



European
ALARA
Network

Welcome address to ALARA and the medical sector

EAN
The European ALARA Network

F.Vermeersch
Chairman EAN

June 7, 2011

ALARA and the medical sector



European
ALARA
Network

ALARA Network History and Evolution

- 1996
 - cooperation of experts from various European organisations mediated by the European ALARA training course
 - European Support from 1996 to 2004
 - EC support to three workshops
 - Enthusiast individuals, supported by their institutions
- Evolution to a self supporting network
- 2005
 - EAN a legal entity, non-profit organisation under French law
 - Coordination CEPN, HPA and a group of European experts
 - EAN Administrative board (financial)
 - Chairman, vice-chairman, treasurer, secretary
 - EAN steering group (activities)



European
ALARA
Network

EAN objectives

- First
 - ALARA in industry and research
 - Industry → non NPP (ISOE for NPP)
- Later
 - ALARA in the medical field
 - ALARA in NORM-industry
- Future
 - All exposure situations



European
ALARA
Network

ALARA Network objectives

- Promote a wider and more uniform implementation of the ALARA principle for the management of worker, public and patient exposures in all situations,
- Provide a focus and a mechanism for the exchange and dissemination of information from practical ALARA experiences
- Identify and investigate topical issues of common interest to further improve the implementation of ALARA



European
ALARA
Network

EAN participation

- Voluntary cooperation
- Broad range of experts
 - radiation protection authorities and safety authorities
 - industrial companies and services
 - research institutions
 - hospitals
 -
- Evolution from 8 to 20 countries since 1996
- Financial support through contributions from different institutions, companies, regulatory authorities, ...organised per country (a representative or contact person per country)



European ALARA Network

BELGIUM



SCK-CEN Mol
<http://www.sckcen.be>



Belgonucleaire
<http://www.belgonucleaire.be>



<http://www.ire.be>

IRE - National Institute for
Radioelements

umicore



Federal Agency of Nuclear Control
<http://www.fanc.fgov.be>



Belgoprocess
<http://www.belgoprocess.be>



Belgian Association for Radiation Protection (BVS-ABR)
<http://www.bvsabr.be>

CROATIA



EKOTEH Dosimetry
<http://www.ekoteh.hr>



Croatian Ministry of Health and Social Care
[Website](#)

CZECH REPUBLIC



State Office for Nuclear Safety
<http://www.sujb.cz>

FINLAND



Radiation and Nuclear Safety Authority (STUK)
<http://www.stuk.fi>



Members of the Steering group



CEPN, France
www.cepn.asso.fr



HPA, UK
<http://www.hpa.org.uk>

FRANCE



French Nuclear Safety Authority (ASN)
<http://www.asn.fr>

GERMANY



Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
<http://www.bmu.de>



Federal Office for Radiation Protection (BFS)
<http://www.bfs.de>

GREECE



Greek Atomic Energy Commission (GAEC)
<http://www.gaec.gr>

IRELAND



Radiological Protection Institute of Ireland (RPII)
<http://www.rpii.ie>

NORWAY



Norwegian Radiation Protection Authority
<http://www.nrpa.no>

SPAIN



Consejo de Seguridad Nuclear (CSN)
<http://www.csn.es>

SWEDEN



Swedish Radiation Safety Authority (SMA)
<http://www.stralsakerhetsmyndigheten.se/Allmanhet/>

Strål
säkerhets
myndigheten
Swedish Radiation Safety Authority

SWITZERLAND



Swiss Federal Office of Public Health - Radioprotection Division
<http://www.str-rad.ch>



