



Editorial

WHO Guidelines on Public Health Response to Radiological and Nuclear Emergencies

Dear Colleagues, Dear Friends,

It is finally a very hot summer in Geneva after a long cold spring. We have kept very busy since the last issue of the e-Newsletter. This new issue is bringing to you the latest news of the Network and first of all, I am happy to share with you the big news – WHO Radiation Program has launched a new two-year project on development of the **Guidelines for Public Health Response to Radiological and Nuclear Emergencies!** The need for such document was highlighted as one of the lessons learnt after Fukushima accident. Many relevant existing international recommendations for public health interventions are currently scattered throughout various publication sources, and are presented in a form that may not be easily understood and applied by non-radiation safety experts who may be dealing with emergency planning and response management at national health authorities. To address this gap, WHO has launched the new project in June 2012 at the Kick-Off Meeting of the Guidelines Development Group (GDG). The GDG has a challenging task to review and evaluate the scientific evidence base for the existing recommendations, to fill the gaps for areas, where clear recommendations may still be lacking, and to develop a balanced framework of common recommendations which would allow for local flexibility through their optimization accounting for national specifics.

Please join me in wishing the GDG a fruitful and smooth journey towards the new Guidelines which will hopefully meet the needs of our Member States and help them to strengthen national capacities to prepare and respond to radiological and nuclear emergencies. ◆

Wishing you all good summer holidays!

Dr. Zhanat Carr

WHO-REMPAN Coordinator



L. Cuiping, A. Bushmanov, C. Li, M. Akashi, Q. Huda, V. Meineke, R. Schneider, C. Murith, M. Benderitter, Z. Carr, C. Miller, N. Valverde, S. Norris, L. Stenke, I. Soufi, N. Gent (from left) – Kick-Off Meeting – WHO HQ, Geneva, Switzerland – June 12, 2012

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Network News – Fukushima Update

Fukushima Series – Report 1. Health Management Survey Project for Fukushima Residents – To Aid the Recovery

By Shunichi Yamashita, Fukushima Medical University, Radiation Medical Science Center for the Fukushima Health Management Survey, Fukushima, Japan

Looking back at the Great East Japan Earthquake eighteen months ago, besides further analysis of the initial response and of the nuclear accident countermeasures basis, knowledge of international standards of radiation safety and protection is crucial to be able to cope professionally with a challenge of managing long-term response. Reports from various sources about radiation risk have created misunderstanding, groundless misconception and so-called an information disaster.

The importance of the epidemiological study of human health risk and the understanding of radiation protection concepts need to be emphasized; past experiences, such as lessons learnt from the Chernobyl accident should be also considered. Therefore, since May 2011, Fukushima Prefecture started the Health Survey Project for the purpose of long-term health care management and surveillance for the residents of the prefecture. The project undertaken by the Fukushima Medical University receives special funds by the Japanese Government, targeting all residents in Fukushima.

There are two main categorized surveys which are important for the optimization of essential radiation health risk management. The **Basic Survey** – a questionnaire sent by post - focuses on the detailed movement record during four months after the earthquake in order estimate the external radiation dose received for the period when air dose was highest for people in Fukushima prefecture. This examines



activity type and duration vs. recorded exposure rates and presumes the additional dose in mSv for the period of four months, using dose-assessment software developed by the National Institute of Radiological Sciences (NIRS) in Chiba, Japan.

*Prof. S. Yamashita –
Information session at
Fukushima Medical University
Hospital – March 18, 2011*

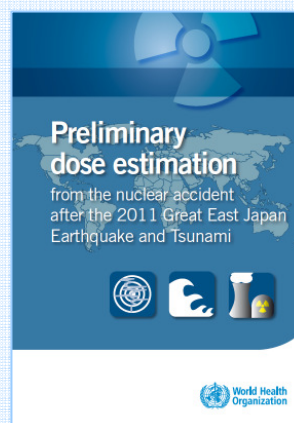
As of January 31, 2012, questionnaires were mailed to about 2,050,000 people, and about 430,000 people have replied (21% response rate). Results of the investigation of 10,468 people among the expected and comparatively high dose precedence implementation areas (29,000 people of the Yamakiya, Kawamatamachi area, Namie-cho, and Iitate-mura, 52% response rate) have been released. The peak value was 23.0 mSv. In 9,747 people (99.3%), except those engaged in the radiation business operation, the dose was below 10 mSv. Although the examination committee evaluated the situation as "it is highly unlikely to consider the health impairment caused by radiation", continued efforts for health care administration and reduction of psychological impact are necessary.

