Safeguards, Security and Non-Proliferation in the Euratom Treaty

Assessing the Prospects of the Euratom Treaty Approach in the Middle East
Finlay MacLean, ENER-D3, Florence, 27 June 2012
Euratom Substantial Chapters

- **I** Promotion of Research
- **II** Dissemination of Information
- **III** Health and Safety
- **IV** Investment
- **V** Joint Undertakings
- **VI** Supplies
- **VII** Safeguards
- **VIII** Property Ownership
- **IX** The Nuclear Common Market
- **X** External Relations
European Union Treaties

Treaty on European Union

Treaty on the Functioning of the European Union

(latest evolution of the European Economic Community)
Article 25

The Union shall conduct the Common Foreign and Security Policy by:

(b) adopting decisions defining:

- (i) actions to be undertaken by the Union;
- (ii) positions to be taken by the Union;
TFEU

Article 6
The Union shall have competence to carry out actions to support, coordinate or supplement the actions of the Member States. The areas of such action shall, at European level, be:

(f) civil protection;
TFEU

Article 83

1. The European Parliament and the Council may, by means of directives adopted in accordance with the ordinary legislative procedure, establish minimum rules concerning the definition of criminal offences and sanctions in the areas of particularly serious crime with a cross-border dimension ....
TFEU

Article 88

*Europol’s* mission shall be to support and strengthen action by the Member States’ police authorities and other law enforcement services and their mutual cooperation in preventing and combating serious crime affecting two or more Member States, *terrorism* and forms of crime which affect a common interest covered by a Union policy.
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- II Dissemination of Information
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- IV Investment
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- VII Safeguards
- VIII Property Ownership
- IX The Nuclear Common Market
- X External Relations
Safeguards

Euratom Treaty - Article 77

In accordance with the provisions of this Chapter, the Commission shall satisfy itself that, in the territories of Member States:

- ores, source materials and special fissile materials are not diverted from their intended uses as declared by the users;

- the provisions relating to supply and any particular safeguarding obligations assumed by the Community under an agreement concluded with a third State or an international organization are complied with.
Safeguards Declaration

Euratom Treaty - Article 78

- Anyone setting up or operating an installation for the production, separation or other use of source materials or special fissile materials or for the processing of irradiated nuclear fuels shall declare to the Commission the basic technical characteristics of the installations, to the extent that knowledge of these characteristics is necessary for the attainment of the objectives set out in Article 77.

- The Commission must approve the techniques to be used for the chemical processing of irradiated materials, to the extent necessary to attain the objectives set out in Article 77.
• The Commission shall require that operating records be kept and produced in order to permit accounting for ores, source materials and special fissile materials used or produced. The same requirement shall apply in the case of the transport of source materials and special fissile materials.

• Those subject to such requirements shall notify the authorities of the Member State concerned of any communications they make to the Commission pursuant to Article 78 and to the first paragraph of this Article.

• The nature and the extent of the requirements referred to in the first paragraph of this Article shall be defined in a regulation made by the Commission and approved by the Council.
Regulation 302/2005 (in part)

- Article 3  Declaration of the Basic Technical Characteristics
- Article 6  Particular Safeguards Provisions (PSP)
- Article 7  Accounting system
- Article 8  Operating records
- Article 9  Accounting records
- Article 10  Accounting reports
- Article 12  Inventory change report (ICR)
- Article 13  Material balance report (MBR) and PIL
- Article 17  Particular Safeguards Obligations
- Article 19  Derogations
Agreements with 3rd States

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## Nuclear Cooperation Agreements

<table>
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<tr>
<th>Country</th>
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<td>Australia</td>
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<td>Uzbekistan</td>
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Euratom international Agreements

Typical obligations in Agreements

Advance notification of transfers
Tracking of material and equipment
Reporting balances
Derived nuclear material
Re-export – prior consent
Peaceful use
International Safeguards and fall-back safeguards
Restrictions on further processing
Physical Protection
Operators’ Activities

Physical Event

Operational Record(s)

Supporting Documents: Transport, Delivery, Contract
Measurement(s): Weighing, Analysis

Accountancy Record(s)

Bookstock
Inventory Changes (monthly)
Physical Inventory (yearly)
Material Balance (yearly)

European Union flag
Main Data Flow

MBAs (~1,000) → ~1,800,000 accountancy entries → EU - DG ENER Luxembourg

~1,500,000 accountancy entries → IAEA - Vienna
Inspections
Euratom Safeguards Inspections

Euratom Treaty - Article 81

- The Commission may send inspectors into the territories of Member States. ........

- On presentation of a document establishing their authority, inspectors shall at all times have access to all places and data and to all persons who, by reason of their occupation, deal with materials, equipment or installations subject to the safeguards provided for in this Chapter, to the extent necessary in order to apply such safeguards to ores, source materials and special fissile materials and to ensure compliance with the provisions of Article 77.
Inspection Activities

Examples:

Verification of BTC
Verification of records
Physical Inventory Verification
Physical verifications
Sample taking
Containment and surveillance
Safeguards Inspections

- Euratom Safeguards
  - all EU civil nuclear materials and civil installations

- Euratom Safeguards Inspectorate
  - Corps of 100 inspectors plus support

- Euratom 2011
  - 3700 inspection-person days

- Two on-site laboratories
IAEA Safeguards Agreements

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IAEA Safeguards Agreements

- EUR-EU25-IAEA + AP  INFCIRC/193
- EUR-UK-IAEA + AP  INFCIRC/263
- EUR-FR-IAEA + AP  INFCIRC/290
Articulation of EC & IAEA safeguards

INFCIRC/193 has a Protocol detailing i.a.:

- Cooperation and coordination of activities
- Scheduling and planning of inspections
- Technical procedures per facility type and, if necessary, per individual facility to be agreed in advance between EC and IAEA
- EC to transmit its working papers for all inspections to the IAEA
- Common sampling
- Common Physical Inventory Verifications
Extensive European nuclear industry

double inspections a burden

Sensitivity – Soviet inspectors

1992 New Partnership Approach
based on one-man-one-job
mid-1990’s Strengthened Safeguards and Additional Protocol

Decided within EU that Euratom would not exercise AP controls on Member States

Commission between states and IAEA

2010 Integrated Safeguards
depening of cooperation IAEA/EUR
AP for EU Non-nuclear-weapon States

Entry into force – 30 April 2004
- 173 Sites
- About 400 declarations per year

Complementary Access (CA)
- EC inspector participates
- Advance notice from IAEA 24/2 hours before start

Integrated Safeguards
- From 1 Jan 2010 in EU-25
Euratom as RSAC

Provision of data to IAEA
QC of data passed to IAEA
Facilitator for IAEA
  • (logistics, equipment, supply of data..)

RSAC as CBM vis à vis its own MS
Thank you for your attention

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