

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## International initiatives since 09/11 – Feedback from GICNT and other Workshops

**Gisela Stoppa**

Division Supervision in the Field of Radiological Protection

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety

## 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

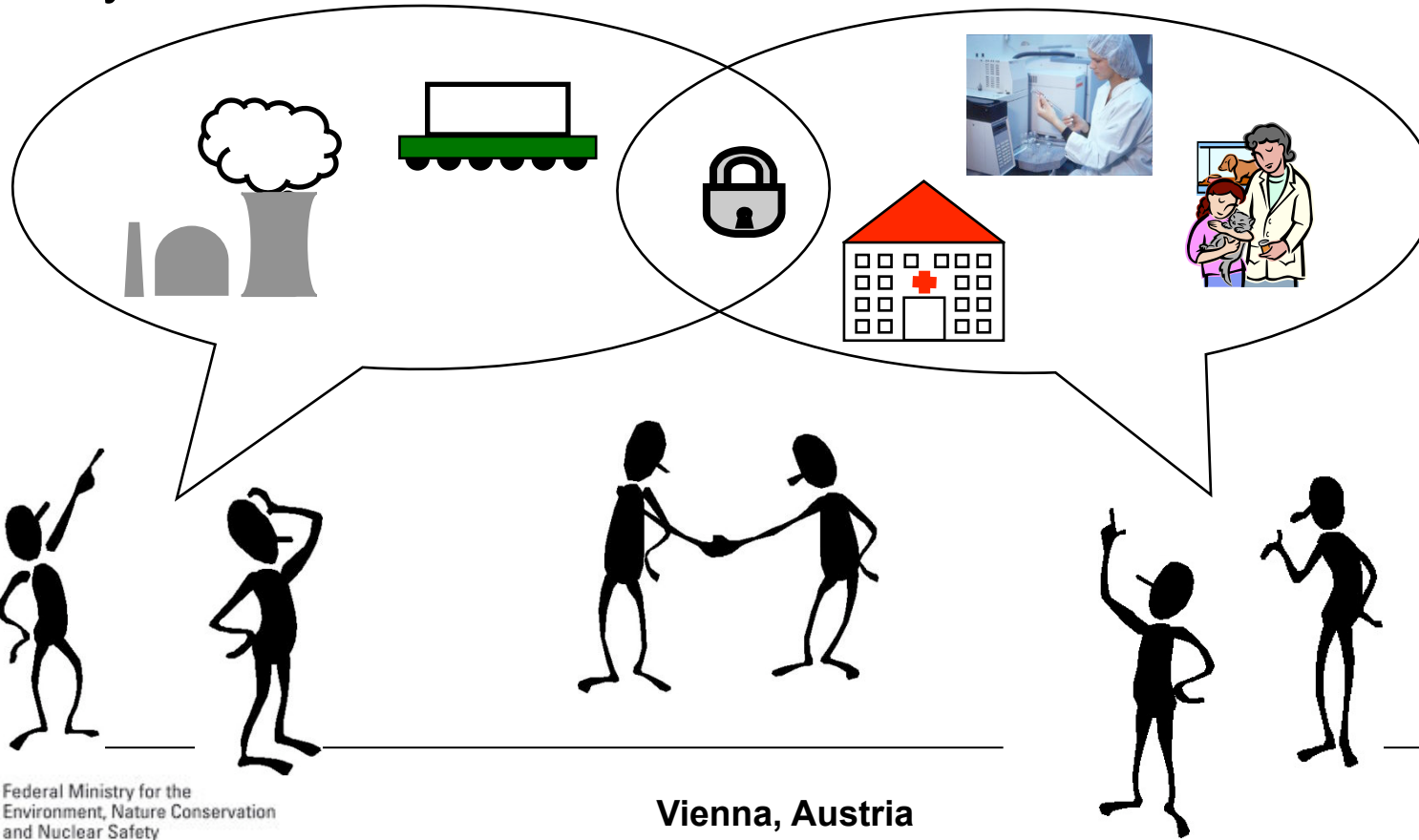
**The IAEA “Code of Conduct on Safety and Security of radioactive sources” defines :**

