

# scaling up

the delivery of life-saving vaccines

## Status and the way forward

Jean Marie Okwo-Bele  
Director  
Immunization Vaccines & Biologicals



World Health  
Organization



# Expanded Programme on Immunization



World Immunization Week: 24-30 April 2014

Are you up-to-date?

**IMMUNIZE FOR A HEALTHY FUTURE**



**KNOW**  
Vaccines help keep you and your family healthy.  
Ask at your health clinic to know which vaccines you need.



**CHECK**  
Check whether you and your family have all the vaccines you need.



**PROTECT**  
Protect yourself: get the vaccines you need, when you need them.



# Outline

**1**

## **IMPLEMENTATION OF SAGE's RECOMMENDATIONS**

Yellow Fever  
Hepatitis A  
Cholera

**2**

## **WHERE ARE WE?**

Progress towards DOV goals  
Access to vaccines  
Research

**3**

## **ISSUES ON SAGE'S HORIZON?**

SAGE Working Groups  
Issues on the horizon

# **3** key messages



**sustain  
momentum**



**support  
implementation**



**identify areas  
for collective efforts**





1

**IMPLEMENTATION OF  
SAGE's  
RECOMMENDATIONS?**

Yellow Fever  
Hepatitis A  
Cholera



# WHO Position Paper July 2013



**A single dose of Yellow Fever vaccine is sufficient to confer sustained life-long protective immunity against YF disease; a booster dose is not necessary.**

# Follow-up on one dose recommendation for YF vaccine

## Jan 2014 - 34th session of the Executive Board

Resolution EB 134.R10 and recommended the World Health Assembly (May 2014) to update relevant provisions in IHR (Annex 7) to reflect the life long protection of YF vaccine

The WHO Secretariat shared with Member States the proposed amendments (DG circular letter 1, 2014)

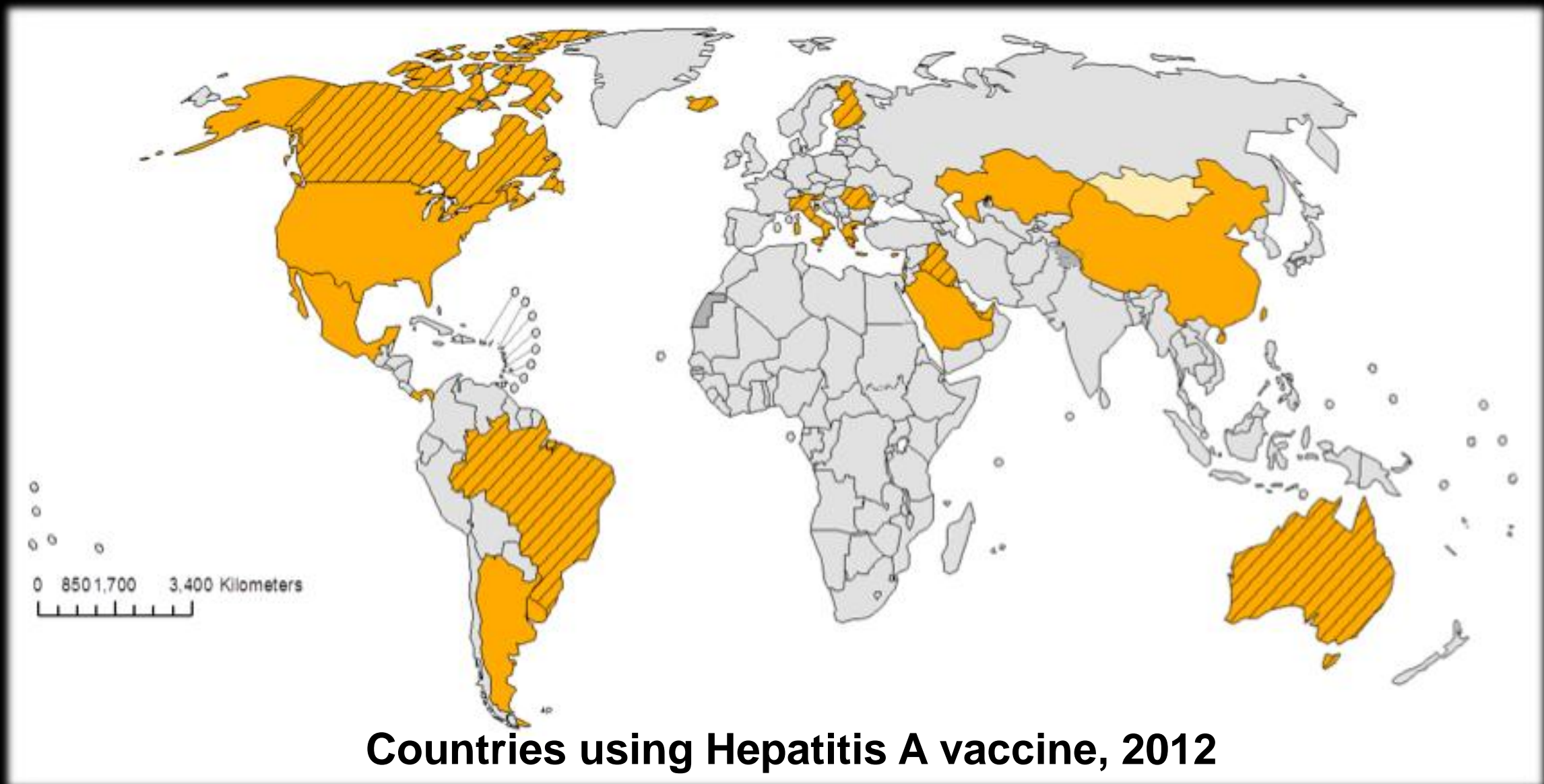




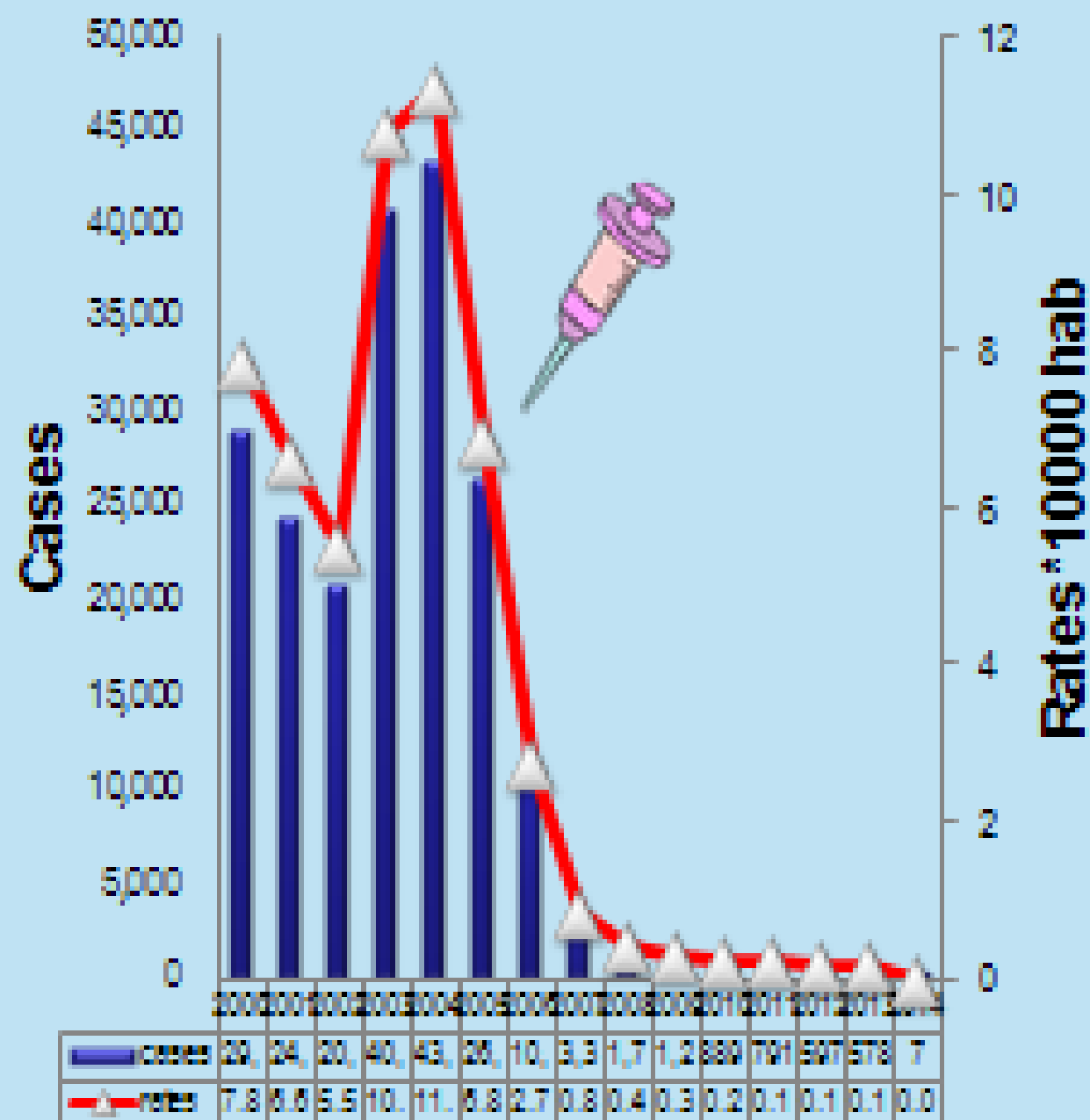
# Hepatitis A position paper, 2013

HAV be integrated into the national immunization schedule  
**children aged  $\geq 1$  year - ONE DOSE**

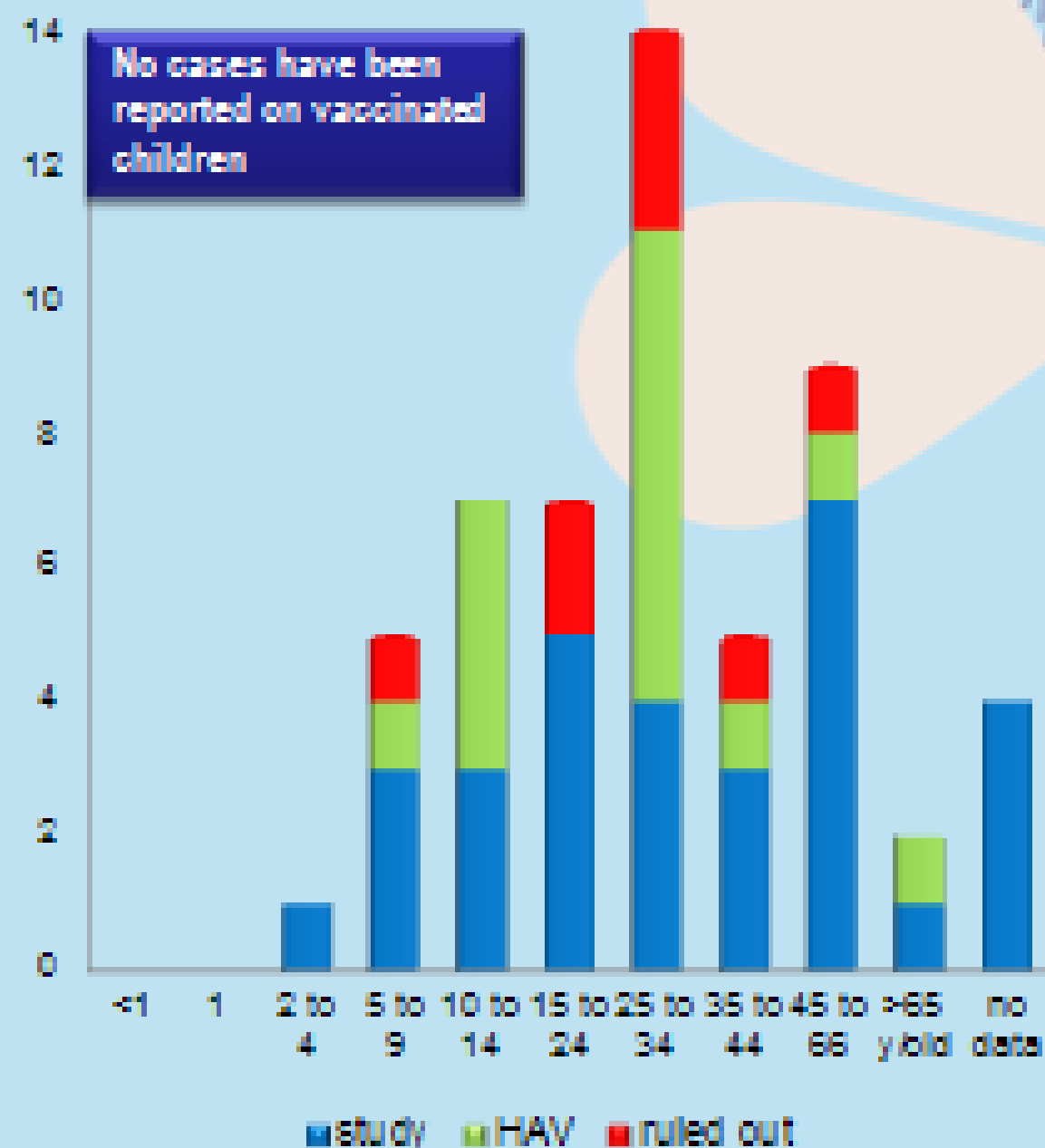
if indicated on the basis of epidemiology and consideration of cost-effectiveness.



## Hepatitis A and unspecified Hepatitis. Cases and rates – Argentina 2000-2013



## Hepatitis A cases by age group National Laboratory System. Argentina 2013





# Roll-out of cholera vaccines.....at last

## Stock-pile: July 2013

two million doses to respond to outbreaks

provisions made for humanitarian emergencies

## Consultative meetings

EMR: Nov 2013

AFR: April 2014

## Plan to vaccinate half a million people in Haiti

## Discussions with partners

Assessing potential GAVI support for a larger stockpile





2

## WHERE ARE WE?

Progress towards DOV goals  
Access to vaccines  
Research



# DECADE OF VACCINES

In 2013, SAGE made 4 recommendations

1. Data quality improvement
2. Improving immunization coverage
3. Accelerating efforts to achieve disease elimination
4. Enhancing country ownership of national immunization programmes

