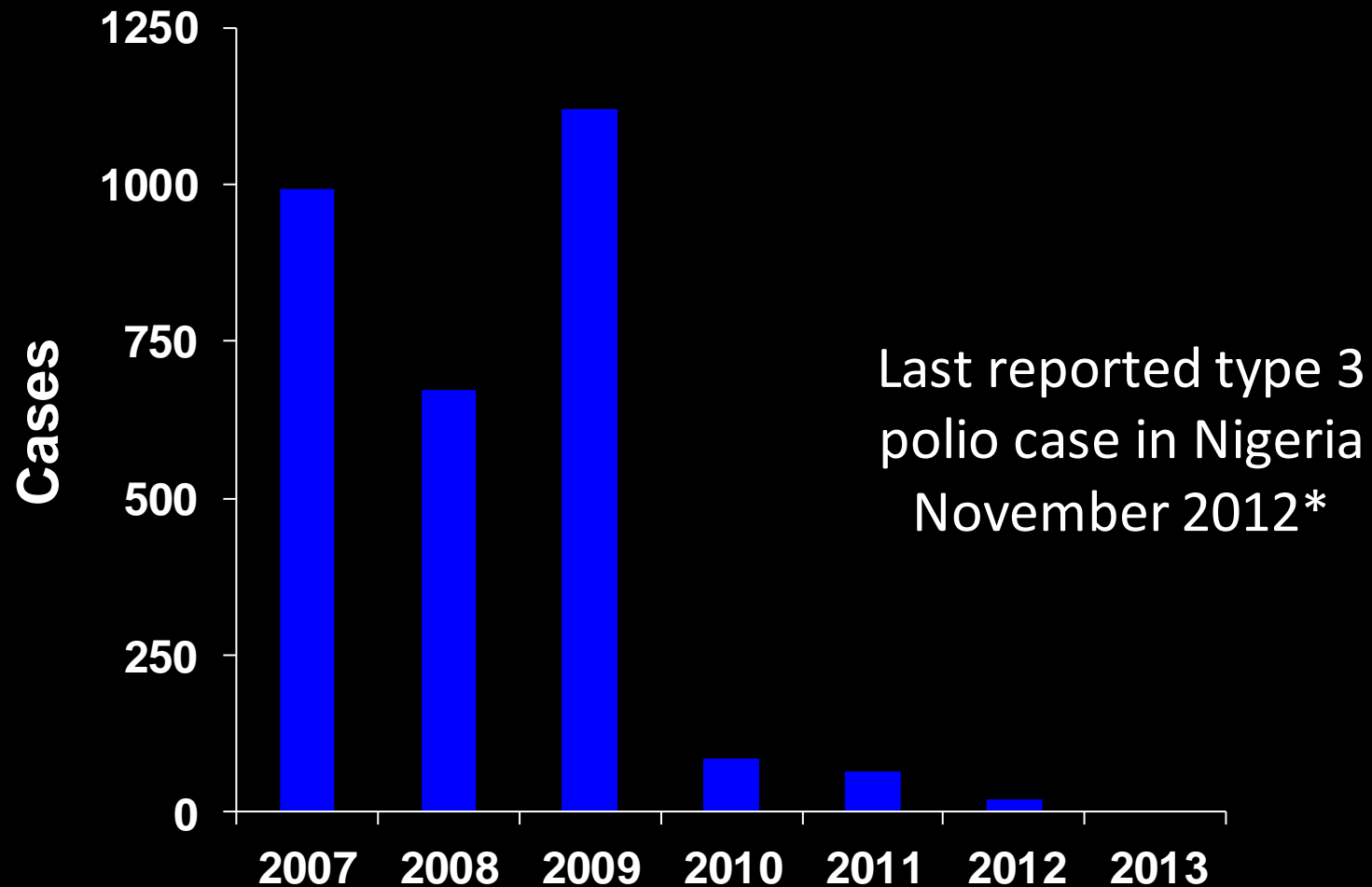


- Wild Polio Virus Type 1
- Wild Polio Virus Type 3
- Wild Polio Virus Type 1&3

- Endemic countries
- ▨ Country infected with WPV case (Importation/ re-establishment)

*01 JAN - 15 APR 2014

Polio, type 3 cases



* onset of most recent case was 10 Nov 2012

March 27, 2014:

**South-East Asia Region of
WHO certified polio-free**



**>80% of the
world's
population
live in polio-
free Regions**

Progress

>99.9% decline in cases

type 2 (and possibly type 3) eliminated

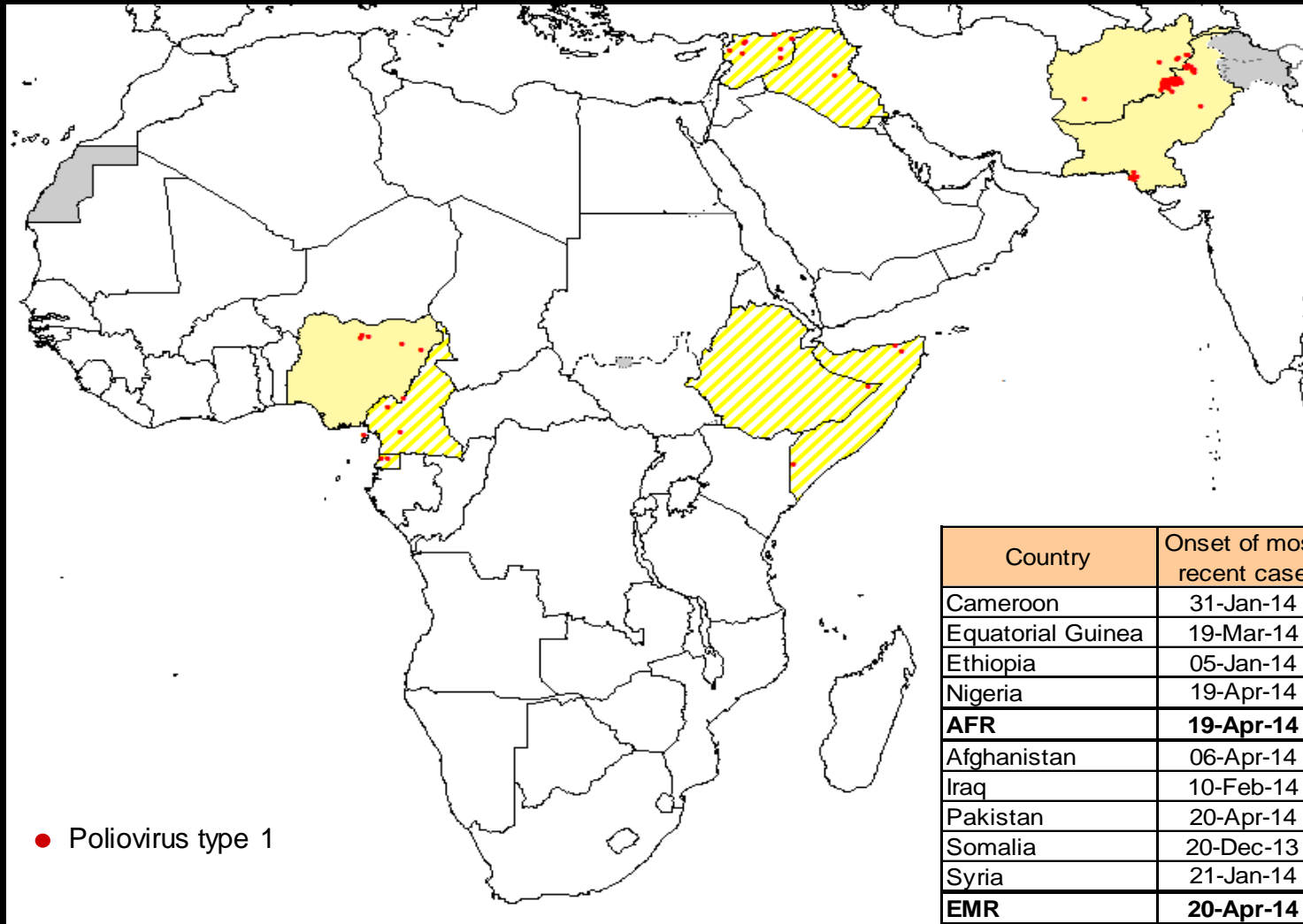
only 3 countries never eliminated
poliovirus (AFG, PAK & NIG)