The **Detailed Survey** is categorized into four in-depth researches: 1) thyroid examination, 2) health check-up, 3) mental health and lifestyle; 4) special considerations for pregnant women and children. ◆

Network News – Fukushima Update

Preliminary Dose Assessment after the Nuclear Accident Published by WHO

This **2012 WHO report** describes a preliminary estimate of radiation doses to the public resulting from the nuclear accident at Fukushima Daiichi nuclear power plant after the 2011 Great East Japan Earthquake and Tsunami. These doses are assessed for different age groups in locations around the world, using assumptions described in the report.



The dose assessment forms one part of the overall **health risk assessment** project being carried out by WHO of the global impact of the accident at the Fukushima Daiichi nuclear power plant. The health risk assessment is the subject of a separate WHO report which will be published in 2012. The dose assessment report is available at: http://www.who.int/ionizing_radiation/pub_meet/fukushima_dose_assessment/en/ ◆

Scientific Events

38th Annual Meeting and Training Course of the EBMT in Geneva, Switzerland

By Ray Powles, Parkside Hospital, London, United Kingdom

The 38th Annual Meeting of the **European Blood and Marrow Transplant Centres (EBMT)** in Geneva, Switzerland, from April 01-04, 2012 had a scientific session dedicated to its **Nuclear Accident Committee (NAC)** priority scientific question “Is Multi-organ failure an inevitable consequence of significant accidental or planned irradiation to 10Gy?” There were speakers from USA, France, Germany and the UK. The balance of opinion was that one should give victims the benefit of the doubt that survival may be possible up to 10 Gy. At the 38th Annual Meeting the NAC met, and has added to its affiliation to WHO, the US Radiation Injury Treatment Network (RITN) partner, and a network or members from China, Korea, Israel, Japan, Saudi Arabia, Russia and Iran.



38th Annual Meeting of the EBMT – Geneva, Switzerland – April 2012 (<http://www.congrex.ch/ebmt2012/photo-gallery.html>)

Immediately after, the EBMT NAC hosted the first advanced CPD-recognised **EBMT Training Course** on European Approach to the Medical Management of Mass Radiation Exposure chaired by Alejandro Madrigal, Arno Mank, and Ray Powles, Chairman EBMT NAC. Fifty-one EBMT centres were represented at unique training programme that will also be featured at the 39th EBMT Annual Meeting in London from April 07-10, 2013 (course organizer: Bhawna Sirohi bhawna.sirohi@btinternet.com).

This activity complements the EBMT NAC’s work of consensus meetings, published papers, devised bed configurations, and lectures that are a central part of the its activity.

The NAC has a rigorous programme of comprehensive European preparedness to be seen on the EBMT NAC website, as can the lectures from the Scientific Session (www.ebmt.org/) ♦

Scientific Events

IAEA International Experts’ Meeting on Effective and Transparent Communications in Nuclear Emergencies in Vienna, Austria

By Zhanat Carr, WHO, Geneva, Switzerland

A three-day International Experts’ Meeting on practices in public communication in a nuclear emergency took place on June 18-20, 2012 at the IAEA in Vienna, Austria.

Over 160 communication experts and government officials from 54 countries were discussing **communication challenges during a nuclear emergency**. The meeting featured presentations and discussions between national governments, international organizations, national nuclear regulators, operators, the media, radiation protection and health authorities, and other stakeholders.



G. Hartl, WHO, giving a talk at the IAEA International Experts’ Meeting – Vienna, Austria – June 2012

Mr. Gregory Hartl, Coordinator, Media Relations and News of the WHO HQ Department of Communications, described and compared WHO experience with public communications during major emergencies such as the pandemic and Fukushima nuclear emergency.