European
ALARA
Network

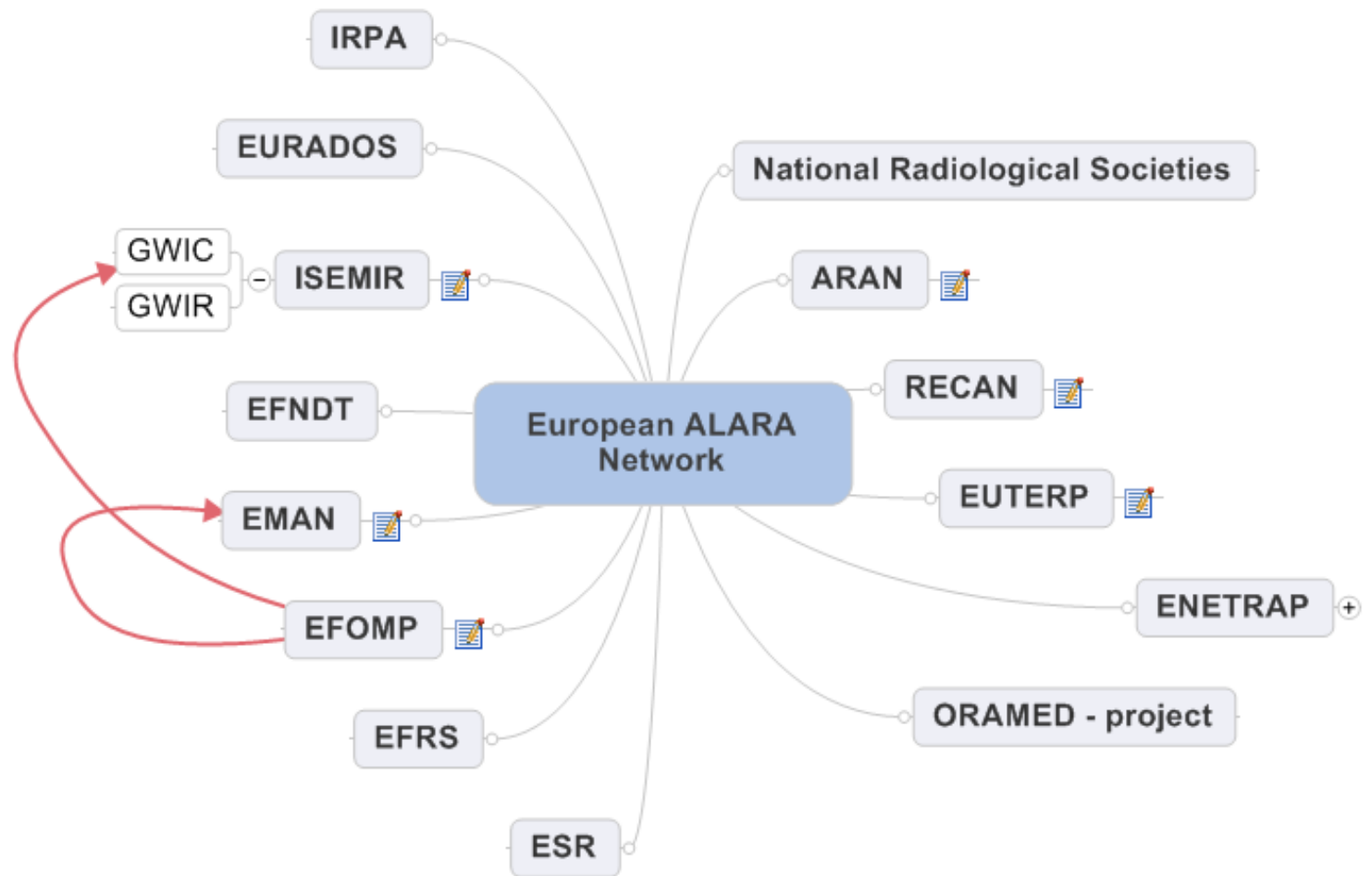
How does the network work

ACTIVITIES AND ACHIEVEMENTS



European ALARA Network

Contacts with other organisations Networking





European
ALARA
Network

Collaboration with European and international organisations

- **Medical field**

- EFOMP – European Federation of Organisations for Medical Physics
- EFRS – the European Federation of Radiographer Societies

- **Industry**

- EFNDT – European Federation for Non-Destructive Testing
- Invited to participate in the EAN meetings (steering group, workshops, WG)



European
ALARA
Network

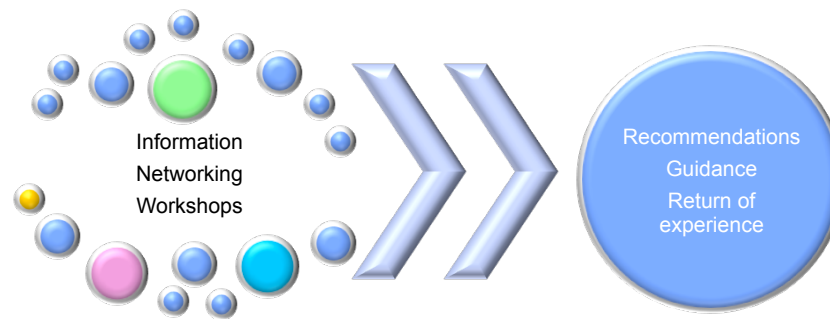
Another way of gathering information Surveys

