

# Global Health Security and WHO

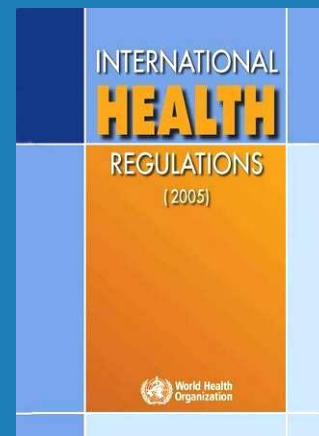
April 24 2012  
Vienna, Austria

*Global Alert and Response.....A world on alert and ready to respond rapidly and effectively to epidemics and other acute public health emergencies*

Nicolas Isla, *Global Capacities Alert & Response, WHO*



World Health  
Organization



# A new paradigm: Global Health Security

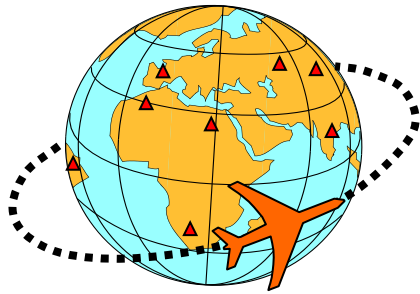
*Global public health security minimizes vulnerability to acute public health events that endanger the collective health of populations living across geographical regions and international boundaries, and includes the impact on economic, political stability, trade, tourism, access to goods and services and demographic stability.*

