

Polio eradication and Endgame Strategic plan: Global perspective

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KZN Polio symposium 2016

Outline

- Historical perspective
- Polio as a candidate for eradication
- The polio endgame
- Last vestiges of disease in 2016

Historical perspective

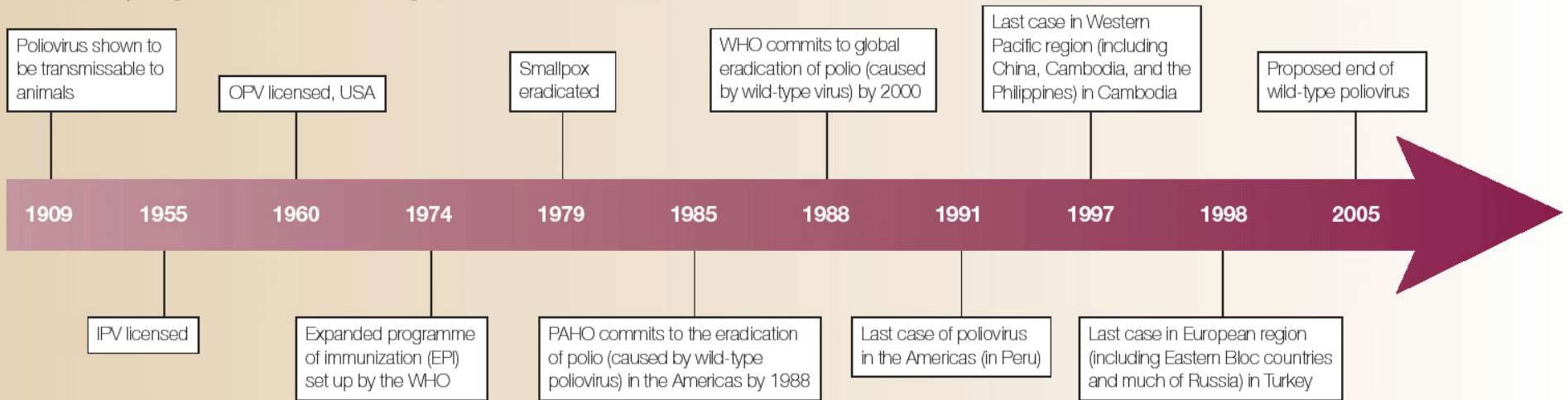
- Egyptian carvings
- 1789 – First clinical account by British physician Dr. Michael Underwood
- First polio epidemic in the U.S. in 1894
- 1900s widespread epidemics in Europe
- Peak – paralyzed and killed up to 500 0000 per year
- March of Dimes – 1938





Patients in the iron lungs were only let out to eat.

Timeline | Important events in poliovirus eradication



IPV, inactivated polio vaccine; OPV, oral polio vaccine; PAHO, Pan American Health Organization; WHO, World Health Organization.

Global eradication

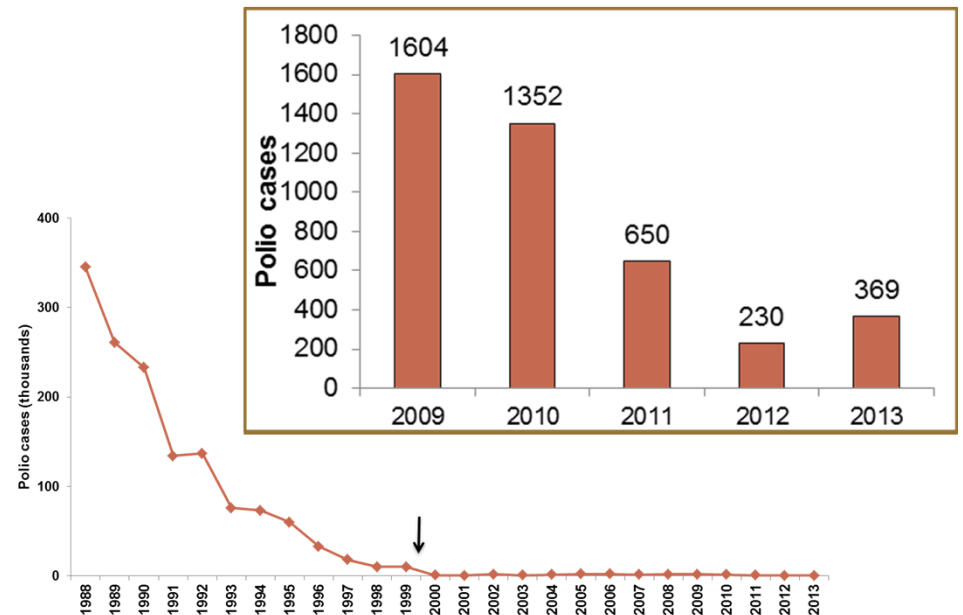
- “the worldwide absence of a specific disease agent in nature as a result of deliberate control efforts that may be discontinued where the agent is judged no longer to present a significant risk from extrinsic sources.”

POLIO AS A CANDIDATE FOR ERADICATION

- 4 key criteria
- Humans are required to maintain the pathogen.
- Sensitive and specific diagnostic tools are available.
- Effective intervention to terminate human-to-human transmission.
- Proof of principle (ie, elimination of transmission in a large geographic area).

Global Polio Eradication Initiative

- Eradication efforts 1988
 - 350,000 persons paralyzed
 - Targeted 2000
- More than 99% reduction
 - 3/6 WHO regions polio free
 - One of the 3 WPV serotypes been eradicated
 - Still a few hundred cases of WPV-related paralysis each year
 - Endemic countries and countries re-infected via importations



Three major deadlines missed

- Interruption of transmission by 2000
- Certification of eradication in 2005
- Interruption of transmission by 2012

STRATEGIES THUS FAR

- Ongoing strengthening of routine immunization coverage
- Continued supplementary immunization activities (SIAs)
- Extensive surveillance to find the virus
- Mopping up efforts in areas with continued transmission