4 WHO Regions certified as polio-free
(PAHO, WPRO, EURO & SEARO)



Major Issues

Wild Poliovirus Cases¹, Previous 6 Months*

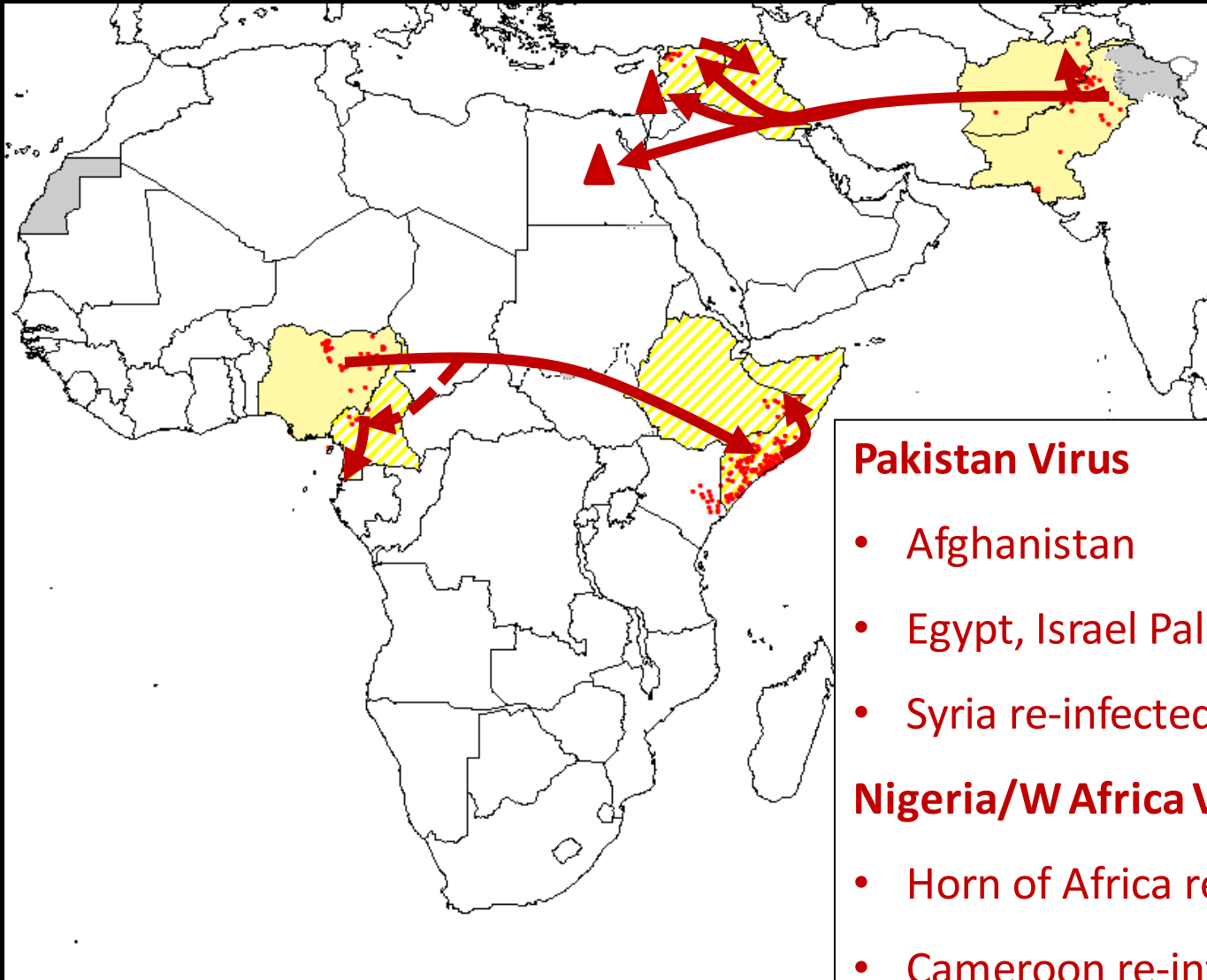


- Endemic country
- Country with WPV case in previous 6 months

14 November 2013 – 13 May 2014

Country	Onset of most recent case	Number of districts	Virus Type		Total WPV
			W1	W3	
Cameroon	31-Jan-14	3	3		3
Equatorial Guinea	19-Mar-14	3	3		3
Ethiopia	05-Jan-14	1	1		1
Nigeria	19-Apr-14	5	5		5
AFR	19-Apr-14	12	12		12
Afghanistan	06-Apr-14	6	7		7
Iraq	10-Feb-14	1	1		1
Pakistan	20-Apr-14	12	82		82
Somalia	20-Dec-13	2	3		3
Syria	21-Jan-14	7	8		8
EMR	20-Apr-14	28	101		101
Global	20-Apr-14	40	113		113

International Spread of Polio, 2013-14



Pakistan Virus

- Afghanistan
- Egypt, Israel Palestine sewage
- Syria re-infected + Iraq in 2014

Nigeria/W Africa Virus

- Horn of Africa re-infected
- Cameroon re-infected + Equatorial Guinea in 2014

Gunmen in Pakistan Kill Women Who Were Giving Children Polio Vaccines



**Pakistan
Dec 2012**

**Nigeria
Feb 2013**



NEWS AFRICA

8 February 2013 Last updated at 11:47 GMT



Nigeria polio vaccinators shot dead in Kano

Nine female polio vaccinators have been killed in two shootings at health centres in northern Nigeria, police have told the BBC.