More information about the meeting can be found at: <http://iaea.org/newscenter/news/2012/communicationstrans.html> ♦

Scientific Events

2nd Sub-Regional Meeting of WHO REMPAN Collaborating Centers of the Former Soviet Union Countries, Kiev, Ukraine

By Larysa Yanovych, NRCRM, Kiev, Ukraine

From March 01-02, 2012, the 2nd Sub-Regional Meeting of WHO REMPAN Collaborating Centers of the Russian-speaking states was held at the **National Research Center for Radiation Medicine (NRCRM)** in Kiev, Ukraine. The meeting discussed lessons learnt from past radiation accidents and the strengthening of medical preparedness in the countries of the former Soviet Union.

The meeting was attended by Dr Zhanat Carr, coordinator of the REMPAN network, Dr Natalia Korol, representative of WHO Ukraine, by officials from the Ministry of Emergencies of Ukraine, and by representatives of the following WHO REMPAN centers: NRCRM AMN (Kiev, Ukraine), Burnazyan FMBC (Moscow, Russia), MRNC RAMS (Obninsk, Russia), NRCERM (St. Petersburg, Russia), URRC (Chelyabinsk, Russia), UIBF (Ozersk, Russia), GU RPCRM (Gomel, Belarus), and the Estonian Department of Public Health in Tallin.



L. Yanovych, A. Bushmanov, Z. Carr, G. Dimov, T. Azizova, A. Bazyka, N. Seleva, S. Aleksanin, T. Aro, A. Chumak, A. Isshenko, D. Belyi, N. Korol, (from left) – 2nd Sub-Regional Meeting of WHO REMPAN – Kiev, Ukraine – March 2012

The outcomes of WHO activities under the framework of the UN inter-agency ICRIN project in Ukraine on mitigation of the psychological impact of the Chernobyl accident were reported at the meeting. The successful implementation of the project has contributed to the reduction of the psychological impact through education and training of health care and education workers. The meeting participants recommended continuing the project in the affected areas of Ukraine, Belarus and the Russian Federation.

Members of REMPAN network reported on their on-going activities, engaged in active round-table discussions and shared experiences of best practices on the medical management of over-exposed people, of long-term follow-up, and the results of research programs to strengthen preparedness to radiological emergencies.

The next sub-regional meeting will be held in St. Petersburg, Russia, in 2013. ◆

Scientific Events

Two Conferences held in St. Petersburg, Russia

By Sergey Aleksanin, Nikiforov Russian Center of Emergency and Radiation Medicine (NRCERM), St. Petersburg, Russia

From April 25-26, 2012, the Federal State Institute **Nikiforov Russian Center of Emergency and Radiation Medicine (NRCERM)** EMERCOM of Russia held the scientific conference “Advanced medical technologies in the Clinic of Internal Diseases”. The conference coincided with the opening of the multidisciplinary Hospital No. 2 of NRCERM, EMERCOM of Russia. Leading specialists in different medical fields, e.g. endocrinology, gastroenterology, infectious diseases, cardiology, neurology, surgery, endoscopy, addressed problems in diagnostics, treatment and prevention of diseases, and presented advanced clinical experience, including the provision of specialized support to victims of emergency situations and catastrophes.

Further, from June 04 to 17, 2012, an International Seminar focusing on problems of psychological support of the victims of the accident at the Chernobyl NPP and of other emergency situations was conducted by the Federal State Institute NRCERM EMERCOM of Russia. ◆

Education and Training

Live Webcast Continuous Education on Nuclear Power Plant Safety and the Public Health Response, USA

By Charles Miller, Centers of Disease Control and Prevention, Atlanta, USA

On April 13, 2012, the United States **Centers of Disease Control and Prevention (CDC)**, Radiation Studies Branch presented a satellite broadcast that discussed the clinical and public health impacts of a nuclear power plant accident. The event was produced by the South Central Preparedness and Emergency Response Learning Center in partnership with the State of Alabama Department of Public Health.