- World Health Report 2007

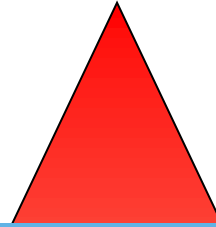


## PANDEMIC

## Global spread

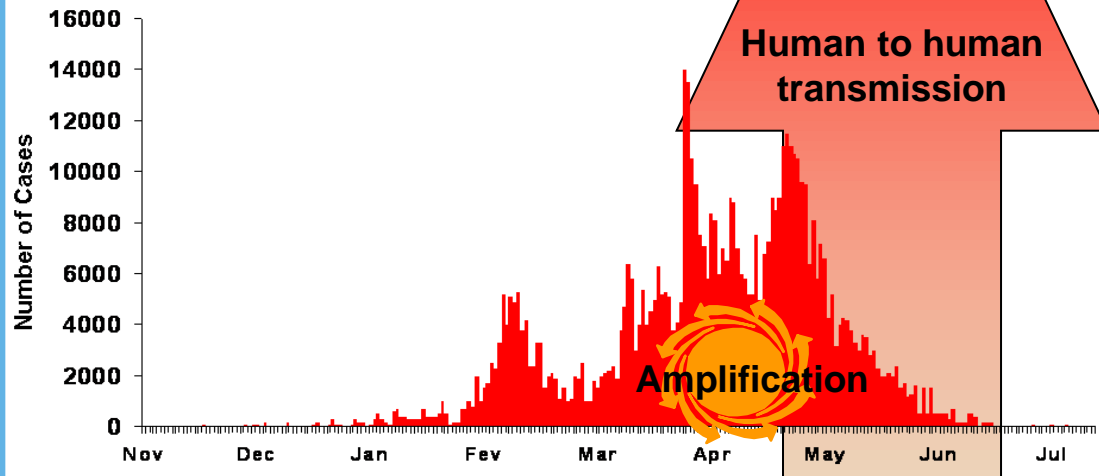


Global travel and trade



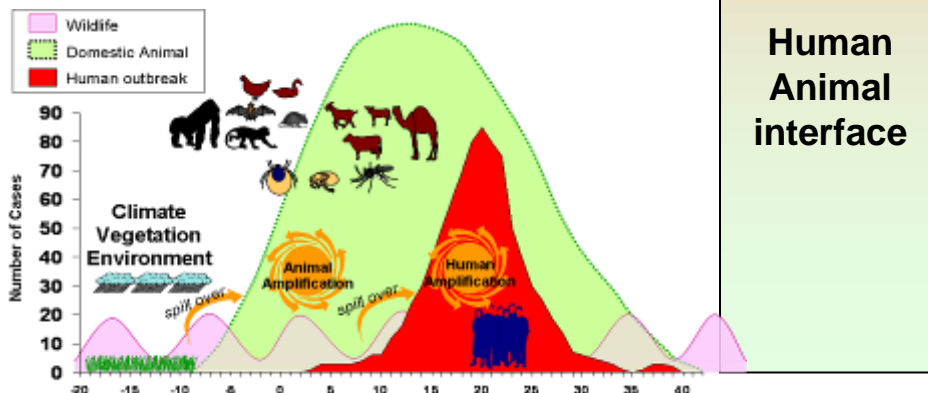
## EPIDEMIC

## Amplification



## OUTBREAK

## Emergence



# Global Health Security Challenges

## Globalization of pathogens

- Global travel: people, animals, vectors
- Global trade: animal and their products, vaccines, medical products, etc.

## Amplification of pathogens

- Successful H2H transmission,
- Nosocomial transmission in health care centers
- New introduction from animals
- Urbanization
- Mass gatherings
- Agricultural intensification
- Technology and Industry
- Accidental or deliberate use of biological agents

## Emergence of pathogens

- Encroachment introduction, “Spill over”
- At-risk behaviour
- Human encroachment, ex-situ contact, ecological manipulation
- Translocation of wildlife

# What does it mean?

- Global health challenges and global security challenges are too complex and large in scope to continue working individually
- Interconnectedness and interdependence of health sector, security sector, economy, foreign affairs, etc.
- Whole-of-society approach = robust multisectoral engagement

# Objectives of Global health security

## ● Increased awareness

- Access to scientific knowledge
- Surveillance systems
- Risk analysis and assessment
- Risk communication to populations

## ● Increased readiness

- More emphasis on preparedness
- Sound health systems and infrastructure
- Multi-hazard operational planning
- Multisectoral engagement
- Exercises and refinement of plans

## ● Improved responses

- Effective, timely, coordinated
- Adequate surge capacity
- Access to external support/expertise
- Proportional to impact
- Increased knowledge, applied research

## ● Increased resilience

- All baseline functional capacities
- Flexibility of systems
