



**World Federation for Culture Collections
ICCC-12 Conference 2010**

Florianopolis, Brazil, 26 Sept – 1 Oct 2010

The Biosafety and Laboratory Biosecurity programme at the World Health Organization

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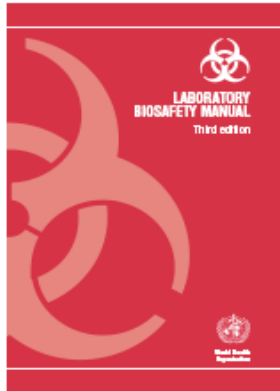
Biosafety is not new



New is the way people look at biosafety.

What is biosafety?

What is laboratory biosecurity?



Laboratory biosafety describes containment principles, technologies and practices implemented to **prevent unintentional exposure** to pathogens and toxins, or their accidental release.

http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_CSR_LYO_2004_11/en/

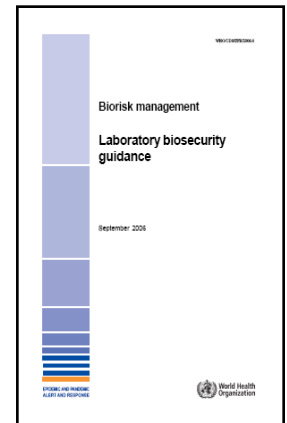
'Protect people from pathogens'

Prevention of accidental or 'deliberate' release from labs

Laboratory biosecurity describes the protection, control and accountability for valuable biological materials (VBM) within laboratories, in order to **prevent their unauthorized access, loss, theft, misuse, diversion or intentional release.**

http://www.who.int/csr/resources/publications/biosafety/WHO_CDS_EPR_2006_6/en/index.html

'Protect pathogens from people'



A sad trigger for safety awareness: Laboratory Acquired Infections (LAIs): the risk of sparking an epidemic...



FMD

- Pirbright, 2007



The SARS outbreak was over, the Region was coming out of a huge economic crisis

The viruses were still available in laboratories...

SARS

- Singapore, 2003
- Taipei, 2003
- Beijing, 2004

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Strengthen BIOSAFETY !
Reduce RISKS of infection !

It should not have happened, even in these extraordinary circumstances and it must not happen again

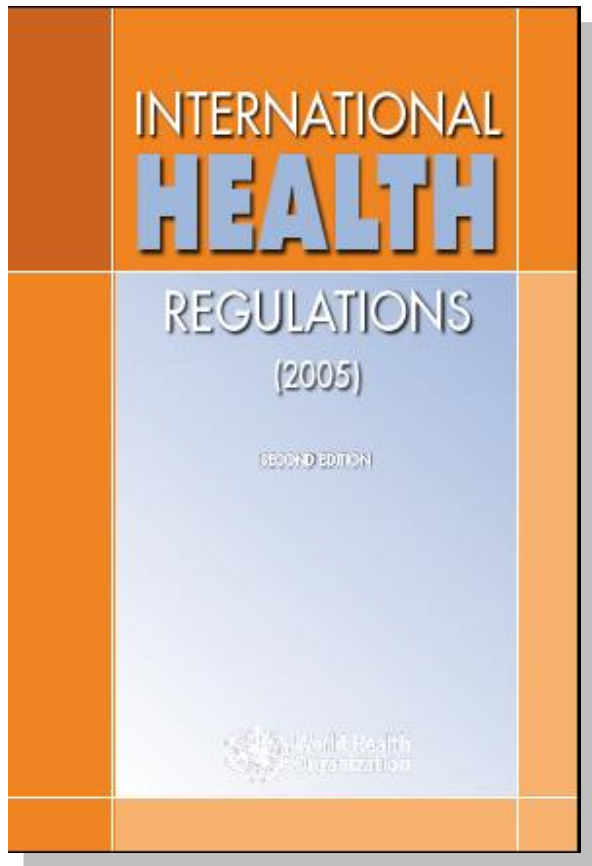
Hilary Benn
Environment Secretary

WHO's public health mandate for biosafety and laboratory biosecurity

- **WHO Constitution of 1948**
 - "Attainment by all people of highest possible levels of health"
- **World Health Assembly resolution 55.16 (2002)**
 - "Global public health response to natural occurrence, accidental release or deliberate use of biological and chemical agents or radionuclear material that affect health"
- **International Health Regulations, resolution 58.3 (2005)**
 - "Prevention and control of the international spread of disease and public health risks"
- **World Health Assembly resolution 58.29 (2005)**
 - "Enhancement of laboratory biosafety"



International Health Regulations – IHR (2005)

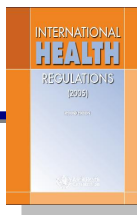


May 2005

<http://www.who.int/csr/ihr/en/index.html>

- **Legally binding** for all **193 WHO Member States**, international law
- Purpose:
"prevent, protect against, control and provide a public health **response** to the **international spread** of disease"
- Requires countries to **develop minimum core** national and international **surveillance** and **reporting capacities**

Laboratory support to outbreak response – key messages



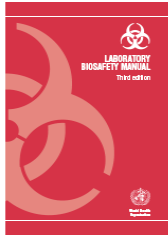
- **Laboratory services** are essential to identify and confirm the causes of outbreaks.