# SAGE GVAP Assessment report

## Executive Board 134, Jan 2014

**22 Member States and 2 NGOs intervened.**

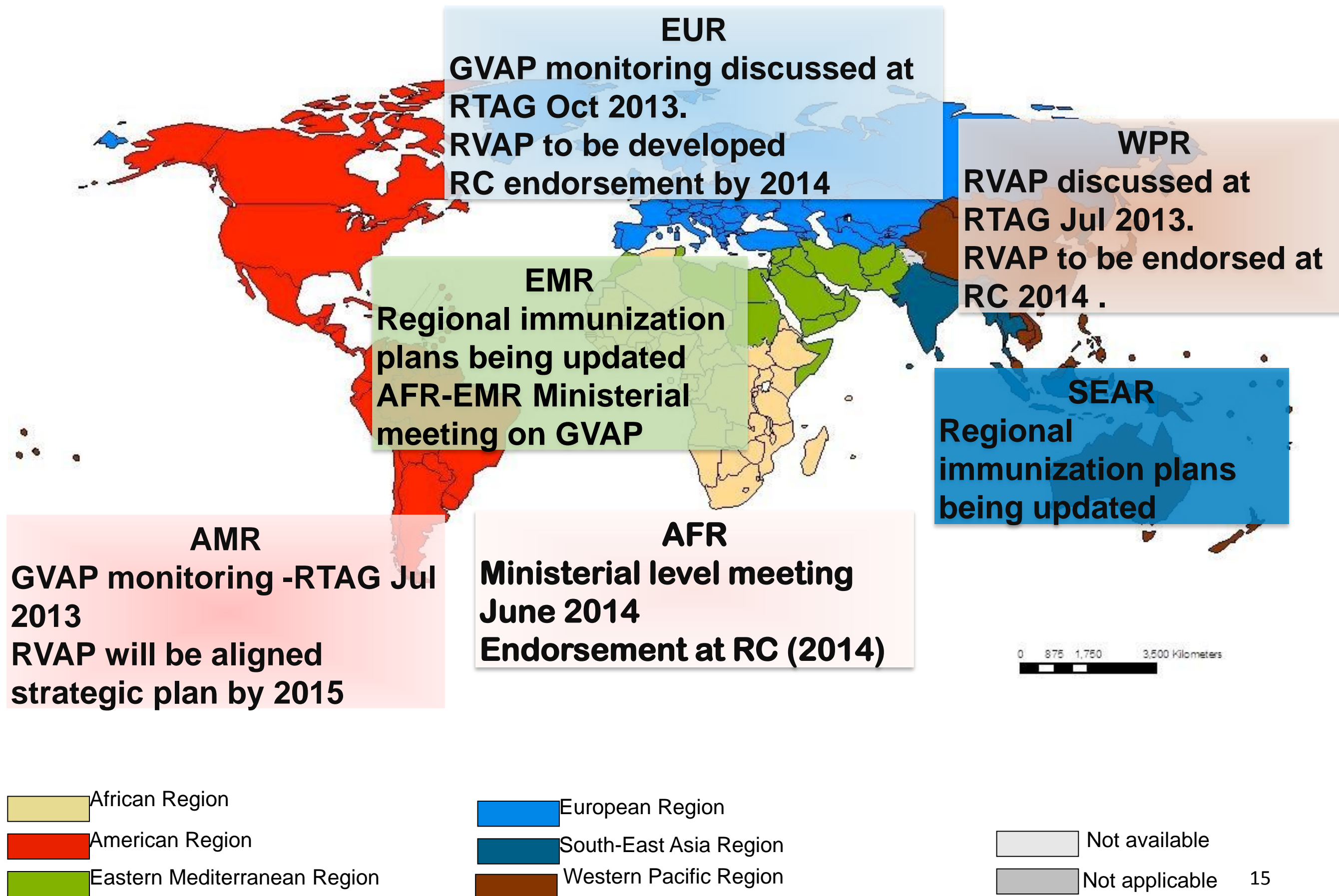
**Member States welcomed the SAGE recommendations, specifically the need to:**

**More**

- ❖ **improve data quality** to ensure that timely actions can be taken to improve national immunization programmes and monitor impact
- ❖ **increase the use of new technology** as a tool to improve data quality at all levels (including reference to Electronic Registries)
- ❖ **ensure national vaccine supply chains and logistics systems** are up to-date and are able to support and sustain efficient and effective vaccine delivery;
- ❖ **ensure middle income countries that self-procure vaccines have access to affordable vaccines.**



# Turning GVAP into ACTION at regional level



# Polio eradication in India

## South-East Asia Region certified polio-free



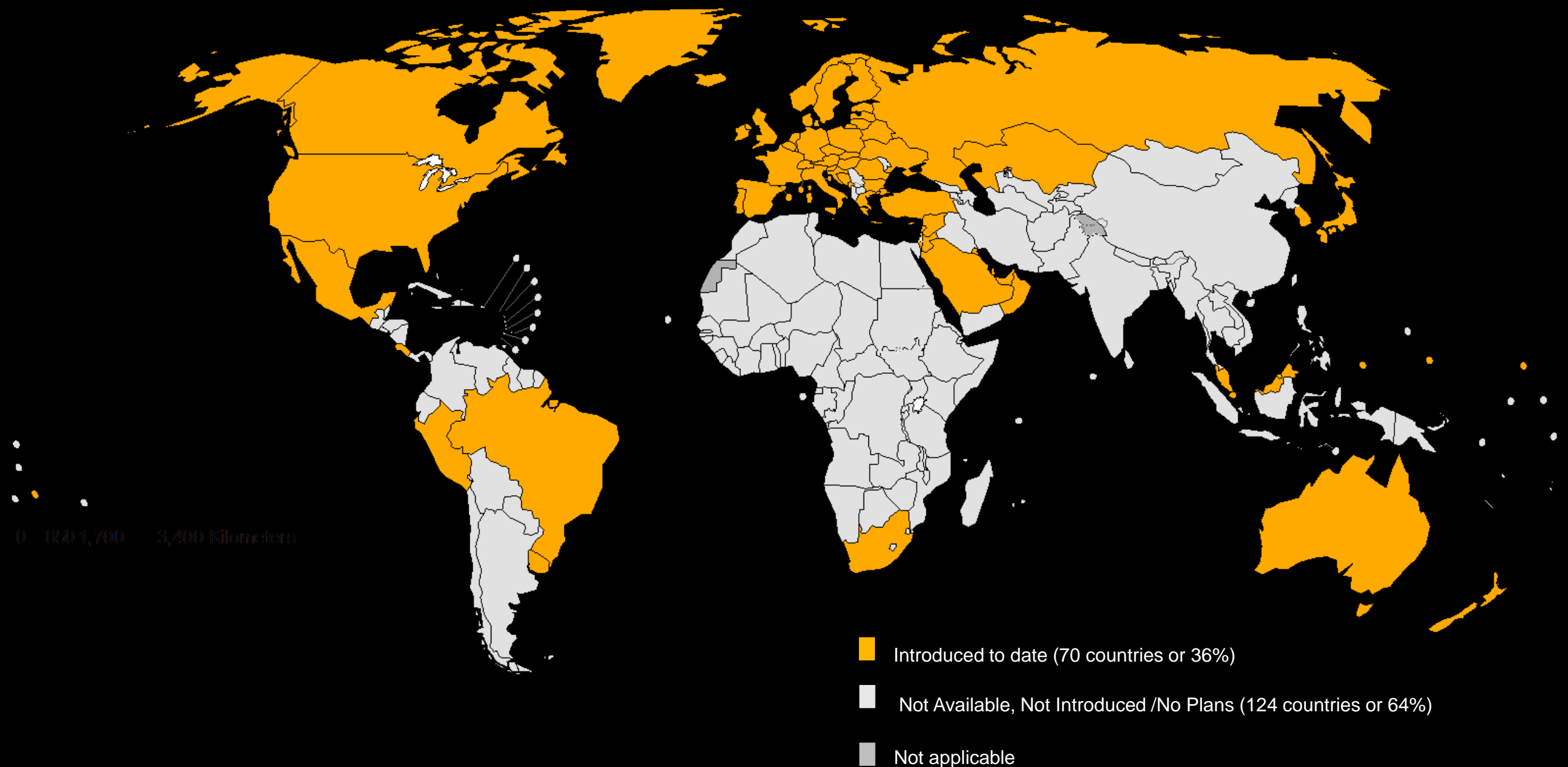
India's last case was reported in West Bengal on January 2011.  
The victim, a girl named Rukhsar



Five years ago, India accounted for nearly half of all new wild poliovirus cases in the world.



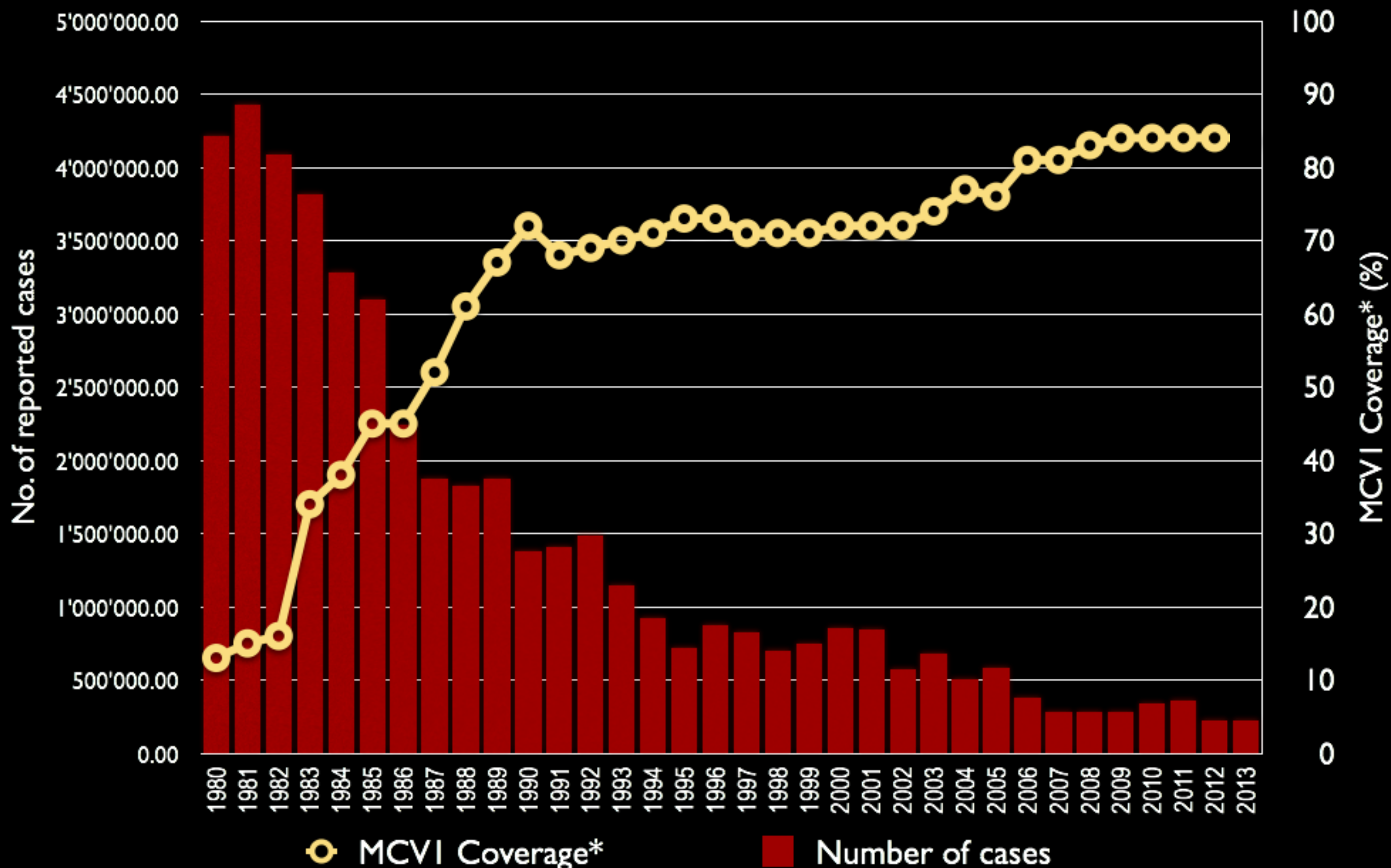
# 70 countries with Injectable Polio Vaccine in the national immunization programme; & planned introductions in 2014



The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

© WHO 2014. All rights reserved

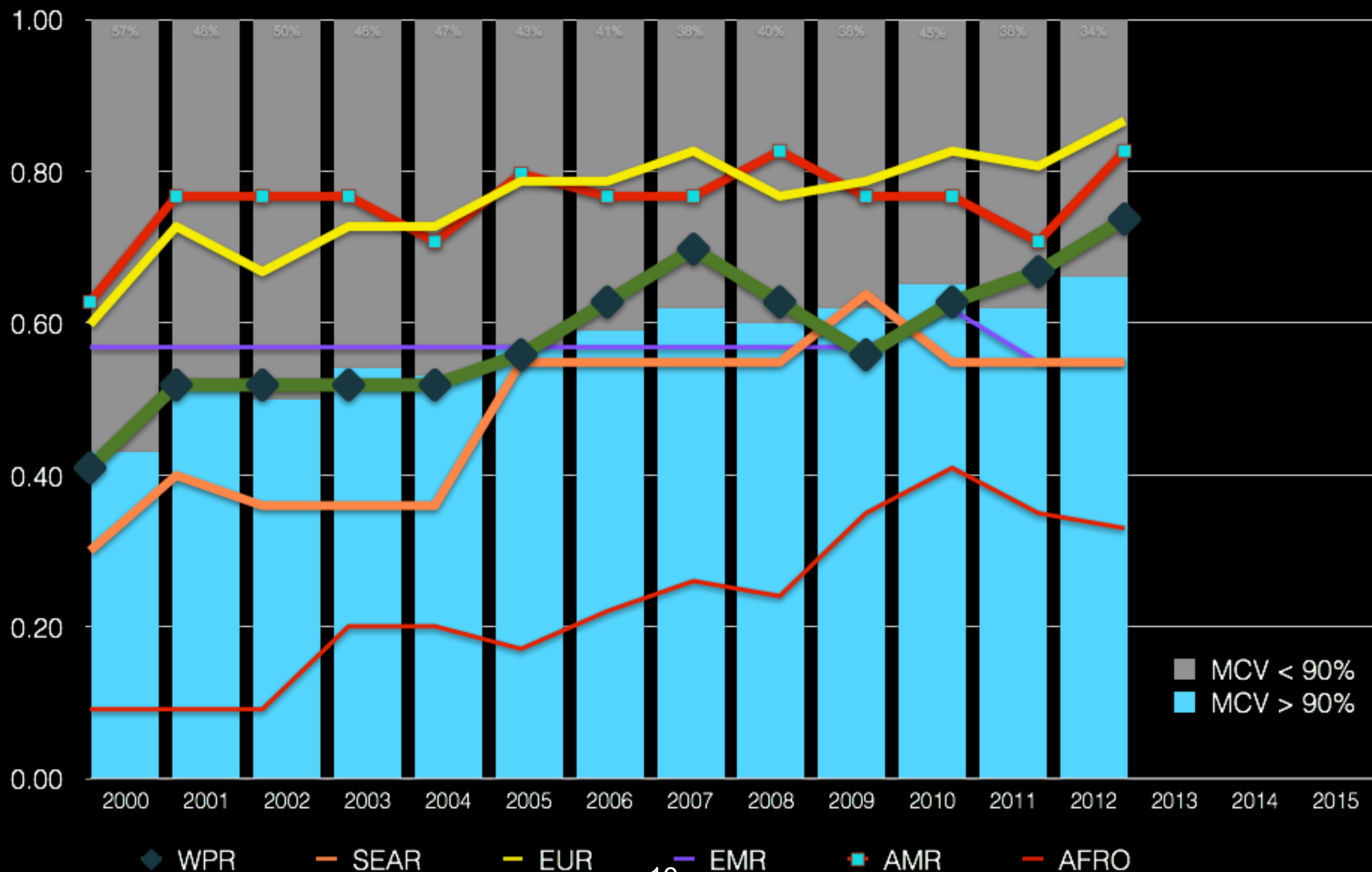
# Number of reported measles cases and MCV1 coverage\*



\* MCV1 coverage: coverage with first dose of measles-containing vaccine up to 2012 as estimated by WHO and UNICEF