*Dr. Z. Kazzi,
Dr. R. Whitcomb
(from left) –
Satellite broadcast
– April 2012*

Speaker Robert Whitcomb, PhD, discussed the functioning of nuclear power plants and their accidental release prevention measures. He also described protective action measures like evacuation and sheltering-in-place, and delineated the different components of population monitoring. Speaker Ziad Kazzi, MD, discussed the potential health effects of a nuclear power plant accident and highlighted the differences between the hazards to nuclear plant or emergency workers and hazards to the public residing in surrounding communities. He also described the proper use of potassium iodide as a potential protective measure.

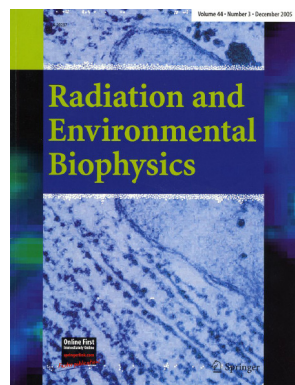
The live broadcast was viewed by over 800 people across the United States and included an interactive questions and answers session. The presentation offers, free of charge, 1 credit hour of continuous education credit and remains available online until April 13, 2014:

<http://adph.org/ALPHTN/index.asp?id=5733>. ◆

New Publications

Radioiodine exposure in Belarusian children

By Alexander Rozhko, Research Center for Radiation Medicine and Human Ecology, Gomel, Belarus



The article “Karyopathological traits of thyrocytes and **exposure to radioiodines** in Belarusian children and adolescents following the accident at the Chernobyl nuclear power plant” by E. Nadyrov et al. has been published in Radiation and Environmental Biophysics 2012; 51: 187-193 and is downloadable at:

<http://www.springerlink.com/content/6487142441q50466/fulltext.pdf>



Scientific Events

“Chernobyl Readings 2012” in Gomel, Belarus

By Alexander Rozhko, Research Center for Radiation Medicine and Human Ecology, Gomel, Belarus

The international scientific and practical conference “**Chernobyl Readings 2012**” was held at the Republican **Research Center for Radiation Medicine and Human Ecology (RCRM)** from April 19-20, 2012, in Gomel, Belarus.

Over 200 representatives of scientific and medical communities working in fields to mitigate the consequences of the Chernobyl accident from Belarus, the Russian Federation, Kazakhstan, and Japan attended the conference. Topics presented included radiobiology and -ecology, radiation medicine, rehabilitation, radiation epidemiology, dosimetry, and radiation safety.



*E. Nadyrov, Belarus, K. Kazhenkov,
Kazakhstan, L. Ilyin, Russia,
A. Rozhko, Belarus (from left) –
“Chernobyl Readings 2012” –
Gomel, Belarus – April 2012*

The resolution of the conference adopted concerned the:

- critical importance and social significance of ongoing scientific and practical measures to overcome consequences of the Chernobyl accident.
- sincere gratitude to international organizations and countries, which participated in rehabilitation and restoration of living conditions in areas affected by Chernobyl.
- importance of further development and implementation of health measures protecting affected populations as well as cooperation of scientists from CIS and other countries in radio-epidemiological studies and in assessing key health indicators and risk factors for diseases in different populations affected. ◆

Education and Training

XXI FEAM Annual Training Course, Angra dos Reis, Brazil

By Teresa Leite, FEAM, Angra dos Reis, Brazil, and Pablo Jimenez, PAHO, Washington, USA

The XXI Annual Training Course organized by the Eletronuclear Medical Assistance Foundation (FEAM) took place at the Center of Medicine of Ionizing Radiation in Angra dos Reis, State of Rio, Brazil, from December 02 to 04, 2011.



Drill – XXI FEAM Annual Training Course – Angra dos Reis, Brazil – December 2011

The program of the training course included two days of theoretical education, and a practical day on how to provide health care to an injured patient with radioactive contamination. Further, a review of radionuclear accidents in Latin America and the possible public health impacts and consequences of the Fukushima nuclear accident for the development of the nuclear industry in Brazil were presented.