The POLIO endgame



WHO, UNICEF, Rotary International and the CDC + others

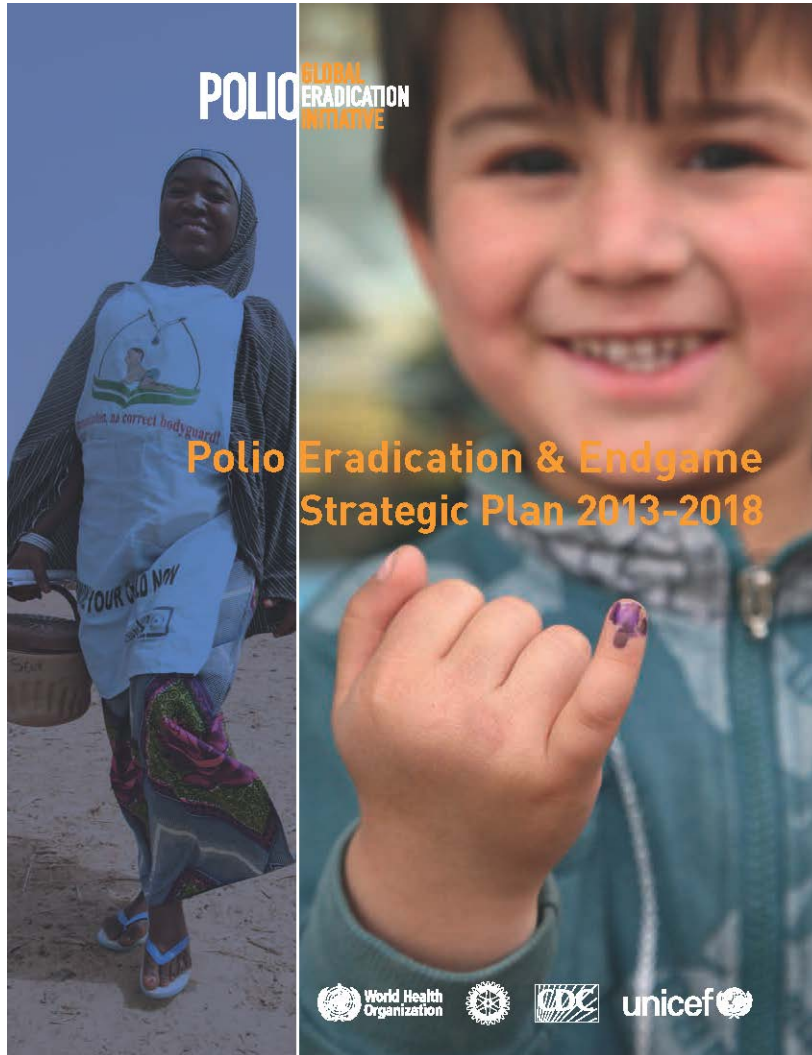
Global Polio Eradication Initiative (GPEI)

AIMS TO WIPE OUT THE LAST CASES OF POLIO FROM ALL CAUSES BY 2018

The Polio Eradication & Endgame Strategic Plan 2013-2018

The Plan differs from previous eradication plans

“complete the eradication and containment of all wild, vaccine-related, and Sabin polioviruses such that no child ever again suffers paralytic poliomyelitis.”



What does it mean for the world to be polio-free?

- Complete interruption of transmission and elimination of all polio disease
 - **Wild polioviruses**
 - **Vaccine-derived polioviruses (VDPVs)**
 - **Vaccine-associated paralytic poliomyelitis (VAPP)**
- Eradication & Endgame Strategic Plan 2013-2018 refers to **both wild and vaccine-derived polioviruses**

Eradication
<ul style="list-style-type: none">• Plan refers to wild virus

Endgame
<ul style="list-style-type: none">• Plan refers to management of VDPVs and VAPP

The Plan has four objectives

1

- Detect and interrupt all poliovirus transmission

2

- Strengthen immunization systems, withdraw oral polio vaccines (OPV), and introduce inactivated polio vaccine (IPV)

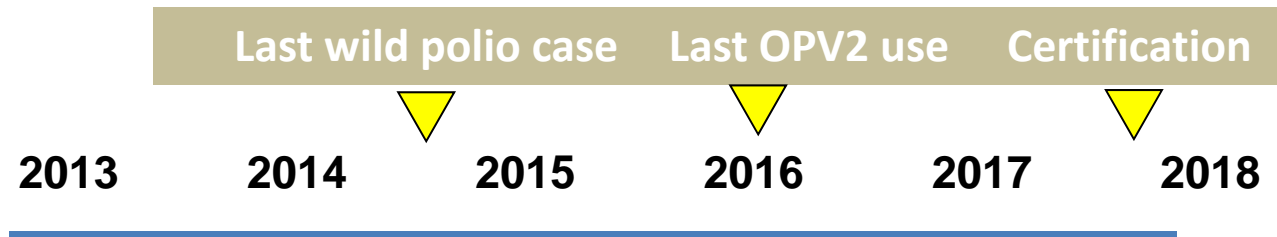
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- Contain poliovirus and certify interruption of transmission

4

- Plan polio's legacy

*Endgame
Major
Objectives*



Virus detection & interruption

Wild virus interruption (2013-2015) | Outbreak response (esp. cVDPVs) (2016-2018)

RI strengthening & OPV withdrawal

RI strengthening OPV2 pre-requisites (2013-2015) | Introduce IPV (2016) | OPV2 withdrawal (2017-2018)

Containment & certification

Finalize long-term containment plans (2013-2015) | Complete containment & certification globally (2016-2018)

Legacy Planning

Consultation & strategic plan (2013-2015) | Initiate implementation of legacy plan (2016-2018)

Wild virus interruption

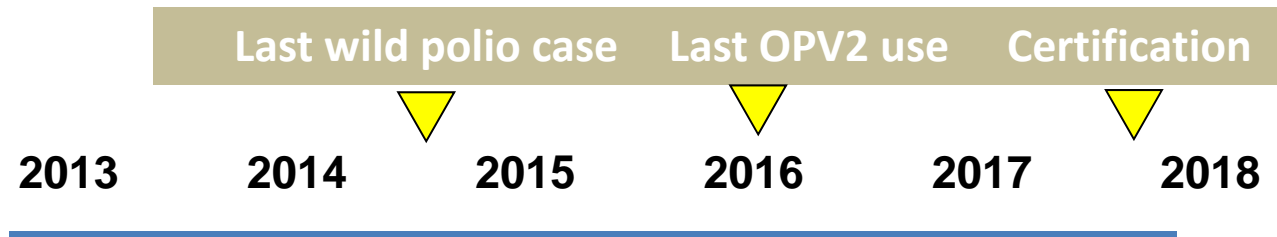
- Stop all wild poliovirus transmission by the end of 2014
- Stop new outbreaks due to a cVDPV within 120 days of confirmation of the index case

