



**The Abdus Salam
International Centre for Theoretical Physics**



2257-45

Joint ICTP-IAEA School of Nuclear Energy Management

8 - 26 August 2011

The International Legal Framework for Civil Liability for Nuclear Damage

Anthony Wetherall
*IAEA, Vienna
Austria*

2011 Joint IAEA/ ICTP
School of Nuclear Energy Management
Trieste, Italy

Session 6: Nuclear Law
15th August 2011

The International Legal Frameworks for Nuclear Safety and Security



Anthony Wetherall
Legal Officer
Nuclear and Treaty Law Section
Office of Legal Affairs

Scope

PART A: Int'l Legal Framework on Nuclear Safety

- I. The Int'l Instruments Relevant for Nuclear Safety
- II. Observations on the Int'l Legal Framework for Nuclear Safety

PART B: Int'l Legal Framework for Nuclear Security

- I The Legal Basis for IAEA Nuclear Security Mandate and Activities
- II Int'l Instruments and Other Texts Relevant for Nuclear Security
- III Observations on the Int'l Legal Framework for Nuclear Security

Scope

PART A: Int'l Legal Framework on Nuclear Safety

I. The Int'l Instruments Relevant for Nuclear Safety

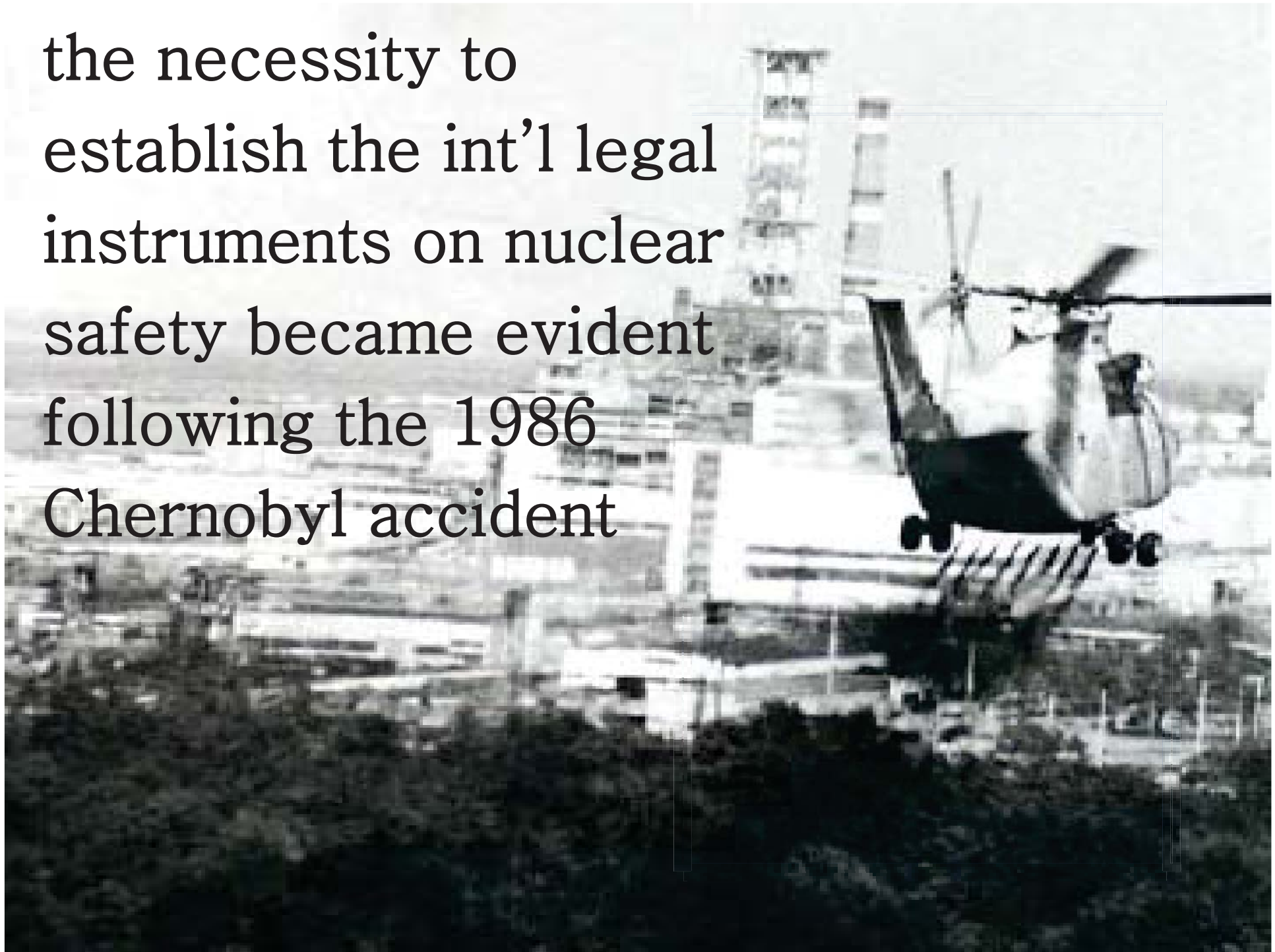
II. Observations on the Int'l Legal Framework for Nuclear Safety

PART I



Int'l Instruments
Relevant for Nuclear Safety

the necessity to
establish the int'l legal
instruments on nuclear
safety became evident
following the 1986
Chernobyl accident



Nuclear Safety in a Nutshell

[see nuclear security later]

focuses primarily on unintended conditions or events that could lead to radiological releases from authorized activities.



“Reiterate the importance of universal adherence to and the effective implementation and continuous review of the relevant international instruments on nuclear safety, consider the possibility of strengthening the international legal framework in this area; and recognize the Agency’s enhanced efforts to that effect”

Para. 16 of the Declaration by the
IAEA Ministerial Conference on Nuclear Safety
Vienna, 20th June 2011 (INFCIRC/821)

The relevant int'l instruments include those adopted by and under the auspices of the IAEA:

1. Convention on Early Notification of a Nuclear Accident, 1986 (INFCIRC/335)
2. Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, 1986 (INFCIRC/336)
3. Convention on Nuclear Safety, 1994 (INFCIRC/449)
4. Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management, 1997 (INFCIRC/546)
5. Code of Conduct on the Safety and Security of Radioactive Sources, 2003 (INFCIRC/663) and supplementary import/export Guidance, 2004
6. Code of Conduct on the Safety of Research Reactors, 2004 (IAEA/CODEOC/RR/2006)

The scope covers:

- ✓ nuclear power plants
- ✓ spent fuel and radioactive waste
- ✓ radioactive sources
- ✓ research reactors
- ✓ corresponding emergency preparedness and response system



early notification of nuclear accidents and assistance

Convention
on Early Notification
of a Nuclear Accident
and
Convention on Assistance
in the Case
of a Nuclear Accident
or Radiological Emergency