\* Reported measles cases up to 2013

# Proportion of countries reaching 90% coverage with the first dose of measles containing vaccine 2000-2012



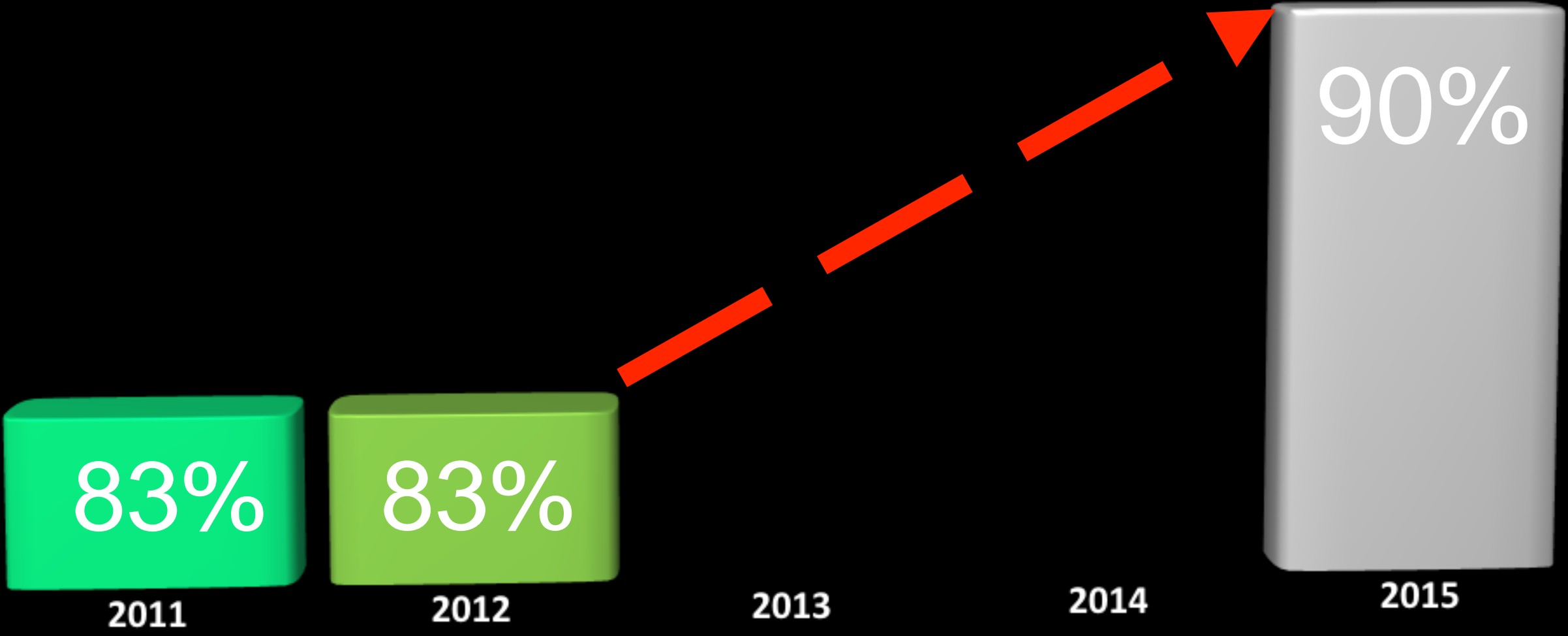


110,600,000 infants received DTP3 in 2012

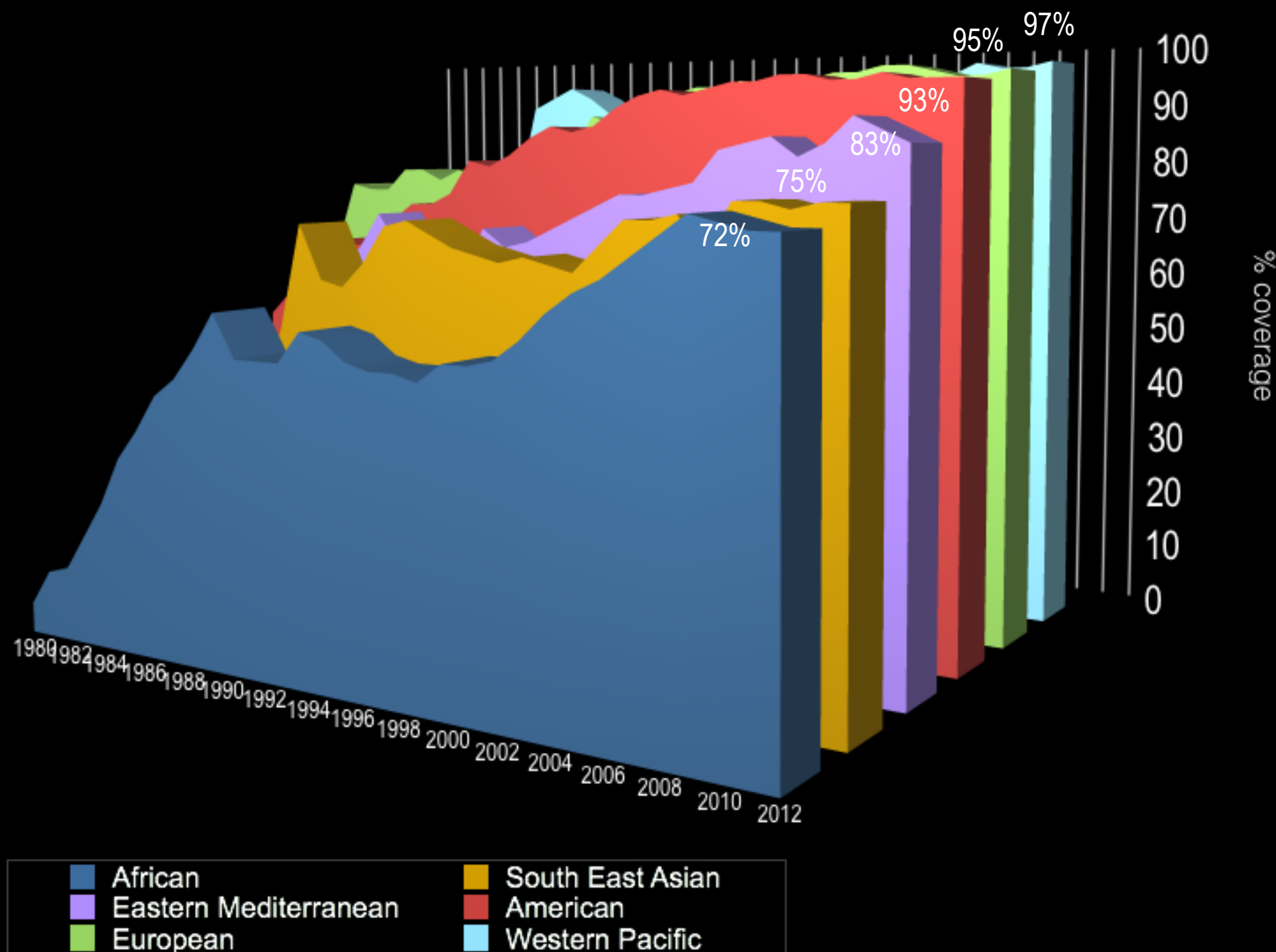
10,000,000 additional infants to immunize each year to reach 90%



Global Vaccine  
Action Plan  
2011–2020



# DTP3 coverage in infants by WHO Region, 1980-2012

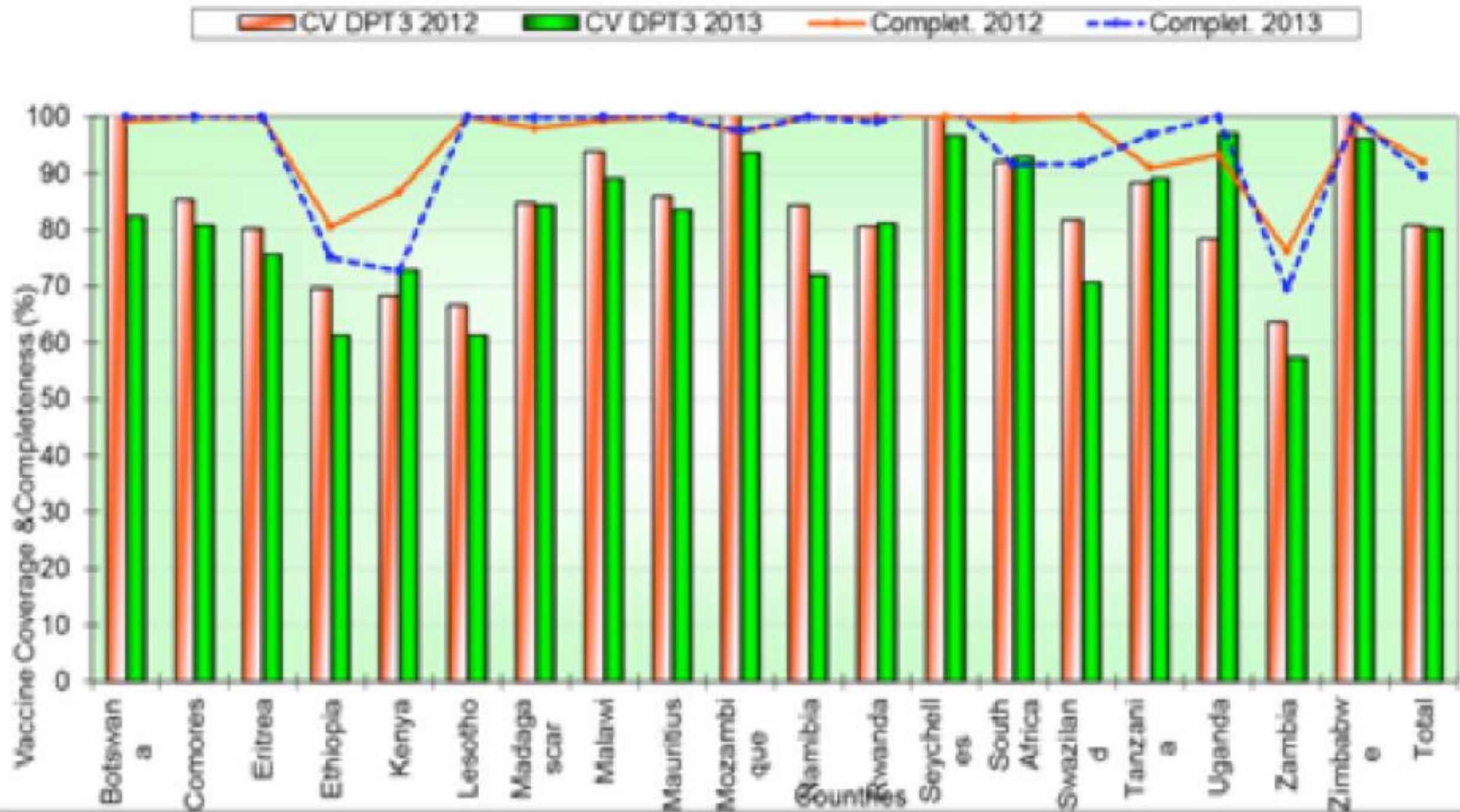


Region	Additional number of infants to reach each year (millions)
AFR	8.9
SEAR	8.9
EMR	2.5
AMR	1
WPR	0.7
EUR	0.5