In the first attack in Kano the polio vaccinators were shot dead by gunmen who drove up on a motor tricycle.

Thirty minutes later gunmen targeted a clinic outside Kano city as the vaccinators prepared to start work.



AFP

Nigeria is one of only three countries where polio is still endemic.



- Chris Hadfield
- Arctic conference
- Rate My Hospital
- B.C. votes

Taliban pledge support for Afghan polio campaign

Afghan government announced polio vaccination program last month

CBC News Posted: May 14, 2013 10:24 PM ET | Last Updated: May 15, 2013 1:19 AM ET

Related Stories

- Nahlah Ayed: Key Muslim clerics join fight to eradicate polio
- Canada funds polio effort in Afghanistan, Nigeria, Pakistan

The Taliban in Afghanistan say they will now support programs aimed at eradicating polio in the country.

In a statement released earlier this week in Afghanistan, the Taliban said they asked members "not to create any kind of trouble" for health workers, but would not tolerate foreigners participating in the eradication program.

"According to the latest international medicine science, the polio disease can only be cured by preventive measures ie the anti-polio drops and the vaccination of children against this disease," the group said.

"The Islamic Emirate of Afghanistan supports and lends a hand to all those programs which works for the health care of the helpless people of our country."

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*Public Health Emergency of
International Concern (PHEIC)*

Quick access

- GSM quick links -
- Intranet sites -
- Country pages -
- Travel reports (eTR) -
- Applications / Tools -
- Services -
- WHO OrgChart search -

Discover...

Virus Monitoring, Assessment and Vaccine Support (VMV)

The Virus Monitoring, Assessment and Vaccine Support (VMV) Unit, working through the Global Influenza Surveillance Network (GISN), plays a leading rol ...

[open intranet site](#)

Spotlight Series



About WHO

General Programme of Work
Medium-term Strategic Plan
EB and WHA
Health Updates by Cluster
WHO Country Cooperation Strategy
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Information resources

WHO Library
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Country Facts and Contacts

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Polio declared public health emergency of international concern



Pictured is Dr Bruce Aylward, speaking to the press.

After several days of consultation with the Emergency Committee, convened under the International Health Regulations, WHO Director-General Margaret Chan has determined that the spread of wild poliovirus to three countries to be a public health emergency of international concern. [full story](#)

WHO faces

Health specialist Dr Karifa Mara joined the WHO Country Office in the Republic of Guinea last year after more than 20 years of public health experience in the field. [more](#)



Health news



Access to better drinking-water and sanitation makes progress [more](#)

Our workplace

The ITT Global Service Desk (GSD) currently providing support from Monday to Friday is extending its operation hours to include Sundays, thanks to its collaboration with the EMRO Regional Service Desk. [more](#)

Hidden talents



This summer, he plans to scale 5000 metres of Mt Everest. [more](#)

Events

This spring and summer, check out the many things to do in Geneva. Concerts and exhibitions to attend, marathons to run to stay fit; or simply find your kind of place to hang out and relax. In the process, you may find little (or big!) treasure. [more](#)

Director-General's Speeches EN

[show details](#)

- WHO Director-General addresses the economic dimensions of universal health

WHO Reform

On-line platform for the information, communication and exchange of ideas on the current WHO programme of reform and the immediate efficiency saving measures. Explore key documents, watch town hall meetings, send in comments, ideas and questions; and read responses from the DG.

- [WHO reform intranet site](#)

WHO Trivia

When was the Main Building at WHO headquarters inaugurated?

[Click for the answer...](#)

HQ-GVA Wireless Network

Network name: HQ-Guest
Username: wireless
Current Password: S@f3gu@rd

IT Resources

[IT Knowledge Base](#)

[IT Service Catalogue](#)

[Spotlights Series](#)

[IT Clinics](#)

[Log a Service Request \(GSD\)](#)

ITT Service Alerts

[informational] No Alert

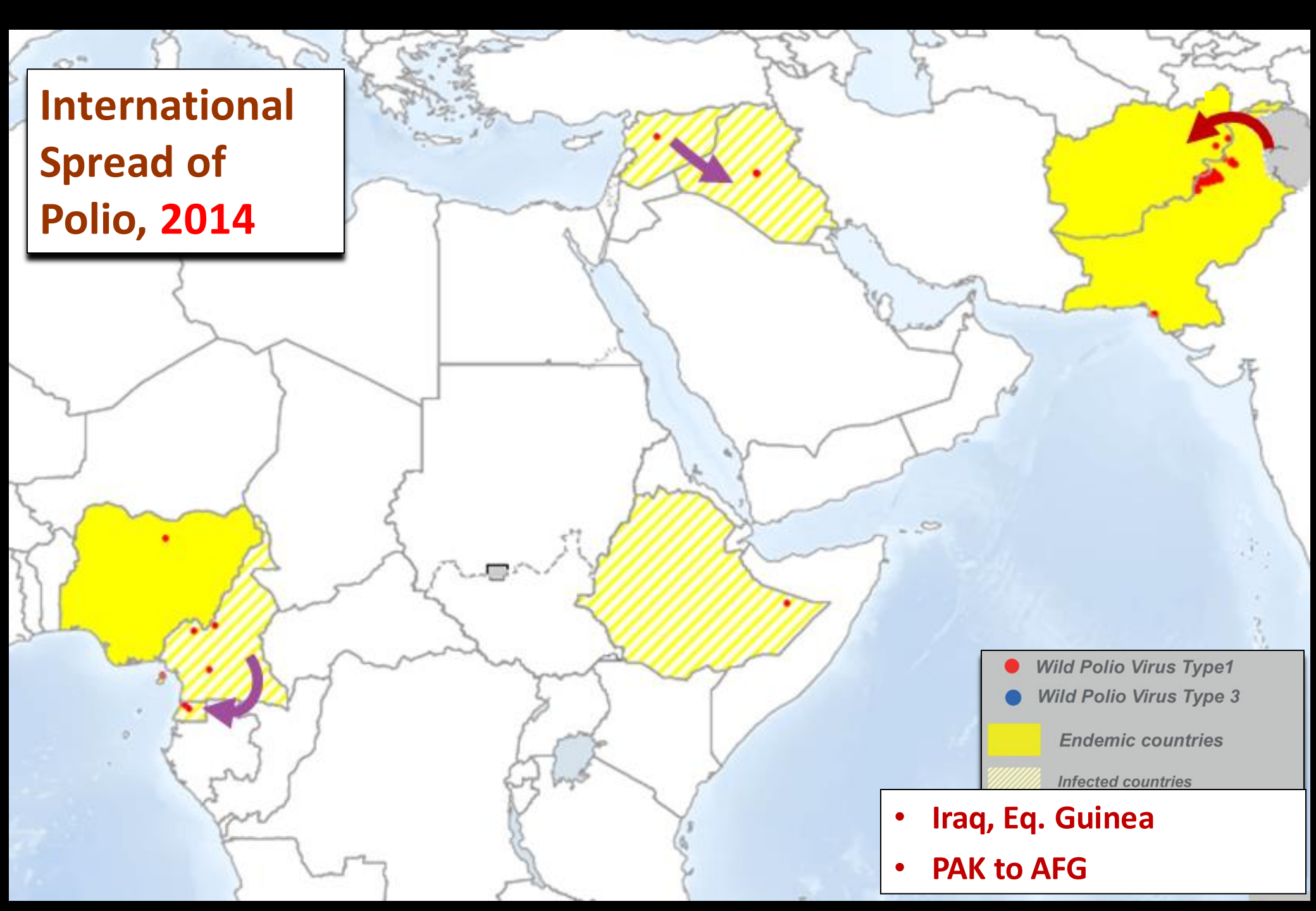
[view all](#)