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1987

1st & 2nd key int. instruments

Early Notification Convention

Scope: nuclear accidents

* Obligations include: (i) forthwith notification to certain other States; (ii) prompt provision of information to minimize radiological consequences; and (iii) making known competent authorities/ point of contact

Assistance Convention

Scope: nuclear accidents or radiological emergencies

* Obligations include: (i) int. cooperation (and with IAEA) to facilitate prompt assistance; (ii) on request, prompt decision whether to render requested assistance; and (iii) making known competent authorities/point of contact

safety of nuclear power plants

Convention on Nuclear Safety

LEGAL SERIES No. 16



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1994

3rd key int. instrument



Scope

- ✓ * safety of land-based civil NPPs
- ✗ * NOT research reactors

Some Obligations

- ✓ * establishment and maintenance of legislative and regulatory framework including an effectively independent regulatory body with adequate authority, competence, human and financial resources (general safety provision)
- ✓ * specific measures based on general safety considerations (availability of resources, quality assurance)
- ✓ * technical requirements i.e. taking of appropriate steps concerning siting, design and construction, and operation
- ✓ * participation in the Peer Review Mechanism

Joint Convention

International Atomic Energy Agency
INFORMATION CIRCULAR

INF

NFCIRC/546
4 December 1997

GENERAL Distr.
Original: ARABIC, CHINESE
ENGLISH, FRENCH, RUSSIAN and
SPANISH

JOINT CONVENTION ON THE SAFETY OF SPENT FUEL MANAGEMENT AND ON THE SAFETY OF RADIOACTIVE WASTE MANAGEMENT

1. The Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management was adopted on 5 September 1997 by a Diplomatic Conference convened by the International Atomic Energy Agency at its headquarters from 1 to 5 September 1997. The Joint Convention was opened for signature at Vienna on 29 September 1997 during the forty-first session of the General Conference of the International Atomic Energy Agency and will remain open for signature until its entry into force.
2. Pursuant to article 40, the Joint Convention will enter into force on the ninetieth day after the date of deposit with the Depositary of the twenty-fifth instrument of ratification, acceptance or approval, including the instruments of fifteen States each having an operational nuclear power plant.
3. The text of the Convention, as adopted, is attached hereto for the information of Member States.

safety of spent fuel management and radioactive waste management



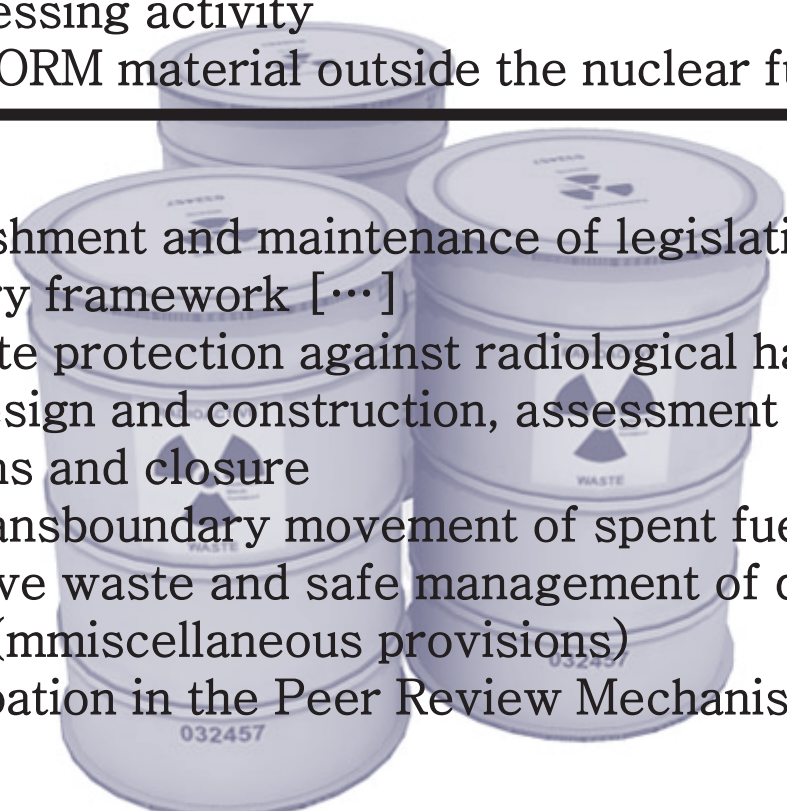
4th key int. instrument

Scope

- ✓ * combines in a joint structure two distinct subject matters:
 - ✓ (1) safety of spent fuel management; (2) and safety of radioactive waste management
- ✓ * also, applies to uranium mining and milling wastes, and discharges from regulated activities
- ✗ * NOT spent fuel held at reprocessing facilities as part of a reprocessing activity
- ✗ * NOT NORM material outside the nuclear fuel cycle

Some Obligations

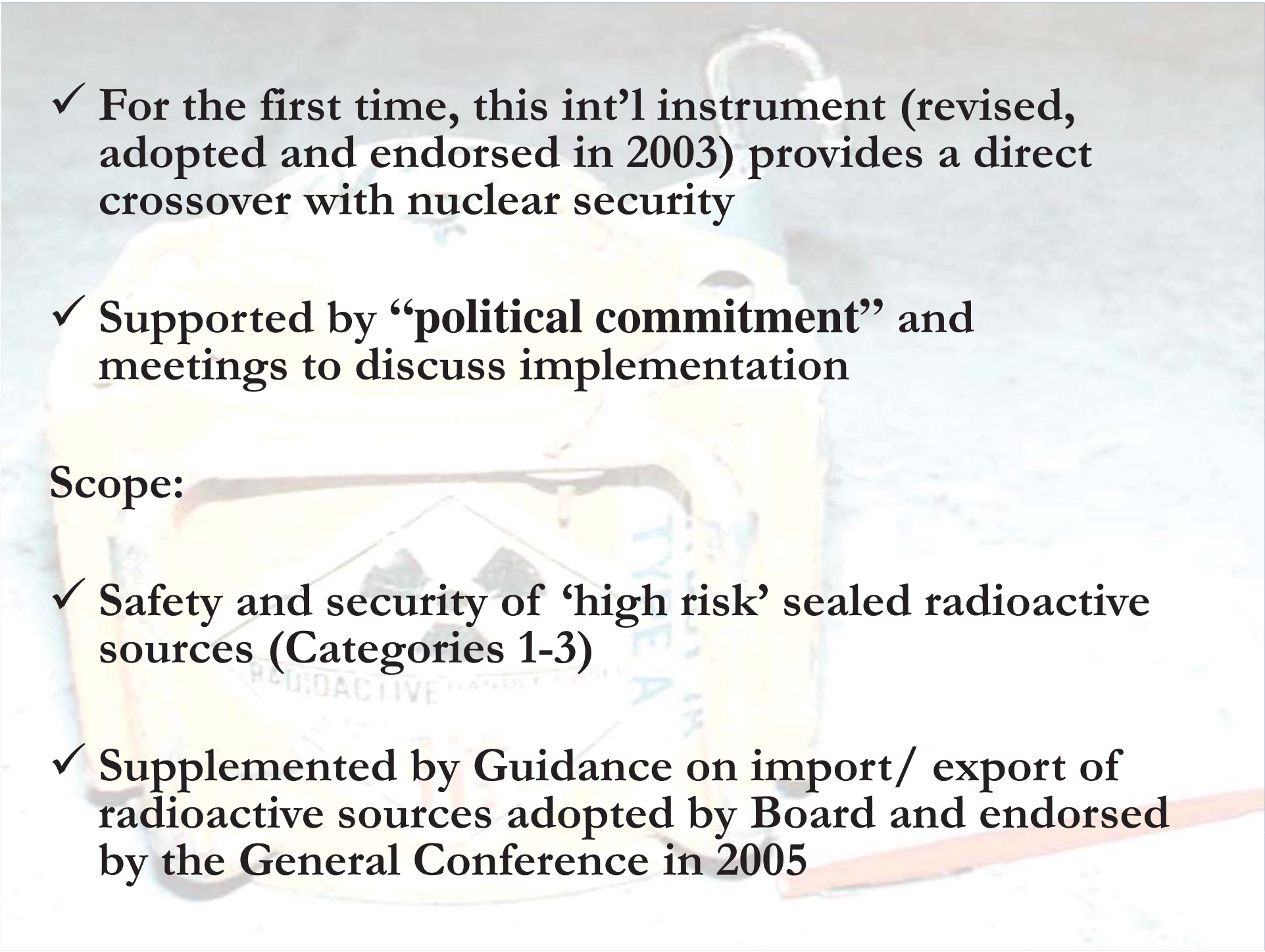
- ✓ * establishment and maintenance of legislative and regulatory framework [...]
- ✓ * adequate protection against radiological hazards in siting, design and construction, assessment of facilities, operations and closure
- ✓ * safe transboundary movement of spent fuel and radioactive waste and safe management of disused sealed sources (miscellaneous provisions)
- ✓ * participation in the Peer Review Mechanism