**“Security” means measures to prevent unauthorized access or damage to, and loss, theft or unauthorized transfer of radioactive sources.**

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

Security of Nuclear Fuel

Security of other radioactive material



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## German Register of High Radioactive Sealed Sources

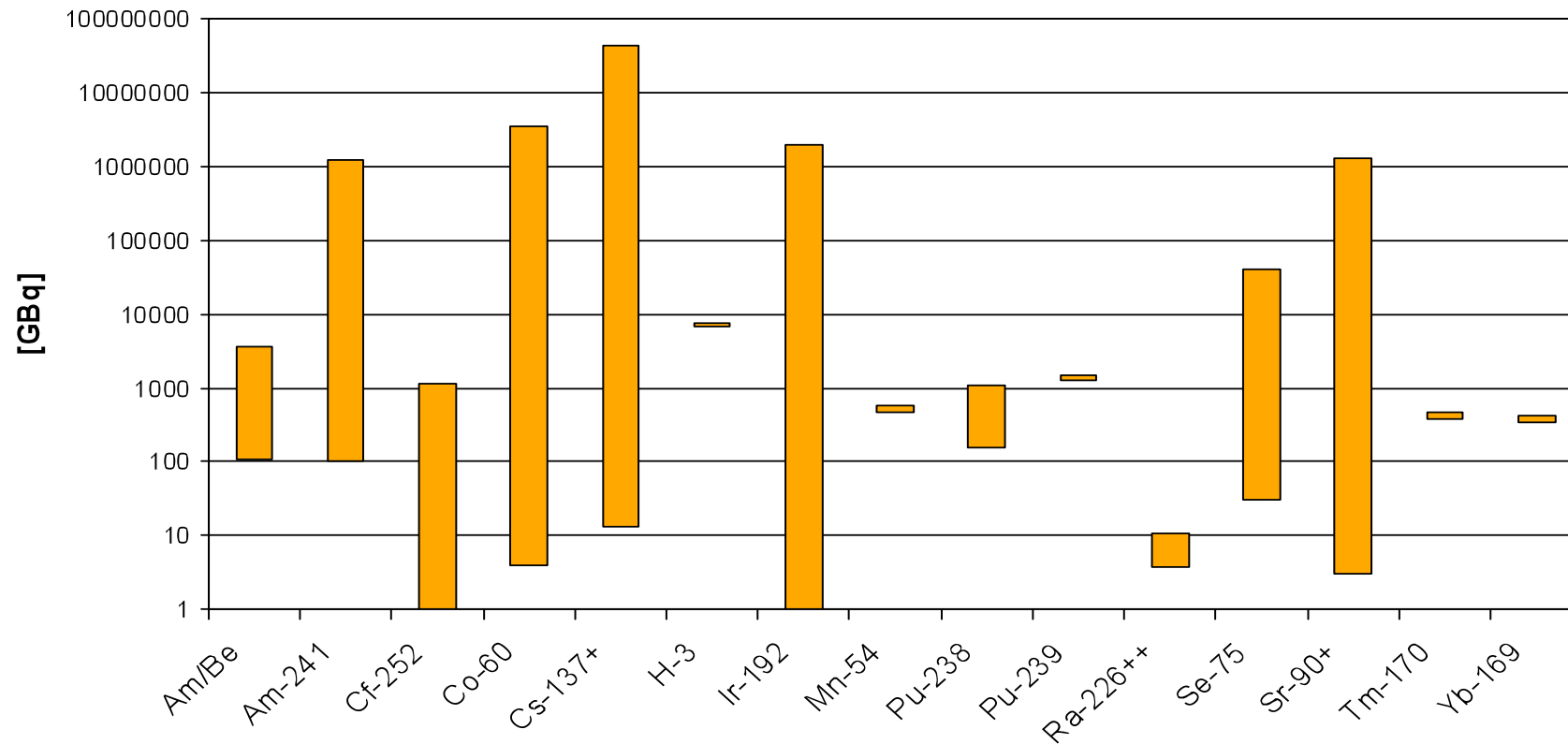
**> 8 000** High Radioactive Sealed Sources