National speakers came from the FEAM, the Ministry of Health, the National Commission of Atomic Energy (CNEN), the National Cancer Institute (INCA), the Institute of Radiation Protection and Dosimetry (IRD), and others, e.g. the Brazilian Armed Forces and Center for Bone Marrow Transplantation. Dr Pablo Jimenez, Pan-American Health Organization (PAHO), was invited to the course to cover “The Actions of PAHO in the Prevention and Mitigation of Radiological Emergencies”, and to participate in the practical session.



Course participants – XXI FEAM Annual Training Course – Angra dos Reis, Brazil – December 2011

More than 70 professionals participated from Brazilian civilian and military institutions, e.g. the National Cancer Institute, State of Goias Health Department, the Navy and Air Force, the Fire Corps and Civil Defense. ♦

New Publications

The information contained in the publication **The Great East Japan Earthquake** – A story of a devastating natural disaster, a tale of human compassion is primarily based on Japan Earthquake and Tsunami Situation Reports No. 1–35, issued from 11 March to 6 July 2011, by the **WHO Western Pacific Regional Office**. The data collected were supplemented with first-hand information collected from the areas affected by the earthquake and tsunami during two field missions conducted by staff of the WHO Regional Office. Downloadable at:

http://www.wpro.who.int/publication/s/docs/japan_earthquake.pdf ♦



The WHO manual **Rapid risk assessment of acute public health events** published in 2012 has been developed to guide rapid risk assessment of acute public health risks from any type of hazard in response to requests from WHO Member States. It is aimed primarily at national health-protection departments, National Focal Points (NFPs) for the International Health Regulations (IHR), WHO staff and multidisciplinary risk assessment teams, such as clinicians, field epidemiologists, veterinarians, chemists, food-safety specialists:

http://whqlibdoc.who.int/hq/2012/WHO_HSE_GAR_ARO_2012.1_eng.pdf ♦



New Publications

Concept of Operations published by RITN in 2012, USA

By Cullen Case, National Marrow Donor Program - RITN, Minneapolis, USA

In February 2012 the Radiation Injury Treatment Network® (RITN) released its **Concept of Operations (ConOps)**. The purpose of this 14-page document is to establish a uniform understanding among RITN center staff and non-medical RITN partners of the anticipated participation of RITN centers during a national disaster.

The **RITN ConOps** outlines the anticipated integration of RITN into the national response to a mass casualty incident resulting in marrow-toxic injuries; describing the triage and flow of casualties from the initial catastrophic incident through the disaster aftermath to the treatment facility. Included in the ConOps are new estimates of expected casualties for the RITN network of centers from a 10kT Improvised Nuclear Device, casualty flow diagram and an estimated timeline of the response to an incident.

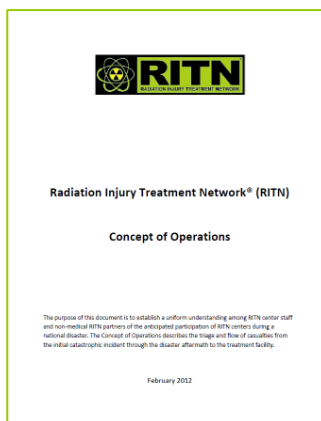
Radiation Dose (Gy)	Care Requirement	Mid Casualty Estimate (50 th %tile)	Moderately-High Casualty Estimate (85 th %tile)	High Casualty Estimate (95 %tile)
Mild (0.75-1.5)	Outpatient monitoring	5,000	32,000	91,000
Moderate (1.5-5.3)	Supportive Care and possible inpatient admission	7,000	29,000	51,000
Severe (5.3-8.3)	Intensive Supportive Care (most possibly including HCT)	3,000	9,000	12,000
Expectant (>8.3)	Comfort Care	10,000	28,000	47,000
Combined Injury and Radiation (>1.5)	Stabilization and monitoring, pending resource availability	3,000	20,000	44,000
Estimate of total casualties for triage to RITN (Moderate + Severe categories)		10,000	38,000	63,000

Estimates of expected casualties according to RITN Concept of Operations

Irradiated casualties will be decontaminated, stabilized and triaged prior to their arrival at RITN medical centers. The National Disaster Medical System will oversee these activities and control the distribution of patients to the Federal Coordinating Center, which will then coordinate with local public health agencies to distribute patients to the appropriate hospital. After a mass casualty incident, formal transport of patients to distant RITN centers is expected to be delayed by at least 96 hours. However, many casualties will self-evacuate and could arrive at RITN centers within the region of the incident even before the onset of symptoms.