WHO Events Calendar

May, 2014

< < Today > >
Mon Tue Wed Thu Fri Sat Sun

International Spread of Polio, 2014



- Wild Polio Virus Type 1
- Wild Polio Virus Type 3
- Endemic countries
- Infected countries

- Iraq, Eq. Guinea
- PAK to AFG

Key issues for Emergency Committee

- *Uncontrolled transmission in parts of Pakistan*
 - Massive increase in cases (8 → 61 same period 2013 & 14)
- *Low-season spread from three countries*
 - Pakistan to Afghanistan
 - Syria to Iraq
 - Cameroon to Equatorial Guinea
- *New scientific data*
 - Waning of mucosal immunity (<12 mos)
 - Boosting of mucosal immunity with IPV or OPV



WHO statement on the meeting of the International Health Regulations Emergency Committee

After discussion and deliberation on the information provided, and in the context of the global polio eradication initiative, the Committee advised that the international spread of polio is a public health risk to which a rapid response is essential. The cessation of international travel, if unchecked, this situation is the world's most serious vaccine-preventable disease. The Committee has expressed its International Concern (PIC)

and a public health risk to which a rapid response is essential. The cessation of international travel, if unchecked, this situation is the world's most serious vaccine-preventable disease. The Committee has expressed its International Concern (PIC)

from 13:30 to 19:00 Geneva



States currently exporting wild poliovirus

Pakistan, Cameroon, and the Syrian Arab Republic

- officially declare the interruption of PV a **national PH emergency**
- ensure that, prior to travel, **all residents (or long-term residents) receive a dose of OPV or IPV** (between 4 wks and 12 mo before travel)
- ensure that, in case of **urgent travel**, those who did not receive OPV or IPV still receive **a dose at the time of departure**
- ensure that polio vaccination is recorded on **standard IHR Vaccination Certificate** (IHR 2005, Annex 6)
- and maintain these measures until: (i) at least **6 months passed w/out new exportation**, (ii) **high-quality eradication activities are documented** in all infected areas;
 - in the absence of such documentation, measures to be maintained until at least 12 months passed w/out new exportations

States infected with wild poliovirus but not currently exporting

Afghanistan, Equatorial Guinea, Ethiopia, Iraq, Israel, Somalia and particularly Nigeria, given the international spread from that State historically, pose an ongoing risk for new wild poliovirus exportations in 2014. These States should:

- officially declare the interruption of PV a **national PH emergency**
- encourage **residents (or long-term residents) to receive a dose of OPV or IPV** (between 4 wks and 12 mo before travel), and, for unvaccinated travelers on urgent travel, to still receive a **dose at the time of departure**
- ensure that travelers receiving vaccine have access to an appropriate document to record the vaccination;
- maintain these measures until: (i) at least **6 months passed w/out the detection of WPV transmission from any source**, and (ii) **high-quality eradication activities are documented** in all infected areas;
 - in the absence of such documentation, measures to be maintained until at least 12 months passed w/out new exportations



Pakistan's failings to fight global emergency response

BY TOM MILES

GENEVA Mon May 5, 2014 12:03pm EDT

1 COMMENTS | Tweet 2 | Share Share this 0



Polio workers give polio vaccine drops to a child as a policeman stands by during a vaccination campaign in Peshawar, the capital of Khyber-Pakhtunkhwa province.

CREDIT: REUTERS/FAYAZ AZIZ

RELATED TOPICS

Health »

(Reuters) - Pakistan's failure to step up global emergency health measures... Health Organization (WHO) recommending all residents must show proof of vaccination before they can leave the country.

TOP NEWS

HOME / TOP NEWS / WORLD NEWS / POLIO NOW A WORLD HEALTH EMERGENCY, WHO SAYS

Polio now a world health emergency, WHO says

The World Health Organization characterized the polio outbreak as a worldwide health emergency, and recommended a vaccination certification for anyone traveling from an affected area.

By Ed Adamczyk | May 5, 2014 at 12:01 PM | 0 Comments (Leave a comment)



2



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*Polio Eradication &
Endgame Strategic Plan
2013-2018*

What is the new endgame strategy?

- Strategic framework for the sequential cessation of Sabin strains, starting with Sabin type 2.
- For Sabin type 2, cessation means that tOPV must be replaced with bOPV (1+3) in a synchronized manner globally.
- For risk mitigation, the framework includes at least one dose of IPV included in the routine EPI (starting 6 months before switch from tOPV to bOPV).

Why is this plan needed?

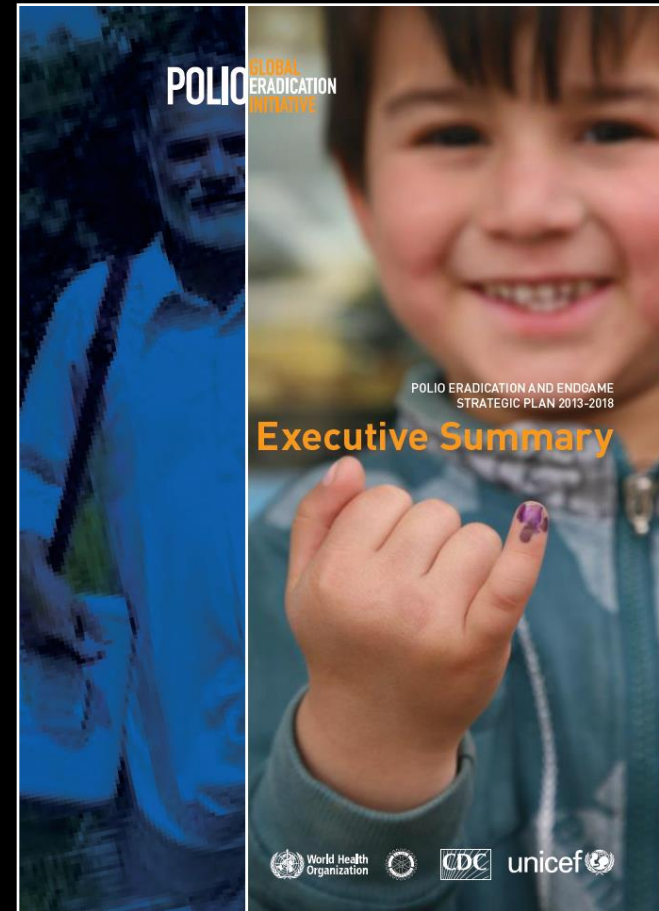
- address proactively Sabin type 2 burden of paralytic disease.
- regardless of fate of eradication, we can lock in type 2 gains for infinity.
- accelerate eradication and boost types 1 and 3 immunity with bOPV & IPV.
- dry run of all Sabin cessation (at a time when stakes are lower).