- Adaptability of behavior

# Global public health system ...

- **Strong national public health systems** able to maintain active surveillance of diseases and public health events; investigate detected events; report; assess public health risk; share information; and implement control measures. and
- **Effective global systems, networks and tools** for containing public health threats, able to carry out continuous global risk assessment, and prepared to respond to unexpected events with the potential for international relevance



World Health  
Organization

# International Health Regulations (2005)

- “ to prevent, protect against, control and provide a public health response to the international spread of disease in ways that are commensurate with and restricted to public health risks, and which avoid unnecessary interference with international traffic and trade”  
(Article 2)



# International Health Regulations (2005)

## 1. Notification to WHO

### a. All cases of 4 diseases:

SARS, Smallpox, wild-type poliovirus, new subtype human influenza  
(in accordance with WHO case definition)

### b. All events which fulfil at least 2 of 4 risk criteria specified in the IHR):

1. Potentially severe public health impact;
2. Unusual or unexpected;
3. Significant risk of international spread;
4. Significant risk of international trade or travel restrictions



## 2. Reporting to WHO of public health risks in other countries within 24 hours

## 3. Verification to WHO upon request of unofficial reports of above kinds of cases/events



# National Capacities

detecting, assessing, notifying and reporting

- **Core capacities (8)**

- Legislation and Policy
- Coordination
- Surveillance
- Response
- Preparedness
- Risk Communications
- Human Resources
- Laboratory

- **All Hazards**

- Biological
  - Infectious
  - Zoonosis
  - Food safety
- Chemical
- Radio nuclear