safety and security of radioactive sources



5th key int. instrument

- 
- ✓ For the first time, this int'l instrument (revised, adopted and endorsed in 2003) provides a direct crossover with nuclear security
 - ✓ Supported by “political commitment” and meetings to discuss implementation

Scope:

- ✓ Safety and security of ‘high risk’ sealed radioactive sources (Categories 1-3)
- ✓ Supplemented by Guidance on import/ export of radioactive sources adopted by Board and endorsed by the General Conference in 2005

“Reaffirming the importance and the value of the Code of Conduct on the Safety and Security of Radioactive Sources, while recognizing that the Code is not a legally binding instrument”

IAEA General Conference Resolution
GC(53)/RES/11 (2010)

safety of research reactors

CODE OF CONDUCT ON
THE SAFETY OF
RESEARCH REACTORS

研究堆安全行为准则

CODE DE CONDUITE POUR
LA SURETE DES REACTEURS
DE RECHERCHE

КОДЕКС ПОВЕДЕНИЯ
ПО БЕЗОПАСНОСТИ
ИССЛЕДОВАТЕЛЬСКИХ
РЕАКТОРОВ

CÓDIGO DE CONDUCTA SOBRE
LA SEGURIDAD DE LOS
REACTORES DE INVESTIGACIÓN

مدونة قواعد السلوك بشأن أمان
مفاعلات البحوث



6th key int. instrument

Need for the National Legal Framework

“Underline the need for States planning to embark on a nuclear power programme to create an appropriate nuclear safety infrastructure based on IAEA safety standards and relevant guidance and assistance [...]”

Para. 20 of the Declaration by the
IAEA Ministerial Conference on Nuclear Safety
Vienna, 20th June 2011 (INFCIRC/821)



Observations on the Int'l Legal Framework for Nuclear Safety



PART B. NUCLEAR SECURITY

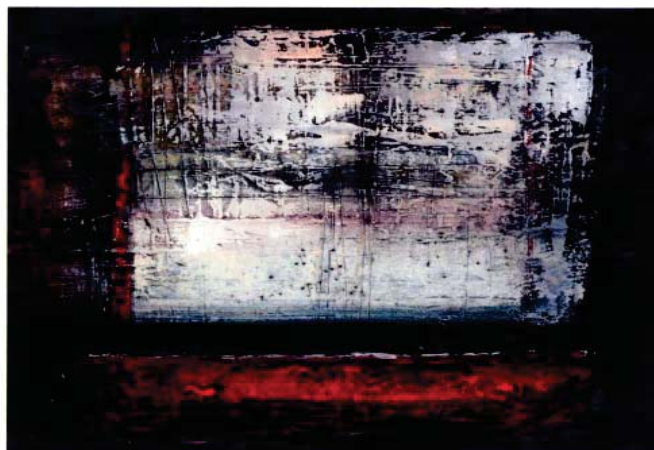


Scope

- I The Legal Basis for IAEA Nuclear Security Mandate and Activities
- II Int'l Instruments and Other Texts Relevant for Nuclear Security
- III Observations on the Int'l Legal Framework for Nuclear Security

The International Legal Framework for Nuclear Security

IAEA International Law Series No. 4



www.ola.iaea.org

Nuclear Security in a Nutshell

[compare with nuclear safety earlier]

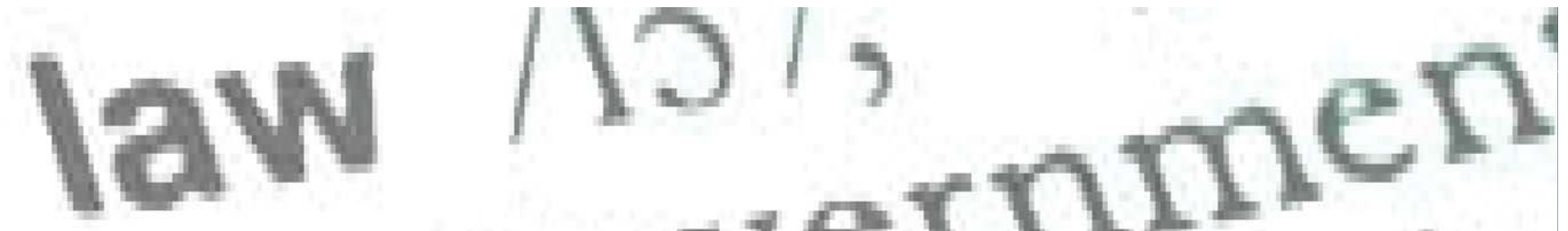
focuses primarily on intentional misuse of nuclear or other radioactive materials and related facilities (such as theft, unauthorized access, sabotage, illegal transfers etc.) by non-state elements



Nuclear Security: working definition

*The prevention and detection of, and
response to, theft, sabotage,
unauthorized access, illegal transfer or
other malicious acts involving nuclear
material, other radioactive substances
or their associated facilities*

