

**IRSN**

INSTITUT  
DE RADIOPROTECTION  
ET DE SÛRETÉ NUCLÉAIRE

*Enhancing nuclear safety*

# The soft power of international insight in and leverage on national nuclear programmes

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- **Controlling nuclear activities is a national responsibility**
- **International governance through hard law, soft law and incentives**
- **Practical ways and means**

## Sovereignty vs. international commitments

### Essentially national responsibilities:

- Energy and nuclear programmes
- Legal and regulatory framework
- Nuclear safety and security, radiation protection

### Specifically international responsibilities:

- Non proliferation

### Areas both nationally and internationally controlled:

- Nuclear liability

**National responsibilities mostly have the upper hand**

## The European situation

- Nuclear activities are essentially national responsibilities
- Yet there is some competition between national sovereignty and European authority
- Europe is deeply divided over nuclear energy and energy policies
- but it cooperates on nuclear safety, a consensual subject, through concrete actions: stress tests, research
- and has some common EU legislation

# Instruments for international nuclear governance

## Hard law

- NPT and conventions

- Bilateral agreements

- Tools: interdictions, reporting, possibly inspections and enforcement

## Intermediate instruments : the “obligatory incentive”

- Safety conventions

## Soft law

## Soft law

### Incentive schemes and the strength of pressure

Based on the strength of pressure from the international community, public opinions,...

Scope and membership

- Global (IAEA, NSG,...),

- regional (EU,...),

- Actor-based (governments, regulators, industry,...)

Differing degrees of formalism/legalism

All based on various forms of international cooperation

## Cooperative arrangements

Voluntary information exchange, cooperative projects, research,...

As such arrangements are essentially voluntary:

- Commitments and legalities are not the key issues
- Common interests and benefits are the major drivers

## How effective ?

**A paradoxical situation :**

- Hard law may be weak because accepted obligations are limited in scope**
- Soft law may be may be more compelling, even though non-binding, because of a broader reach and of the strength of pressure**

**Soft law may be harder and more effective**

**Cooperation can be extremely effective**



# The practical ways and means for insight into and leverage on national nuclear programmes

## What for ?

- Information
- Influence
- Involvement
- Possibly some form of control

# International Security Instruments

**Nuclear proliferation : NPT + safeguards agreements**

- Reporting**
- Verification, inspections**
- Enforcement possibilities**

**Disarmament arrangements, Comprehensive Test Ban Treaty**

# International Conventions (1)

## Four conventions in nuclear safety :

- Convention on Nuclear Safety (power reactors)
- Joint Convention on the Safety of Spent Fuel Management and on the Safety of radioactive Waste Management
- Convention on the Early Notification of a Nuclear Accident
- Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency

## Two conventions in related fields :

- Espoo Convention on Environmental Impact Assessment in a Transboundary Context
- Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters

## International Conventions (2)

### The Nuclear Safety Convention

#### Current status :

- Adopted in 1994, entry into force in 1996
- 78 State Parties + 10 signatory States (all States with power reactors except Iran)

#### Obligations of State Parties :

- General obligations based on IAEA fundamental safety principles: national framework, safety authority, organisation for emergencies, site studies, operational safety,...
- Review meetings every three years
- Before every review meeting, submission of a national report on measures taken to fulfil the obligations under the convention
- Mechanism of questions and answers before and during review meetings

## International Conventions (3)

### The Nuclear Safety Convention

- Obligations remain general and are not very demanding
  - The main concrete obligation, and one of the major benefits from the convention, lies in the peer review mechanism every three years (national report+ questions + review meeting)
  - The convention is of an incentive nature
- A proposed amendment, aiming at including in the Convention's obligations that reactors must be designed with the objective of preventing accidents and avoiding off-site contamination, was not adopted and resulted, in February 2015, in a non-binding political declaration by the Parties.