- The implementation of the European Basic Safety Standards in Directives 96/29 and 97/43 in national regulations (2006),
- The management of radioactively contaminated soils (2006),
- Potential exposures in nuclear installations (2007),
- The Diagnostic Reference Levels (DRLs) in Europe (2007),
- Radon exposure management (2010)
- Aircrew exposures (2011)
- Declaration systems of incidents (2011)
- Dose guidance for emergency workers (2011)



European
ALARA
Network

EAN Activities and outputs



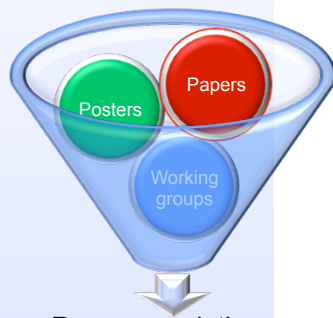
Input

output

- EAN Workshops
- Support to European Surveys
- EAN subnetworks
- ALARA Newsletter
- EAN Website



European
ALARA
Network



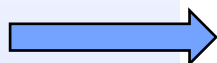
Recommendations –
documentation, Guidance

EAN workshops

- **Workshops** on different topics
 - 60-120 experts
 - Expert papers
 - Scene setting
 - Practical cases
 - Poster session
 - Working groups (questions, discussion topics)
 - Output of the workshop
 - Recommendations
 - Documented in
 - Newsletter
 - EAN Website
 - National radiation protection journals



European ALARA Network



In preparation
*ALARA in existing
 exposures situations*
*Dublin Castle,
 Ireland, 2012*
ALARA Culture
Croatia, 2014

Workshops

ALARA and decommissioning	Saclay, France, 1997
Good radiation practices in industry and research	Oxford, United Kingdom, 1998
Managing internal exposure	Munich, Germany, 1999
Management of occupational radiological and non-radiological risks: lessons to be learned	Antwerp, Belgium, 2000
Industrial radiography, improvements in radiation protection	Rome, Italy, 2001
Occupational exposure optimisation in the medical and radio-pharmaceutical sectors	Madrid, Spain, 2002
Decommissioning and site remediation	Arnhem, Netherlands, 2003
Occupational radiological protection control through inspection and self-assessment	Uppsala, Sweden, 2004
Occupational exposure to natural radiation	Augsburg, Germany, 2005
Experience and new developments in implementing ALARA in occupational, public and patient exposures	Prague, Czech Republic, 2006
ALARA in radioactive waste management	Athens, Greece, 2008
ALARA issues arising for safety and security of radiation sources and security screening devices	Vienna, Austria, 2009
ALARA and the medical sector	Oscarborg Fortress, Norway, 2011



European
ALARA
Network

Selection of the workshop topic EAN Steering group

- Decision for ALARA and the medical sector
 - increase in patient dose
 - associated increase of occupational exposure
 - the development of new technologies
 - the occurrence of serious incidents and accidents
 - initiatives such as the creation of the EMAN project
- The workshop will provide a scene setting on ALARA in the medical sector and will also provide practical examples from the field.



European
ALARA
Network

13th European ALARA Workshop



13th European ALARA Network Workshop

ALARA

and the medical sector

Oscarsborg Fortress, Norway
7-10th June 2011
First announcement

<http://alara2011.nrpa.no>

 Statens strålevern
Norwegian Radiation Protection Authority

 European
ALARA
Network



European
ALARA
Network

Discussion groups

- Dose optimisation for patient and staff
- Policies and tools to implement ALARA
- Education and training
- Technical developments and quality control



European
ALARA
Network

Thanks to

- Norwegian Radiation Protection Authority
- The program committee
- IAEA
- European Society of Radiology (ESR)
- European Association of Nuclear Medicine (EANM)
- European Society of Therapeutic Radiology and Oncology (ESTRO)
- European Federation of Organisations of medical Physics (EFOMP)
- European Federation of Radiographer Societies (EFRS)
- European Radiation Dosimetry Group (EURADOS)



European
ALARA
Network

**Thank you and have a
Successful Workshop**