- Geographic focus
 - Endemic countries
 - Countries at highest risk of importation in Africa
 - Countries with persistent cVDPV or a history of cVDPV emergence

Activities

- Enhancing global poliovirus surveillance
- Improving OPV campaign quality to reach children in the remaining endemic and persistent cVDPV countries
- Rapid outbreak response

*Endgame
Major
Objectives*



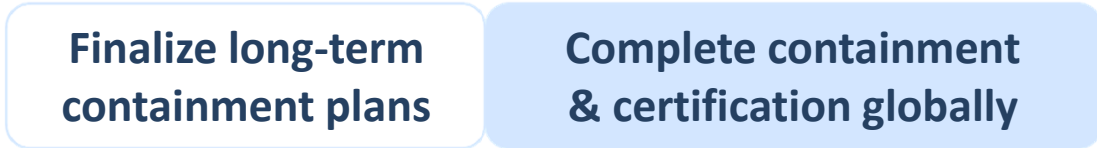
Virus detection & interruption



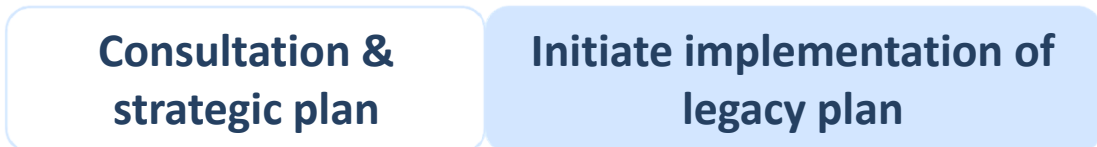
RI strengthening & OPV withdrawal



Containment & certification



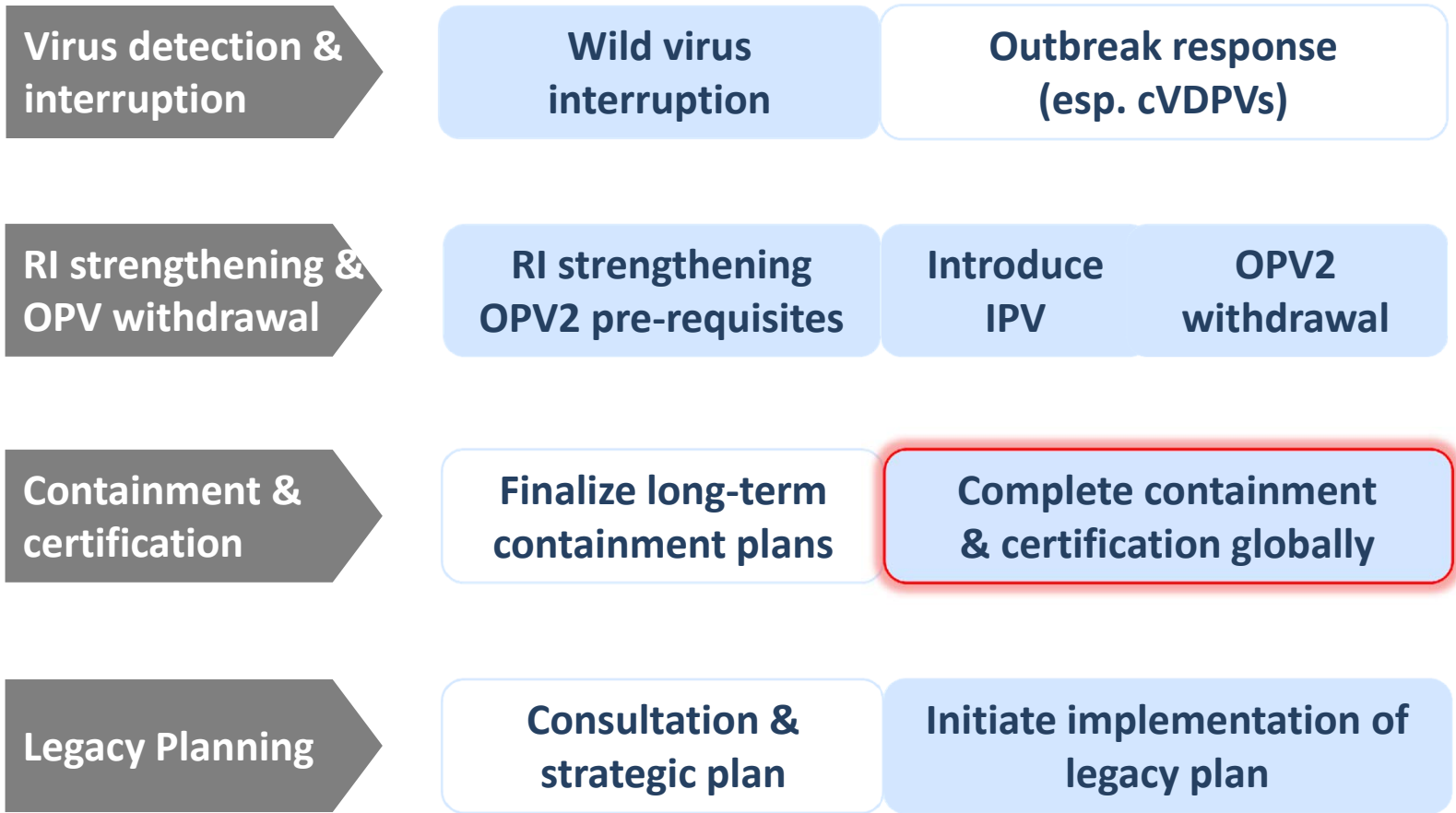
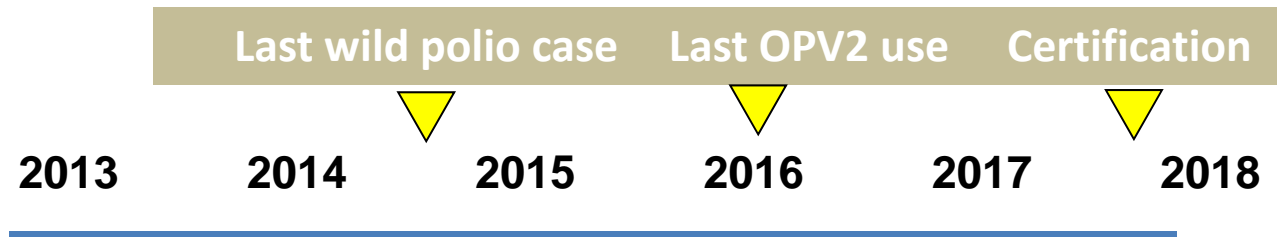
Legacy Planning