The changing polio world

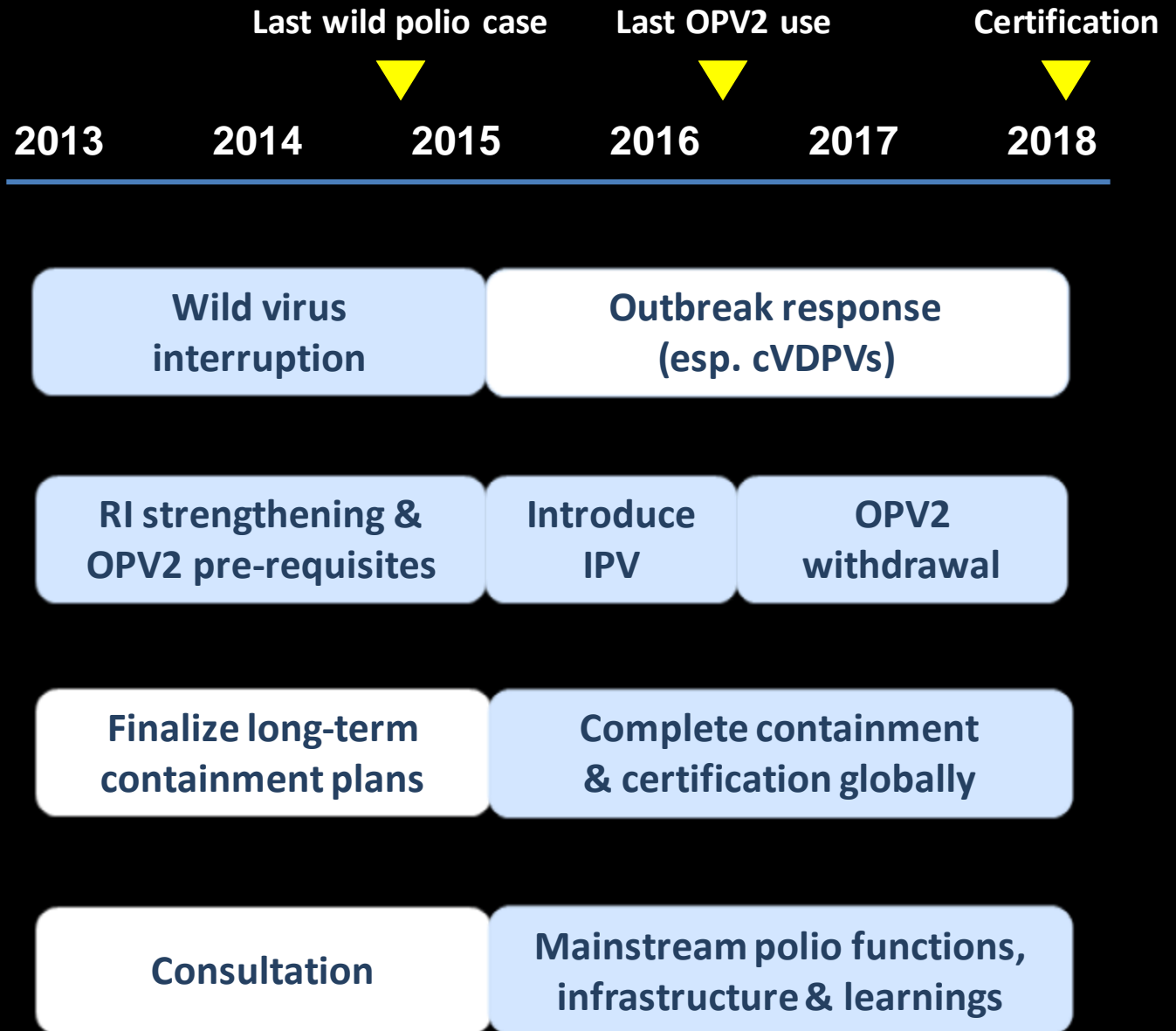
- wild poliovirus type 2 was last detected in 1999 in India
- thus, >10 years without wild poliovirus type 2
 - yet, ~40% of global vaccine-associated paralytic poliomyelitis (VAPP) burden is due to Sabin type 2 (100-200 cases annually), and,
 - >95% of cVDPV cases are due to poliovirus type 2
- 2012 marks first year with more paralytic disease likely caused by vaccine virus than wild poliovirus

Endgame Plan, 2013-18

- Polio detection & interruption *(by 2014)*
- Immunization systems & OPV withdrawal *(by 2016)*
- Containment & Certification *(by 2018)*
- *Legacy Planning*