IAEA Advisory Group on Nuclear Security
January 2002 (under revision)

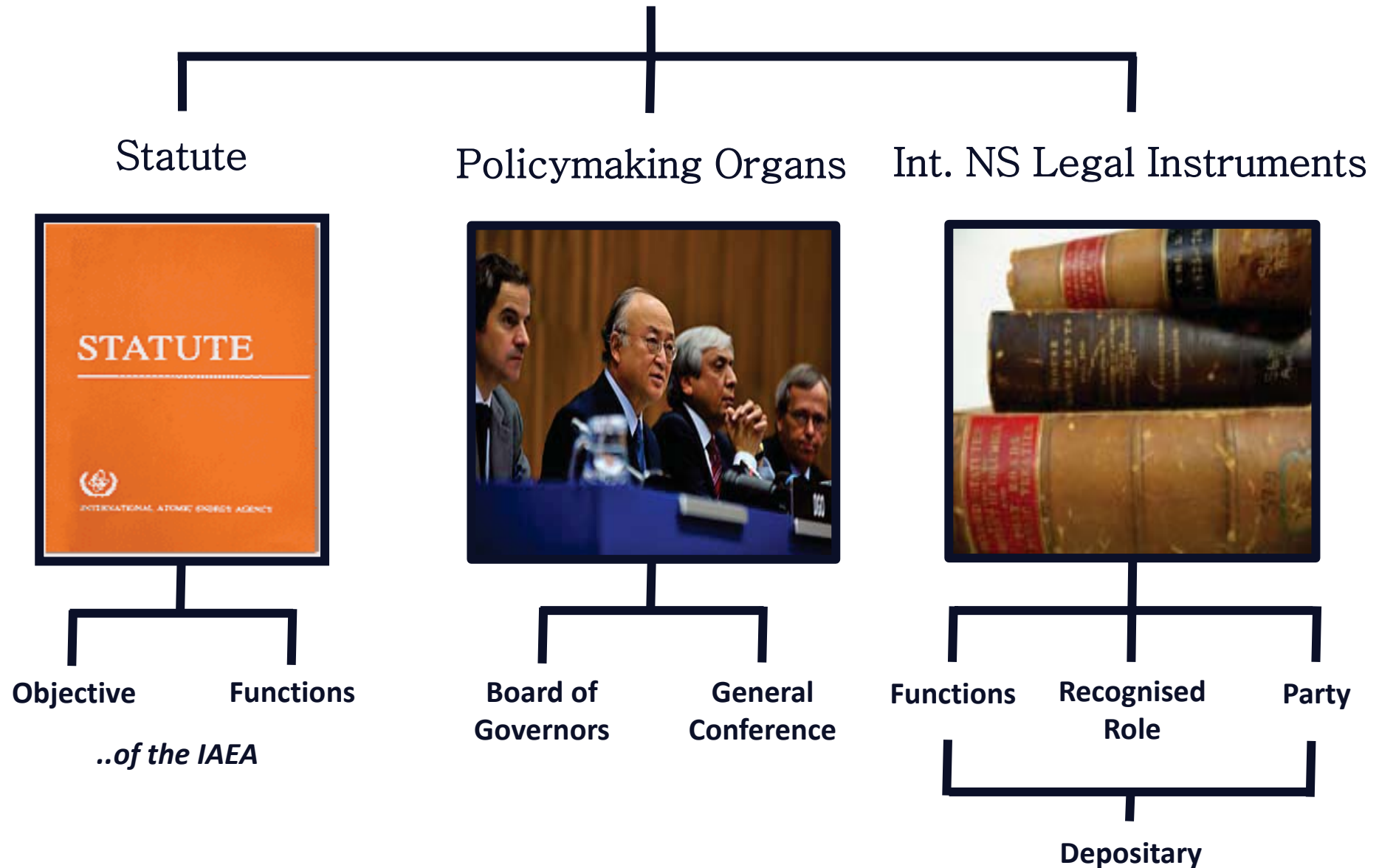


Legal Basis for IAEA Nuclear Security Mandate and Activities

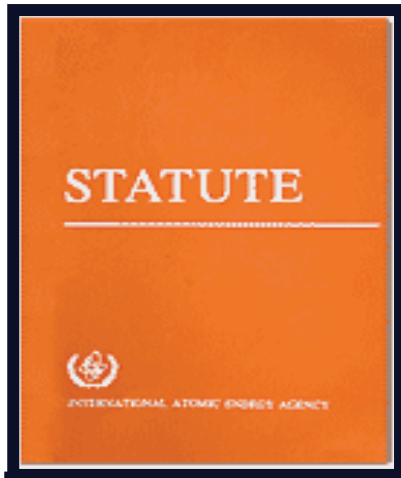


Legal Basis for IAEA

Nuclear Security Mandate and Activities



Statute of the IAEA



- Science and Technology
- Safety (and Security)
- Safeguards (Verification)

*3 pillars
of the
IAEA's
work*

Statute of the IAEA



- No explicit reference to Nuclear Security in the Statute
- BUT the legal basis derives from Art. II (Statutory Objectives [...])
- ALSO, specific IAEA activities are directly attributable to Art. III (Statutory Functions [...])



IAEA Policymaking Organs

(Board of Governors and General
Conference)

- The understanding of the legal basis is anchored and confirmed in decisions of the Board of Governors such as approval of the Nuclear Security Plan 2010–2013
- Activities implemented pursuant to this Plan can be directly attributed to the aforementioned Statutory Functions
- Recognised and drawn on synergies between measures to strengthen security and those for safety and safeguards

