

The role of WHO in strengthening global preparedness and response to radiological and nuclear emergencies

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WHO – UN's specialized agency for HEALTH



More than 7000 people work for the World Health Organization (WHO) in its 157 country offices, six regional offices and at the Headquarters in Geneva, Switzerland



The World Health Assembly (WHA): the WHO's supreme decision-making body. Meets once a year, gathering representatives of WHO's 194 Member States

Produces WHA Resolutions

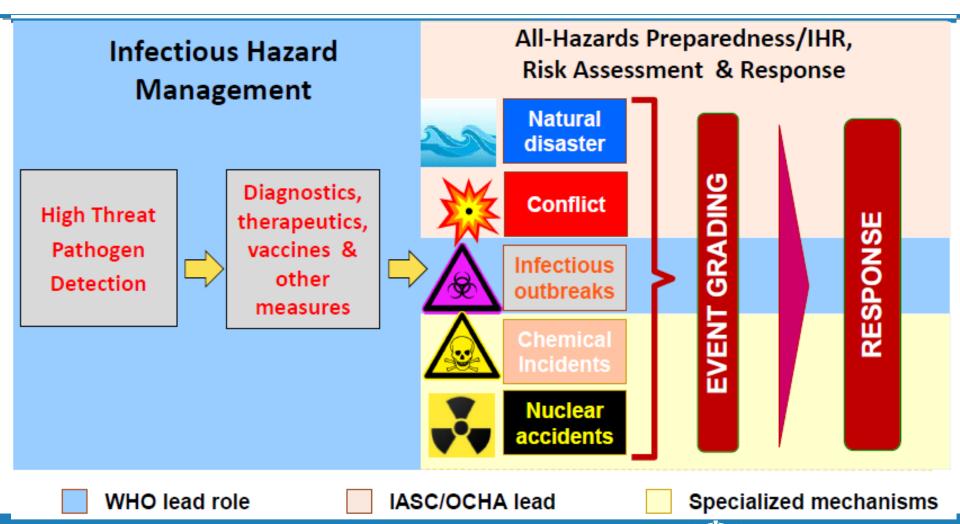


WHO Programmatic Priorities

- Achieving the Sustainable Development Goals addressing human health (11 out of 17 SDG)
- Advancing universal health coverage
- Increasing access to essential, high-quality and affordable medical products
- Reducing health inequities by addressing the social, economic and environmental determinants of health
- Implementing the International Health Regulations in preparedness and response to public health emergencies



All-Hazard Approach to EPR





Legal Basis for WHO's role in Response to Radiation Emergences

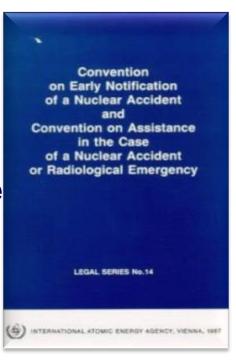
- The WHO Constitution, 1948
- Relevant World Health Assembly Resolutions
- Two Conventions on Early Notification and Assistance (1987)
- The International Health Regulations (IHR, 2005)
- Sendai Framework for disaster risk reduction in 2015-2030 with the central focus on health





International Emergency Conventions

- In place since 1986, triggered by the accident at Chernobyl Nuclear Power Plant in former USSR
- Secretariat International Atomic Energy Agency, some
 120 State Parties and four Int. Organizations
- They place specific obligations on the Parties to minimize consequences for health, property and the environment
- Each State Party set up a 24-hour warning points and competent authorities authorized to send notifications, requests of assistance, and to arrange for assistance if needed.



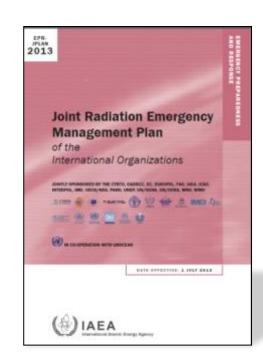
More info: http://www-ns.iaea.org/conventions/emergency.asp?s=6&l=38





IACRNE and Joint Plan

- Inter-Agency Committee on Radiological and Nuclear Emergencies (IACRNE) was set up to strengthen coordination of response to radiation emergencies by the international organizations with relevant responsibilities (IAEA is the coordinating agency).
- Provides links between agencies to ensure continuous communication prior to, during, and after emergencies. Arrangements are described in the Joint Radiation Emergency Management Plan of the International Organizations (EPR-JPLAN 2013).