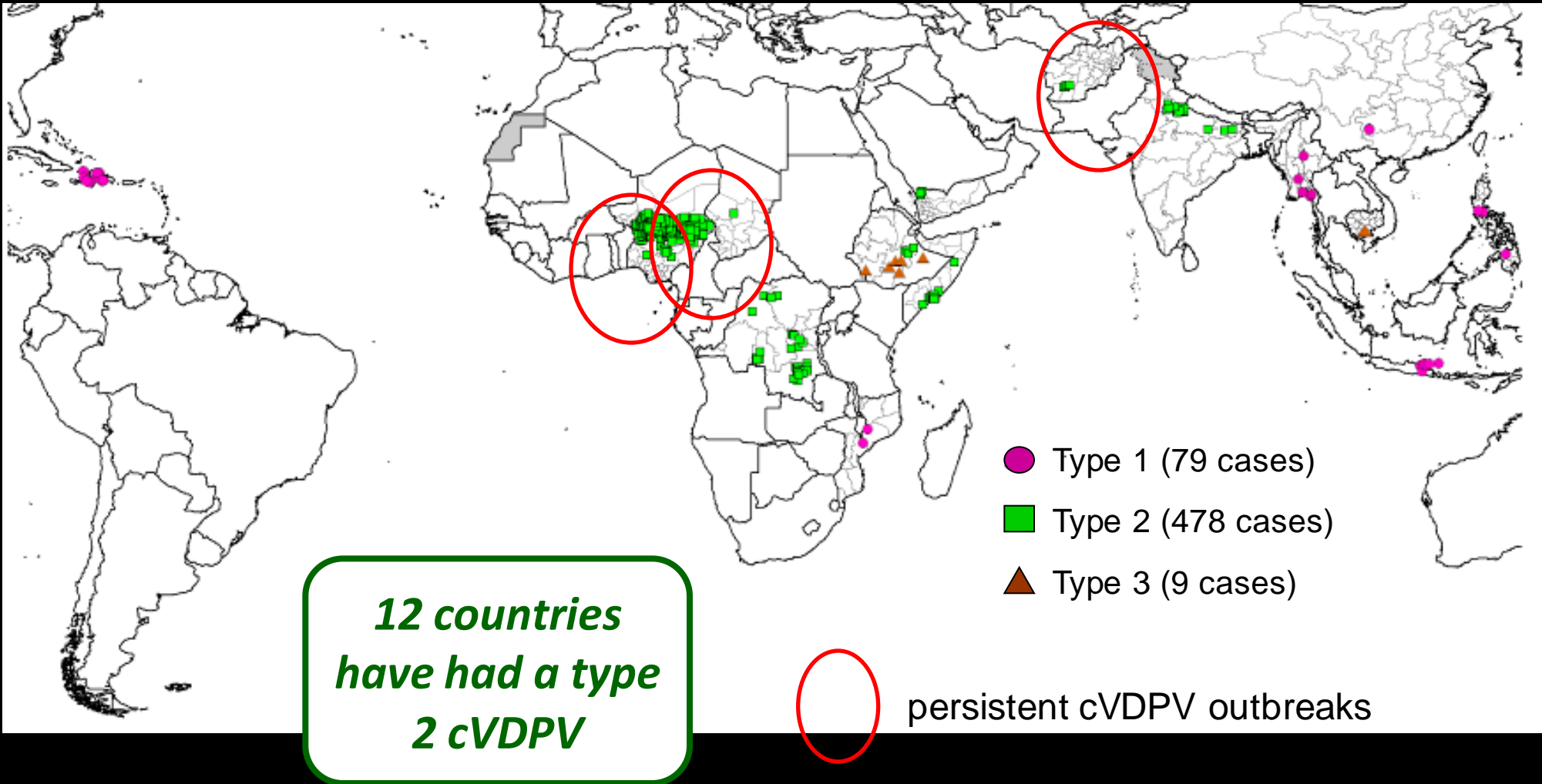
Major Objectives



Implementing the Plan:

- reaching children in very insecure areas
- operational scope >140 countries, with unprecedented ramp-up of new vaccine
- technically complex & politically volatile issues (e.g. IPV, containment, IHR & travelers)

Risk associated with OPV: cVDPV outbreaks, 2000-2013



Updated WHO Position Paper on Polio Vaccination, WER, 28 February 2014

2014, 89, 73–92

No. 9



World Health
Organization

Weekly epidemiological record
Relevé épidémiologique hebdomadaire

Organisation

Vaccination with OPV plus IPV

WHO no longer recommends an OPV-only vaccination schedule. For all countries currently using OPV only, at least 1 dose of IPV should be added to the schedule. The primary purpose of the IPV dose is to maintain immunity against type 2 poliovirus during and after the planned global withdrawal of OPV2 and switch from tOPV to bOPV. Depending on the timing of the IPV

Contents

73 Polio vaccines: W
paper, January 20

Sommaire

73 Note de synthèse
sur les vaccins an
tiques – Janvier 2

and combinations of vaccines against diseases that have an international public health impact. These papers are concerned primarily with the use of vaccines in large-scale immunization programmes.

actualisées sur les vaccins et les associations vaccinales contre les maladies ayant des répercussions sur la santé publique internationale. Ces notes portent essentiellement sur l'utilisation des vaccins dans le cadre des programmes

Summary

*Today, the world has the lowest-
ever number of cases & infected
countries ever.....*

*....accelerating the 'Endgame'
plan is now essential to secure a
polio-free world.*

*Thank you for your
attention!*

Wild Poliovirus Cases, 2012-14

2012

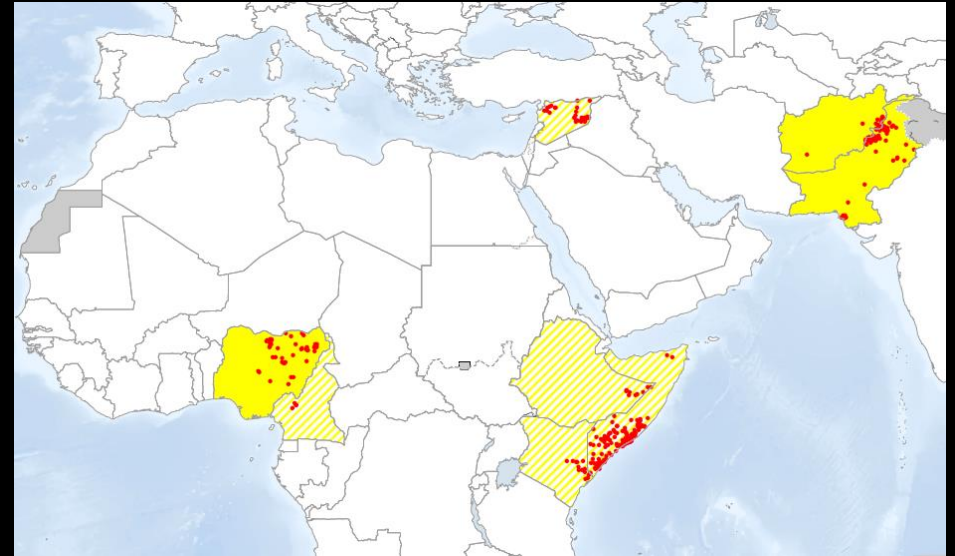
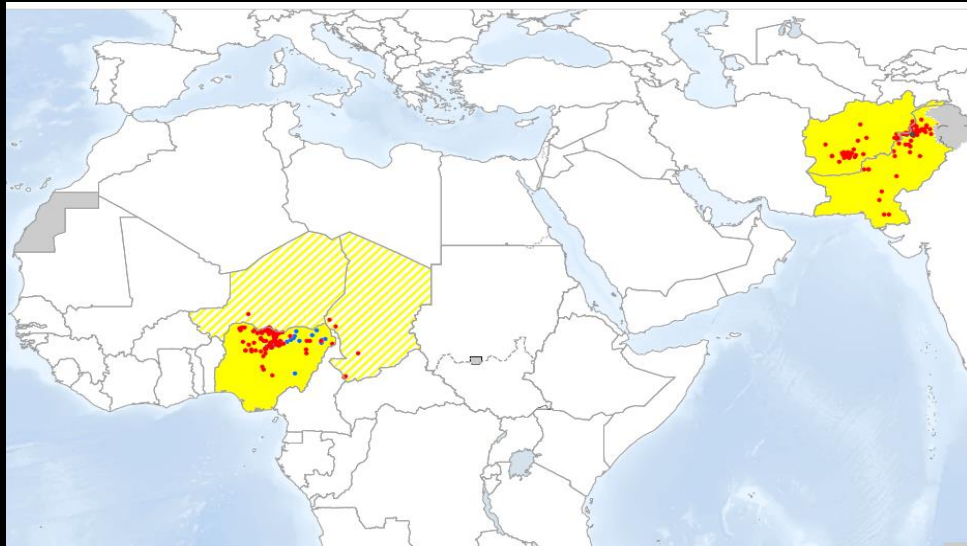
2013