Int'l Nuclear Security Legal Instruments



— FUNCTIONS e.g. CPPNM & 2005 Amendment

— RECOGNISED ROLE e.g. UN Security Council Resolutions

— PARTY e.g. Safeguards Agreements

— DEPOSITARY e.g. CPPNM & 2005 Amendment

PART B.II

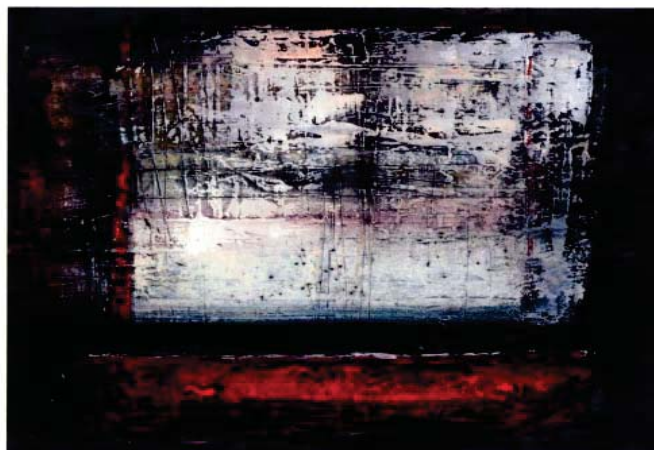


Int'l Nuclear Security

Legal Instruments and Other Texts

The International Legal Framework for Nuclear Security

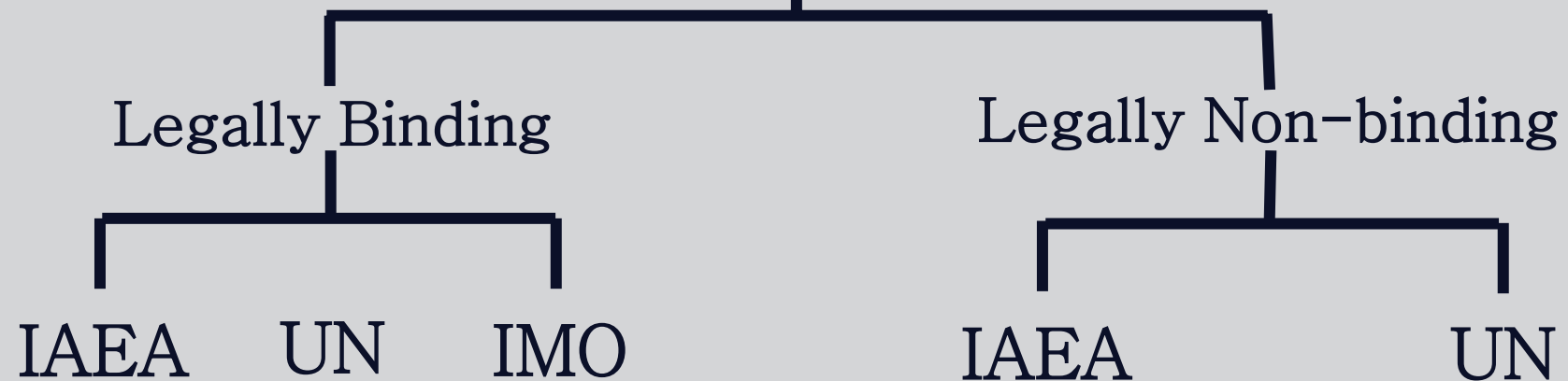
IAEA International Law Series No. 4



www.ola.iaea.org

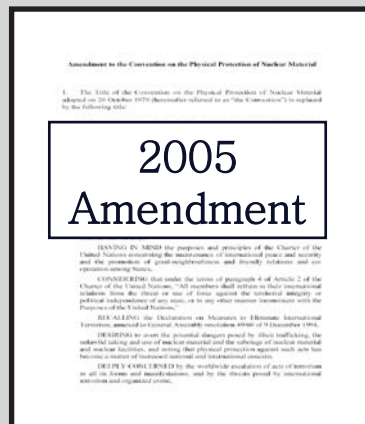
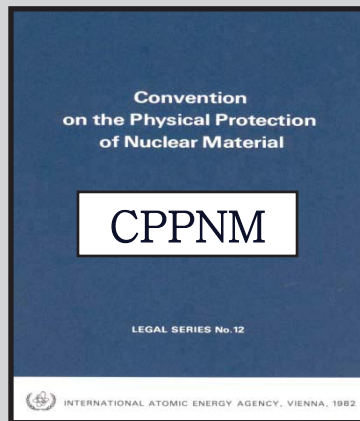
Int'l Legal Framework for Nuclear Security

Primary Int'l Legal Instruments

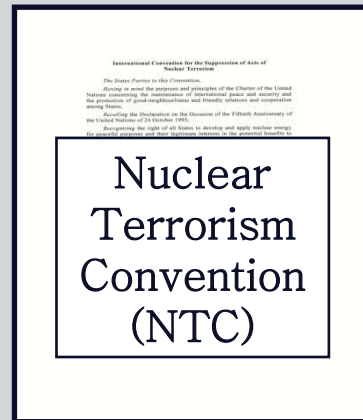


Legally Binding

IAEA



UN

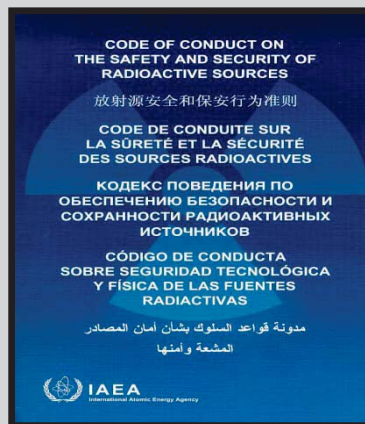
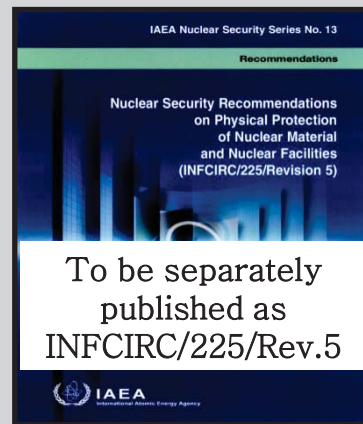


IMO



Legally Non-Binding

IAEA



Code of Conduct on Safety &
Security of Radioactive
Sources and supplementary
Import/ Export Guidance



**Convention
on the Physical Protection
of Nuclear Material**

CPPNM

LEGAL SERIES No.12



INTERNATIONAL ATOMIC ENERGY AGENCY, VIENNA, 1982

physical protection (PP)
of nuclear material
(NM) used for peaceful
purposes

CPPNM



PP of NM



Prevent and combat
specified offences



Int'l cooperation &
info. exchange

3-fold scope of application



Physical Protection (PP)

- PP of specified categories of NM (see Annex II) and at specified levels (see Annex I)
- during int'l transport (and incidental storage)
- BUT not during domestic use, storage and transport



Prevent and combat specified offences

- under national law, make punishable specified acts as offences, such as the unlawful receipt, possession, use, transfer, alteration, disposal or dispersal of NM; theft or robbery of NM; and threats, attempt, and demands
- make the offences punishable by appropriate penalties taking into account their grave nature
- establish jurisdiction and take measures to ensure jurisdiction over the offences
- prosecution or extradition of alleged offenders



Int'l cooperation & info. exchange

- central authority/ point of contact
- recovery and protection of NM, by info. sharing
- return of stolen or unlawfully taken NM
- criminal proceedings assistance
- guidance on design, maintenance and improvement of PP systems [...] during int'l transport

PP of NM used for peaceful purposes & nuclear facilities (NFs)

Convention on the Physical Protection of Nuclear Material

Amendment to the Convention on the Physical Protection of Nuclear Material

1. The Title of the Convention on the Physical Protection of Nuclear Material adopted on 26 October 1979 (hereinafter referred to as "the Convention") is replaced by the following title:

CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR
MATERIAL AND NUCLEAR FACILITIES