- **Points of Entry**

- **National systems**

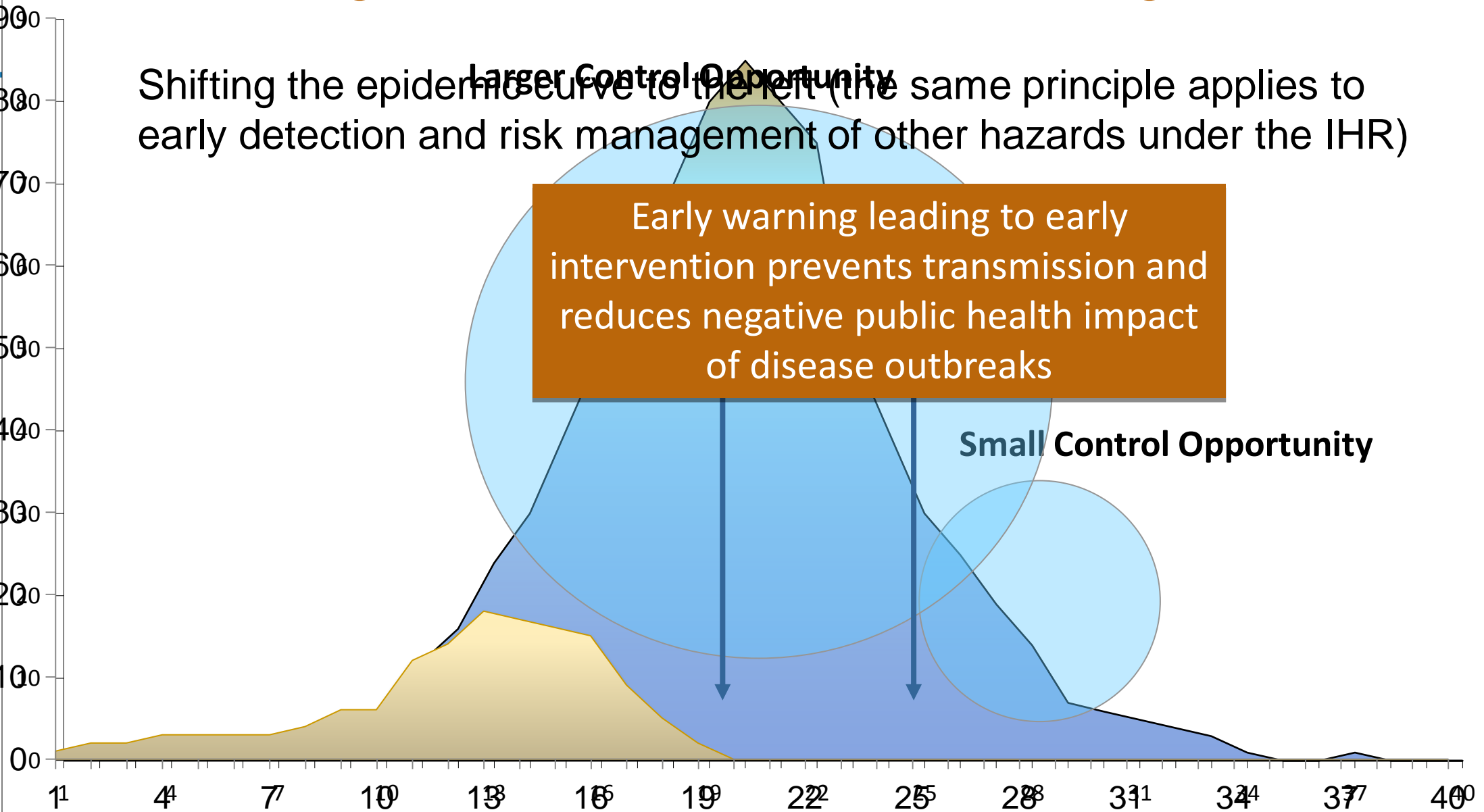


# Under IHR (2005) WHO responds to all hazards to health regardless of origin or source



# Management of public health emergencies

Shifting the epidemic curve to the left (the same principle applies to early detection and risk management of other hazards under the IHR)

