World Health Organization

The 1st Coordination Meeting of WHO BioDoseNet Network for Radiation Emergencies

07 September 2008 – Hannover NH, USA

WHO – 193 Member States

PEOPLE

Last but not least, WHO is people. Over 8000 public health experts including doctors, epidemiologists, scientists, managers, administrators and other professionals from all over the world work for WHO in 147 country offices, six regional offices and at the headquarters in Geneva, Switzerland.

When diplomats met in San Francisco to form the United Nations in 1945, one of the things they discussed was setting up a global health organization. WHO's Constitution came into force on 7 April 1948 – a date we now celebrate every year as World Health Day.

Delegates from 53 of WHO's 55 original member states came to the first World Health Assembly in June 1948. They decided that WHO's top priorities would be malaria, women's and children's health, tuberculosis, venereal disease, nutrition and environmental sanitation – many of which we are still working on today. WHO's work has since grown to also cover health problems that were not even known in 1948, including relatively new diseases such as HIV/AIDS.

1948

International Classification of Disease

WHO took over the responsibility for the International Classification of Disease (ICD), which dates back to the 1850s and was first known as the International List of Causes of Death. The ICD is used to classify diseases and other health problems and has become the international standard used for clinical and epidemiological purposes.

1952–1964

Global yaws control programme

One of the first diseases to claim WHO's attention was yaws, a crippling and disfiguring disease that afflicted some 50 million people in 1950. The global yaws control programme, fully operational between 1952-1964, used long-acting penicillin to treat yaws with one single injection. By 1965, the control programme had examined 300 million people in 46 countries and reduced global disease prevalence by more than 95%.

1952 Dr Jonas Salk (US) develops the first successful polio vaccine.

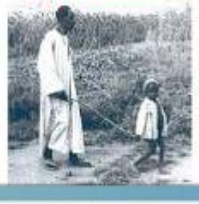
1967 South African surgeon Christiaan Barnard conducts the first heart transplant.

1974 The World Health Assembly adopts a resolution to create the Expanded Programme on Immunization to bring basic vaccines to all the world's children.

1977 The first Essential Medicines List appeared in 1977, two years after the World Health Assembly introduced the concepts of "essential drugs" and "national drug policy". 156 countries today have a national list of essential medicines.

1974

Onchocerciasis control programme



WHO worked for 30 years to eliminate onchocerciasis – or river blindness – from West Africa. 600 000 cases of blindness have been prevented and 16 million children spared from the disease. Thousands of farmers have been able to reclaim 25 million hectares of fertile river land that had been abandoned because of the risk of infection.

Dr Ali Maalin (left), from Somalia, was the last person known to be infected with smallpox. Here he stands with the doctor who treated him more than 25 years ago. Ali has since worked on polio eradication campaigns.

1979

Eradication of smallpox

The eradication of smallpox – a disease which had maimed and killed millions – in the late 1970s is one of WHO's proudest achievements. The campaign to eradicate the deadly disease throughout the world was coordinated by WHO between 1967 and 1979. It was the first and so far the only time that a major infectious disease has been eradicated.

1983 Institut Pasteur (France) identifies HIV.

2003

WHO Framework Convention on Tobacco Control

21 May 2003 was a historic day for global public health. After nearly four years of intense negotiations, the World Health Assembly unanimously adopted WHO's first global public health treaty. The treaty is designed to reduce tobacco-related deaths and disease around the world.

2004 Adoption of the Global Strategy on Diet, Physical Activity and Health.

1978 The International Conference on Primary Health Care, in Alma-Ata, Kazakhstan sets the historic goal of "Health for All" – to which WHO continues to aspire.

1988 Global Polio Eradication Initiative established

Since its launch in 1988, the Global Polio Eradication Initiative has reduced the number of cases of polio by more than 99% – from more than 350 000 per year to 1956 in 2006. Spearheaded by national governments, WHO, Rotary International, the US Centers for Disease Control and Prevention and UNICEF, it has immunized more than two billion children thanks to the mobilization of more than 20 million volunteers and health workers. As a result, five million children are today walking, who would otherwise have been paralysed, and more than 1.5 million childhood deaths have been averted.