# DTP3 Containing Vaccine Coverage 2012 & 2013

## Eastern and Southern African Countries

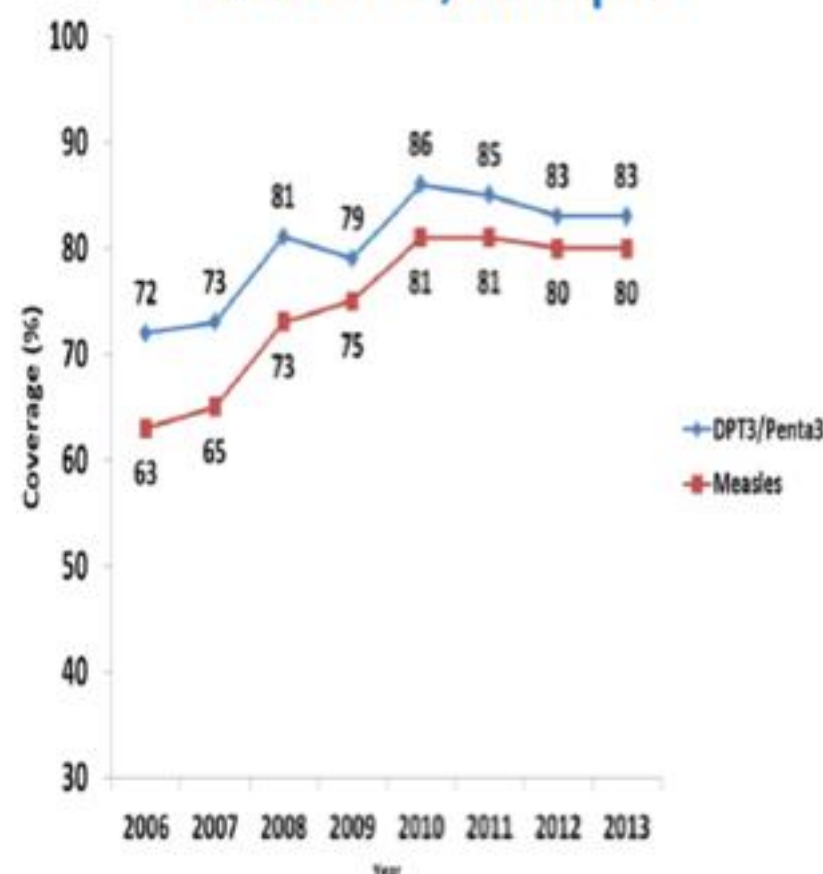


# Re-positioning EPI as Priority Development Agenda in Ethiopia:

## Factors Affecting Program Improvement

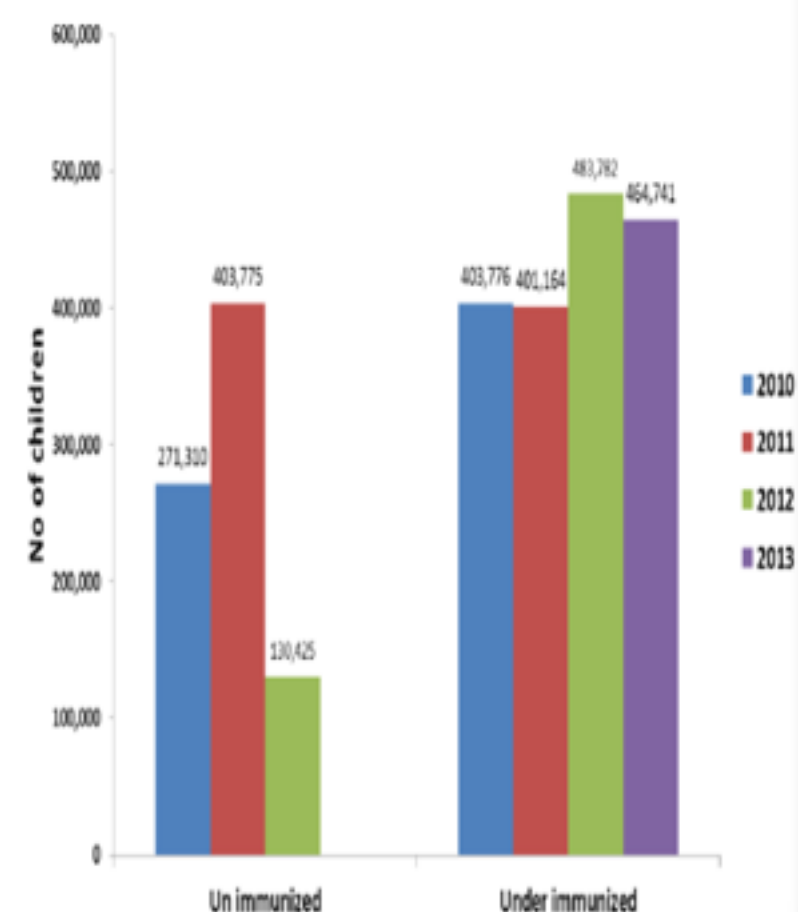


Routine EPI Coverage,  
2006-2013, Ethiopia



Source: HMIS

Un and Under Immunized Children,  
2010-2013, Ethiopia





# To sustain momentum



## We need to:

increase coverage by optimising use of existing contacts and health systems

good governance-  
efficient supply chain

increased community  
demand

country ownership

link to other health interventions to expand routine coverage

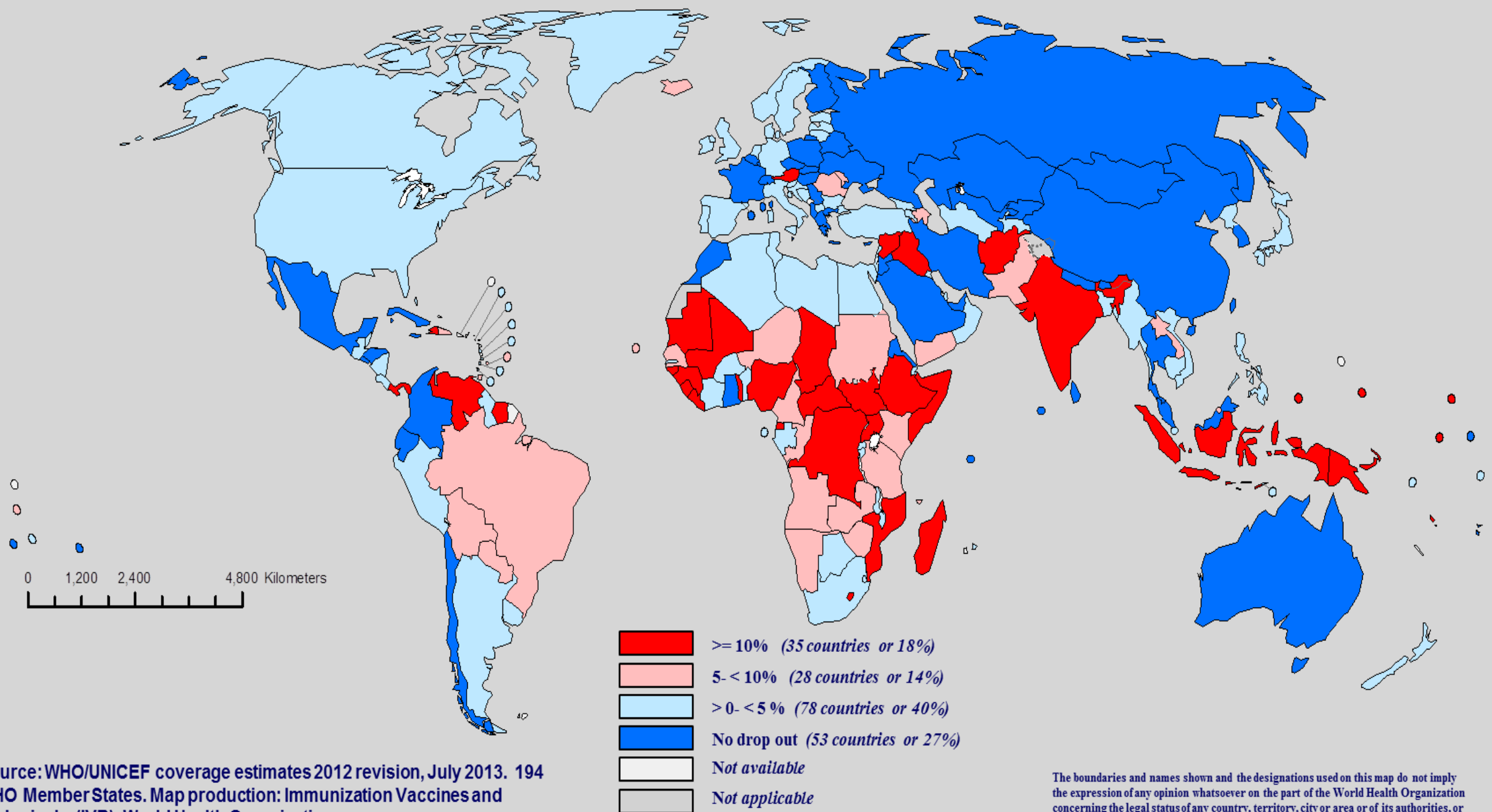
good governance-  
efficient supply chain

increased community  
demand

country ownership

maximize opportunity of outreach and campaigns to deliver integrated interventions

# Drop out rate between DTP1 and DTP3, 2012

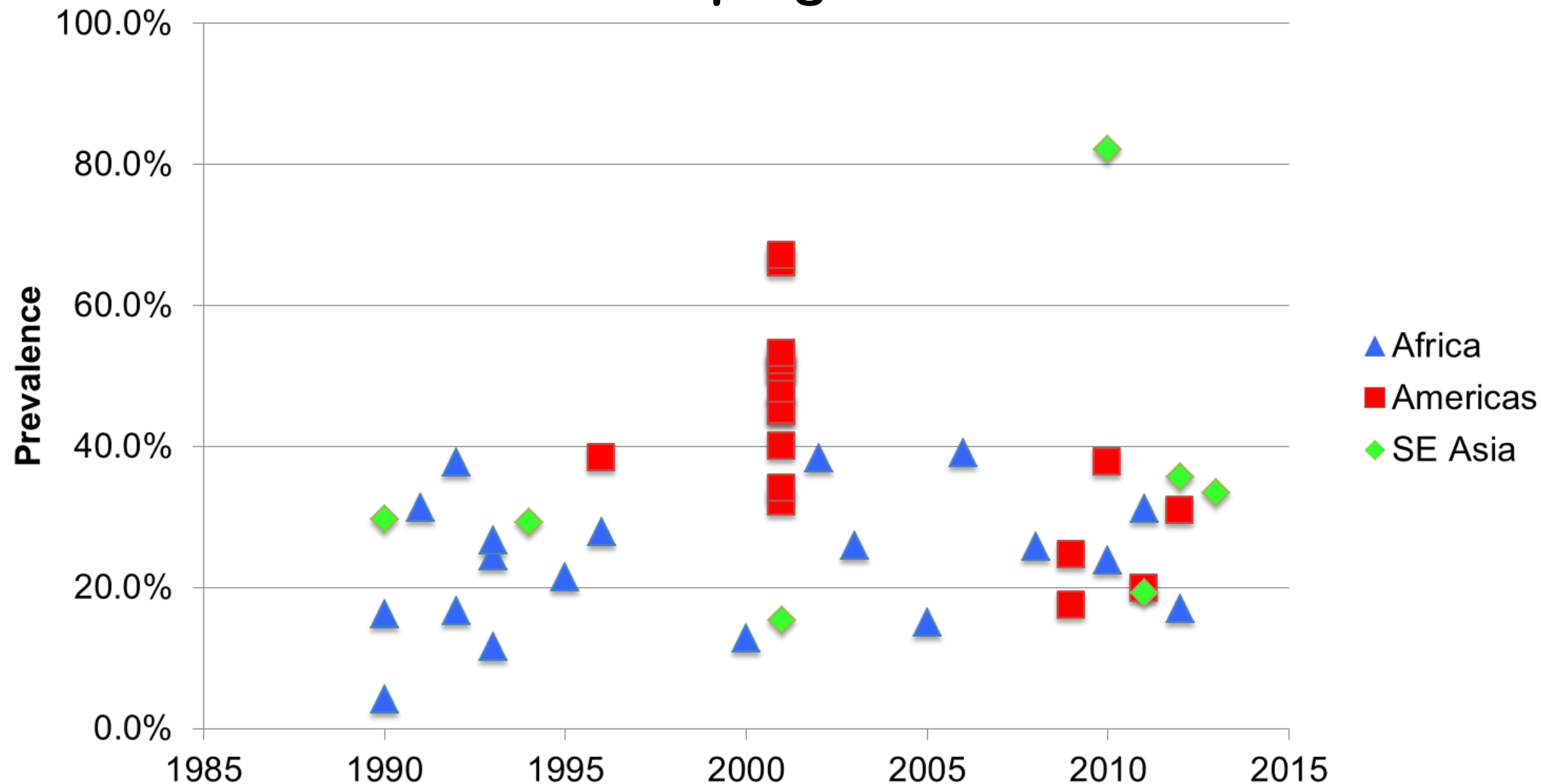


Source: WHO/UNICEF coverage estimates 2012 revision, July 2013. 194 WHO Member States. Map production: Immunization Vaccines and Biologicals, (IVB). World Health Organization  
Date of slide: 16 July 2013

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement. © WHO 2013. All rights reserved



# Prevalence of missed opportunities for vaccination for any vaccine dose, persons 0-18 years of age in developing countries



--Each point represents a result for one study in one country at one time point  
--SE Asia data all came from India

Source: AMP 2014 (unpublished)



# ETHIOPIA MNCH SCORECARD

## NATIONAL INDICATORS

### National Priorities

Skilled birth attendance	20%	Early postnatal care	48%	Contraceptive Prevalence Rate	20%
Measles immunization	80%	Low birth weight	11%	ARV prophylaxis	25%

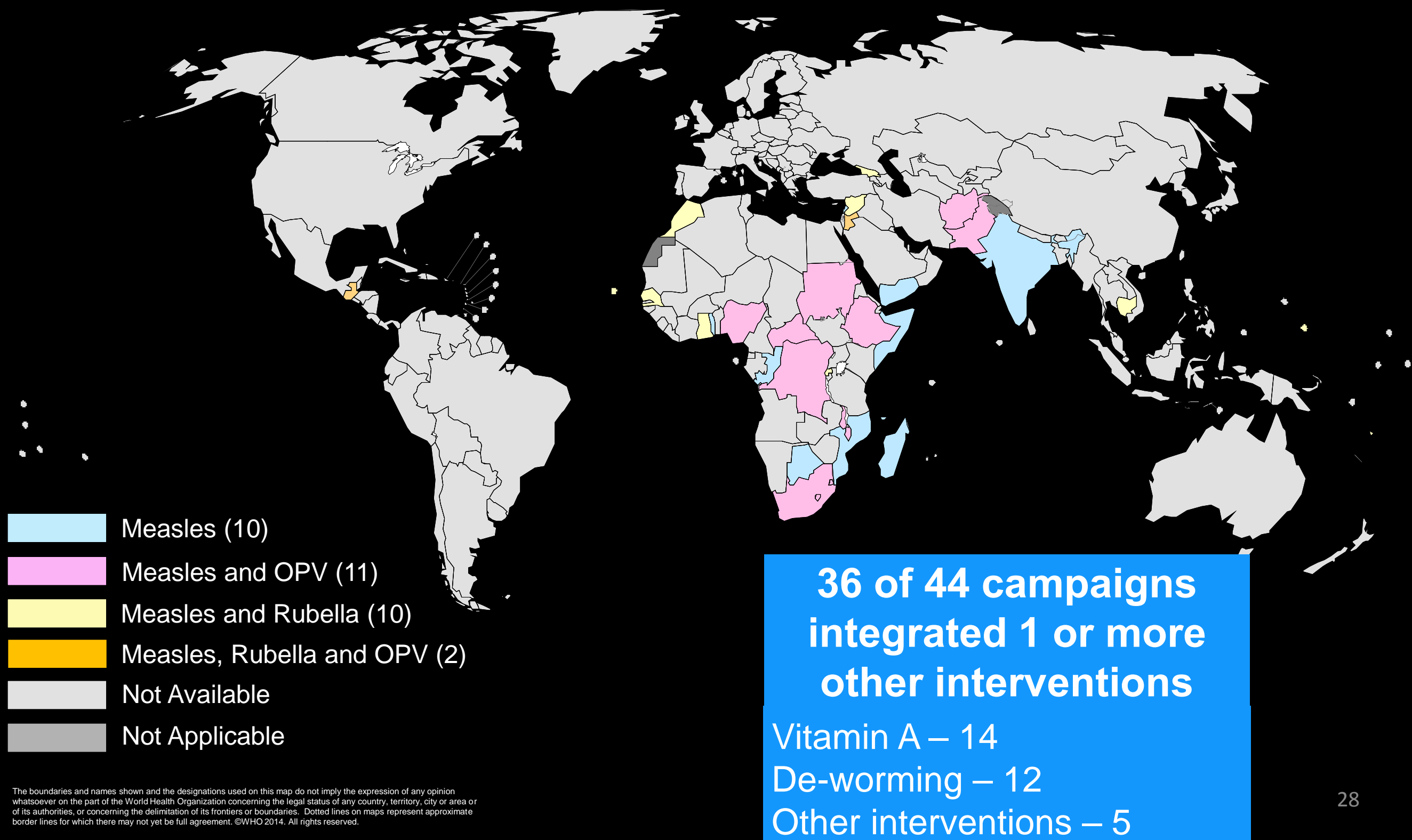
### Impact Indicators

Maternal mortality rate	67%	Neonatal mortality rate	
Under 5 mortality rate	88	Stunting	

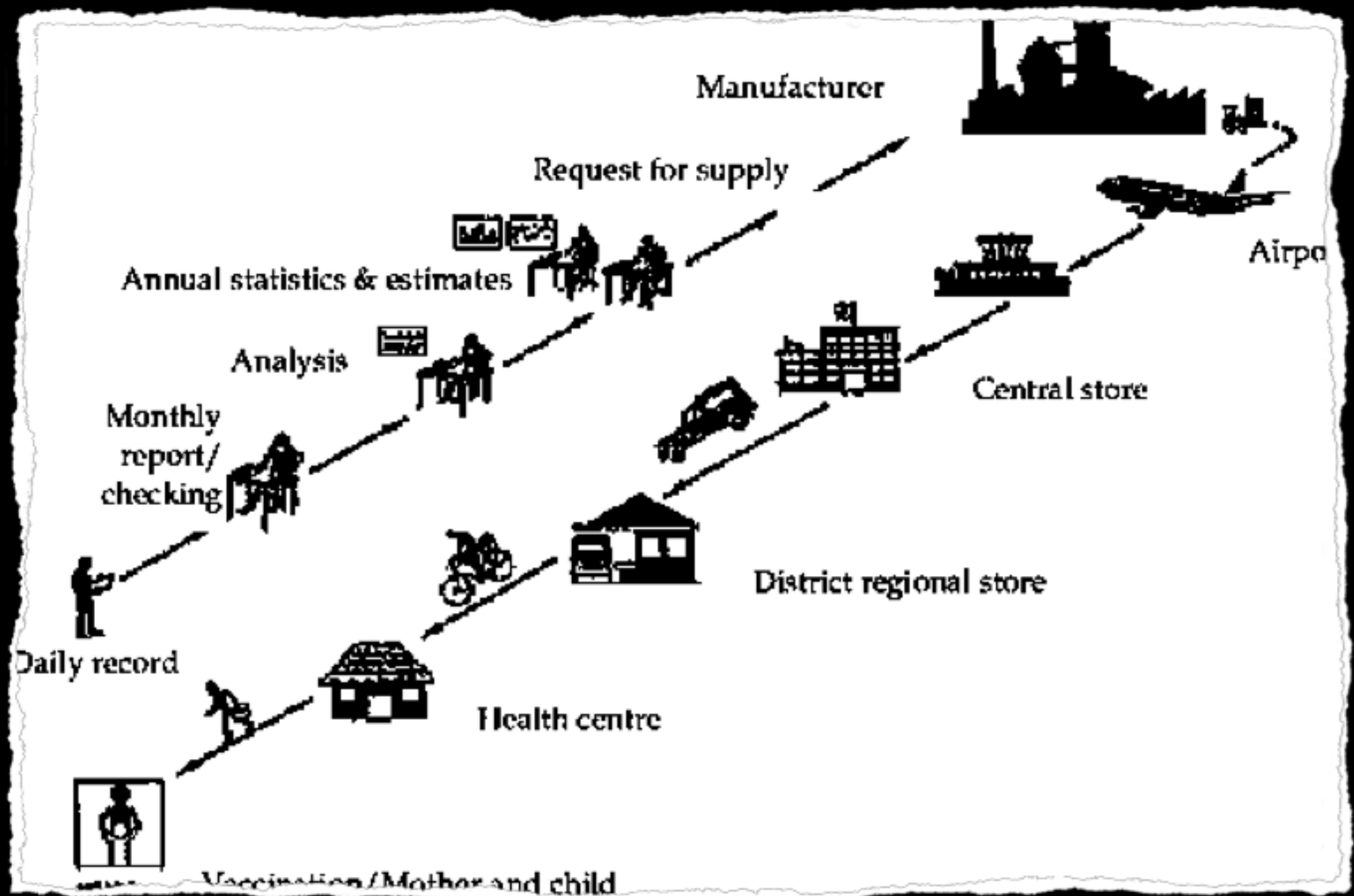
Region	PMCH		HEALTH SYSTEMS					HEALTH BUDGET	MATERNAL HEALTH					NEWBORN AND CHILD HEALTH					
	Free MNCH in all health facilities	Maternal death notification	Graduated health workers	HOA Networks Created (HOA Networks Functional)	Midwife to Reproductive age group (15-49 years)	Free Drug stockout rate	Data timeliness & quality	Health budget	Contraceptive acceptance rate	ANC Coverage	PMCT / HIV positive on ART	BBV/ONC/ CBV/ONC	Skilled birth attendants	Postnatal care	Exclusive Breast-feeding	Measles vaccine	ICCM service	YFARV A	Deaths
Tigray			73%	17%	1:5,465	73%	80%	8%	57%	100%	3%	6%	26%	10%	75%	78%	100%	87%	
Afar			4%		1:23,456	40%	10%	12%	20%	51%	10%	1%	12%	2%	60%	38%		100%	
Amhara			79%	10%	1:18,144	79%	10%	12%	85%	84%	10%	4%	12%	10%	72%	70%	100%	88%	
Oromiya			84%	14%	1:18,154	75%	10%	13%	61%	85%	10%	1%	24%	12%	57%	84%	62%	85%	
SNNPR			70%	10%	1:8,793	83%	10%	12%	74%	97%	10%	1%	13%	14%	52%	94%	100%	100%	
Benishangul-Gumuz			21%		1:8,452	73%	10%	13%	18%	52%	10%	1%	3%	17%	60%	11%	100%	100%	
Gambela			2%		1:20,140	40%	10%	10%	8%	40%	10%	1%	14%	2%	57%	18%		12%	
Somali			10%		1:4,731	88%	10%	13%	7%	82%	10%	1%	13%	12%	50%	10%		100%	
Harari			11%		1:1,612	67%	10%	7%	10%	100%	10%	1%	67%	13%	62%	17%		73%	
Dire Dawa			11%		1:2,136	85%	10%	14%	13%	88%	10%	1%	11%	10%	72%	14%		82%	
Addis Ababa			10%		1:6,576	83%	10%	10%	20%	100%	10%	1%	66%	12%	67%	82%		11%	
National performance against targets			79%	10%	1:8,206	73%	10%	10%	60%	80%	10%	1%	20%	14%	62%	80%	75%	92%	
Comparison to international targets			79%	10%	1:8,206	73%	10%	10%	60%	80%	10%	1%	20%	14%	62%	80%	75%	92%	
Data Sources	PMCH	PMCH	HMIS	HMIS	Health & health-related indicators	HMIS	HMIS	Health & health-related indicators	HMIS	HMIS	HMIS	HMIS	HMIS	HMIS	EDHS	HMIS	Administrative Report	HMIS	HMIS