Immunization systems strengthening and OPV withdrawal

- Hasten the interruption of all poliovirus transmission
- Build a stronger system for the delivery of other lifesaving vaccines.
- All 145 countries that currently use OPV in EPIs , as well as the GAVI Alliance and immunization partners
 - 3 polio endemic countries plus 7 high risk of WPV outbreaks and recurrent cVDPV emergence
 - Angola, Chad, DRC, Ethiopia, India, Somalia and South Sudan

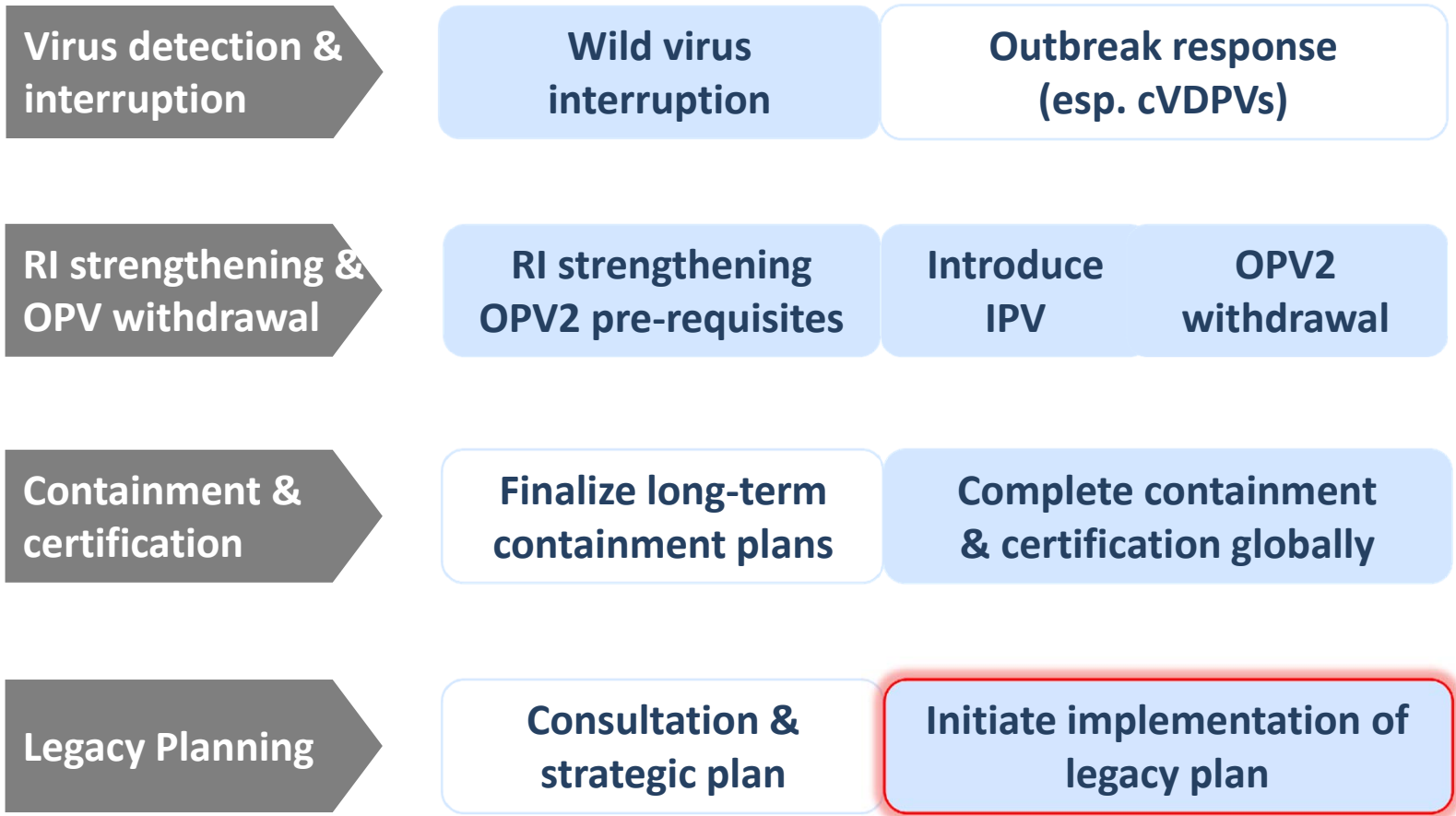
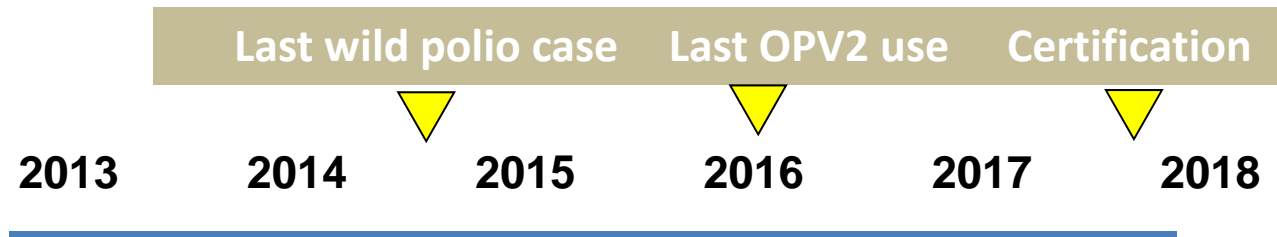
*Endgame
Major
Objectives*



Containment and certification

- Certify all regions of the world polio-free
- Ensure that all poliovirus stocks are safely contained by 2018
- International consensus on long-term biocontainment requirements for polioviruses.