**47** Competent Authorities

**536** Licensees

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

## Distribution of Activity in presently registered high-activity sealed sources



**12th European ALARA Network Workshop  
“ALARA in Safety and Security of Radiation Sources”**

---

**Global Initiative to Combat Nuclear Terrorism**

**Announced  
by  
President Bush and President Putin  
July 15, 2006**

**„The greatest threat we face today is the possibility of  
a secret and sudden attack with chemical, biological,  
radiological, or nuclear weapons.“**

White house, Office of the Press Secretary, July 15, 2006

---

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## Global Initiative to Combat Nuclear Terrorism

### Statement of Principles (Extract )

- Improve accounting, control, and physical protection of nuclear material and radioactive substances
- Improve capabilities of participants of the Initiative to search for, confiscate, and establish safe control over unlawfully held radioactive materials and substances or devices using them.
- Ensure adequate national legal and regulatory frameworks

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## Global Initiative to Combat Nuclear Terrorism

- Workshop on “Safety and Security of High-Activity Radioactive Sources – Operation of a National Register”;  
December 2007 Munich, Germany
- Conference “Security of Radioactive Sources”  
June 2008, Ottawa, Canada.
- Seminar on “Preventing illicit trafficking in nuclear and radioactive materials”; June 2009, Rabat, Morocco



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## Global Initiative to Combat Nuclear Terrorism Conclusions

- Keeping control over radioactive Sources is very important
- Improvement of physical protection of radioactive is necessary
- Raising Awareness for potential malicious use
- Market exists for illicit trafficking of nuclear and radioactive material

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## CBRN Task Force



Photo:  
[www.wohnung.com](http://www.wohnung.com)

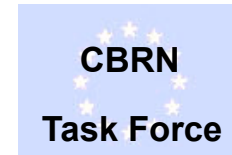
# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## CBRN Task Force



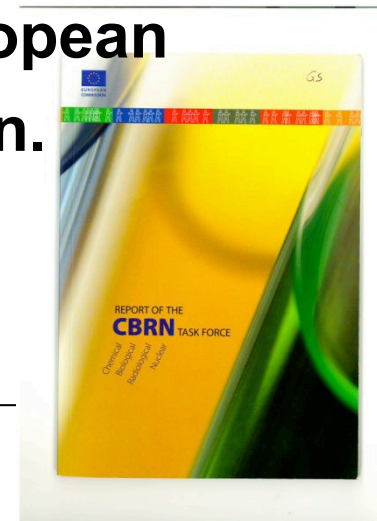
Start February 2008



### Goal:

**Create Policy package on enhancing the security of Chemical, Biological, Radiological and Nuclear materials (CBRN) in the European Union, including an EU CBRN Action Plan.**

**264 Recommendations**



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sou



## Current Status and next steps

- **Adoption of the CBRN Policy Package and Action Plan by the European Commission**  
-> **June 2009**
- **Negotiations of the Council conclusions and the EU CBRN Action Plan**  
-> **Second half of 2009**
- **Adoption of the Council conclusions and approval of the EU CBRN Action Plan**  
-> **by End of 2009**
- **Start of Implementation**  
-> **2010**