2. The Preamble of the Convention is replaced by the following text:
THE STATES PARTIES TO THIS CONVENTION,

2005 Amendment to the CPPNM



Charter of the United Nations, "All members shall refrain in their international relations from the threat or use of force against the territorial integrity or political independence of any state, or in any other manner inconsistent with the Purposes of the United Nations,"

RECALLING the Declaration on Measures to Eliminate International Terrorism, annexed to General Assembly resolution 49/60 of 9 December 1994,

DESIRING to avert the potential dangers posed by illicit trafficking, the unlawful taking and use of nuclear material and the sabotage of nuclear material and nuclear facilities, and noting that physical protection against such acts has become a matter of increased national and international concern,

DEEPLY CONCERNED by the worldwide escalation of acts of terrorism in all its forms and manifestations, and by the threats posed by international terrorism and organized crime,

“Reaffirming the importance of the [CPPNM], as the only multilateral legally binding instrument dealing specifically with the physical protection of nuclear material, and the value of its Amendment extending its scope and thereby strengthening global nuclear security”

IAEA General Conference Resolution
GC(53)/RES/11 (2010)

2005 Amendment to the CPPNM



PP of NM & NFs



Prevent and
combat specified
offences



Int'l cooperation
& info.
exchange

extended 3-fold scope of application



PP of NM & NFs

- PP of NM in domestic use, storage and transport and of NFs used for peaceful purposes
- new “core” undertaking to establish, implement and maintain a PP regime applicable to NM and NFs
- apply insofar as is reasonable and practicable a number of Fundamental Principles of PP of NM and NFs



Prevent and combat specified offences

New offences and revision of others:

- nuclear smuggling

- acts against NFs, or interfering with operation

- contribution/ organizing or directing the commission of an offence

- extension of ancillary crimes of threat, attempt and participation to the main relevant offences

- inclusion of “*substantial damage to the environment*” in some offences i.e. against NFs



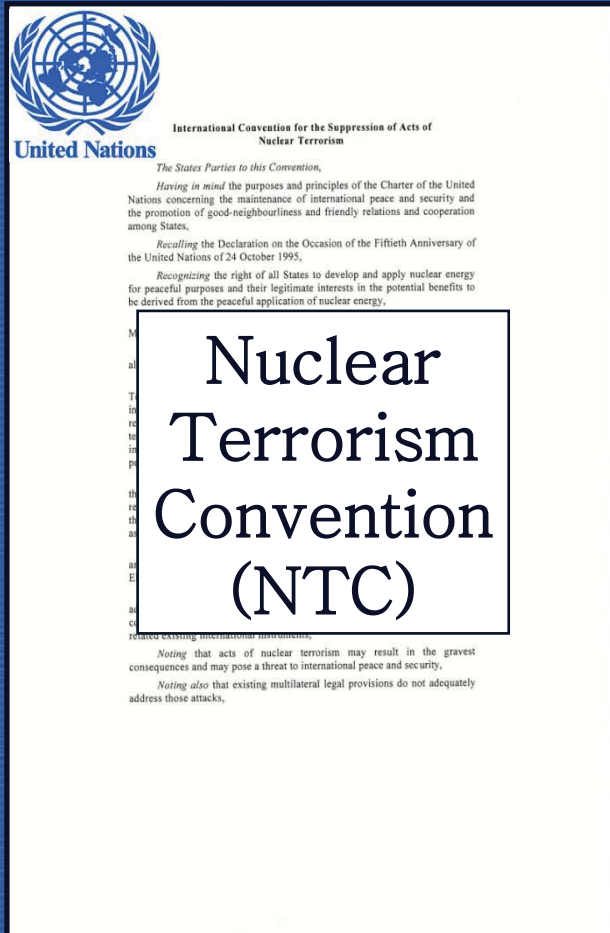
Int'l cooperation & info. exchange

- cooperate to the max. extent feasible in case of credible threat of sabotage of NM or NFs or in case of sabotage thereof
- matters within extended scope of the Convention
- [shall] cooperate and consult regarding guidance on the design, maintenance and improvement of systems of PP for NM in int. transport BUT [may] for national system of p.p. for NM in domestic use, storage and transport and of NFs

“Calls upon States Parties to the CPPNM to act for the early entry into force of th[e] amendment [to the CPPNM], and encourages them to act in accordance with the object and purpose of the amendment until such time as it enters into force, and encourages all States that have not done so to adhere to the [CPPNM] and the amendment as soon as possible”

IAEA General Conference Resolution
GC(53)/RES/11 (2010)

suppression of acts of nuclear terrorism



- ✓ criminalise nuclear terrorism related offences
- ✓ investigate alleged offences
- ✓ as appropriate, arrest, prosecute, or extradite offenders

Nuclear Terrorism Convention (NTC)

- ✓ States Parties are required to adopt measures as necessary to criminalize the Article 2 offences (Article 5); establish jurisdiction (Article 9); and prosecute or extradite alleged offenders (Article 11)
- ✓ States Parties are to make every effort to adopt appropriate measures to ensure the protection of radioactive material, taking into account relevant recommendations and functions of the IAEA (Article 8)

UN Security Council Resolutions



1373 (2001): threats to int'l peace & security by terrorist acts



1540 (2004): non-proliferation of WMD

IAEA

1540 (2004)

- ✓ Adopted as binding under Chapter VII of the UN Charter
- ✓ Refers to the CPPNM and to the Radioactive Sources Code of Conduct
- ✓ Deals with WMD and non-State actors, and obliges States to:
 - ✓ adopt and enforce appropriate effective laws which prohibit any non-State actor to manufacture, acquire, possess, develop, transport, transfer or use (among other things) nuclear weapons, in particular for terrorist purposes, and to establish domestic controls to prevent the proliferation of nuclear weapons
 - ✓ implement accountancy and control and physical protection measures; border controls; measures to detect, deter, prevent and combat illicit trafficking; and import and export control measures.
- ✓ Measures mirror the IAEA's Nuclear Security Plan
- ✓ Establishes the 1540 Committee to monitor and assist implementation