Legend	
Target achieved or on track	
Progress but more effort required	
Not on track	
Data not available/Not Applicable	

# 197 million children vaccinated in 44 measles campaigns in 33 countries in 2013

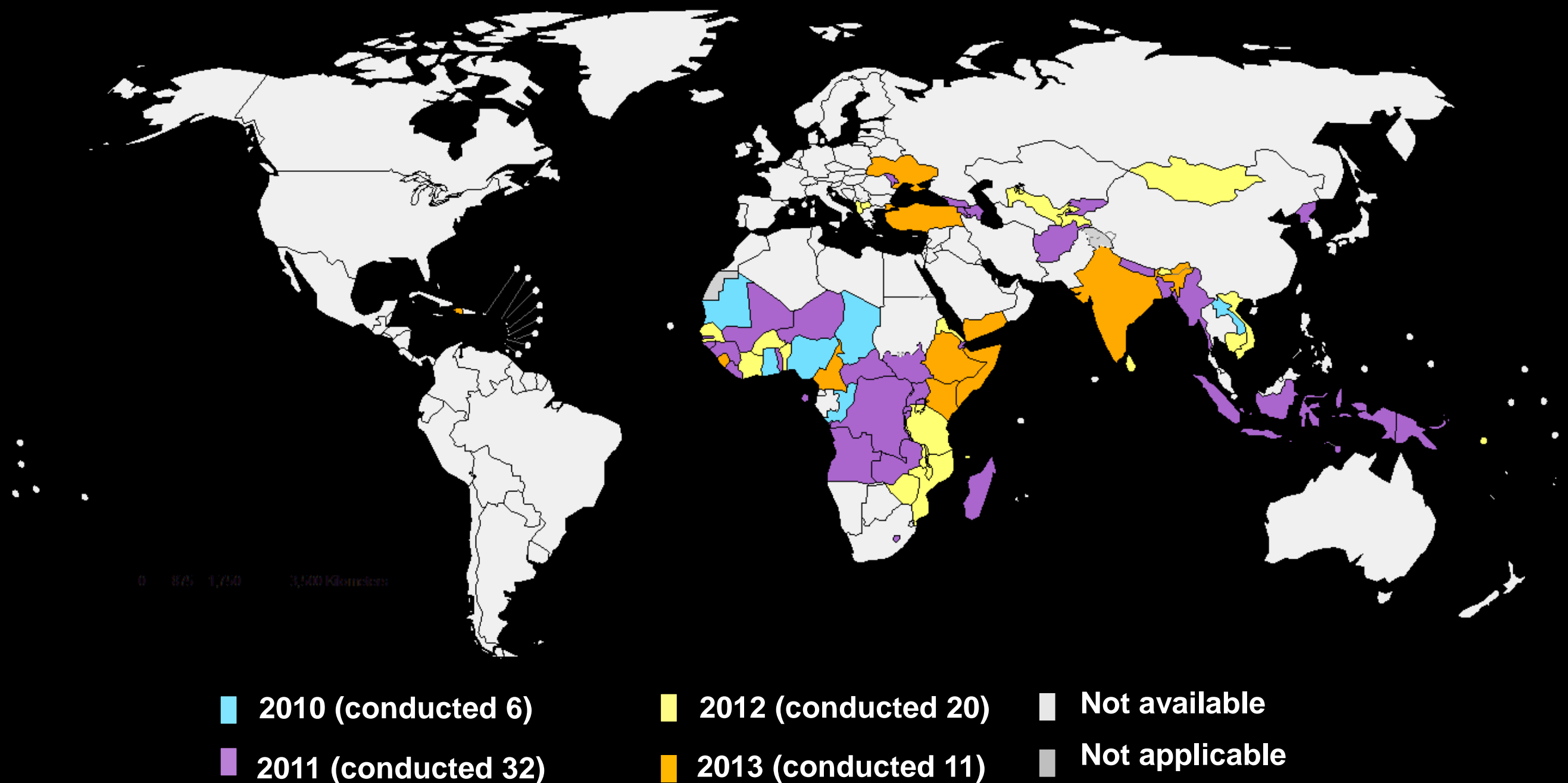






**Ensure national vaccine supply and logistics change systems**

# Effective Vaccine Management assessments implementation status



Data Source: WHO

Map production: Immunization Vaccines and Biologicals,  
(IVB), World Health Organization

Update: 18 March 2013

The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.

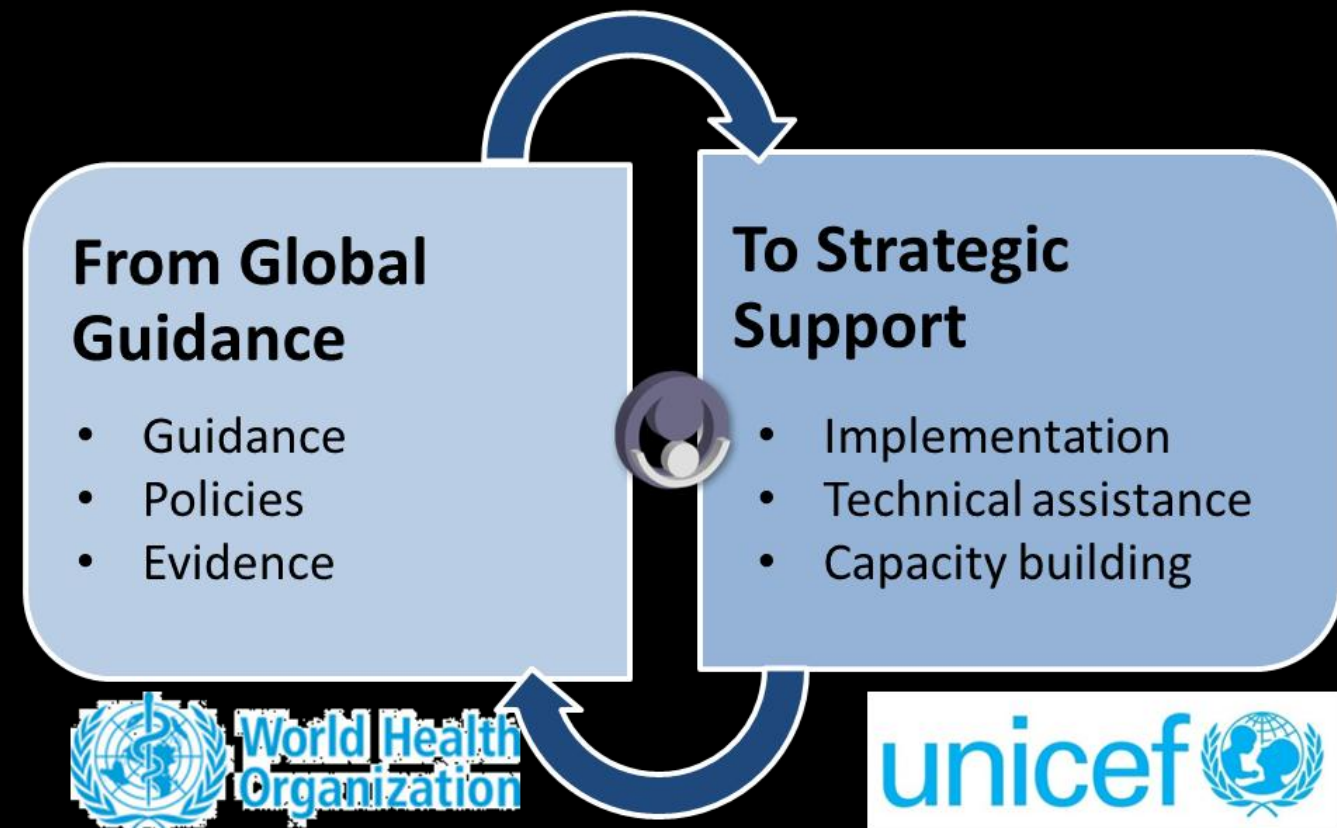
♥ WHO 2014. All rights reserved

## The why

Supply chain assessments in 70+ countries revealed that none meet the minimum WHO requirements of for effective vaccine management  
Over 300 new vaccine introductions expected between 2014-15 and need to ensure supply chain country readiness  
Need to streamline and coordinate technical support to countries given limited resources (financial and human) to tackle the challenges

## The what

Building on the 2020 Vision and Action Plan for Supply Chain Strengthening and GVAP



## The how

Building on the WHO-UNICEF approach to effective vaccine management (EVM) in countries



# High quality data for what purpose?

SAGE Report, 2013

**“...to inform the proper management of the immunization programmes”**

**“...the right data available at the right time and at the right places for the effective and efficient implementation of their national programmes by making greater investments for the improvement of data quality as well as enhance data transparency.”**

**Theme: programme management at national and sub-national levels**

# High quality data for what purpose?

Operational  
decisions



Management  
decisions



Strategic  
decisions

# Areas where WHO has an unique role

Establish norms, standards and best practice guidelines & quality assurance standards

1. Programme monitoring
2. Disease surveillance
3. Impact monitoring

Collect, analyse and disseminate/ share global immunization data  
Strengthen country capacity

1. Through developments of tools and guidelines
2. Facilitate training



# Enhanced management of surveillance data

NUVI Sentinel Network

 en | Welcome, PAHO User

---

## Recent Cases

» Lists the last 10 meningitis cases

Latest IBD Cases					1	2	3	4	5	»	5402 Total Records	Display	10	records
Case ID	Gender	Age In Months	Country	Site	Status	Actions								
PAHO-SLV-SLV115-001347	Female	0	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001346	Female	59	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001345	Female	0	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001344	Female	18	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001343	Female	193	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001342	Female	12	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001341	Female	101	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									
PAHO-SLV-SLV115-001340	Female	74	El Salvador	H. Santa Teresa	✓ EPI ⓘ RRL									

### Filters

Case Id

Country

- Anguilla
- Argentina
- Antigua and Barbuda
- Bahamas

Site

- Princess Alexandra Hospital...
- H. Municipal El Alto Boliviano ...
- H. Materno Infantil Nro.1 Cns...
- H. Del Niño Oviedo Aliaga...

Find

# Improving data quality: activities, AMR/PAHO



Global Immunization News (GIN)

November 2013

## Second Workshop to share lessons learned in the Development and Implementation of Electronic Immunization Registries (EIRs)

Carla Magda Domingues and Antonia Texeira, Ministry of Health, Brazil; Samia Samad, PAHO Brazil and Carolina Danovaro, PAHO, Washington DC

Location: Brasilia, Brazil

Date: 18-19 November 2013

Participants: Representatives from 17 countries of the Americas, including 21 participants from sub-national levels of Brazil; Albania; Angola; Ghana; Sri Lanka; Tanzania; the Open Source Medical Informatics initiative (IMeCA) for Latin America; Training programmes in epidemiology and public health interventions network (TEPHINET); PAHO; and WHO. BMGF, CDC, GAVI, UNICEF and other WHO regions received a Web link to follow the workshop online.



Workshop participants, Brasilia, 18-19 Nov 2013






## Coverage survey in Bolivia –

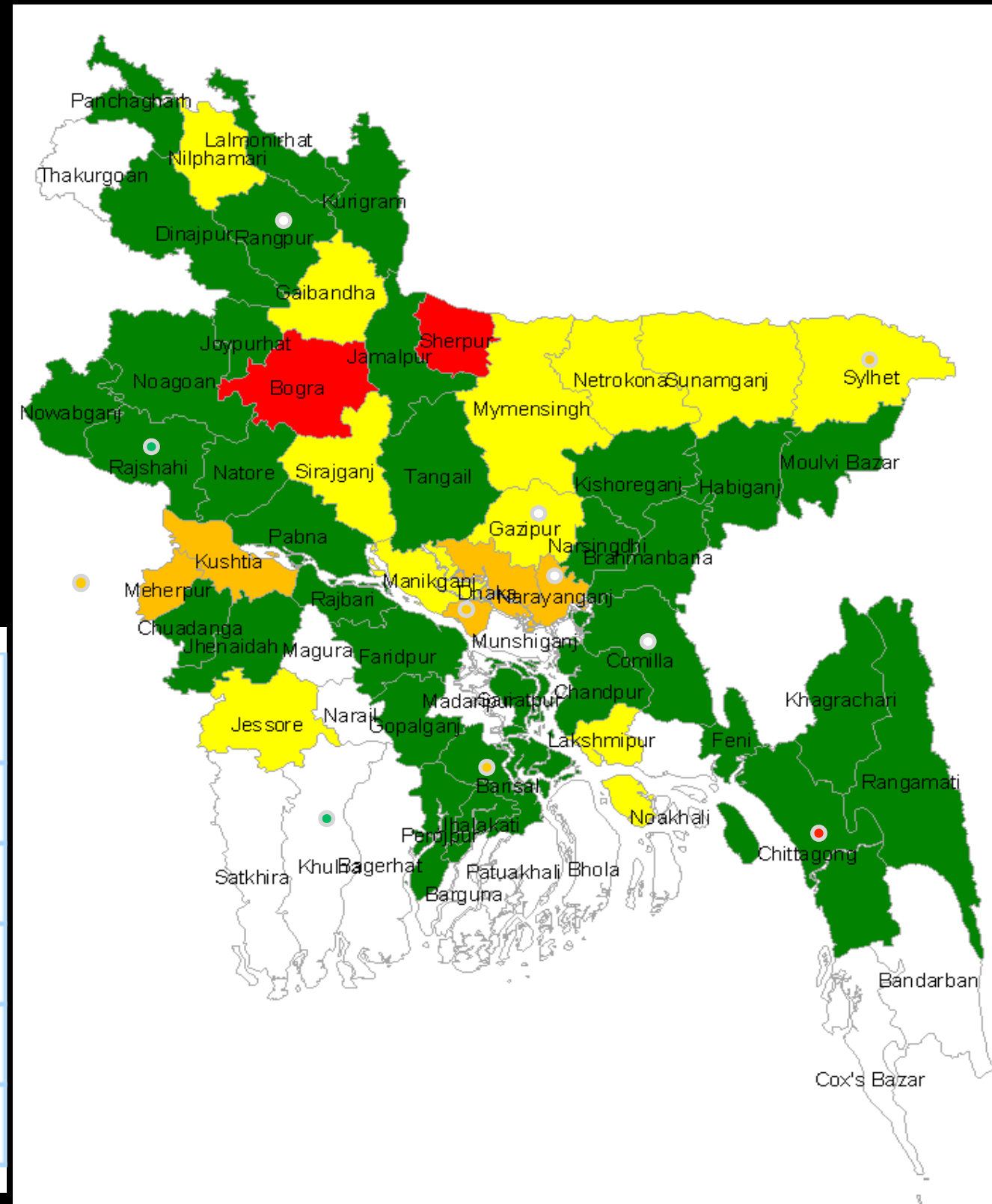
operational study on source of vaccination data, plus photos of the card to assess legibility and other aspects