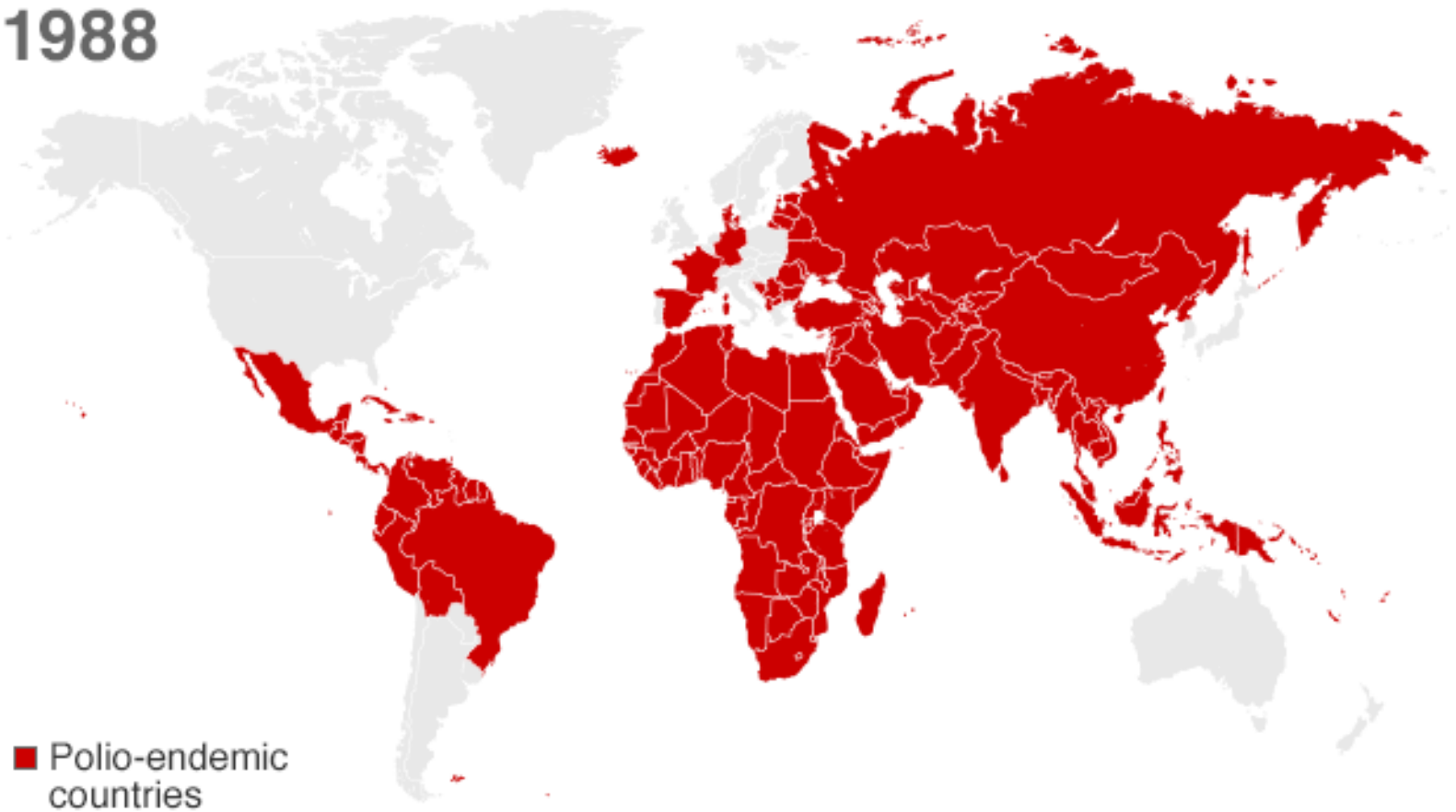
*Endgame
Major
Objectives*



Legacy planning

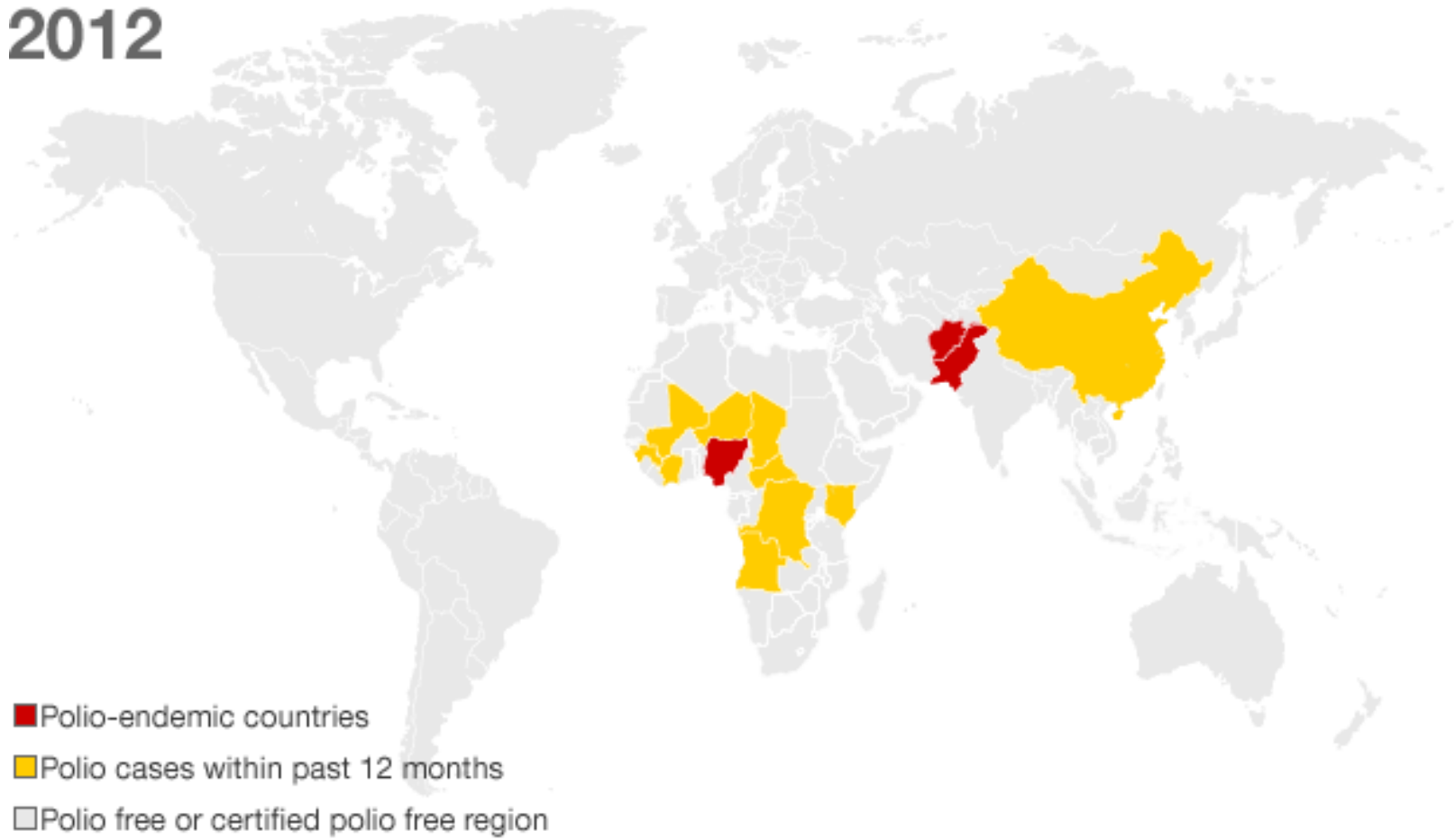
- World remains permanently polio-free
- Investment in polio eradication provides public health dividends for years to come.
- Mainstreaming long-term polio functions
- Leveraging lessons for other major health initiatives
- Transitioning the polio infrastructure as appropriate