Members: CTBTO, EC, EUROPOL, FAO, IAEA, ICAO, IMO, UNSCEAR, INTERPOL, NATO, OECD/NEA, PAHO, UNDP, UNEP, UN/OCHA, UN/OOSA, WHO, and WMO,



International Partnerships

- Inter-Agency Committee for Radiological and Nuclear Emergencies (IACRNA) with 11 participation international organizations
 http://www-ns.iaea.org/tech-areas/emergency/inter-agency-matters.asp
- NEA/OECD CRPPH / Working Party on Nuclear Emergency Matters WPNEM
- Global Health Security Initiative (GHSI) Working Group on radiological and nuclear threats (RNWG) http://www.ghsi.ca/
- Regional partnerships (HERCA WE, NERIS, EURADOS, RENEB etc.)
- NGOs and professional societies (ICRP, IRPA, etc.)
- WHO Collaborating Centres and expert networks
 - URL: WHO CC Database: http://apps.who.int/whocc/List.aspx?cc_subject=Radiation&



WHO's Relevant Emergency Networks

- Radiation Emergency Medical Preparedness and Assistance Network – WHO's technical expertise arm since 1987
 - directory: http://www.who.int/ionizing_radiation/a_e/rempan/en/
- WHO BioDoseNet (since 2007)
 - Global Network of Biodosimetry Laboratories
 - some 90 labs world-wide
- INFOSAN WHO-FAO joint network of national food safety authorities
- Public health emergency operations centres network (EOC-NET) in 38 member states



WHO REMPAN

- A WHO technical expertise arm for providing to MS assistance on health interventions in radiation emergencies and on strengthening national capacities
- established in 1987, originally with 4 members
- today is comprised of 16 CCs, 35 Lls, and individual experts in 45 countries
- meets every three years, proceedings published in peer-review journals
- directory is available on the web:

http://www.who.int/ionizing_radiation/a_e/rempan/en/



Key REMPAN Functions

Technical support to WHO in response to actual radiological and nuclear emergencies

Strengthening national and regional preparedness to radiation emergencies

- Technical guides/tools development
- Trainings and workshops
- Exercises
- Information sharing platform

Technical support of activities aimed at implementation of International Health Regulations in the area of radiation emergencies

- IHR Emergency Committee roster
- JEE expert roster



REMPAN Functions: Support WHO in emergency response

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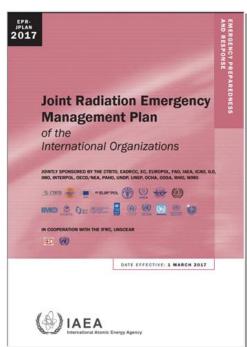




Technical support in response to actual radiological and nuclear emergencies

The scope of WHO technical advice and response to radiological or nuclear emergencies includes the following areas:

- Public health risk assessment and response
- Emergency medical response (diagnosis and treatment)
- Biological and clinical dosimetry
- Long term follow-up of exposed populations
- Control of food, drinking water safety
- Advise on trade and travel
- Mitigation of mental health impact
- Risk communication







Technical support in response to actual radiological and nuclear emergencies

During and after Fukushima accident, WHO provided technical advice and information to its member states, general public and media on matters related to:

- public health risk assessment and response
- food and drinking water safety
- advise on trade and travel
- mitigation of mental health impact
- risk communication
- long term follow-up of exposed populations

Two technical reports were published in 2012 and 2013





REMPAN Functions: support strengthening preparedness in MS

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Strengthening Preparedness in MS

Support and implementation of the international norms and standards:

- Safety requirements: BSS GSR Part 3 (2011) and GSR Part 7 (2015), cosponsored by WHO among other International Organizations
 - IAEA-WHO joint Webinar on the implementation of the GSR Part 7 Feb 2017
- Arrangements for preparedness for a nuclear or radiological emergency, GS-G-2.1, cosponsored by FAO, IAEA, ILO, PAHO, OCHA and WHO (2007)
- Criteria for use in preparedness and response for a nuclear or radiological emergency, cosponsored by FAO, IAEA, ILO, PAHO, OCHA and WHO, GSG-2 (2011)
- Revision of the "Generic Procedures for medical response during a nuclear or radiological emergency", cosponsored by WHO (EPR Medical 2005)
- DS 474 on transition from emergency to the existing situations
- DS 475 on emergency public communication

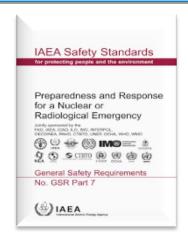


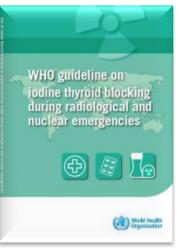




Strengthening Preparedness in MS

- Policy Briefing on Public Health Response to radiological or nuclear emergency (2018)
 - elaboration on the requirements from GSR Part 7
- WHO guidelines on iodine thyroid blocking (2017)
 - Infographics, FAQs will follow the publication of the guideline
- Report on the results of the 2016 WHO survey of national ITB policies
 - draft report is circulated for comments to all contributors to the survey
 - Results to be shared in RPD paper in 2018, and as a technical report later on
- Risk communication tool for radioactively contaminated food







15th Coordination meeting of WHO REMPAN 3-5 July, 2017- Geneva

Key issues addressed:

- Regional JEE reports, hosting and evaluating experts views
- Fukushima survey updates, thyroid screening situation
- Long-term medical follow up criteria, practices, pros and cons, lessons learnt
- Non-radiological health impact management
- Emergency risk communication
- Countermeasures development and research agenda



WHO-NEA cooperation on non-radiological health effects of radiation emergencies

- Proposal of Germany to the WPNEM (NEA/OECD) and to WHO at the 42nd meeting of the WPNEM in Paris
 - BfS is WHO's Collaborating Center and currently undergoing re-designation process for next 4 years, ToR are being reviewed and updated
- A two-phase project being currently discussed
 - Year 1: Development of a policy framework document on application of WHO guidelines on mental health to radiation emergencies (WHO-led task)
 - Year 2: Development of practical arrangements to support emergency response planners and managers to provide tools for efficient mitigation of psychosocial impact (WPNEM-led task)
- Year 3: a joint workshop may be envisioned



Mental health and psychosocial support in emergencies: relevant guidelines

- http://www.who.int/mental_health/resources/emergencies/en/
- IASC publication: A common monitoring and evaluation framework for mental health and psychosocial support in emergency settings, 2017
- Psychosocial support for pregnant women and for families with microcephaly and other neurological complications in the context of Zika virus: Interim guidance for health-care providers, 2016
 - Mental health and psychosocial support in ebola virus disease outbreaks: a guide for public health programme planners, 2015
- mhGAP Humanitarian Intervention Guide (mhGAP-HIG), 2015
- Facilitation Manual: Psychological First Aid during Ebola Virus Disease Outbreaks, 2014
- Psychological First Aid for Ebola Virus Disease Outbreak, 2014
- <u>Psychological first aid: facilitator's manual for orienting field workers, 2014</u>
- Mental and social aspects of health of populations exposed to chemical weapons: an overview, 2013
 - Building back better: sustainable mental health care after emergencies, 2013
- IASC Reference group mental health and psychosocial assessment guide, 2012
 - Assessing mental health and psychosocial needs and resources toolkit for humanitarian settings, 2012
 - Psychological first aid: guide for field workers, 2011

- The Humanitarian Emergency Settings Perceived Needs Scale (HESPER): manual with scale, 2011
- IASC reference group mental health and psychosocial support in humanitarian emergencies: what should humanitarian health actors know? 2010
- IASC guidelines on mental health and psychosocial support in emergency settings: checklist for field use. 2008
- Rapid assessment of alcohol and other substance use in conflict-affected and displaced populations: a field guide, 2008
- IASC guidelines for mental health and psychosocial support in emergency settings, 2007
 - Mental health of populations exposed to biological and chemical weapons, 2005
- Mental and social health during and after acute emergencies: emerging consensus? 2005
- Mental health in emergencies, 2003