RITN centers are affiliated with the **National Marrow Donor Program Network** of care providers, and include medical centers (academic medical centers, tertiary care centers, and cancer centers) with expertise in hematology-oncology patient management including hematopoietic cell transplantation (“marrow transplantation” for the purposes of this document), blood donor centers, and umbilical cord blood banks. These institutions are stand-alone entities that are voluntarily preparing for the response to a national disaster.

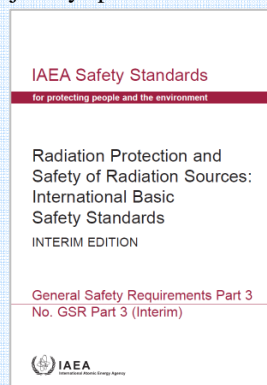
Copies of the RITN Concept of Operations can be downloaded at www.RITN.net/about ◆



New Publications

The IAEA publication "Radiation protection and safety of radiation sources: International Basic Safety Standards"

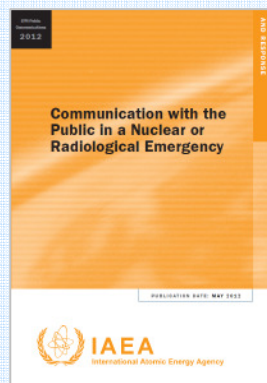
establishes requirements for the protection of people and the environment from effects of ionizing radiation and for the safety of radiation sources. The 2011 **interim Edition** will be finally issued as a jointly sponsored standard:



http://www-pub.iaea.org/MTCD/Publications/PDF/p1531interim_web.pdf ◆

Action guides and information sheets easily to be applied by States to build basic capability to emergency response are provided by the 2012 publication **"Communication with the public in a nuclear or radiological emergency"**.

As part of the IAEA's Emergency Preparedness and Response series it complements the Manual for First Responders to a Radiological Emergency concerning tasks of public information officers and takes into account lessons learned from past emergencies, including the accident at TEPCO's Fukushima Daiichi Nuclear Power Station in 2011.



http://www-pub.iaea.org/MTCD/Publications/PDF/EPR-Communication_web.pdf ◆

News – Coming, Going

New Director General at IRD, Rio de Janeiro, Brazil

By Dejanira da Costa Lauria, IRD, Rio de Janeiro, Brazil

As of November 11, 2011, **Dr. Dejanira da Costa Lauria** was appointed as the new director general of the Institute of Radiation Protection and Dosimetry (IRD), Rio de Janeiro, Brazil. Dr. Dejanira is a chemical engineer. Her current main interest is the environmental impact assessment and remediation of contaminated areas. ♦



Dr. D. de Costa Lauria

New Head Appointed at Frédéric Joliot-Curie NRIRR, Budapest, Hungary

By Géza Sáfrány, NRIRR, Budapest, Hungary



As of June 15, 2011, **Dr. Géza Sáfrány** was appointed as the new director general of the Frédéric Joliot-Curie National Research Institute for Radiobiology and Radiohygiene (NRIRR) in Budapest, Hungary. Dr. Sáfrány is a radiation hygiene physician; his current main interest is in the biological effects of low radiation doses. ♦

Dr. G. Sáfrány

New Deputy Director at CCMRRE, Beijing, China

By Cuiping Lei, Chinese Center for Medical Response to Radiation Emergency (CCMRRE), Beijing, China

Yuag Long, deputy director, Office of Nuclear and Radiological Emergency, National Institute for Radiological Protection (NIRP), Chinese Center for Disease Control and Prevention and Chinese Center for Medical Response to Radiation Emergency (CCMRRE) graduated from Lanzhou University and got his master degree of particle physics and nuclear physics.



He worked at NIRP and CCMRRE, and four years at the Ministry of Health. He has involved in preparation and issue of regulations, guidance and reports such as the management of occupational health of radiation worker. He joined in some investigations and research works such as national radiological health work investigation, national investigation for protection in radiological medical diagnosis and treatment.