1988



Source: World Health Organisation/Global Polio Eradication Initiative

2012



Source: World Health Organisation/Global Polio Eradication Initiative

2015



Source: World Health Organisation/Global Polio Eradication Initiative

2015



1994

■ Polio-endemic countries

Source: World Health Organisation/Global Polio Eradication Initiative

2015



Source: World Health Organisation/Global Polio Eradication Initiative

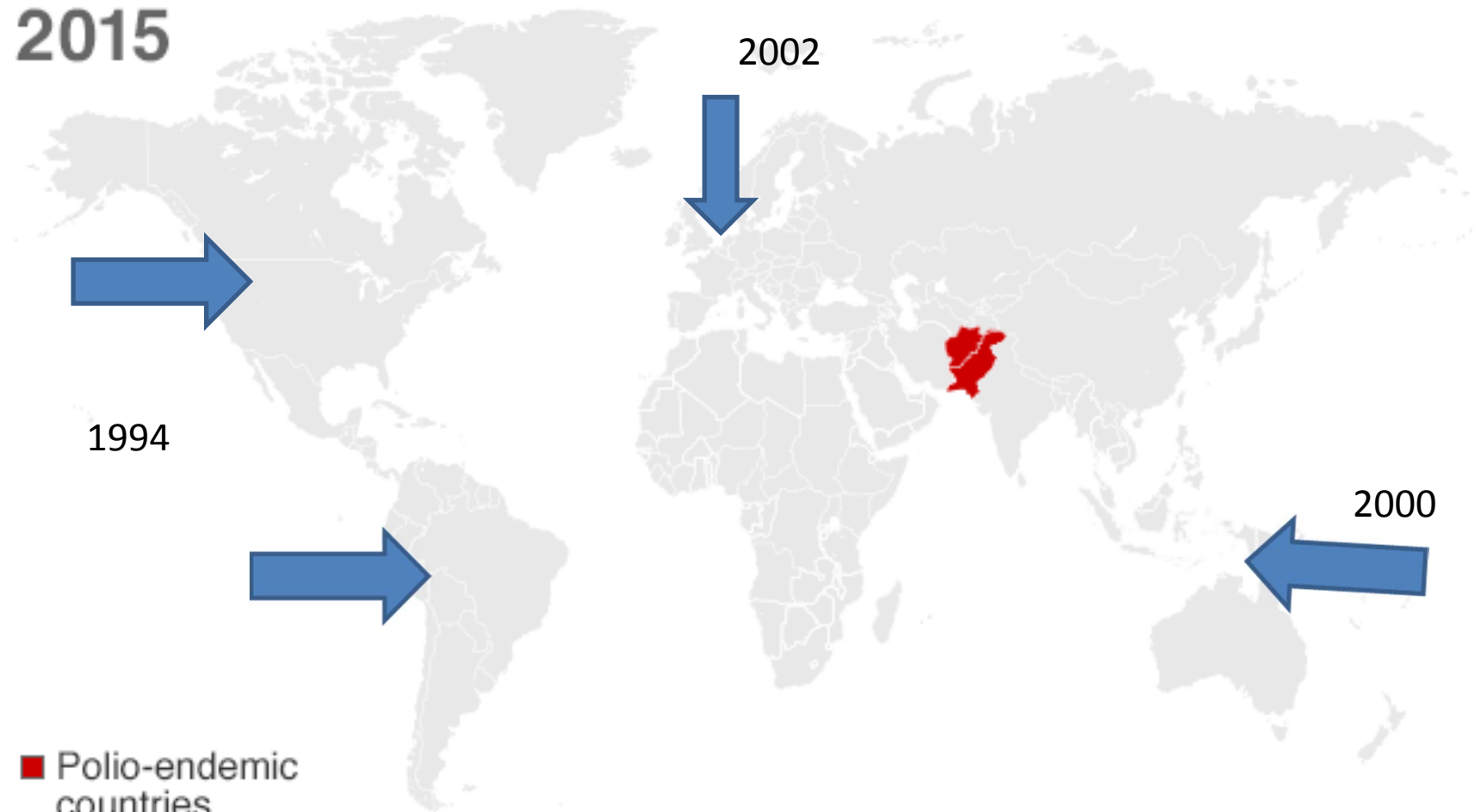
2015

2002

1994

2000

■ Polio-endemic countries



Source: World Health Organisation/Global Polio Eradication Initiative

2015

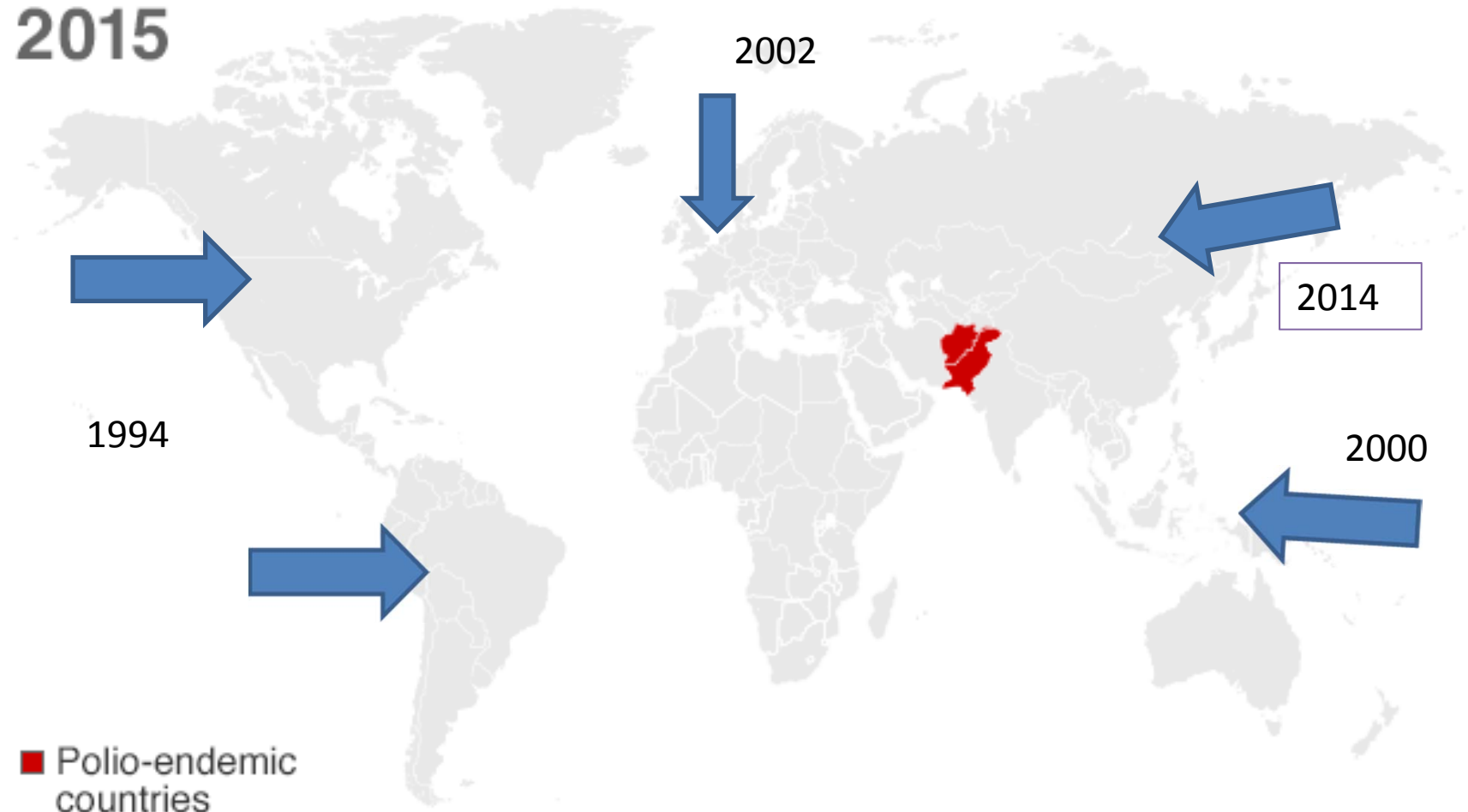
2002

2014

1994

2000

■ Polio-endemic countries



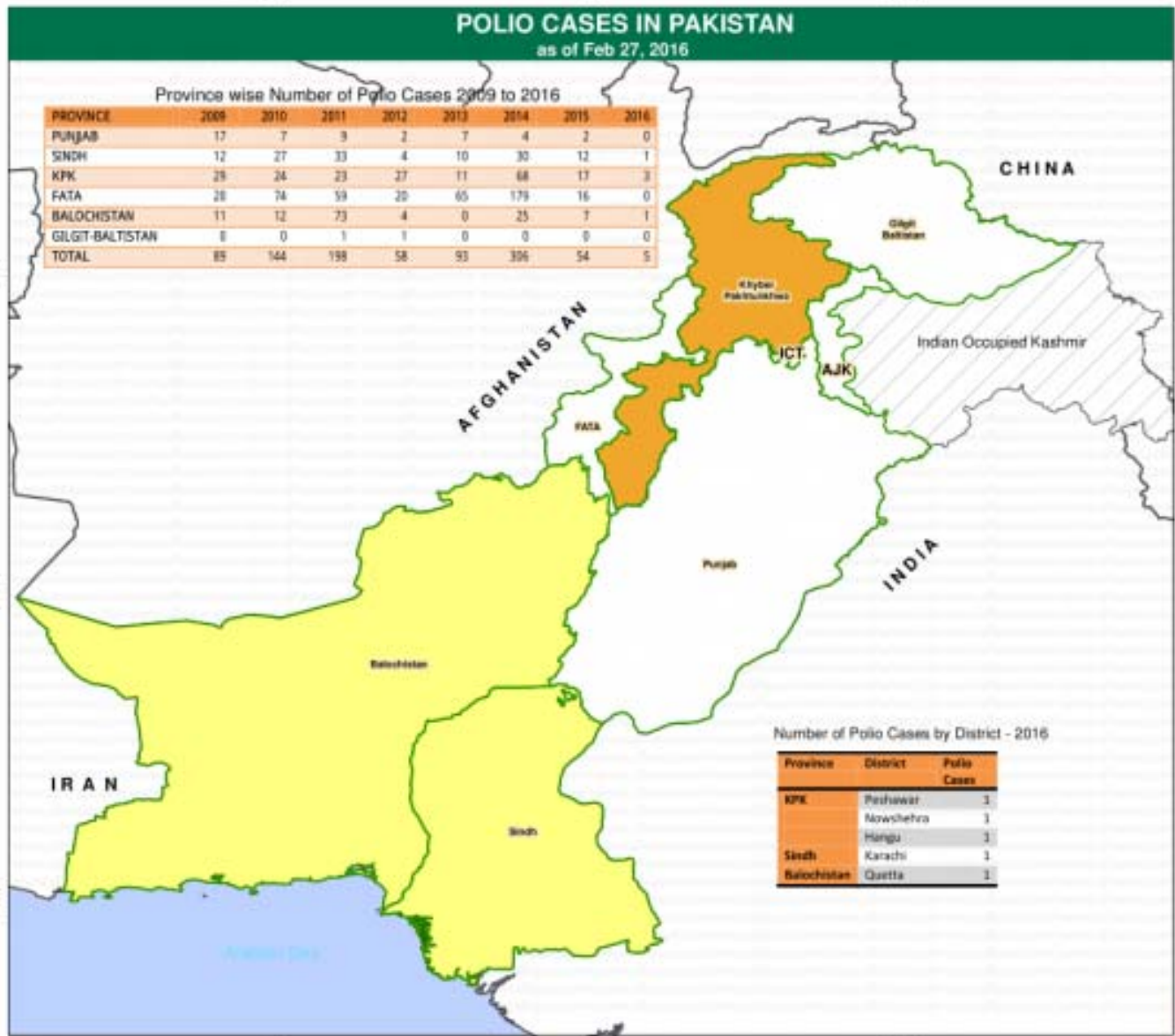
Source: World Health Organisation/Global Polio Eradication Initiative