Optimal working conditions include:

- communication
- specimen collection and transport
- financial resources
- biorisk management
- trained staff
- suitable infrastructure
- functioning equipment
- appropriate reagents
- reliable results

WHA 2006: immediate and voluntary compliance with IHR (2005):

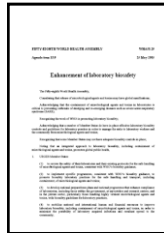
- WHO is requested to "expand and accelerate training efforts in the areas of laboratory capacity, including regional networking of laboratories, **biosafety**, and quality control..."



WHA 58.29

Enhancement of laboratory biosafety

May 2005



Member States to:

- review safety of labs, follow WHO guidance
- implement safety progs, follow WHO guidance
- enhance compliance with bs guidelines
- mobilize human and financial resources
- cooperate with other MS to facilitate access to PPE
- encourage dev of bs training progs and competency stds

WHO to:

- play an active role
- support other programmes and partners
- update relevant guidelines
- report to EB

Biosafety and Laboratory Biosecurity

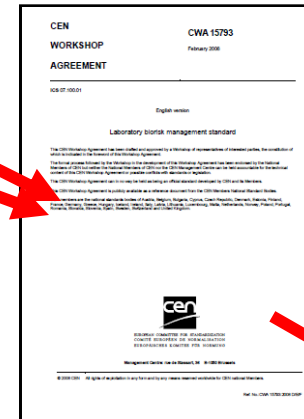


WHO publications

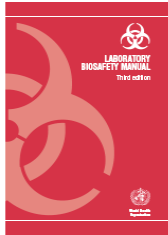
CWA 15793:2008 Laboratory Biorisk Management Standard

16 points action plan

<ftp://ftp.cenorm.be/PUBLIC/CWAs/wokrshop31/>



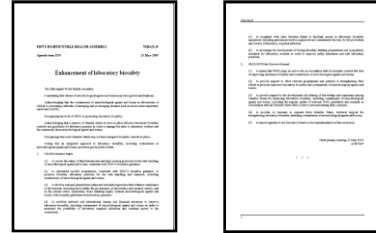
Implementation



Five years later: Where are we now?

Enhancement of laboratory biosafety

May 2005



Through engagement, communication, meetings, workshops, consultations, coordination of global efforts by various stakeholders:

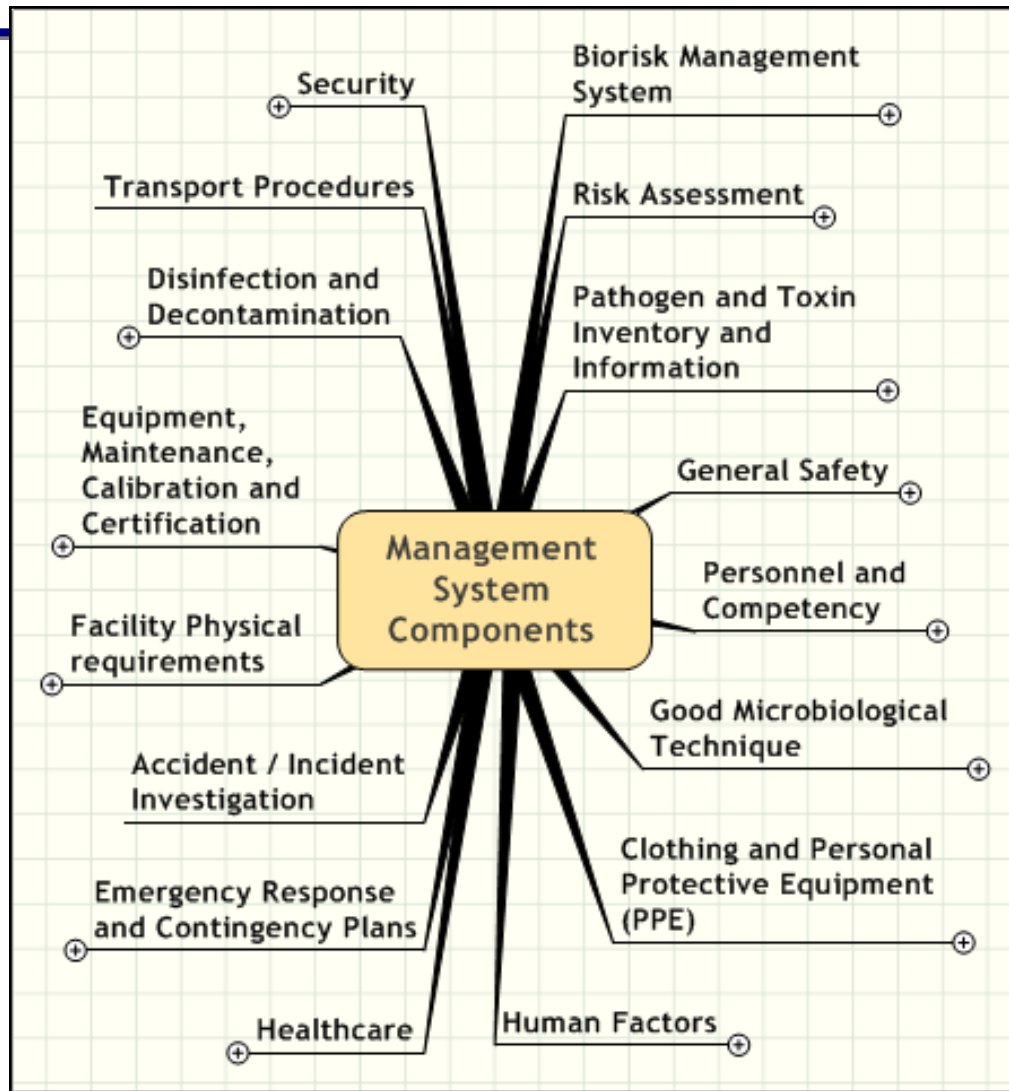
2010:

1. development / revision of legislation (e.g. Singapore / China / Canada)
2. construction / renovation of laboratories (e.g. Brazil: 12 new BSL3)
3. growing commitment to implement BRM systems (CWA15793)
4. role of laboratory managers for biosafety: shift in responsibilities
5. need for education and competency based training



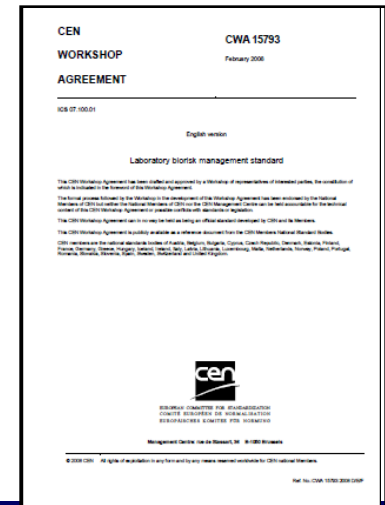
How do biosafety and laboratory biosecurity
translate into practice?

Strengthening biosafety and lab biosecurity programmes: 'CWA 15793: Laboratory Biorisk Management Standard'



Scope of CWA 15793:

To set requirements necessary to **control risks** associated with the handling or storage and disposal of biological agents and toxins in laboratories and facilities.



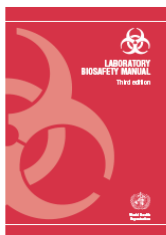


WHO's contributions to global biosafety, 2010



- ❖ *Regional Biosafety Awareness Raising Meetings* 3 days
for animal health and public health communities
identify needs; develop regional action plan for follow up
- ❖ *Strengthen biosafety interface between animal and human health (OIE/FAO/WHO)*
strengthen collaboration as biosafety is of mutual concern
- ❖ *CWA 15793 Laboratory Biorisk Management Awareness Training* 2 days
help countries adopt and implement the standard
- ❖ *WHO Biorisk Management Advanced Trainer Programme* 10 days
combine technical knowledge and techniques to change behaviours





WHO's contributions to global biosafety, 2010 (cont'd)

- *WHO Infectious Substances Shipping Training* 2 days
(developed in collaboration with ICAO and IATA)
Help develop the regulations, support their compliance
- *Biosafety training for disease-specific programmes* 5 days
Provide hands-on BSL3 training
- *CEN CWA 53 Biosafety Professional Competence* ongoing
Education: introduce biosafety into undergraduate curriculum
- *CEN CWA 55 Guidance document to CWA 15793* ongoing
Guide laboratories to the implementation of the standard
- *Extended WHO Biosafety Advisory Group (BAG) meeting* 3 days
'193 ways to implement biosafety' ...



2011-2015: a five-year strategic plan

'193 ways to implement biosafety' (cont'd)

There are many players, many initiatives, many projects and outreach activities, worldwide

Time is right for global coordination of efforts

WHO's 5-year strategic collaborative plan:

Presented early Sept 2010 to:

- ⚠ WHO Regional Offices, WHO biosafety CCs, OIE, FAO, International Biosafety Associations, partners, donor agencies

Covers:

- ⚠ Look at the past: what has been the impact of our initiatives
- ⚠ Construct the future:



2011-2015: a five-year strategic plan

'193 ways to implement biosafety' (cont'd)

Outcomes:

☢ 4 areas of work:

- Promote development of regulatory frameworks
- Develop evidence based information platforms
- Enhanced sustainable competencies in bs/bsec
- Appropriate facilities for appropriate activities

☢ Develop global/regional approaches

- address identified priorities, gaps and needs

☢ Identify global/regional/local support

- engage partners and donors, commit to support WHO
- assign clear roles and responsibilities to partners,
- limit duplication of efforts, connect projects and activities

☢ Develop timeline, monitor and show progress

☢ Identify areas where investment (human and financial) can have most impact



Contribute to the development of a global 'biosafety culture'

Thank you



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