Education and Training programs

- US CDC (national and international programs, on-line training)
- REAC/TS, Oak Ridge TN (regular programs, national, international)
- Latin American training programs with IAEA (Argentina, Brazil)
- UK PHE (national training programs, visiting scientist programs)
- IRSN training programs (national and international), France
- Karolinska University Hospital in Sweden (biennial advanced training for MDs)
- FMBC Moscow, Russia (on-the-job national and regional programs)
- NIRS, Chiba Japan (annual international training programs)
- Fukushima Medical Univ (academic programs)
- Hiroshima University Phoenix Program for radiation disaster management
- RERF (biodosimetry training)
- CDC China (regular national training programs)
- KIRAMS Seoul, S. Korea (annual regional REMPAN training courses)











ConvEx-3(2017)

- ConvEx-3 (2017) an international nuclear emergency response exercise conducted by the IACRNE members, under IAEA's leadership, held 21-22 June 2017, based on the national exercise at Paks NPP in Hungary
- The scenario simulated an off-site emergency with a release of radionuclides in the environment, which also affected several neighboring countries.
- International participants included 80 countries and 11 international organizations, including the European Commission, FAO, IAEA, IMO, WHO and WMO etc.
- In order to enable a harmonized exercise evaluation, Common Objectives (CO) were set for all participating states and international organizations.
- In addition, each state/organization was able to set its own specific objectives (SO).





ConvEx-3(2017)

WHO Specific Objectives for ConvEx-3(2017) exercise:

- Demonstrate competencies in the notification, verification and reporting procedures under the International Health Regulations (IHR 2015).
- Validate the applicability of the WHO Emergency Response Framework (ERF) in the context of a severe nuclear emergency.
- Assess WHO capability to provide international assistance on matters pertaining to human health and test relevant arrangements for securing technical assistance through specialized WHO experts networks.
- Test internal communication and coordination between WHO offices (CO-RO-HQ) for public messaging in case of emergency.





ConvEx-3(2017) – **Level B**

REMPAN members were offered two levels of participation: Level A (observer) and B (active participation).

16 institutions in 14 countries participated and provided technical advice on:

- Case management of combined injuries and decontamination
- Longer term public health response actions

Participating countries	Institutions	
UKRAINE	NRCRM	CC
HUNGARY	OSSKI	
USA	REACTS	CC
CANADA	HEALTH CANADA	
UK	EBMT	
R.KOREA	KHNP	
CHINA	CHINA CDC	
AUSTRALIA	ARPANSA	CC
UK	PHE	CC
LITHUANIA	RSC	
GERMANY	Bfs	CC
GERMANY	Wuerzburg University	CC
JAPAN	NIRS	CC
RUSSIA	FMBC	CC
R.KOREA	KIRAMS	
USA	CDC	