Rapid Convenient  
Assessments of  
coverage,  
MR campaign,  
25th Jan. to 20th Feb.  
2014, Bangladesh

Legend		Number of Districts and City Corporation
	<80%	3
	80 - 89%	8
	90 - 94%	11
	>=95%	35
	No RCA received from field	17

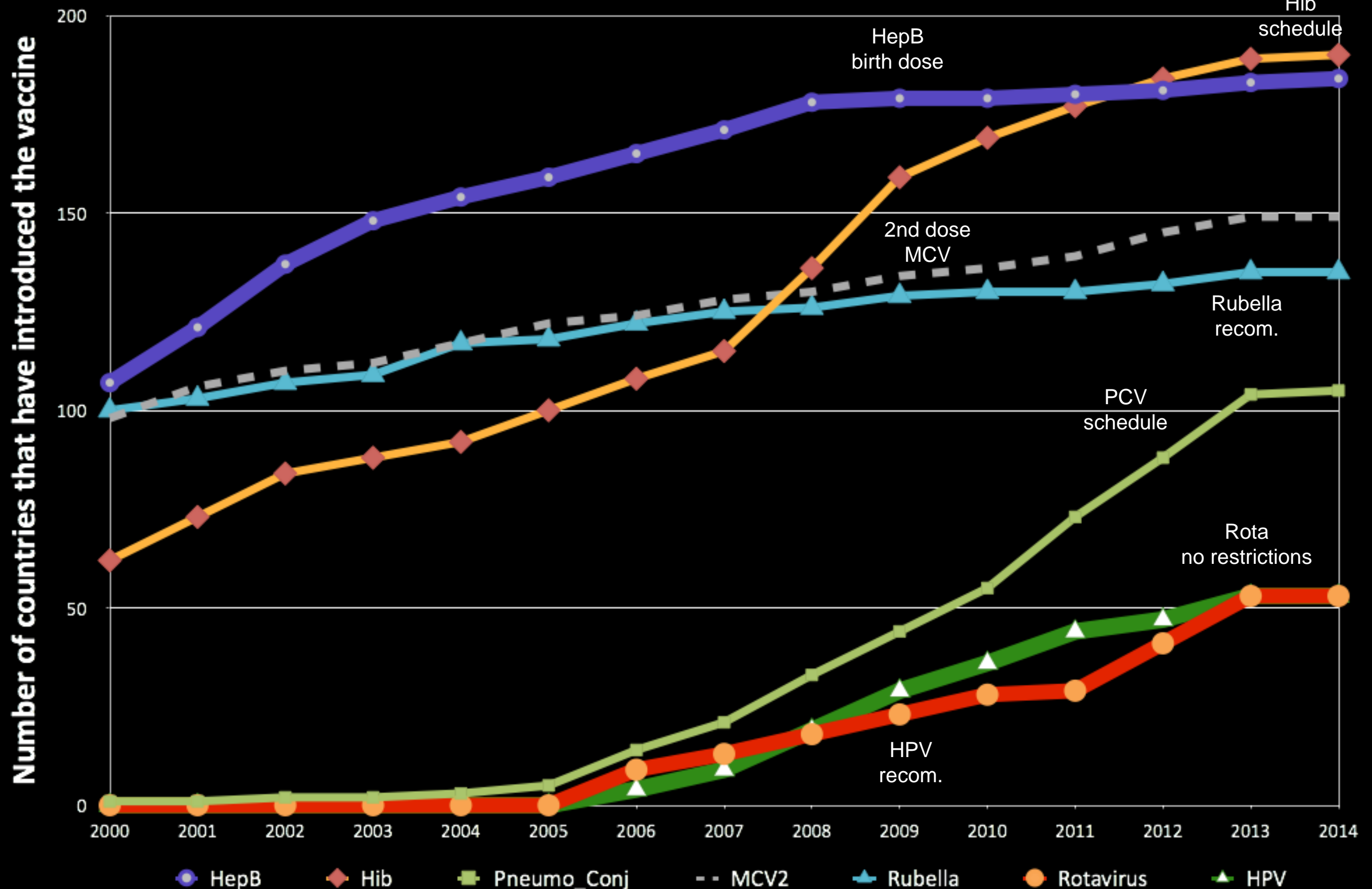






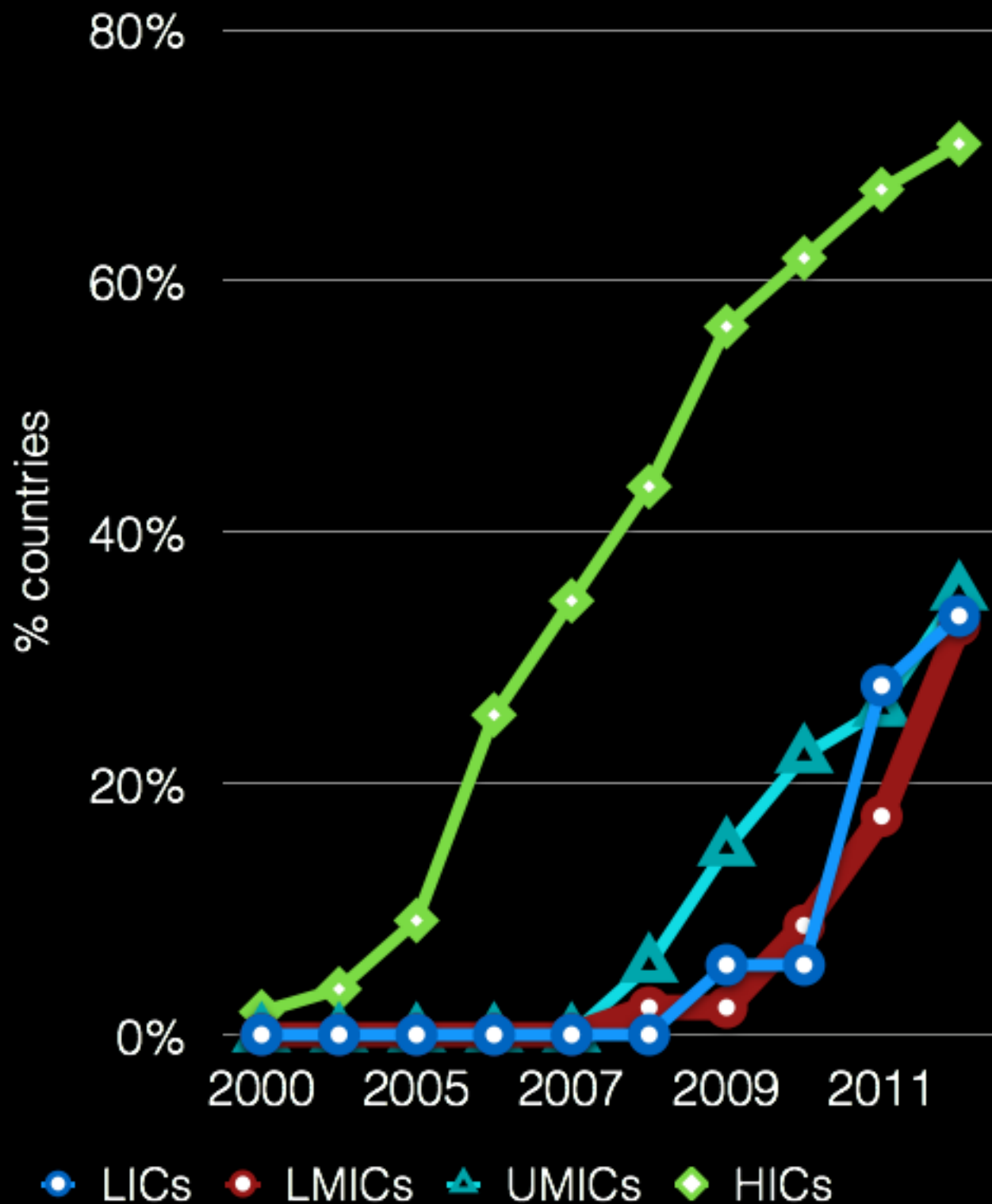
**Ensure that middle income countries  
that self-procure vaccines have  
access to affordable vaccines.**

# Cumulative number of countries that have introduced new vaccines, 2000-2014

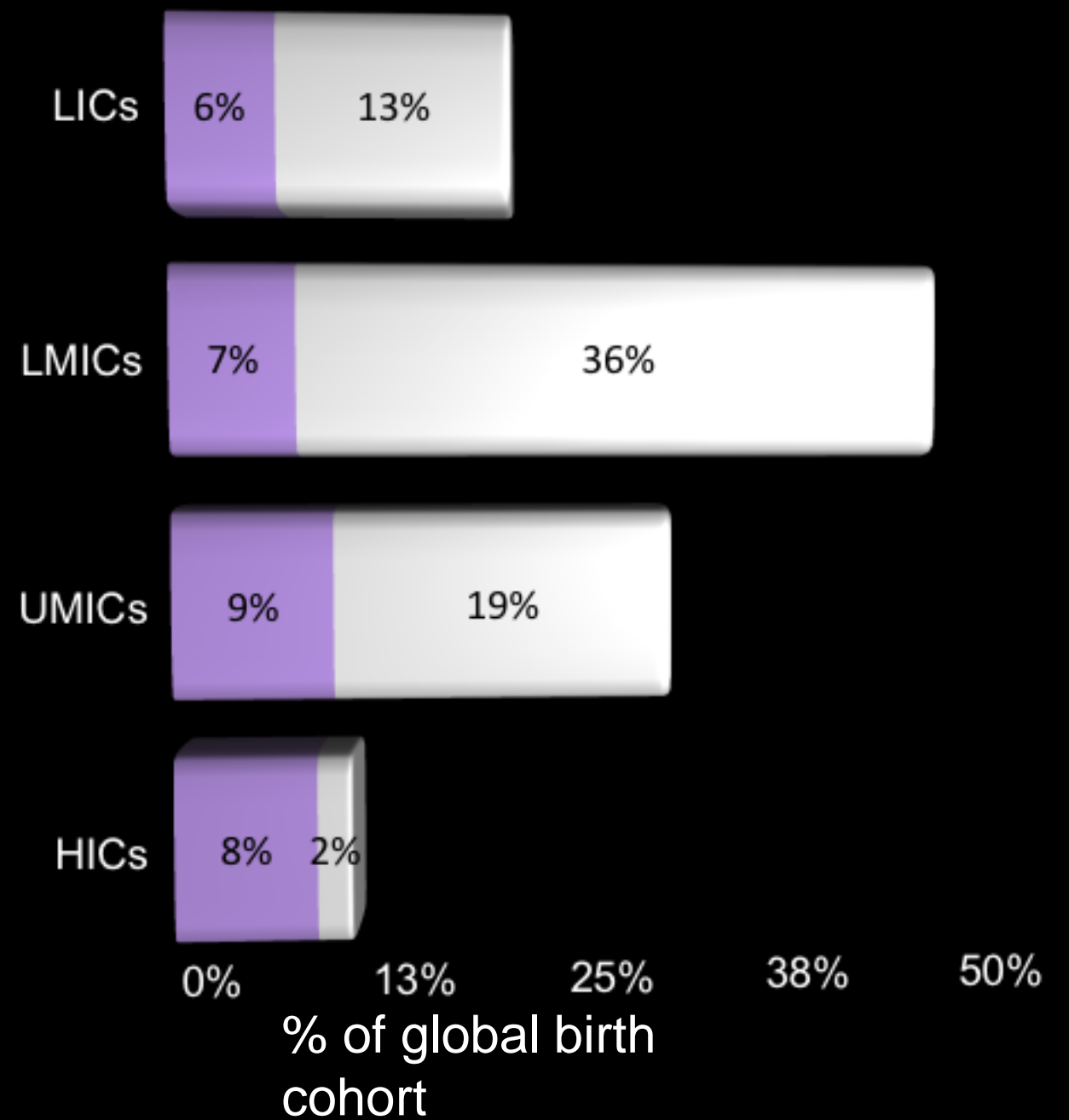


# Routine introduction of PCV by income group

% of countries with PCV



% of global birth cohort by income group





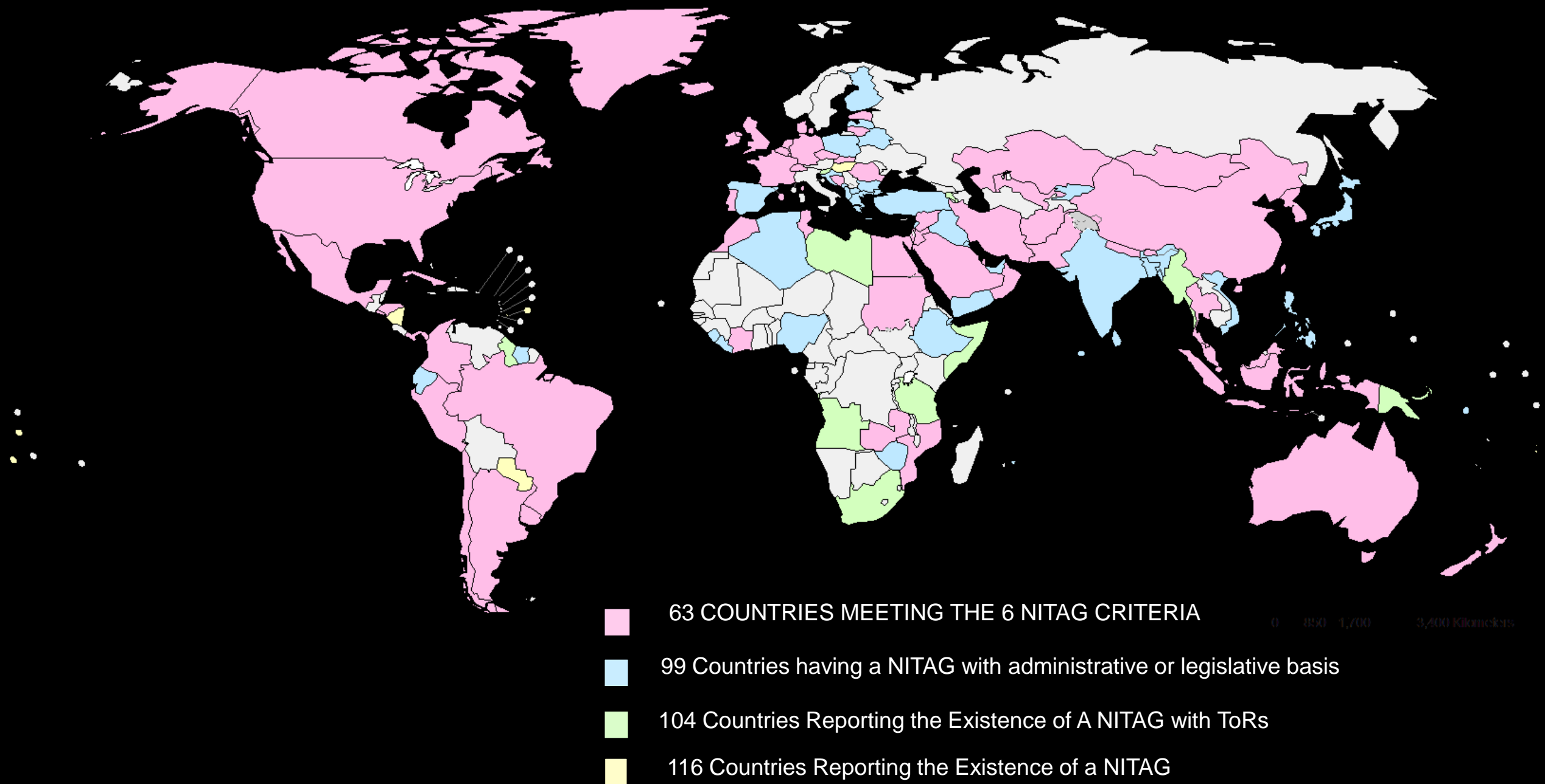
# To support implementation



## WE NEED TO:

- Support stronger **governance** at country level
- Contribute to ensure **country ownership** of plans, actions, assessments...
- Make provisions to effectively and timely address the **special circumstances** in some countries