## International Conventions (4)

### Joint Convention on the safety of spent fuel and waste

#### Current status :

- Adopted in 1997, entry into force in 2001
- 70 State Parties + 42 signatory States

The obligations of State Parties are similar to those under the NSC

- General obligations based on the IAEA Fundamental Safety Principles: general safety requirements, site studies, operational safety,...
- Review meetings every three years
- Before every review meeting, submission of a national report on measures taken to fulfil the obligations under the convention
- Mechanism of questions and answers before and during review meetings

# International Instruments

## IAEA Codes of Conduct

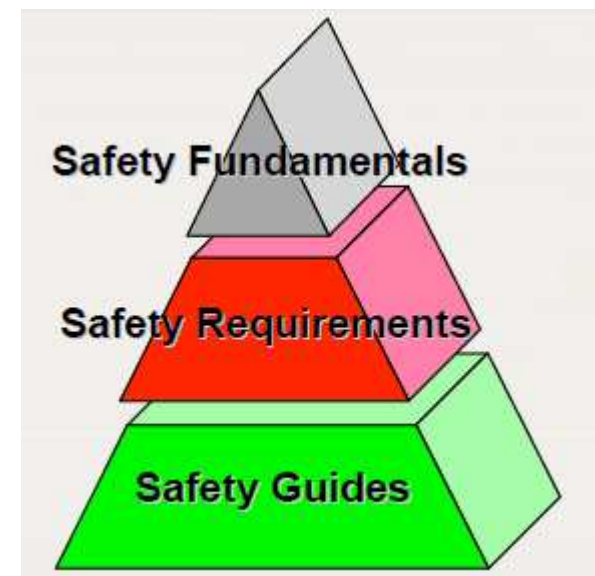
- **Non legally binding instruments**
- **Application based on an information from Member States to the IAEA, expressing support and their intention to apply the code**
- **Regular meetings for the exchange of information and experience**
  - **Code of Conduct on the Safety and Security of Radioactive Sources**
- **130 States have expressed their intention to implement the Code**
  - **Code of Conduct on the Safety and Security of Research Reactors**

# IAEA Safety Standards

Although nuclear safety is a national responsibility, it rests on common international references , primarily the IAEA Safety Standards

The IAEA Safety Standards :

- Are a set of fundamentals principles, requirements, guidance
- Are defined through a formal process in working groups and commissions, concluded by the approval of the IAEA Board of Governors
- Are non-binding and must be transposed into national law
- but are de facto mandatory to all States





## Peer Reviews (1)

Voluntary, not consequential, technically-oriented review missions with no formal consequences

- WANO (World Association of Nuclear Operators)

- IAEA

- For developing nuclear programmes (INIR)

- On a range of safety issues: operations (OSART), regulatory (IRRS), emergency preparedness (EPREV), safety culture, fuel cycle, research reactors,...

- On security (IPPAS)

- Regional : EU (required by the Safety Directive)

## Peer Reviews (2)

The value of peer reviews :

- Technical scope reduces barriers, political sensitivity
- Strong international incentives and wide-spread usage make peer reviews a de facto norm
- Thoroughness and technical effectiveness
- A transparency mechanism with major benefits

Limitations of peer reviews :

- The issue of the publication of results
- Availability of sufficient expertise to maintain quantity and quality

Can peer reviews be further extended? Can they become a de facto control system?

## International Cooperation

- Participation in international organizations (projects, staff,...)
- Networking, notably at the IAEA : GNSSN, ANSN, specific schemes and working groups according to targeted areas (e.g. EPR, RANET, transport)
- International arrangements and cooperative schemes with a technical dimension (IFNEC,...)
- International projects : regional, IAEA (CRPs, TC Projects,...)
- International research projects
- Shared regional infrastructures : environmental monitoring, research, ...

## Regional Cooperation

- **Regional networks: regulators, scientific institutions, universities, technical networks (monitoring, EPR)**
- **IAEA, EU and other regional networks :**
  - **IAEA (ANSN, Foro, FNRBA,...)**
  - **EU (WENRA, HERCA, ETSON, ESARDA,...)**
- **Information exchange (incidents and accidents, other transboundary issues,...)**
- **Bilateral arrangements and agreements**

## Other possible opportunities

- Education and training

- Business and industry

- Civil society initiatives

One thousand and one ways and means to get insight into and leverage on national nuclear programmes, based on...

- Effective and earnest involvement to bring value,
- over the long term,
- leveraging on common interests.

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Thank you for your attention



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