Dr. Y. Long

During 2008 Olympic Games, the Fukushima NPP accident and some other big events, he took part in organizing national preparedness and response to radiological and nuclear emergency. ♦

News – Upcoming Training Courses

- **07-10 August, 2012, Oak Ridge, USA**
Radiation Emergency Medicine (REM)
<http://orise.orau.gov/reacts/capabilities/continuing-medical-education/radiation-emergency-medicine.aspx>
- **13-17 August, 2012, Oak Ridge, USA**
Advanced Radiation Medicine
<http://orise.orau.gov/reacts/capabilities/continuing-medical-education/advanced-radiation-medicine.aspx>
- **11-12 September, 2012, Oak Ridge, USA**
Pre-Hospital Radiation Emergency Preparedness (PREM)
<http://orise.orau.gov/reacts/capabilities/continuing-medical-education/pre-hospital-radiation-emergency-preparedness.aspx>
- **01-05 October, 2012, Mol, Belgium**
Preparedness and Response for Nuclear and Radiological Emergencies
<http://www.euneri.net/index.php/events/228-2012-edition-international-training-course-on-preparedness-and-response-for-nuclear-and-radiological.html>

News – Upcoming Scientific Events

- **22-27 July, 2012, Sacramento, USA**
57th annual Meeting of the Health Physics Society
<http://hps.org/meetings/meeting30.html>
- **20-24 August, 2012, Boston, USA**
Radiological Emergency Planning: Terrorism, Security, and Communication
<https://ccpe.sph.harvard.edu/Radiological-Emergency-Planning>
- **03-05 September, 2012, Oxford, UK**
5th International Systems Radiation Biology Workshop
<http://www.brookes.ac.uk/bms/research/systems-radiation-biology-workshop>
- **07-12 September, 2012, Barcelona, Spain**
International Conference on Radioecology and Environmental Radioactivity
<http://www.icrer.org/>
- **12-14 September, 2012, Helsinki, Finland**
4th International MELODI Workshop
www.melodi2012.org
- **13-14 September 2012, Moscow, Russia**
APEC Symposium 2012 - Best Medical Practices in Mitigation of Radiation Accidents and Catastrophes
apecradmed2012@gmail.com
- **30 September, 2012, Hirosaki, Japan**
4th International Symposium on Radiation Emergency Medicine
<http://www.med.hirosaki-u.ac.jp/english/index.html>
- **30 September - 03 October, 2012, San Juan, Puerto Rico**
58th Annual Meeting of the Radiation Research Society
http://timssnet2.allenpress.com/ECOMradres/timssnet/common/tnt_frontpage.cfm
- **14-17 October, 2012, Sydney, Australia**
37th Annual Conference of the Australasian Radiation Protection Society (ARPS)
<http://arpsconference.com.au/2012/>
- **03-07 December, 2012, Bonn, Germany**
International Conference on Radiation Protection in Medicine-Setting the Scene for the Next Decade
<http://www-pub.iaea.org/iaemeetings/41578/International-Conference-on-Radiation-Protection-in-Medicine---Setting-the-Scene-for-the-Next-Decade>

Disclosure

The REMPAN e-NEWSLETTER is produced 2 times a year and circulated by WHO Secretariat to the network members to provide information about latest news on the network's activities, developments in radiation emergency preparedness and management.

The REMPAN e-NEWSLETTER was prepared by the WHO Collaborating Centre for Radiation Emergency Medical Preparedness and Assistance, Würzburg, Germany and the REMPAN Secretariat, WHO, Geneva, Switzerland.

The designations employed and the presentation of the information in this Newsletter do not imply the expression of any opinion whatsoever on the part of the Secretariat 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. The mention of specific companies or of certain manufacturers' products does not imply that they are endorsed or recommended by the World Health Organization in preference to others of a similar nature that are not mentioned. The World Health Organization does not warrant that the information contained in the Newsletter is complete and correct and shall not be liable whatsoever for any damages incurred as a result of its use.

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