*2014

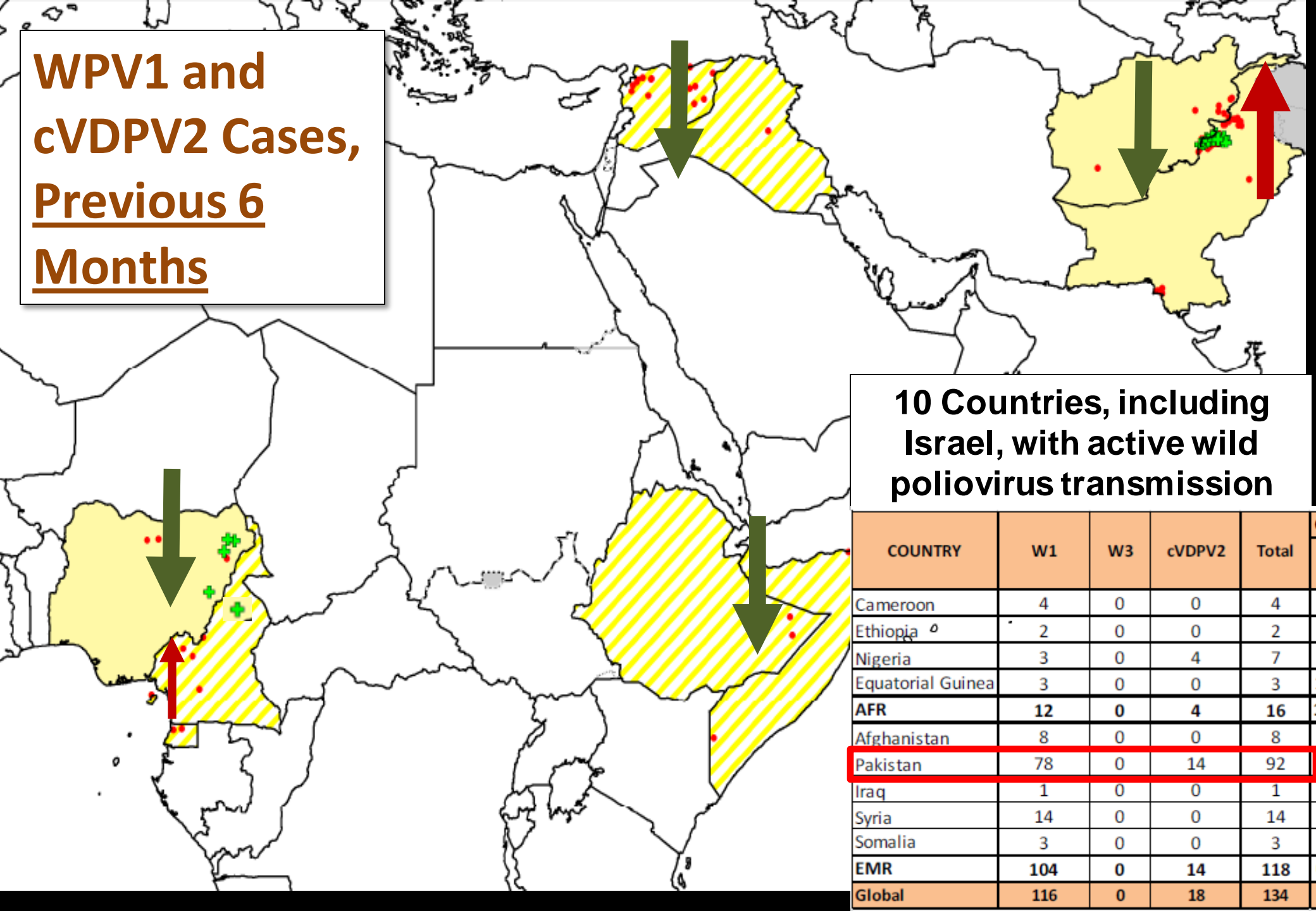
- Wild Polio Virus Type 1
- Wild Polio Virus Type 3
- Wild Polio Virus Type 1&3

■ Endemic countries

▨ Country infected with WPV case (importation/ re-establishment)