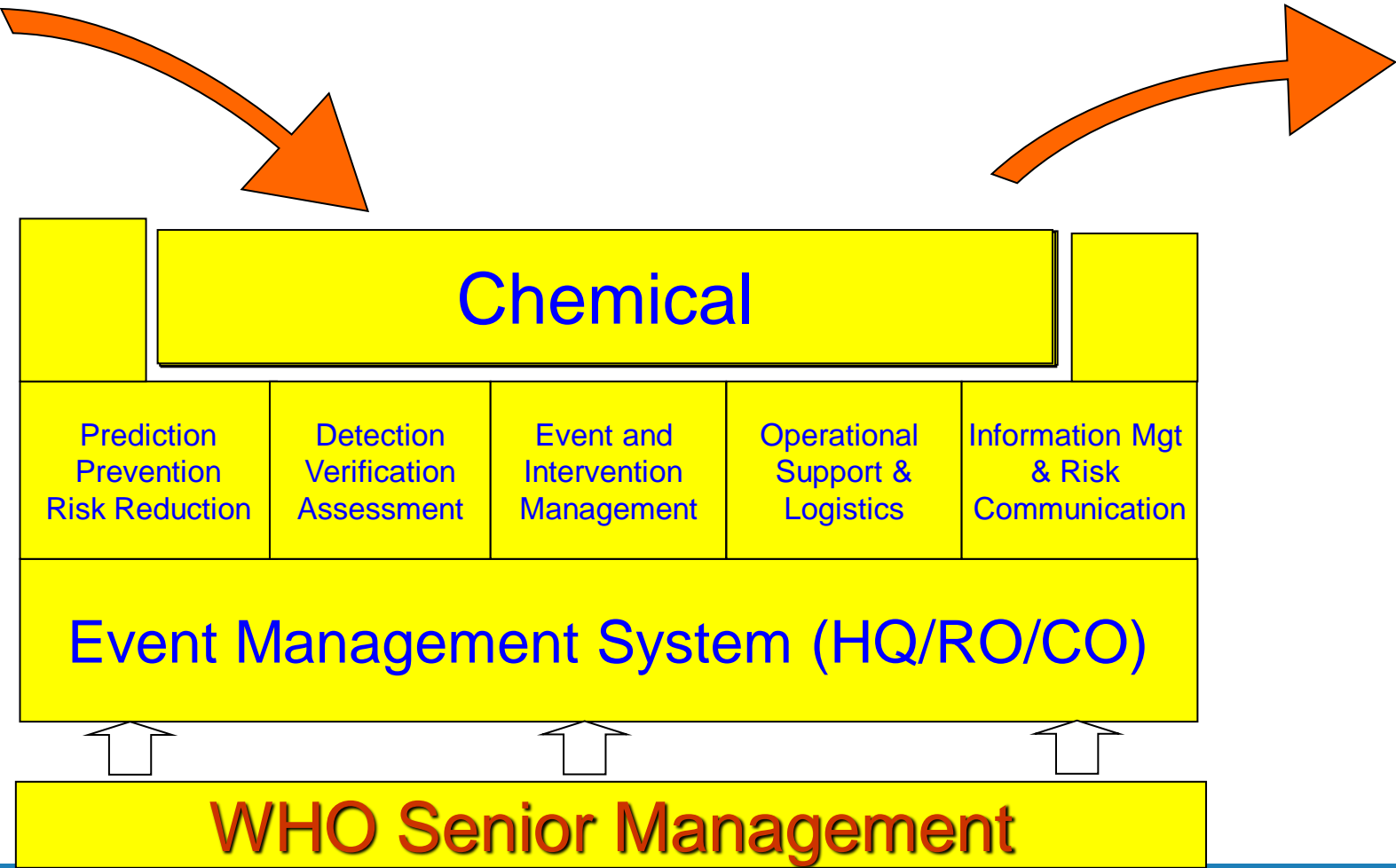


Specialist Programmes

Public Health Event Response  
under the International Health Regulations

- CHEMICAL
- RADIATION
- FOOD
- EPIDEMIC

*"Payload and Platform" concept of operations*



# WHO Portal

EMS  
Event Management System

Welcome, Isabelle NUTTALL Preferences Help Logout

Regions: Events Diseases/Conditions Contacts FOR INTERNAL WHO USE ONLY

GLOBAL AFRO AMRO EMRO EURO SEARO WPRO

Global Summary  
Go to Country

Global Summary Map

Overview of Ongoing Events

Events: 102  
Public Health Risks: 64  
PHEICs: 0  
Countries Affected: 70  
Requests for Assistance: 6  
Deployments: 5

Hazard	Total Events
Infectious	80
zoonotic	7
Food Safety	3
Undetermined	4
Disaster	3
Chemical	2
Product	1
radiation	0
Nutritional deficiency	0

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# States Parties

World Health Organization  
Event Information Site  
for IHR National Focal Points

Current Events

All Events: This site has been developed by WHO to facilitate secure communications with the 146 National Focal Points (NFP) part of the implementation of the International Health Regulations (2005).

Current Events

This section lists ongoing events which are currently being assessed against the criteria for public health risk international importance under the IHR (2005).

Click an event's **Updated** link to see the current risk assessment and most recent updates for the event.

Updated	Country	Hazard	Syndrome	Disease	Initial Information Date	IHR Status
2007/12/07	Peru	Product		Adverse effects of viral vaccines	2007/12/06	Public Health Risk (PHR)
2007/12/07	New Zealand	Product	Acute Neurological Syndrome, unspc...	Organic solvents, other, toxic effe...	2007/12/05	Public Health Risk (PHR)
2007/12/07	Australia	Product	Acute Neurological Syndrome, unspc...	Organic solvents, other, toxic effe...	2007/12/06	Public Health Risk (PHR)
2007/12/06	Sweden	Infectious	Acute Hemorrhagic Fever Syndrome	Sikh Valley Fever	2007/12/07	Public Health Risk (PHR)