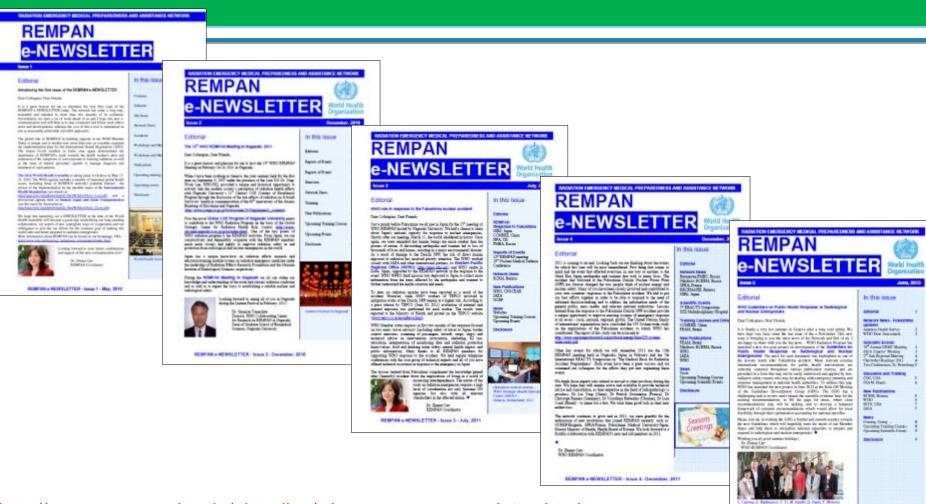
ConvEx-3(2017) – Lessons Learnt

- Standing inter-agency coordination arrangements proved adequate and efficient
- IHR notification mechanism and arrangements under the Notification Convention at the national level need regular and vigorous testing to ensure functional coordination
- WHO-specific exercise objectives were met in general. Areas of further improvement pertain to
 - clarification of specific aspects of internal standard operating procedures
 - coordination at the three levels (HQ, RO, and CO)
 - Training of the WHO staff involved in emergency response management
- REMPAN network contains high level of specialized technical expertise that may not be widely available for any given country. This expertise can be requested and provided upon request.





REMPAN e-Newsletter



http://www.rempan.ukw.de/aktuelles/who-rempan-e-newsletter.html



REMPARA, MINISTERS, INSIG 5 - June, 2012

REMPAN Functions: Support IHR Implementation

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- Technical guides/tools development
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Support IHR implementation

International Health Regulations (2005)

- Legally binding treaty
- 196 States Parties
- In force 15 June 2007





States must prepare, report and cooperate

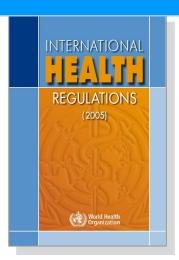
WHO must coordinate





IHR Framework

- An international legal instrument, a law, sets provisions for
 - health surveillance (e.g. unknown origin outbreaks) in addition to radiological monitoring
 - notification through National Focal Points
 - secure information sharing on Event Information Site (EIS)
 - ongoing monitoring of travel and trade measures
- IHR expert roster includes radiation emergency management experts
- Mechanism and tools for assessment, monitoring, and assistance on strengthening preparedness and response capacity of Member States
- Website: http://www.who.int/ihr/en/









IHR all-hazard framework to assess national capacities

IHR (2005): Capacity to detect, assess, report and respond to all Public Health Events of International Concern









Human infectious pathogens

Zoonotic pathogens / Food safety

Radio nuclear hazards Chemical hazards

Legislation and Policy

Coordination

Surveillance

Response

Preparedness

Risk Comm

Human Resources Laboratory



IHR Key Components



- Transparency
- Mutual accountability
- Trust building
- Appreciation of public health benefits
- Dialogue
- Sustainability



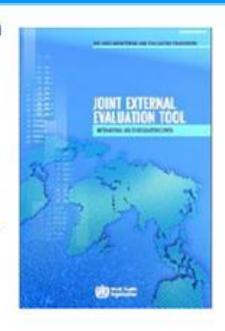


Joint External Evaluation Tool

 Developed in collaboration with partners and initiatives such as the Global Health Security Agenda (GHSA), the JEE tool and process is a part of the IHR (2005) Monitoring and Evaluation framework

(http://www.who.int/ihr/publications/WHO HSE GCR 2016 2/en/)

- By 20 Oct 2017, the JEE reviews were done in 59 countries including Pakistan, Turkmenistan, Qatar, Morocco, USA, etc.
- Focuses on health security and cross-sector coordination and includes 19 areas of evaluation, radiation emergencies being one of them.
- Somewhat similar to EPRev but not as through and detailed at the technical level as EPRev, however – we need to find the way to coordinate these two mechanisms

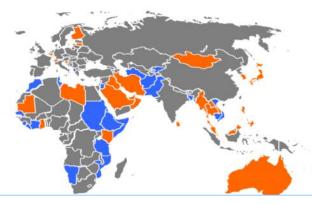


JEE Missions (as of Oct.2017)



COMPLETED





2017 (28 countries): Belgium (June 19-23), Benin (May 22-26), Chad (August 7-11), Comoros (August 20-25), Finland (March 27-31), Ghana (February 6-10), Guinea (April 23-28), Kenya (February 27-March 3), Kuwait (14-18 May), Latvia (May 8-12), Lao PDR(February 17-24), Lesotho (July 10-14), Madagascar (July 10-14), Maldives (March 6-10), Mali (June 26-30), Mauritania (March 27-31), Mongolia (May 12-19), Myanmar (May 3-9), Nigeria (June 11-20), Oman (April 02-06), S.Korea (August 28- September 02), Saudi Arabia (March 12-16), Slovenia (June 5-9), Sri Lanka (June 19-23), Thailand (June 26-30), Uganda (June 26-30), United Arab Emirates (March 19-23), *Tanzania (Zanzibar) (April 23-28)*, Zambia (August 7-11).