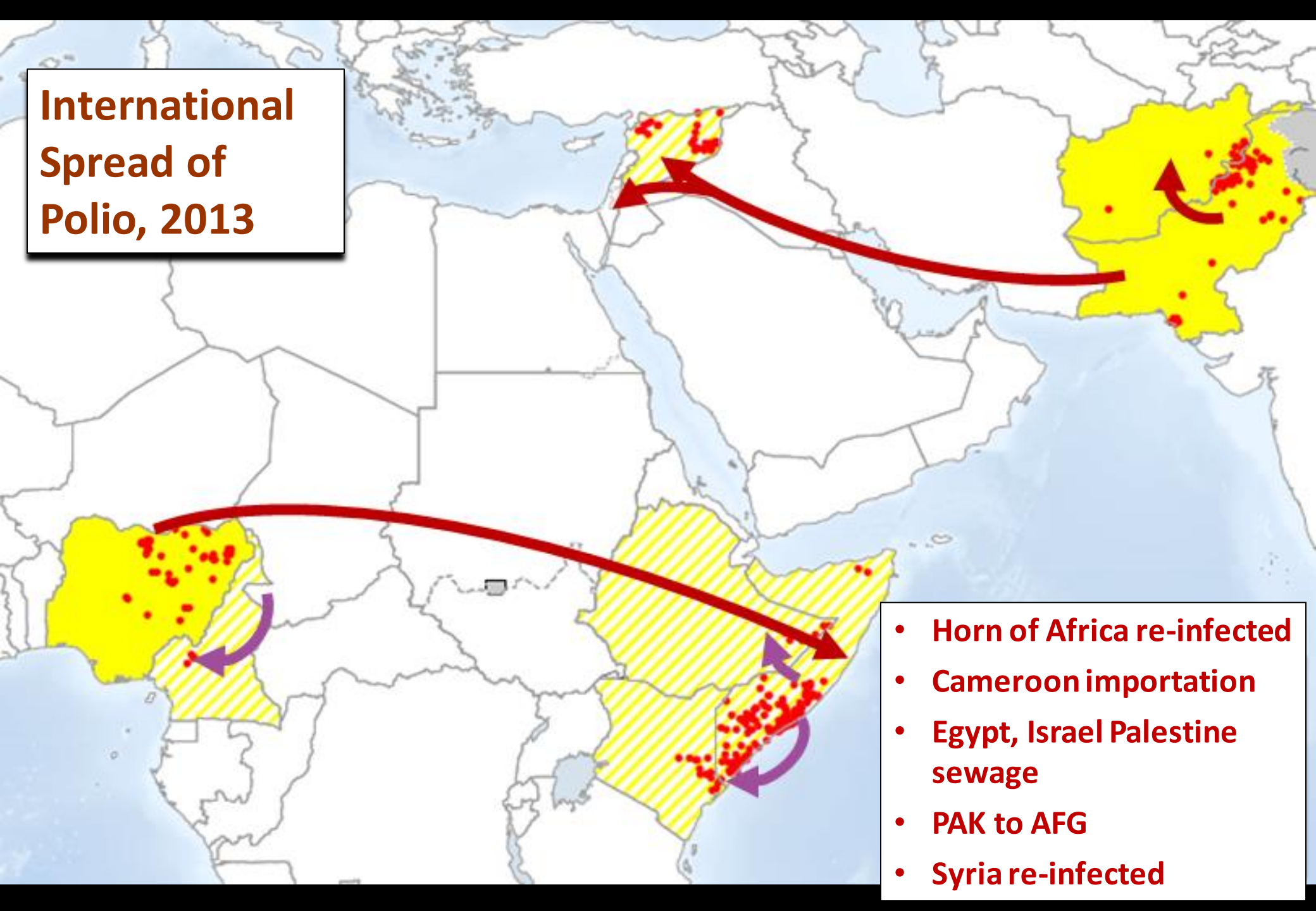
WPV1 and cVDPV2 Cases, Previous 6 Months



**10 Countries, including
Israel, with active wild
poliovirus transmission**

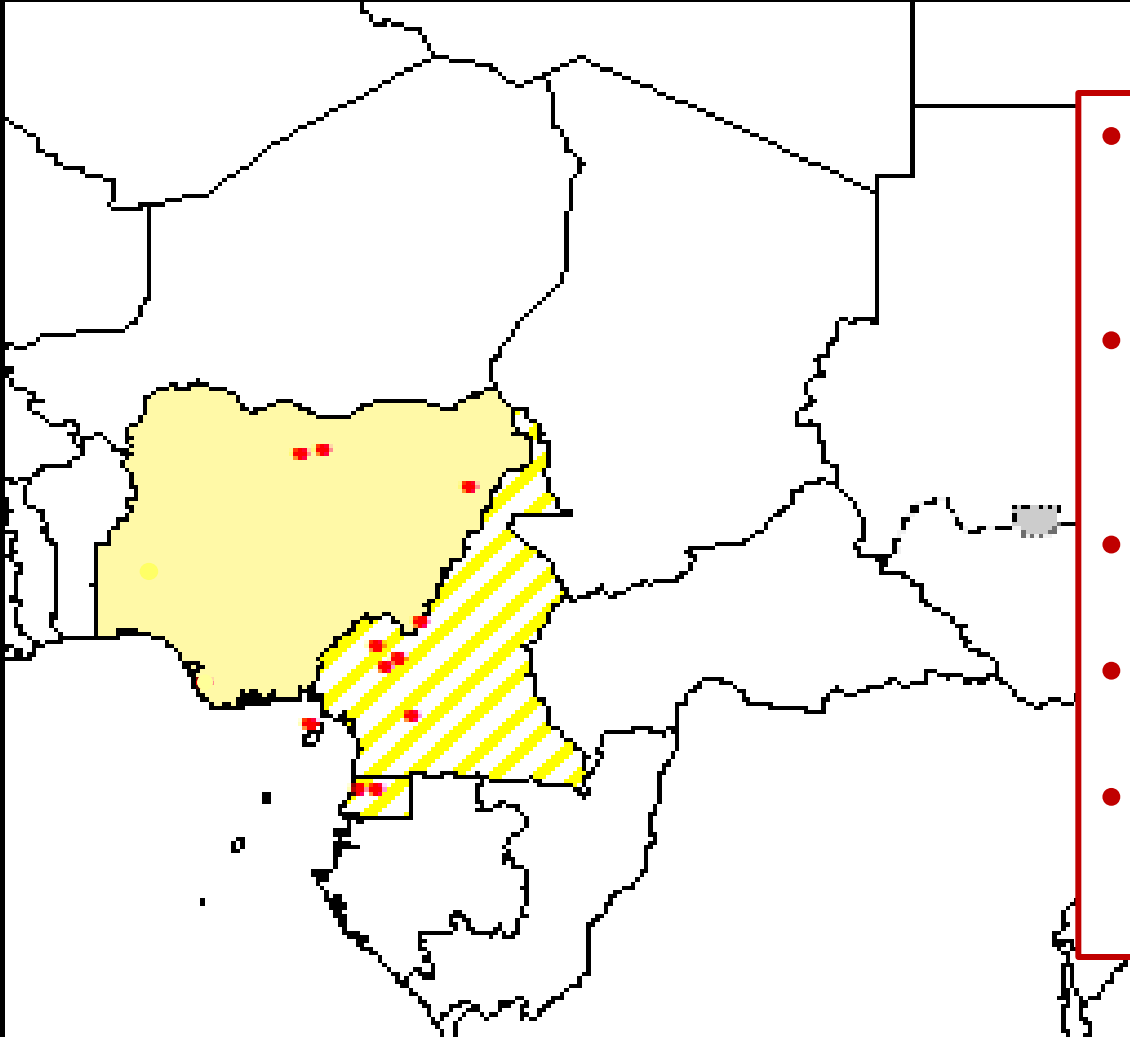
COUNTRY	W1	W3	cVDPV2	Total
Cameroon	4	0	0	4
Ethiopia	2	0	0	2
Nigeria	3	0	4	7
Equatorial Guinea	3	0	0	3
AFR	12	0	4	16
Afghanistan	8	0	0	8
Pakistan	78	0	14	92
Iraq	1	0	0	1
Syria	14	0	0	14
Somalia	3	0	0	3
EMR	104	0	14	118
Global	116	0	18	134

International Spread of Polio, 2013



- Horn of Africa re-infected
- Cameroon importation
- Egypt, Israel Palestine sewage
- PAK to AFG
- Syria re-infected

Polio Outbreak in Cameroon & Eq. Guinea 2013-14



- Prolonged undetected transmission in Cameroon
- Inadequate quality of response to detection
- Spread within Cameroon
- Spread to Equatorial Guinea
- Threat of spread to CAR & Nigeria