safety and security of radioactive sources

CODE OF CONDUCT ON
THE SAFETY AND SECURITY OF
RADIOACTIVE SOURCES

放射源安全和保安行为准则

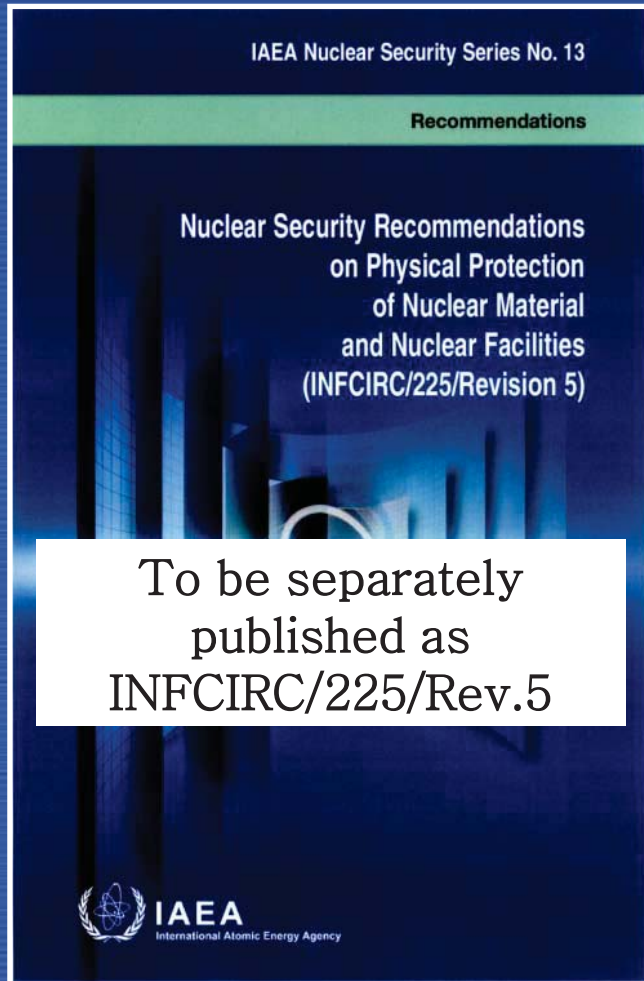
CODE DE CONDUITE SUR
LA SÛRETÉ ET LA SÉCURITÉ
DES SOURCES RADIOACTIVES

Code of Conduct on S&S of Rad. Sources and Import/ Export Guidance

مدونة قواعد السلوك بشأن أمان المصادر
المشعة وأمنها

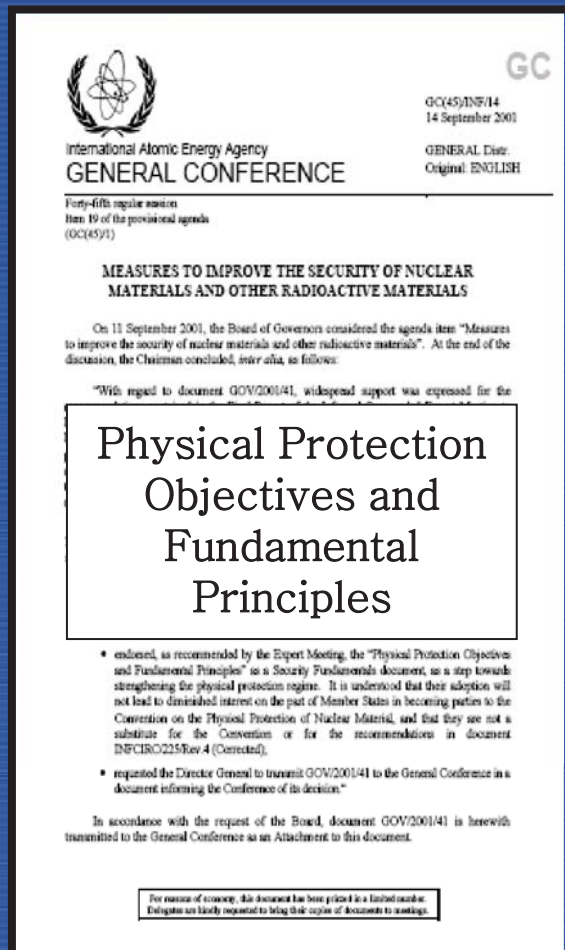


IAEA Recommendations on PP of NM & NFs



- ✓ Per se non-binding int'l standards (but P&S Agreements)
- ✓ NM in use, storage and transport
- ✓ Domestic & int'l; peaceful & military
- ✓ Protection of NM and NFs against sabotage

IAEA Physical Protection Objectives and Fundamental Principles



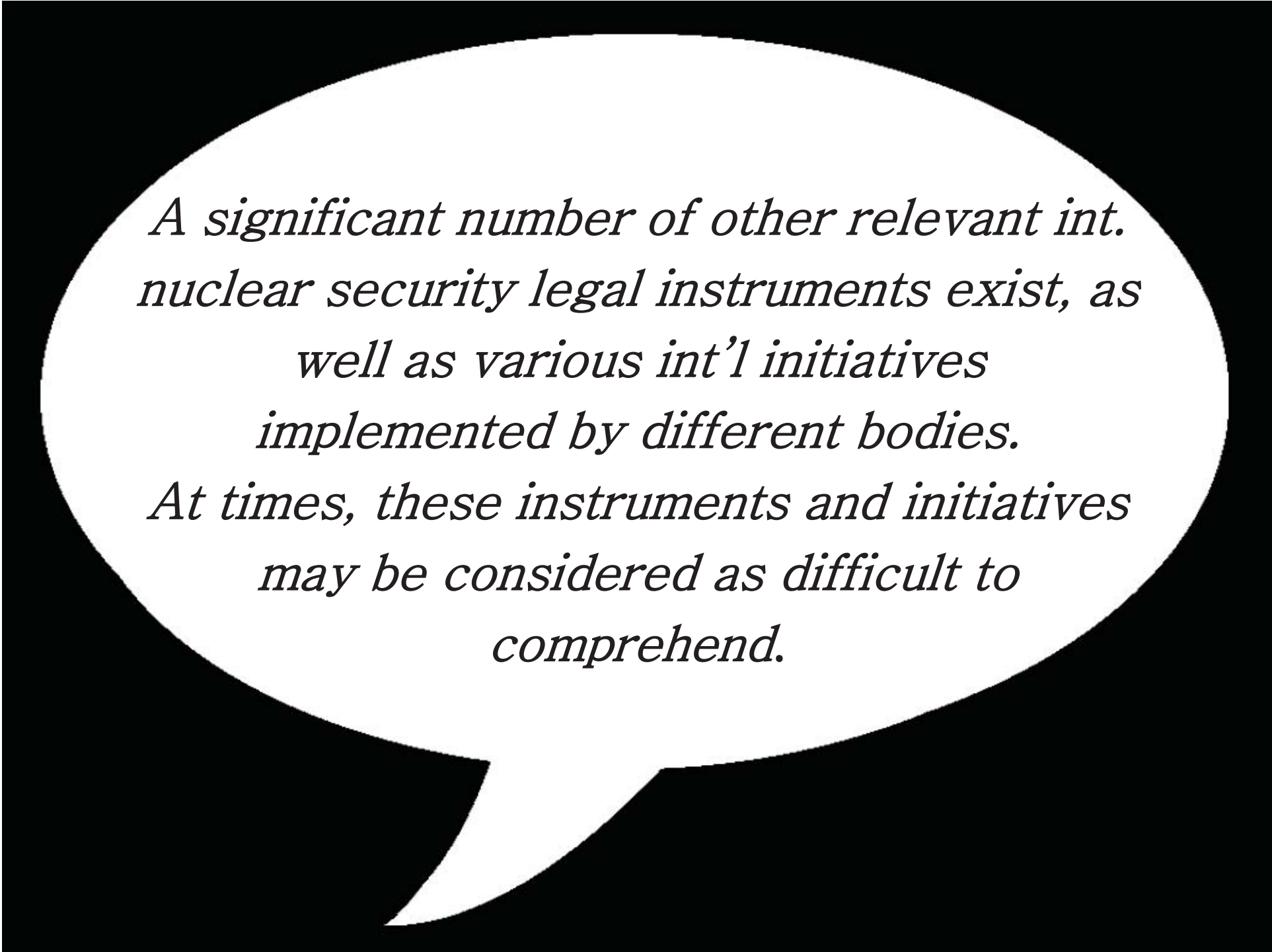
GC(45)/INF/14



- ✓ Endorsed by Board & welcomed by GC in Sept. 2001
- ✓ Based on INFCIRC/225...
- ✓ Intended for NM in use and storage, and transport, and for NFs using or storing NM
- ✓ Provides basic elements for developing national regime and preventing the theft, misuse or sabotage of NM and NFs
- ✓ Includes O&FPs later included in the 2005 Amendment to the CPPNM