# 63 national Immunization Technical Advisory Groups (NITAGs) in 2012

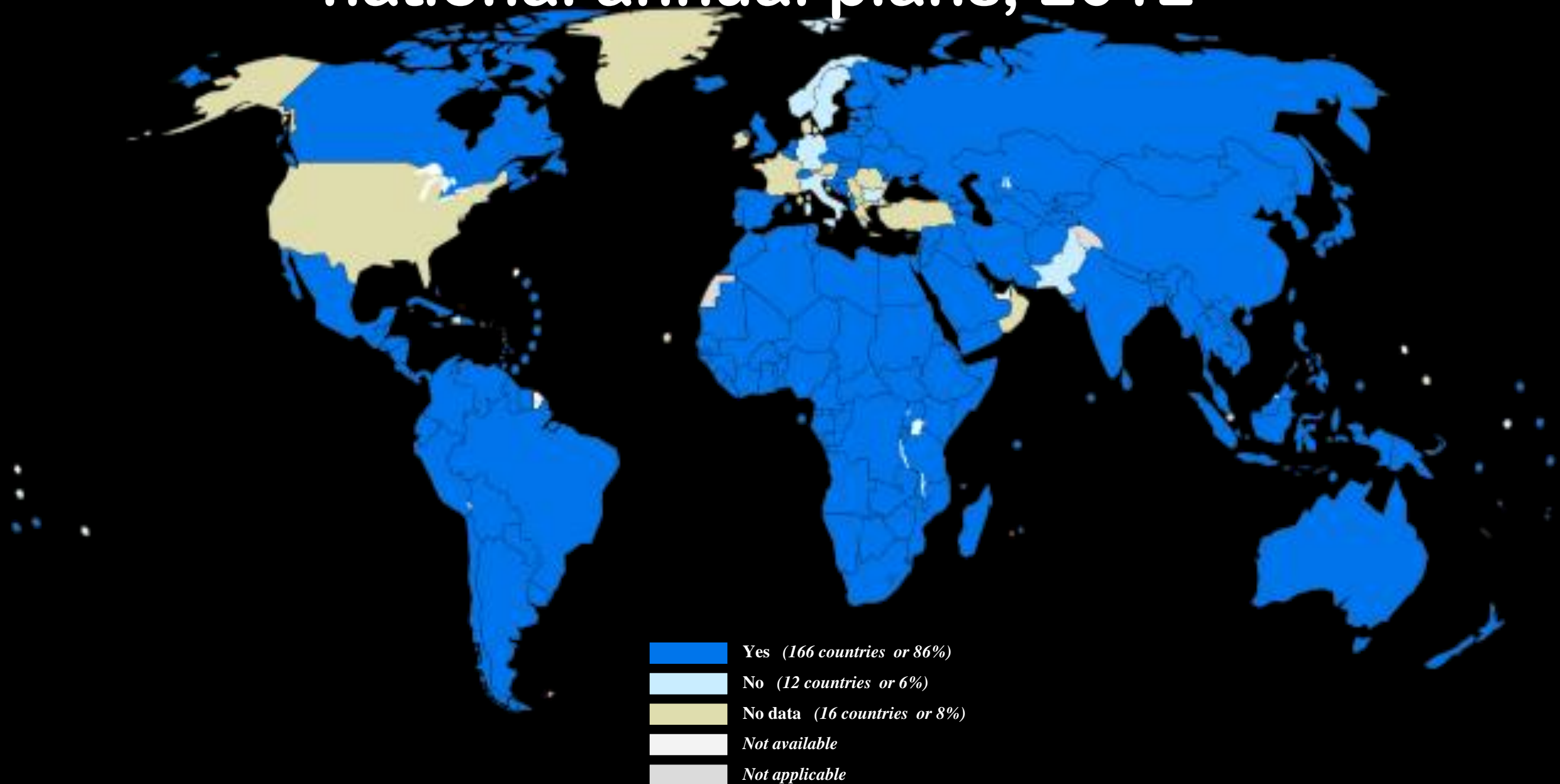


Data Source: Joint Reporting Form, 2012

Map production: Immunization Vaccines and Biologicals, (IVB), World Health Organization

Date of slide: 17 October 2013

# 166 countries reported having a national annual plans, 2012





# Countries with annual work-plans from cMYP by region (2014)

Region	No. of GAVI-Eligible Countries	No. of non-GAVI Eligible Countries
AFR	11	5
EUR	0	0
EMR	1	0
AMR	0	0
SEAR	1	1
WPR	0	0
Total	13	6

# eLearning course

## Immunization staff orientation course

Main objective: Provide all staff with a comprehensive overview of the VPD programmes based on the current context and key emerging priorities

### GVAP Guiding Principles

The lessons learned from past decades, the unmet needs and the opportunities and challenges that this decade presents have been carefully considered in the formulation of fundamental principles. Although the GVAP needs to be translated into specific regional, country and community contexts, these guiding principles are universally applicable and relevant to GVAP goals and strategic objectives.

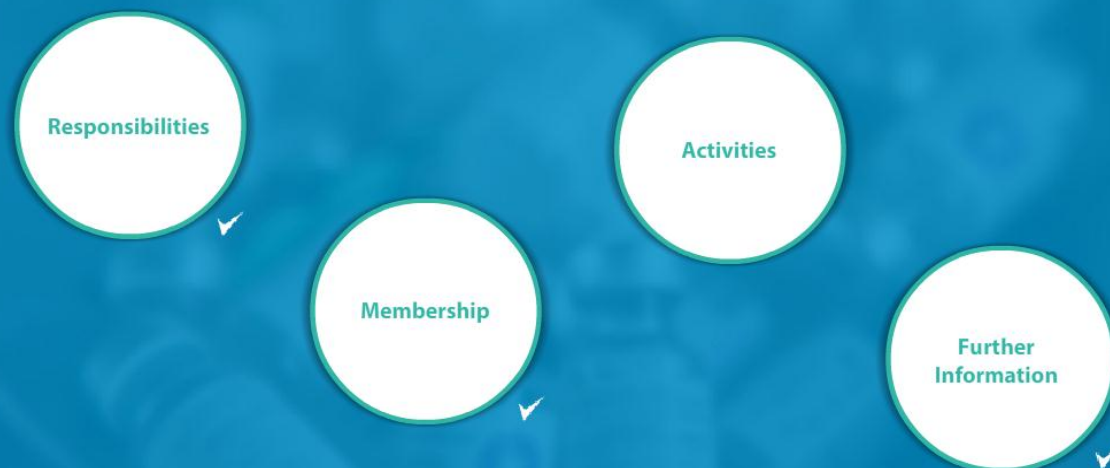
Select each button to review the six guiding principles.



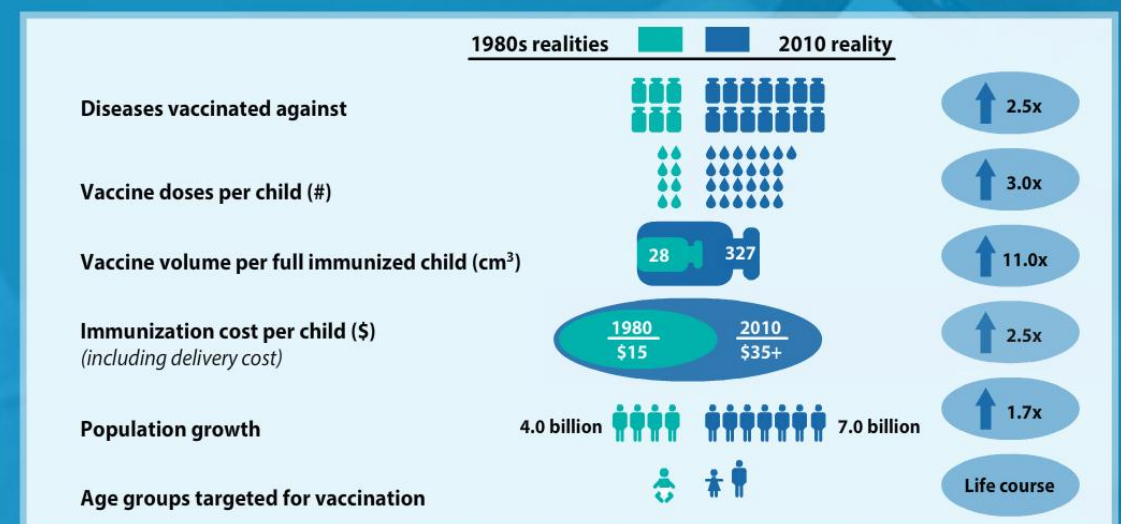
### Strategic Advisory Group of Experts (SAGE) on Immunization

At the top level of WHO's advisory structure, the Strategic Advisory Group of Experts (SAGE) on Immunization is the principal advisory group to WHO for vaccines and immunization.

Click each area to learn more about SAGE responsibilities, membership and activities.



