



# EC Nuclear Safeguards

European Commission DIRECTORATE GENERAL  
for TRANSPORTS and ENERGY

## EURATOM SAFEGUARDS

Luxembourg

# EC Nuclear Safeguards

**Presented by**

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# What are 'nuclear safeguards'?

*“The set of measures to verify that there is no diversion of nuclear material for non-declared uses”*

## **EURATOM**

**To verify that nuclear material is not diverted from declared uses**

## **IAEA**

**Verify that nuclear material is used for peaceful purposes.  
Search for clandestine activities**

## **EURATOM-IAEA Partnership Approach**



## Euratom Treaty

**Main objective: to create the conditions necessary for the development of a nuclear industry.**

- Promotion of research (Chapter 1)
- Dissemination of information (Chapter 2)
- Health and Safety (Chapter 3)
- Investment and Joint Undertakings (Chapters 4 & 5)
- Supplies and property ownership (Chapters 6 & 8)
- **SAFEGUARDS (Chapter 7)**
- The nuclear Common Market (Chapter 9)
- External Relations (Chapter 10)



## Implementation Measures

- Declarations from operators of nuclear installations:  
**e.g.: Control of accountancy declarations**
- Containment
- Surveillance
- Inspection
- Evaluation at the headquarters in Luxembourg



# What are safeguards?

## Implementation Measures: on inspection

- Accountancy checks
- Operational records check
- Basic Technical Characteristics verification
- Placement, testing and removal of seals.
- Taking video records stored in surveillance devices
- Physical verification of nuclear material
- **Sampling taking**
- **Measurement performance**



# What are safeguards?

## Accountancy

- Accurate accountancy records of nuclear material
- Accountancy reports required by European legislation and regulation
- Verification of consistency between reports and records



# What are safeguards?

## Containement and Surveillance

Objective: to ensure the « continuity of knowledge » of nuclear material

- Seals
- Video Cameras
- Remote Data Transmission
- Viewing stored images and data



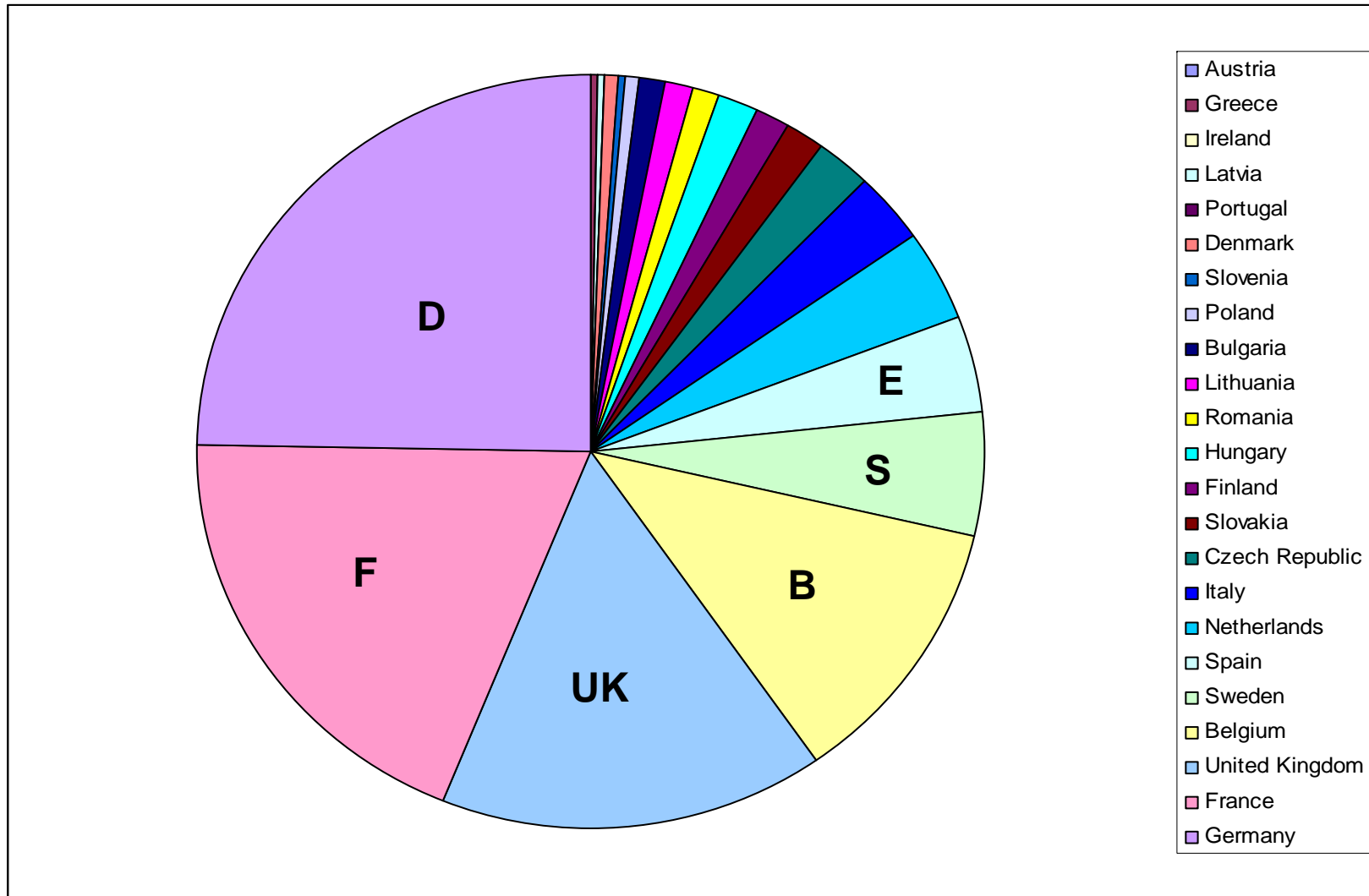
## EURATOM SAFEGUARDS DIRECTORATE (TREN-I) and TREN-H3

### Staff based in LUXEMBOURG

- following intensive and continuous training
- performing verification and evaluation activities both in nuclear installations and at the Headquarters



# Safeguards Inspection effort in the EU





# EURATOM and IAEA inspectors

JRC Karlsruhe 19 March 2009 Nuclear Security for the Media

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# Review of video surveillance





# A very large nuclear site





# Inspectors at work at open air





# Inspectors at work inside nuclear plants





## **EURATOM Inspectors in Luxembourg rely on the technical support of the Joint Research Centre**

- **Analysis of samples taken in nuclear installations**
- **Development of equipment for nuclear measurements**
- **Development of statistical models**
- **Development of equipment for containment and surveillance**
- **Development of system for process control**
- **.....**



**THANK YOU  
for  
YOUR ATTENTION**

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