2016 (28 countries): Afghanistan (December 5-9), Albania (September 5-9), Armenia (August 15-19), Bahrain (September 4-8), Bangladesh (May 8-12), Belize (July 4-8), Cambodia (September 26 – October 3), Côte d'Ivoire (December 5-9), Eritrea (October 3-7), Ethiopia (February 29 – March 4), Jordan (August 28 – September 1), Kyrgyzstan (November 28 - December 2), Lebanon (July 11-15), Liberia (September 5-9), Morocco (June 20-24), Mozambique (April 18-22), Namibia (November 28 - December 2), Pakistan (April 26 - May 6), Qatar (May 29 - June 2), Senegal (November 28 - December 2), Sierra Leone (October 31 – November 4), Tunisia (November 28 - December 2), Somalia(September 25-30), Sudan (October 9-13), Turkmenistan (June 6-10), Tanzania (February 22-26), United States of America (May 23-27), Viet Nam (November 1-6).

WHO Strategic Partnership Portal (SPP)

A one-stop, Web-based, **interactive portal for multisectoral donors and partners** that facilitates the sharing and exchange of information:

https://extranet.who.int/spp/jee-dashboard



Upcoming JEE Missions

(as of Oct.2017, provisional)

		Sylvan	37		
AMRO	Canada	2018	Q1		
EURO	Bulgaria	2018	Q3 or Q4		
EURO	Liechtenstein	2017	Oct 30 – Nov 03		
EURO	Netherlands	2018	TBC		
EURO	Switzerland	2017	Oct 30 – Nov 03		
SEARO	Indonesia	2017	Nov 19-24		
WPRO	Australia	2017	Nov 24- Dec 01		
WPRO	Japan	2018	Feb 26 – Mar 02		
WPRO	New Zealand	2018	Q4		
WPRO	Philippines	2018	NEW May 10-17		
WPRO	Singapore	2018	Apr 16-23		





Support IHR implementation

Chunsheng	Li	Canada	Research Scientist	Health Canada
Jean-Francois	Lafortune	Canada	General Manager	International Safety Research Inc. (ISR)
Fahad Mohamed	Al Blooshi	UAE	Manager, Emergency Preparedness & Response	Federal Authority for Nuclear Regulation (FANR)
Mohammed	RBAI	Moroccan	Head of Health Security and Surveillance Division	Military Health Services, Royal Armed Forces Morocco
Wael	Elkhouly	Egyptian	Head of Safety Sector of Radiation Facilities & Sources	Egyptian Nuclear and Radiological Regulatory Authority
Nick	Gent	British	Senior Medical Specialist	Public Health England
Andrey	Bushmanov	Russia	Physician	Federal medical-Biological Agency
Christophe	Murith	Switzerland	Head of Section	Swiss Federal Office of Public Health
Makoto	Akashi	Japanese	Executive Officer	National Institutes for Quantum and Radiological Science and Technology (QST)
Alexandre	de Ruvo	French/Italian	Higher Radiation Protection Scientist	Public Health England
				Bundesministerium für Umwelt, Naturschutz, Bau
Wolfram	Rother	German	Radiation protection officer	und Reaktorsicherheit
Zhanat	CARR	Kazakhstan	Scientist	Radiation Programme, FWC/PHE/IHE, WHO HQ

Organization

#EUROSAFE-2017 | 6-7 Nov 2017 | Paris, France

Summary

- WHO uses the framework of Emergency Conventions and supports the IHR(2005) implementation by member states through the annual monitoring of national core capacities and via Joint External Evaluation (JEE) missions
- Develops and supports implementation of the international norms and standards
 - contribution to relevant IAEA's requirements, guides, etc.
 - developing technical guidelines for health sector
- Promotes international cooperation in the EPR area through its global expert networks REMPAN and BioDoseNet