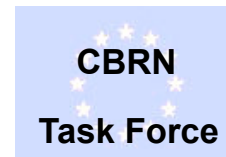
# 12th European ALARA Network Workshop

## “ALARA in Safety and Security of Radiation Sources”

---

### 98 Recommendation for R/N !!

- **Prevention**
  - Definition of relevant radioactive Sources
  - Enhancement of physical protection of sources
  - Enhancement of control over sources
  - Enhancement of information exchange
- **Detection**
  - Definition of testing and trialing schemes for detection equipment
  - Identification of Best Practices in the field of detection
  - Border Monitoring
- **Preparedness / Response**
  - Improve international Information flow in case of CBRN events
  - Strengthen EU-Capacities for counter measures



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

## Example

### Co-60 contaminates stainless steel in Germany

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

**Melting Plant**

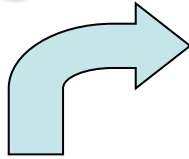


Photo: www.provider-stoerung.de

**Scrap Yard**



Photo: www.manager-magazin.de (Reuters)

**Product**

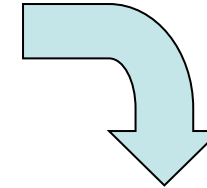
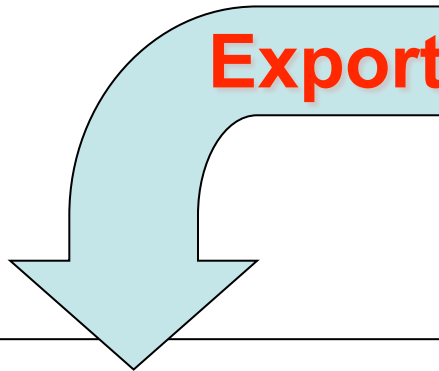


Photo: www.purso.fi

**The Problem**

**Export**



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”