### Supply Chain Realities



Select the Forward arrow to continue



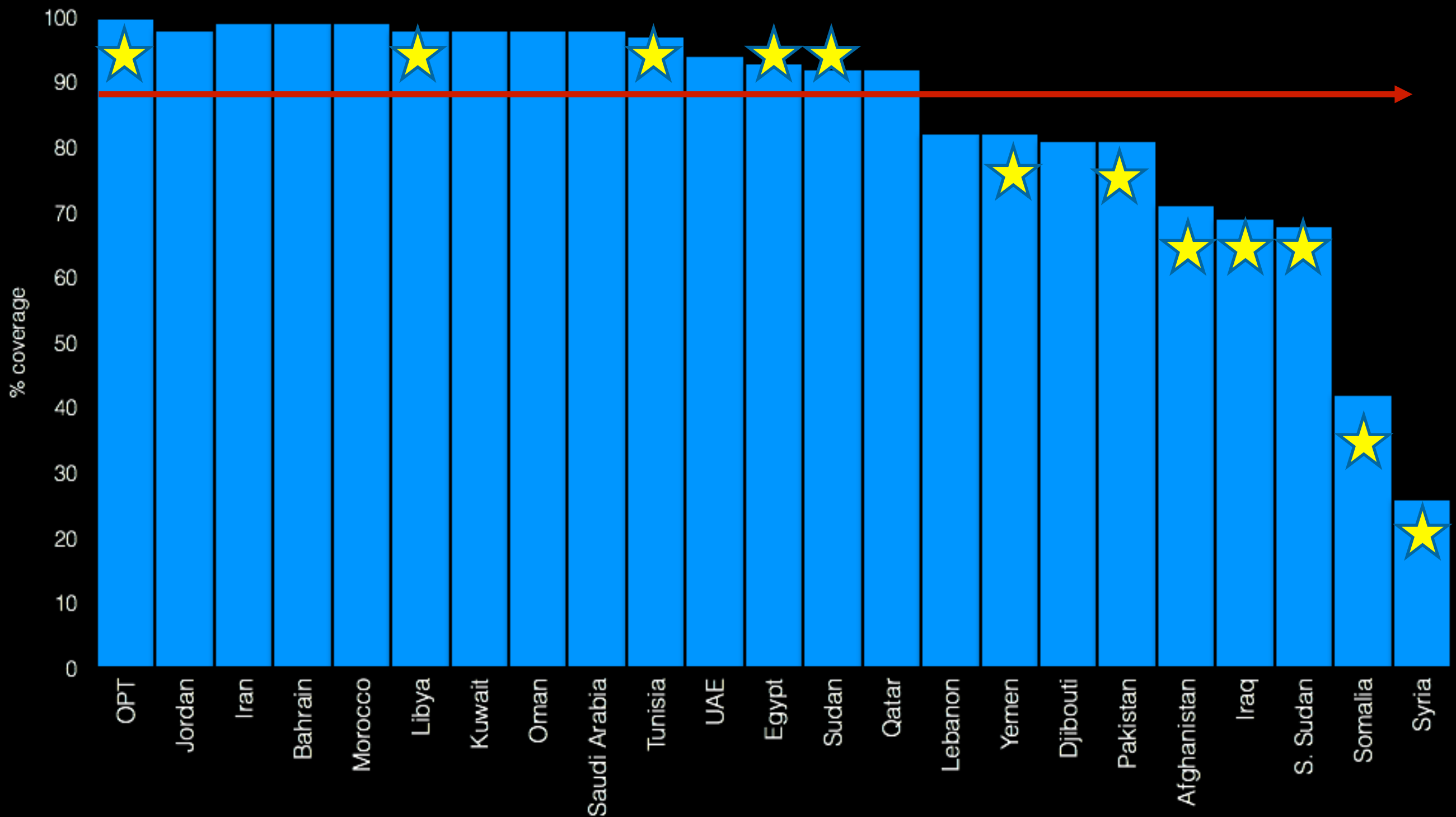




**Additional challenges  
in countries in conflict or  
under difficult circumstances**

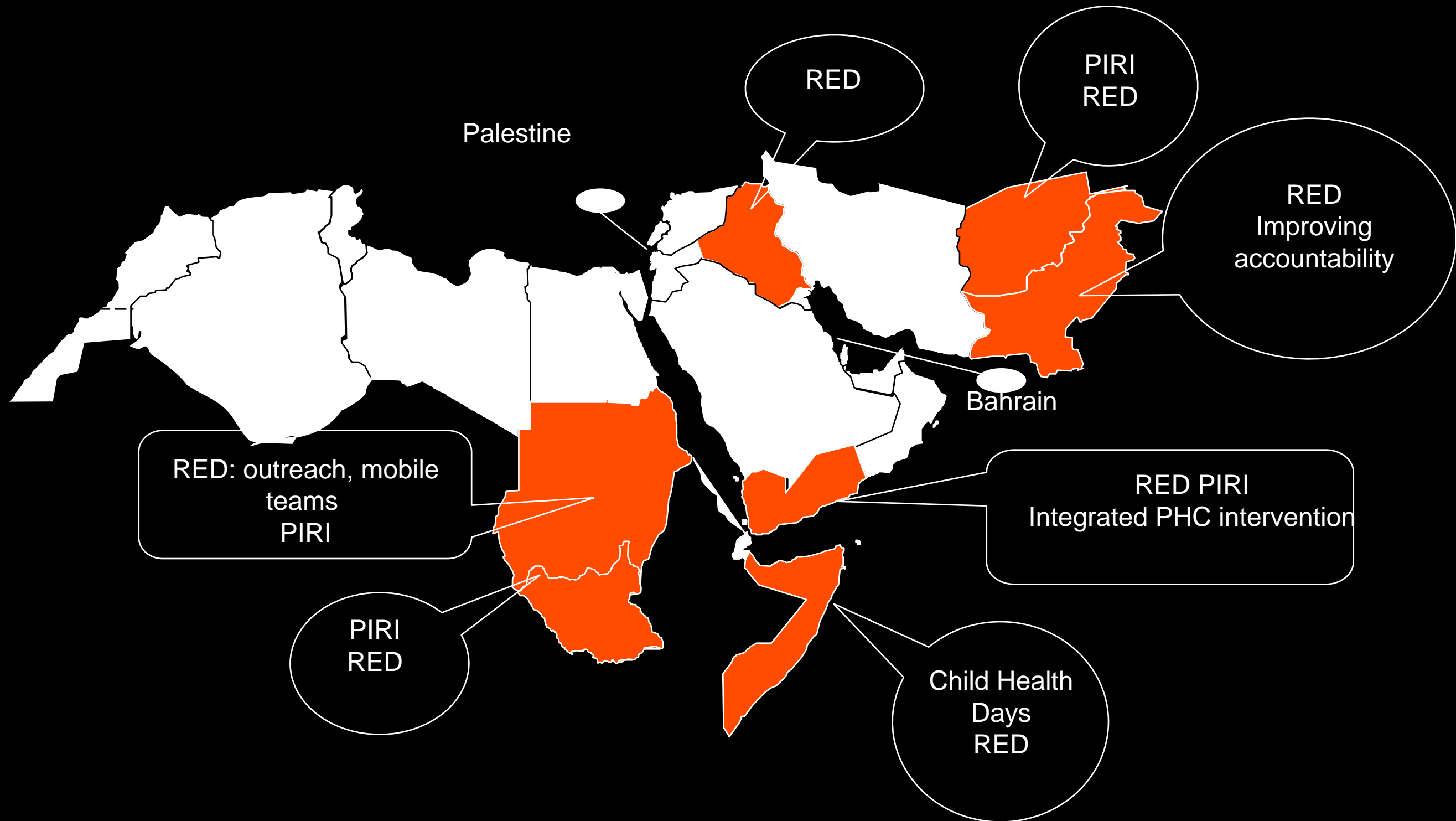


# DTP3 coverage in EMR countries, 2012



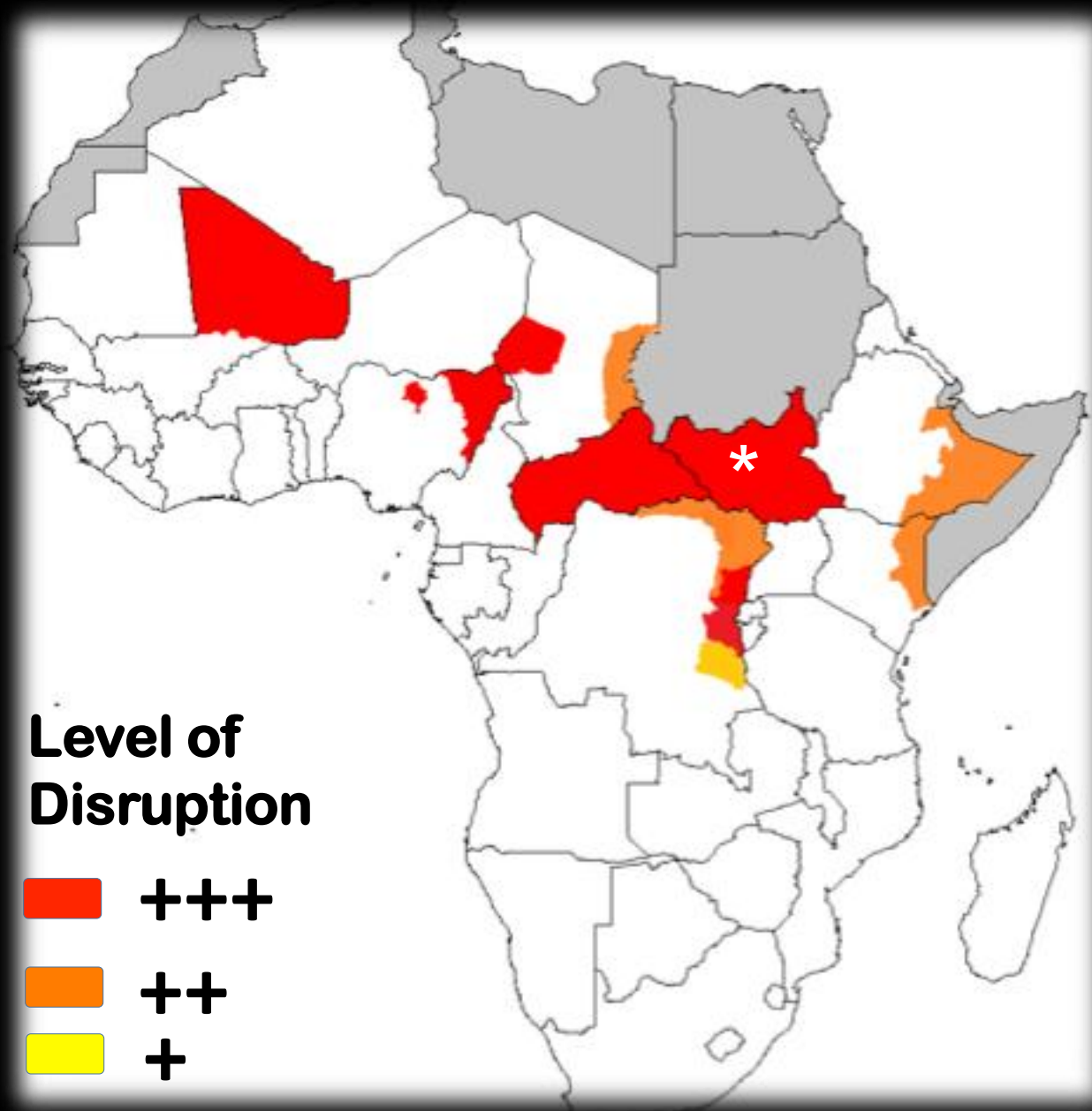
countries in conflict or difficult circumstances

# Improving coverage in the low coverage countries in EMR



# Insecurity and Emergencies in AFR

## 2013 Insecurity in AFR

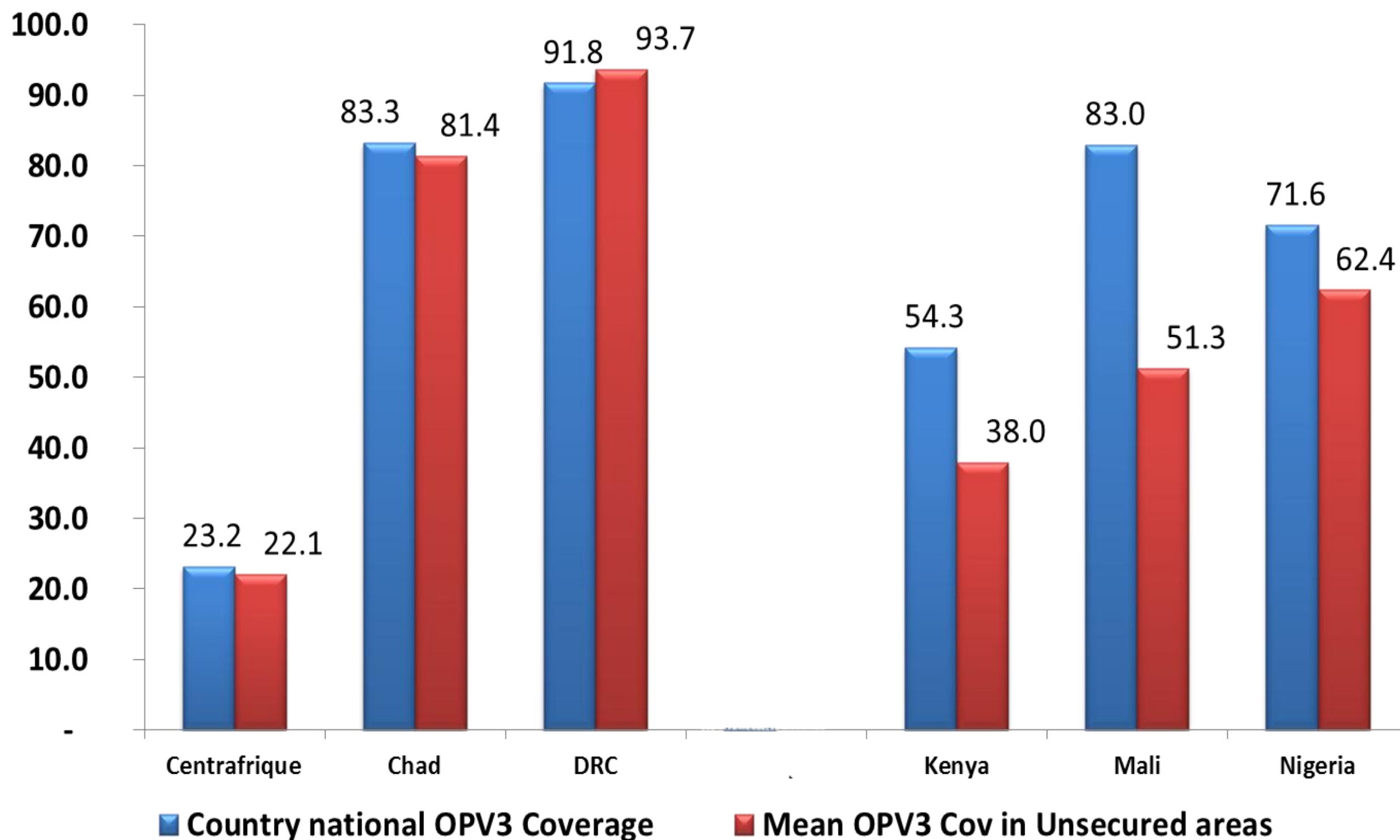


- **1960-2008:** 24 sub-Saharan African countries experienced armed conflict
- **2012:** 57 natural disasters in Africa affecting 38 million people
- **2013:** seven AFR countries experienced significant insecurity

\* South Sudan was in EMR in 2013



# Reported routine immunization coverage\* , 2013



\* Data available in WHO/AFRO as of 15 March 2014:

Source: Administrative RI Data

# Where can WHO's vaccine research contribute ?

Vaccines/products  
licensed and currently  
in use

Assess and/or develop strategies/  
approaches to **expand coverage  
and impact** and improve delivery of  
vaccines

Generate and/or synthesize and  
appraise evidence for robust policy  
making

Candidate vaccines/  
products under  
development

Contribute to development/availability of  
new or better vaccines/delivery systems  
to address remaining BoD

# Global Vaccine and Immunization Research Forum

March 4 - 6, 2014

Hyatt Regency Bethesda, Maryland, USA



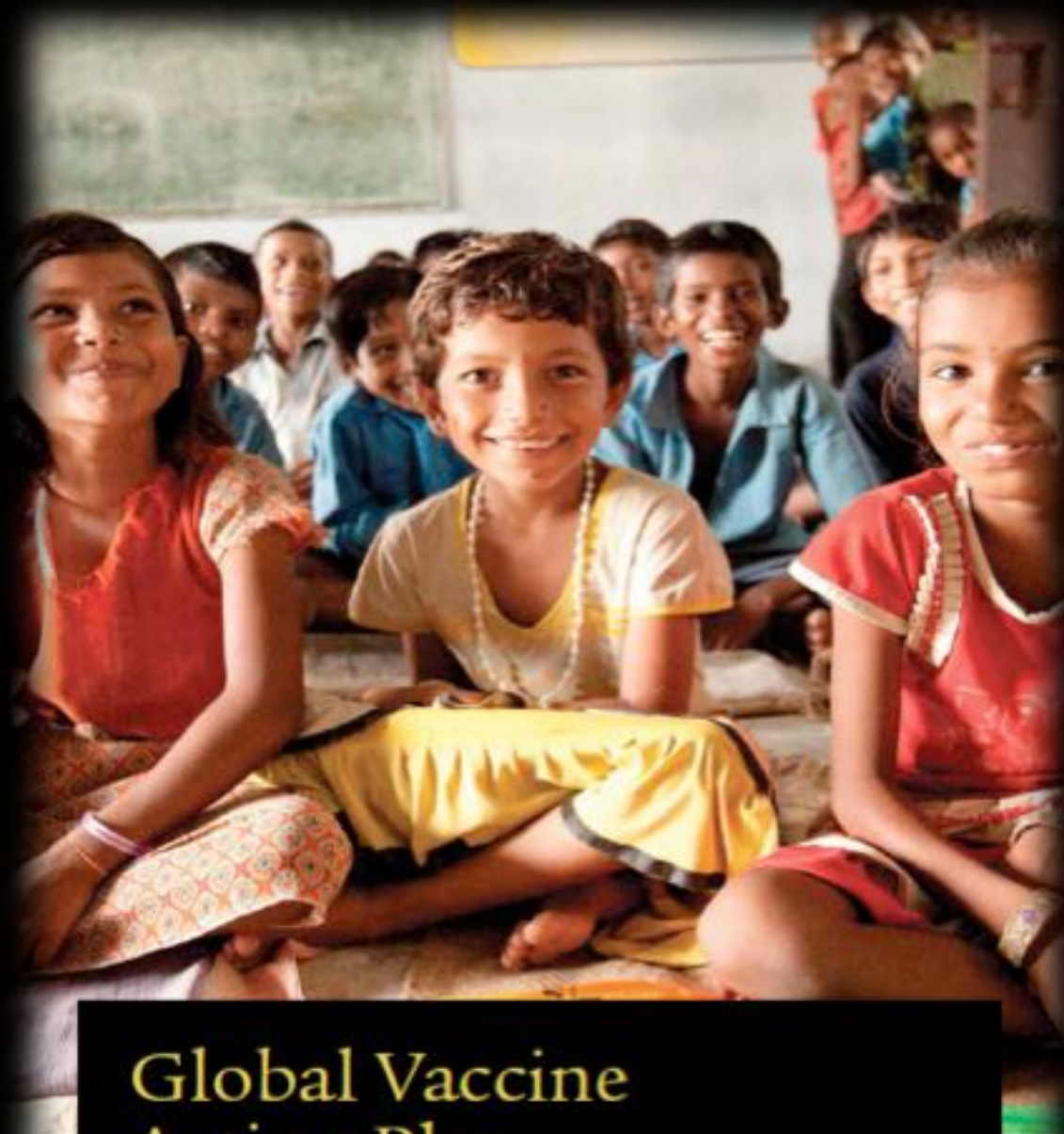
The objective was to hold an open scientific to:

- Track the GVAP R&D agenda progress,
- Track progress and discuss obstacles related to priority vaccine R&D,
- Identify actions recommended to be taken by the R&D community in the area of vaccines and immunization research, and
- Create an opportunity for networking among the vaccine research and immunization community



World Health  
Organization





## Global Vaccine Action Plan

*Strategic Advisory Group of Experts on Immunization*

*Assessment Report 2013*



## Global Vaccine Action Plan

*Monitoring, Evaluation & Accountability*

*Secretariat Annual Report 2013*

3

### ISSUES ON SAGE'S HORIZON?

SAGE Working Groups  
Issues on the horizon

# SAGE Working Groups

Varicella & Herpes Zoster vaccine

Pertussis vaccines

Nonspecific effects of vaccines

April 2014

Dealing with Vaccine Hesitancy

Hepatitis E vaccine

Japanese encephalitis vaccines

Measles rubella vaccines

DOV- GVAP

Oct 2014

# SAGE Topics: Oct 2014

Polio eradication

Hepatitis B schedules

Measles and rubella

DTP and TT schedules

Vaccine hesitancy

Meningitis A vaccine impact

GVAP progress report

Japanese Encephalitis

Hepatitis E



# SAGE Topics: coming years

## Cross cutting issues

Integrated approaches

DOV monitoring session

Additional contacts in the immunisation schedule

Older age groups vaccination

School aged/adolescents vaccination schedule

The immunisation manager of the 21st century

Pain and fever reduction after vaccination

# SAGE Topics: coming years

## Cross cutting issues

Accessibility to affordable vaccines

Global leadership for funding

Off label use of vaccines

NITAGs: strengthening

Counterfeit vaccines

Pre-service curriculum

Maternal immunization

Surveillance: data quality

Private sector: medical organisations

Communication: EPI

Target Product Profiles

Vaccination of immunocompromised

# SAGE Topics: coming years

## Vaccine specific issues

Measles rubella elimination:  
progress

Typhoid vaccine

PCV

Polio eradication

HPV vaccines

Impact monitoring

Dengue vaccines

Malaria vaccine

HIV vaccines

Maternal and neonatal tetanus  
elimination

TB vaccines



# Decade of Vaccines

## Progress against 2014/2015 targets

Interruption of polio transmission by end of 2014	<b>Stands at serious risk. (IMB report Oct 2013)</b>
Neonatal tetanus elimination	<b>Interim GVAP milestone met but target is long delayed.</b>
Measles elimination (4 regions)	<b>Not on track</b>
Rubella/CRS elimination (2 regions)	<b>Not on track</b>
DTP3 90/80 coverage	<b>Not on track</b>
Meet MDG-4	<b>Not on track</b>
Research and development	No targets for 2015, only for 2020

integrated strategies

governance

data quality

supply chain

maximize contacts



areas for collective efforts

**Success** comes from  
taking the initiative and  
following it up...  
persisting...  
systematically working  
together to express the  
depth of your commitment...