Status of Relevant Int'l NS Instruments

	Parties	e.i.f.
Convention on the Physical Protection of Nuclear Material	145	1987
CPPNM Amendment	48	Not in force
Code of Conduct on S&S of Rad. Sources	103 political commitments	2003 adopted
UN Security Council Resolution (1540)	approx. 165 national reports otherwise binding on all States	2004
UN Nuclear Terrorism Convention	77	2007



*A significant number of other relevant int.
nuclear security legal instruments exist, as
well as various int'l initiatives
implemented by different bodies.
At times, these instruments and initiatives
may be considered as difficult to
comprehend.*

Observations on the Int'l Legal Framework for Nuclear Security





1st OBSERVATION

as in other fields of nuclear law, the
int'l legal framework on nuclear
security has developed
in both a
reactive and
progressive
manner



2nd OBSERVATION

there is no single
int'l instrument
or initiative
addressing nuclear security in a
comprehensive manner

3rd OBSERVATION



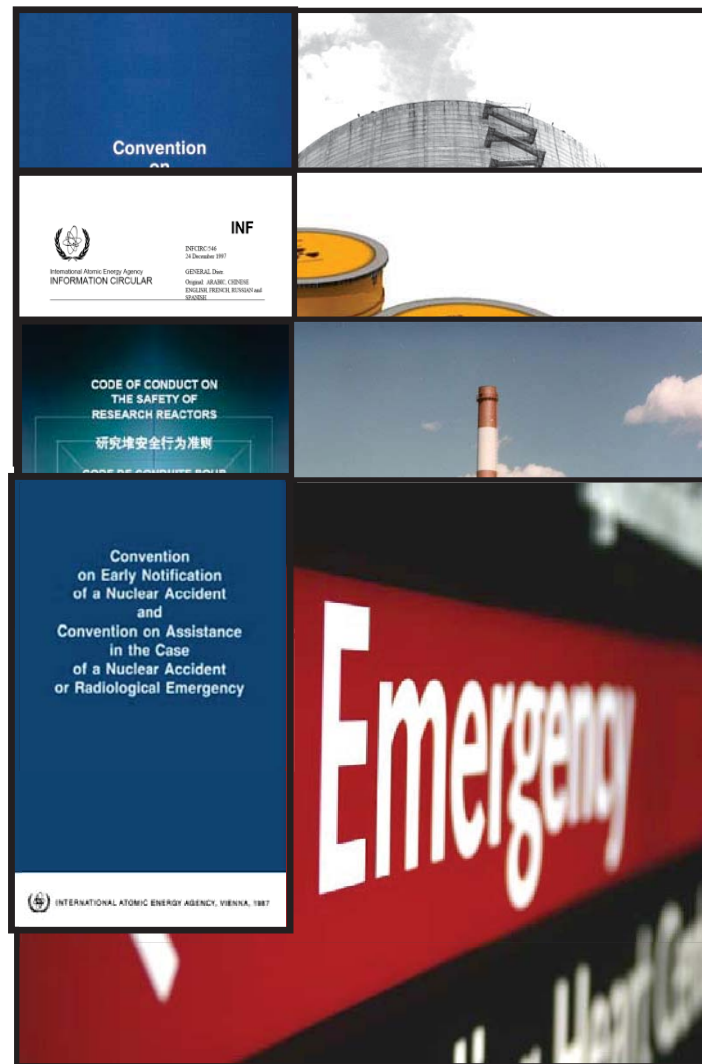
the int'l
legal framework for
nuclear security
comprises instruments
of both hard and soft law

4th OBSERVATION

the scope of the int'l legal framework for nuclear security is comprehensive providing legal, technical and administrative measures for nuclear material, other radioactive material, associated facilities and activities, nuclear weapons [...]

5th OBSERVATION

THE
BIGGER
PICTURE
safety; civil
liability for
nuclear
damage



- ✓ NPPs
- ✓ spent fuel & rad. waste
- ✓ research reactors
- ✓ emergency preparedness and response system



6th OBSERVATION

responsibility for nuclear security rests with a State
but addressing nuclear security has increasingly
become an interest of all States

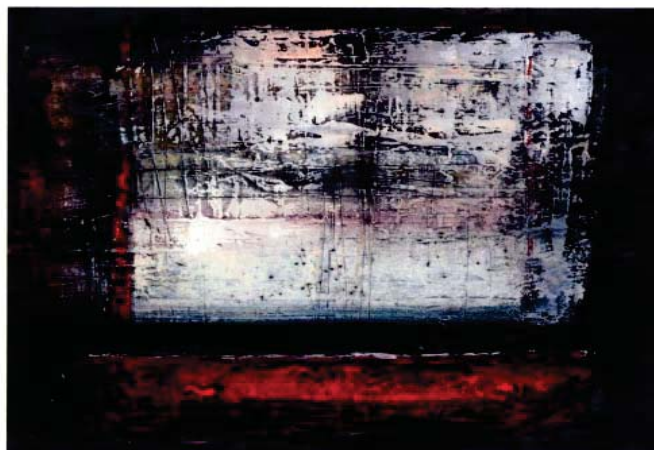
A 3D puzzle map of the world, with the landmasses in a dark blue-grey color and the oceans in white. The puzzle pieces are interlocking and have a slight shadow, giving it a three-dimensional appearance. In the top right corner, there is a red rectangular box with a thin black border containing the text '7th OBSERVATION' in white, serif, all-caps font.

7th OBSERVATION

harmonized national legal frameworks for nuclear security
can enhance and strengthen both global and national efforts
to ensure nuclear security

The International Legal Framework for Nuclear Security

IAEA International Law Series No. 4



www.ola.iaea.org

Thank you for your attention

Anthony Wetherall

Legal Officer

Nuclear and Treaty Law Section

Office of Legal Affairs

Offices Reporting to the Director General

Tel: 0043 (0)1 2600 21511

Email: a.wetherall@iaea.org