# Operations

GOARN

Current Events

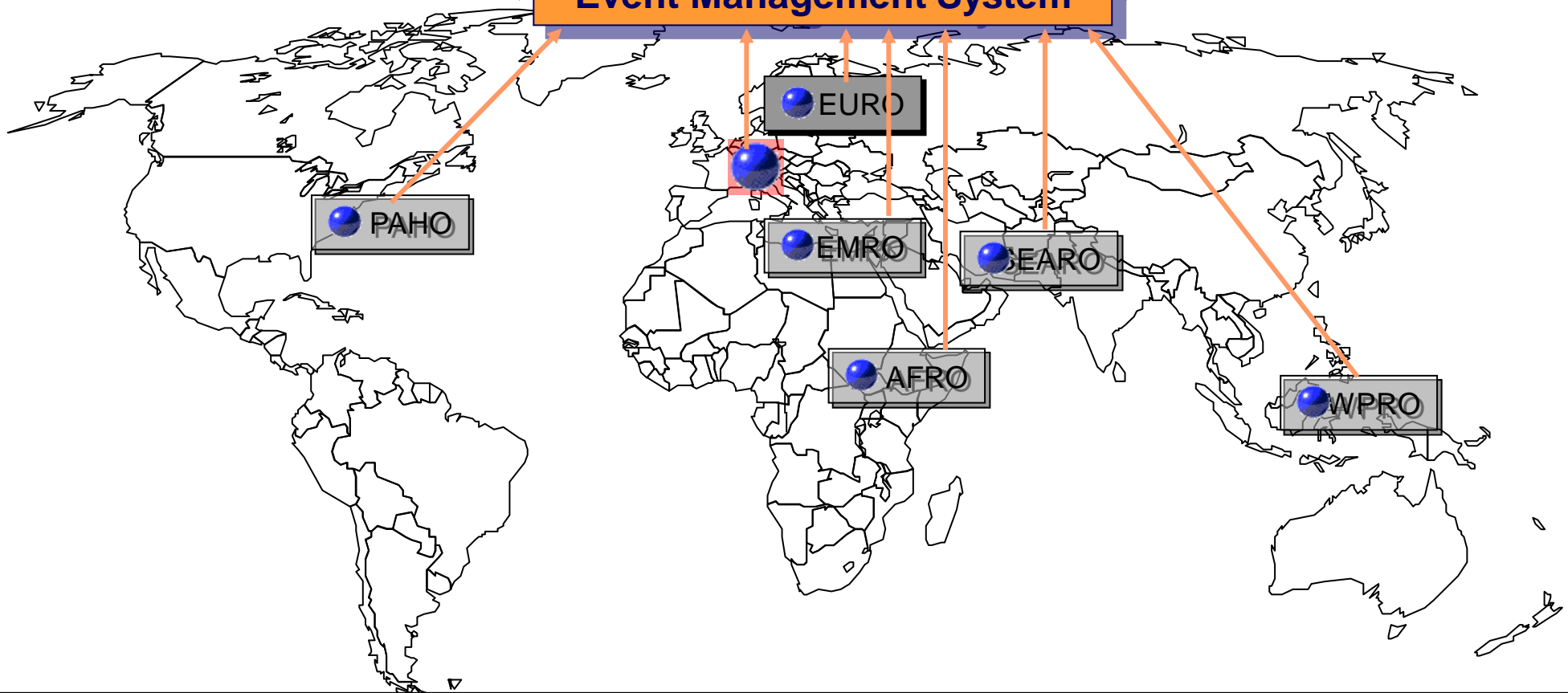
World Health Organization (WHO) Risk 2007

World Map

Search for a Point of Interest

Event Name	Country	Start Date	End Date	Status
Adverse Effects of Viral Vaccines	Peru	2007/12/06	2007/12/06	Active
Acute Neurological Syndrome	New Zealand	2007/12/05	2007/12/05	Active
Acute Neurological Syndrome	Australia	2007/12/06	2007/12/06	Active
Acute Hemorrhagic Fever Syndrome	Sweden	2007/12/07	2007/12/07	Active

## Event Management System



# WHO's engagement with Security

WHO recognises its responsibility in contributing to global security in the event of an alleged use of CBT:

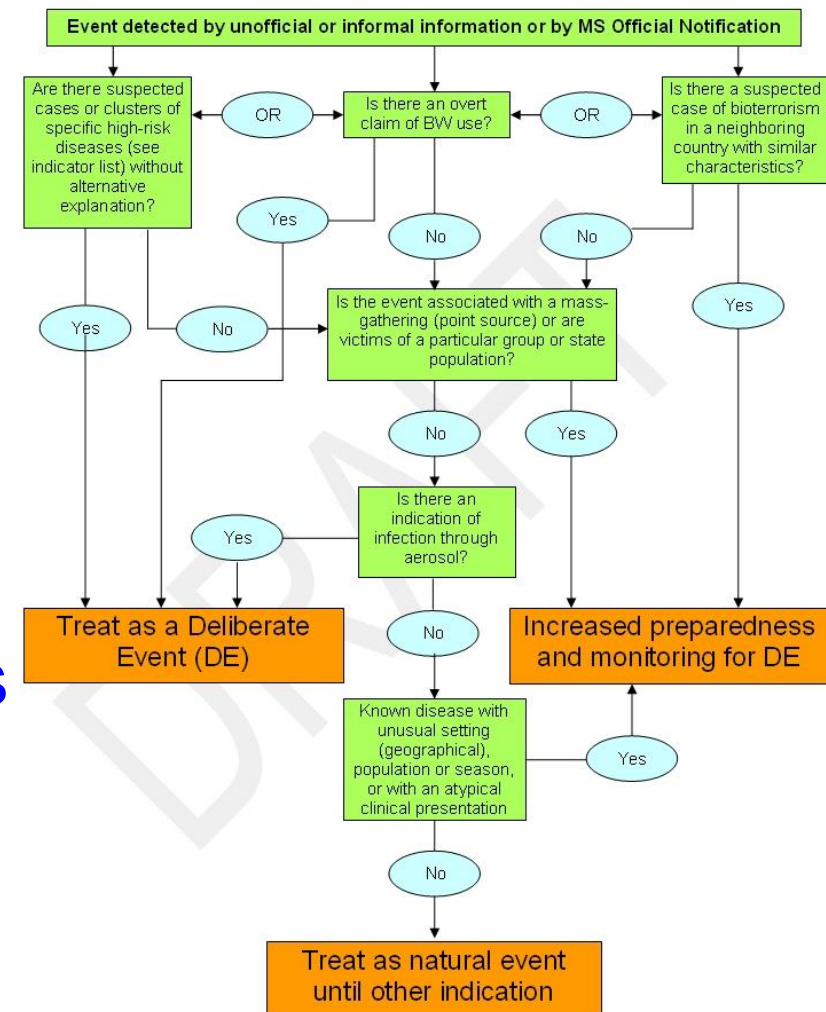
- As the **specialized agency for health with the technical and scientific capacity** for investigating the origins of outbreaks, the WHO has a **moral obligation** to contribute the investigations of alleged use
- The **public health consequences** of a biological agent being used intentionally, how ever unlikely, **necessitates preparedness**. WHO has developed and tested specific SOPs (shown later)
- Has an obligation (WHA 54.14 and WHA55.16) to **build capacity towards CBRN preparedness** in Member States. WHO's approach is through public health system improvement

# Response to deliberate events

- Differentiating between a natural and deliberate events
  - Alert signals (claims and hoaxes)
  - Clinical and epidemiological findings
  - Laboratory findings
  - Specific high-risk diseases
  - Evidence of biological agent dissemination (munitions)
- Assessment and response strategies



Figure 1. Pathway to determine WHO response



# WHO-UNODA collaboration on the UNSG mechanism for Investigating of Alleged Use (IAU)

- A neutral investigation of alleged use of chemical, biological or toxin weapons
- Focussed on BW because CWC has its own IAU
- MoU between WHO and ODA has been signed (Sept 2010)
- Common training for experts in fields relevant to the investigation, including biosecurity

## Used in four cases:

- Thailand 1981-2 BW
- Iran-Iraq 1984-9 CW
- Mozambique 1992 CW
- Azerbaijan-Armenia 1992 CW