POLIO CASES IN PAKISTAN

as of Feb 27, 2016

Province wise Number of Polio Cases 2009 to 2016

PROVINCE	2009	2010	2011	2012	2013	2014	2015	2016
PUNJAB	17	7	3	2	7	4	2	0
SINOH	12	27	33	4	10	30	12	1
KPK	29	24	23	27	11	68	17	3
FATA	28	76	59	20	65	179	16	0
BALUCHISTAN	11	12	73	4	0	25	7	1
GILGIT-BALTISTAN	8	0	1	1	0	0	0	0
TOTAL	85	144	198	58	93	306	54	5



Number of Polio Cases by District - 2016

Province	District	Polio Cases
KPK	Peshawar	1
	Mardan	1
	Hangu	1
Sindh	Karachi	1
Balochistan	Quetta	1

Legend

- No Polio Found
- 1
- 3
- Provincial Boundary

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Data Source(s):
 End Polio Pakistan, Polio Statistics

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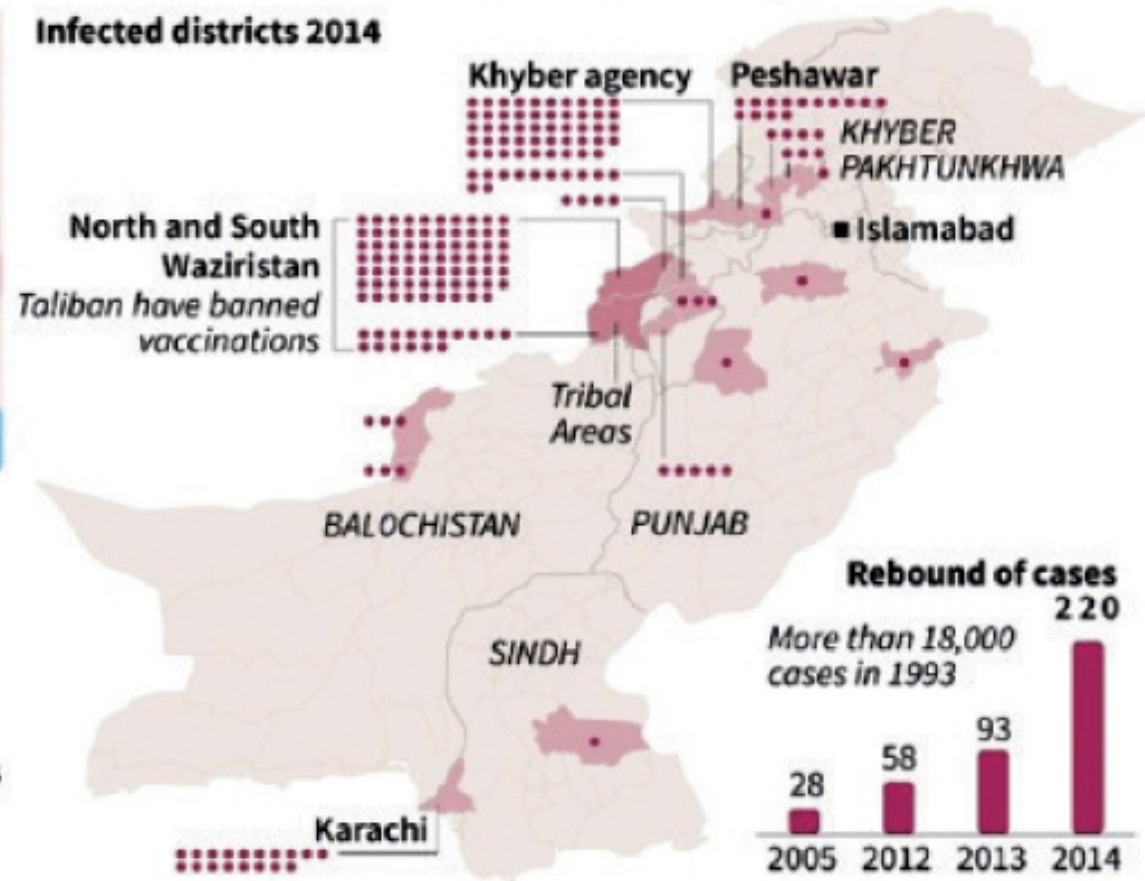


The battle against polio in Pakistan

Efforts to stamp out the crippling disease have been badly affected by deadly attacks against health workers



Infected districts 2014



Vaccination workers killed since December 2012

Vaccinators: at least 30

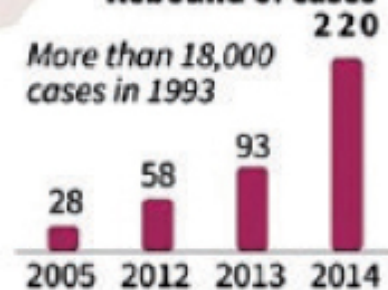
Police and security: nearly 30

- ▶ 350,000 young Pakistanis have missed out on vaccinations this year

Source : EndPolioPakistan

Rebound of cases

More than 18,000 cases in 1993



'global public good'

- GPEI personnel and its infrastructure
 - Other priority health interventions
 - Surveillance of epidemic-prone diseases
 - Humanitarian response to natural disasters and other crises.
- Beyond ending polio
 - Transition lessons of the polio programme
 - Delivering additional public health dividends

Polio still cripples thousands of children around the world. With your help, we can wipe this disease off the face of the earth forever. Visit rotary.org/endpolio to help.



END POLIO NOW

Rotary

We Are ThisClose to Ending Polio.

Archbishop Desmond Tutu