THE GOAL IS TO ERADICATE POLIO WORLDWIDE SO THAT NO CHILD WILL EVER AGAIN BE PARALYZED BY THIS DISEASE.

2003 Severe Acute Respiratory Syndrome (SARS) first recognized and then controlled.

2005 World Health Assembly revises the International Health Regulations.

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Why WHO?

WHO Statute

- **WHO has a mandate and a strong expertise in response and preparedness to disease outbreaks and builds on that towards RN events response**
- **Unique advantage and best position to work directly with health authorities in our 193 Member States**

Specific mandate on radiation health:

- **Develop and promote evidence-based public health policy for Member States that protect health and reduce risks from over- exposure to radiation of any origin**
- **Provide medical support and public health advice in case of radiation accidents or terrorist events**
- **Build capacity and provide technical assistance and information to support national programs in the field of radiation protection and radiation health**

Shift in Global Security and RN Threats

60-80s

Cold War

70-90s

NPP accidents

2000s: terrorism, BCRN threats

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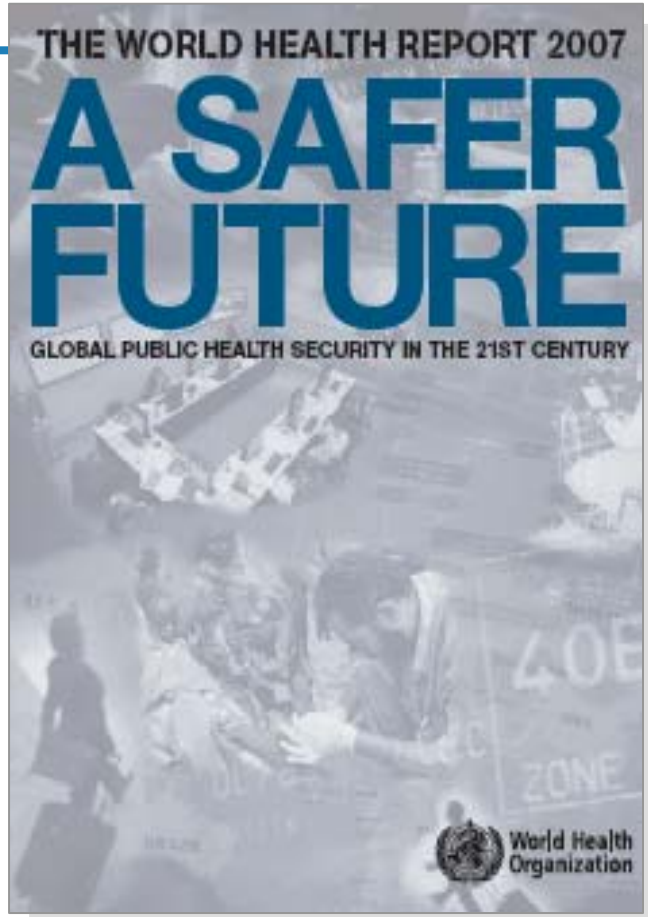


"Given today's universal vulnerability to these threats, better security calls for global solidarity. International public health security is both a collective aspiration and a mutual responsibility….The new watchwords are diplomacy, cooperation, transparency and preparedness"

Introductory statement within the World Health Report of Dr. Margaret Chan, Director General of the WHO, August 23, 2007

Dr Margaret Chan
Director-General
World Health Organization

WHO Vision

The goal:

A more secure world that is on the alert and ready to respond collectively to any threat of public health emergency that represent an acute threat to human life and health

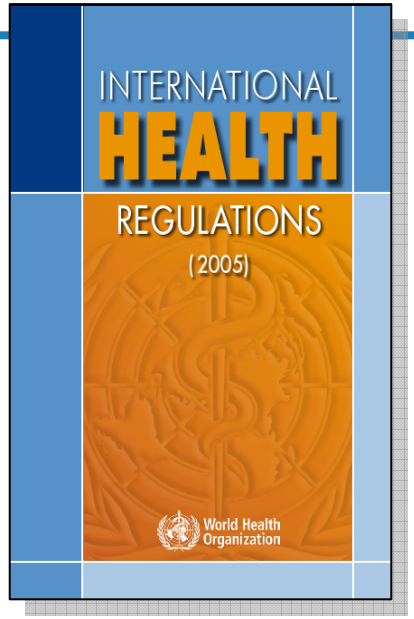
Strategic Objective:

Implementation of an international alert and response system based on strong national public health system capacity, and an effective international system that is prepared to deal with specific threats and to co-ordinate international response

Legal Framework for Radiation Emergency Response

- **Two Conventions on Early Notification and Assistance (1987)**
- **International Health Regulations (2005)**
- **WHA Resolutions 55.16 and 59.22**
- **Joint Plan of the International Organizations (2006)**

The International Health Regulations (2005)



- **A legally-binding global agreement to protect public health**
- **Adopted at the World Health Assembly & binding on 193 WHO's Member States**
- **Recently revised on instructions from States to WHO, final draft established by negotiation between Member States**
- **Entry into force of IHR(2005) - 15th June 2007**
- **SOPs for IHR implementation, evaluation, reporting**

Why a Global Biodosimetry Laboratories Network?

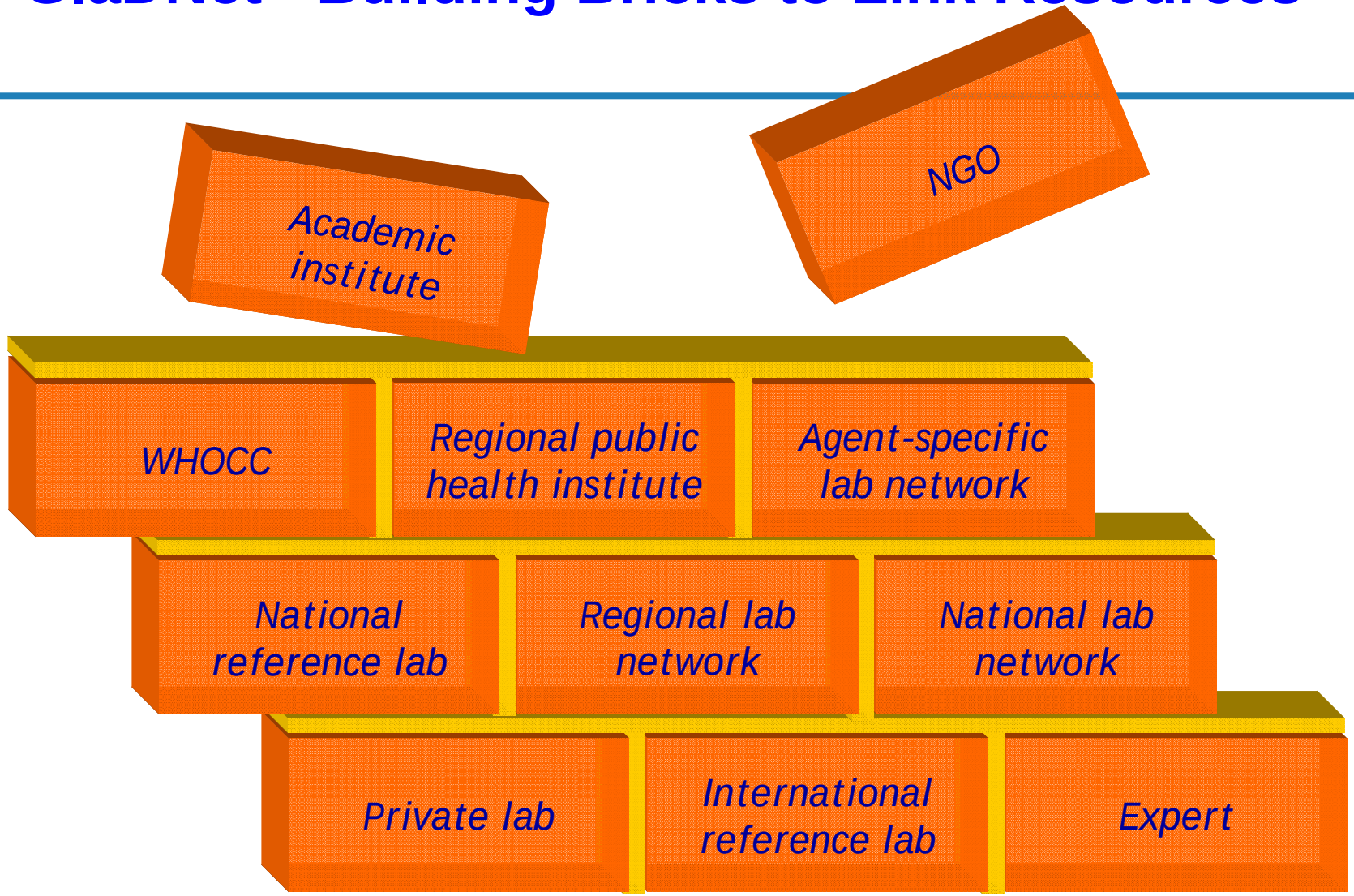
- **Global health security as WHO priority area of work**
- **Change in global threat calls for changes in global response and preparedness**
- **The system proved sufficient for isolated radiological accidents but mass-casualty type of event**
- **IHR implementation plan – establishment of global laboratory services directory and network (GLaDNet)**
- **Biodosimetry is a threat-specific sub-set of GLaDNet**