# Responsible life sciences research for global health security

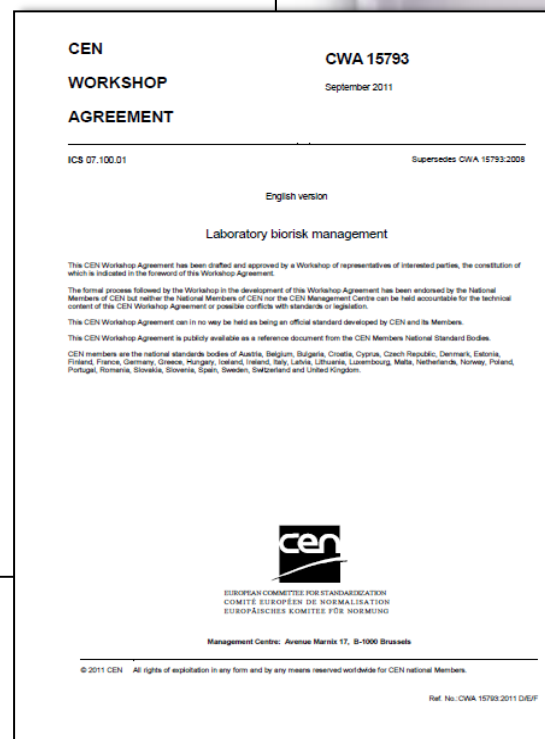
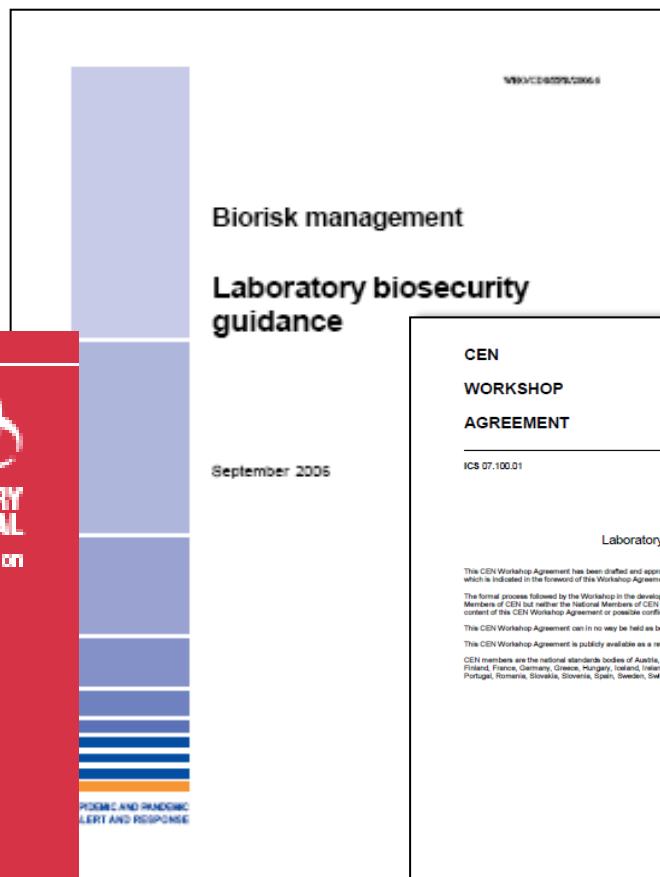
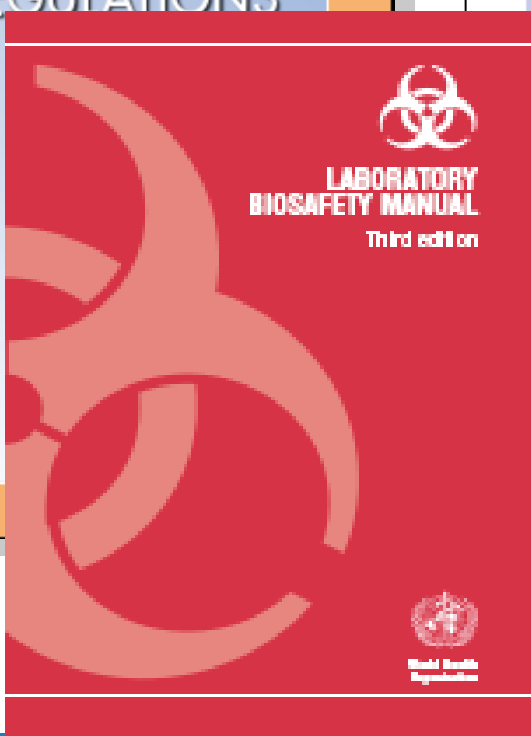
*The promotion of a culture of scientific integrity and excellence is the best defense against accidents and potential misuse, and the best prospect for progress and development*

- Based on 3 pillars

- Research excellence
- Ethics
- Biosafety/biosecurity

- Awareness raising
- Capacity building
- Workshops
- Empowering stakeholder network
- Establishment of scientific working groups

# Biosafety and Laboratory Biosecurity: guidance and training



# THANK YOU !

Mike Ryan

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Mark Nunn

Katie Smallwood

James Oakes

Angela Merianos

Pat Drury

Tom Grein

Stella Chungong

Vernon Lee

Guenäel Rodier

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