**Co-60  
Contaminated  
Stainless Steel  
found  
in  
Germany**

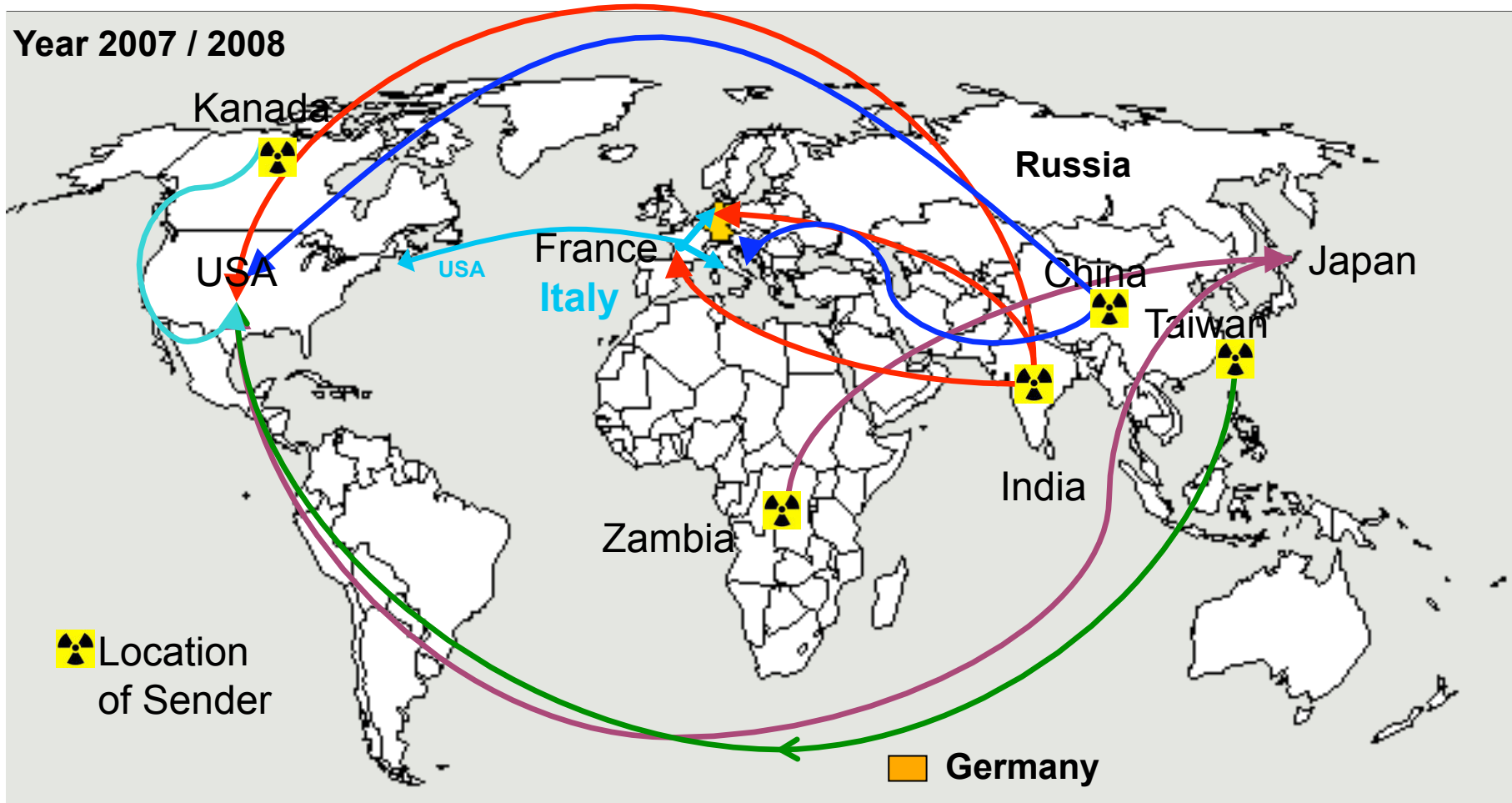
**180 tons of material**

**Activities up to 600 Bq/g**

Status as of 9<sup>th</sup> Feb. 2009



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”



# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

## Main goal:

Prevent gradual increase of contamination in our environment.



Photo: [www.weltderphysik.de](http://www.weltderphysik.de)

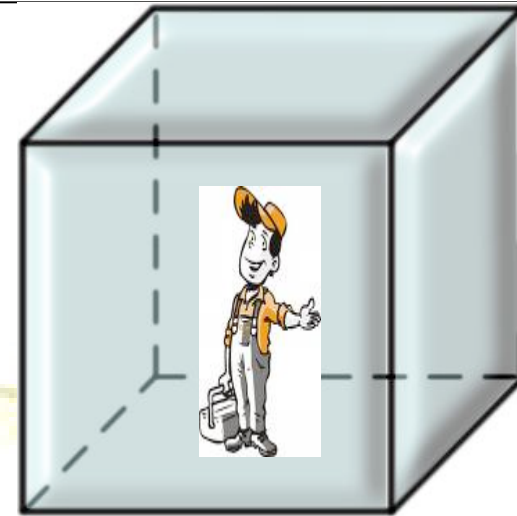


Image: [www.trading-strategy.de](http://www.trading-strategy.de)

**Example: Person in “room“ (2,5m x 2,5m x 2,5m)**  
**Walls: 2 mm stainless steel with activity 10 Bq/g**  
**Dose: > 1 mSv per year**  
Working time: 1800 h/a  
(e. g. truck, kitchen, engine room on ship or industry, elevator)

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

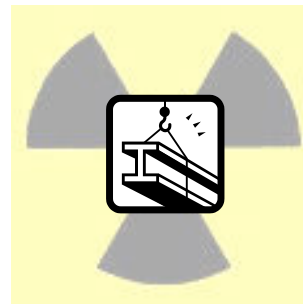
---

**Absence of any contamination !!!**



**Metal - Industrie**

**No Acceptance !!**



**No Acceptance !!**



**Public**

# 12th European ALARA Network Workshop “ALARA in Safety and Security of Radiation Sources”

---

Thank you very much for your attention!