Global Laboratory Directory and Network - to Support International Health Regulations Implementation

GladNet builds on WHO's long-standing history and extensive experience on laboratory networks in place for various types of clinical, environmental and other laboratories around the world. These networks allow for:

- **identifying and mapping of existing resources**
- **coordination of capacity building process**
- **encourage applied research between partners for the public good**
- **Share logistic and knowledge management platforms**

GlaDNet - Building Bricks to Link Resources



Public Health Management of Radiation Emergencies – two key aspects:

- **Public Health**
  - **Prevention**
  - **Preparedness**
  - **Health care systems**
  - **Emergency stockpiles establishment**
  - **Public communication**
  - **Long-term follow-up**

Dosimetry is a tool to support decision making

- **Medical**
  - **Triage**
  - **Monitoring**
  - **Decontamination**
  - **Treatment**
    - Decorporation
    - CRS
    - ARS/MOF
    - Surveillance

Emergency Biodosimetry: Gaps

- No universal dosimeter exists for various types of radiation/exposure
- Standardization of methods (giving it a "legal" status)
- Optimization of EPR and cytogenetic procedures for rapid population triage in case of radiological emergency
- Automated processing/imaging/scoring
- Provision for special approaches for dose reconstruction for children-victims may be needed
- Multi-parameter and integrated biological dosimetry tools are needed – integration of molecular bioassays and "conventional" biodosimetry tools for support of radiation casualty management
- Portable in-vivo EPR technique that are sensitive, non-invasive and could support clinical triage of victims, is urgently needed
- Low throughput for any given lab alone, will be over-whelmed in case of emergency

Biodosimetry networks - a solution?

- **Benefits of such networks include but are not limited to:**
  - **Common basis for planning and reagent stockpiling**
  - **In emergency, streamlined communications may save time**
  - **Standard protocols for samples handling, processing, evaluation, and interpretation of findings**
  - **Consistent calibration protocols**
  - **Common criteria for quality assurance**
  - **Training and exercises for sustainable expertise**
  - **Regular inter-comparison programs**
  - **Sharing consumables (plastic-wear, consumables)**

- **WHO is the right group at the right time to assist in pulling this effort together because it is first of all a pubic health issue**

The 1st Coordination meeting of WHO BioDoseNet – 7 September 2008

World Health Organization

Objectives of the 1st Coordination meeting

- **To Agree on policy issues and Terms of Reference for the BioDoseNet**
- **To agree on structure and appoint Steering Committee**
- **To identify tasks to refer to Steering Committee/Working Groups**
- **To develop a list of the activities and agree on the time line of work**