

VERTIC's Safeguards Database

Alberto Muti

APSN 6th Annual Meeting, Tokyo, Japan

11 November 2015



VERTIC

• Work areas: nuclear non-proliferation and disarmament, nuclear test ban issues, nuclear security, CWC, BWC, UNSC1540, trade controls on conventional arms and cyber security issues.

• Activities:

- Analysis, research and development;
- Facilitation, outreach and engagement;
- Collaboration with a wider range of stakeholders.



VERTIC's Safeguards Project

- VERTIC has been running a project on IAEA Safeguards since 2012, with specific focus on the Additional Protocol;
- We work with countries to <u>raise awareness</u> and <u>build capacity</u> in safeguards implementation;
 - Main partners: Countries who are working on establishing or updating their laws and practices for safeguards implementation;
- We focus on knowledge- and experience-sharing:
 - Countries can learn from each other to find the most suitable implementation approach;
- We provide assistance only on request of our partner countries, and free of charge.

ding trust through verification VERT C

Assistance activities

- Legislation review:
 - Main goal: understanding how each country approaches the implementation of IAEA Safeguards;
 - Review of country legislative framework;
 - Receives comments and feedback from national regulator.
- Technical assistance visits:
 - Awareness-raising and provision of information on Safeguards implementation;
 - Aimed at a range of national stakeholders;
 - Can also support internal outreach;
- Other activities and services.



VERTIC Safeguards Database

Relational database used to archive and research information on countries' implementation of Safeguards;

- Key goal: facilitate experience-sharing by providing a single, comprehensive repository of knowledge.
- Current status: final prototype;
 - Core functions have been implemented;
 - Graphic User Interface first basic draft;
 - Populated with information on a sample of countries;
- We aim to have a discussion and understand what countries need: please think about questions and about how this tool could help you.



DB: Country Profile

'Homepage' of Database user interface.

- Contains key information on the country's:
 - Safeguards status for CSA, AP and SQP;
 - Legal tradition;
 - Geopolitical Region(s) of reference;
 - Affiliation to treaties, NWFZs, regional organisations or other groups;
 - Nuclear fuel cycle profile.
- This information is used to provide context to our analysis of Safeguards implementation, and to find countries with similar profiles for comparison.



Norway	IAEA Membership	10/01/1957		Full Legal Framework Survey >>
SQP Status Date No SQP	CSA Status Date INFCIRO	01/03/1972	Additional Protocol	Go To Country Summaries >> Status In Force Date 16/05/2000
	Category:	Edit tags	▼ -	



DB: Information on National Regulator

Profile of country's national regulator.

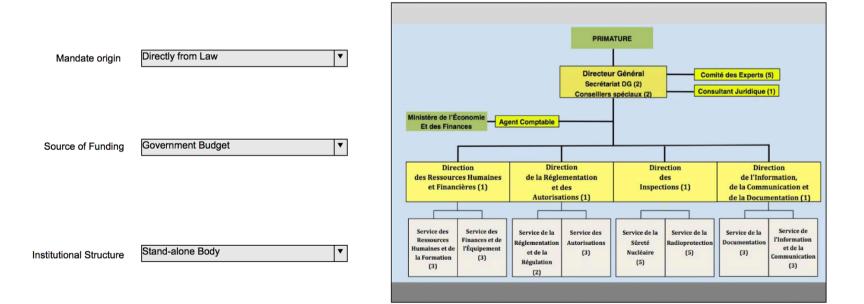
- Collects information on:
 - Origin of mandate and authority;
 - Source of funding;
 - Type of organisational structure;
 - Areas of authority;
 - Powers to provide authorisations and enforce decisions.
- Also provides an organogram of the regulator's organisational structure.

30 November 2015



Senegal	•				
	Name L'Autorite de Radioprotection	et de Surete Nucleaire	Web	http://www.arsn.sn	
	In Charge of Safeguards Reporting In Charge of Nuclear Safety In Charge of Nuclear Security	● Yes ○ No ○ Partially● Yes ○ No ○ Partially● Yes ○ No ○ Partially	In Charge of Licensing Has Enforcement Powers	● Yes ○ No ○ Partially ○ Yes ○ No ● Partially	Integrated SSS Authority Yes

Organogram





DB: Legislative Framework Survey

The legislative framework survey is the core of our analysis on Safeguards implementation.

- Analysis of how specific provisions have been adopted in the national legislation;
 - Provisions drawn from CSA, AP, IAEA guidance, and recognised best practices.
- Provisions are tagged with different 'subject areas', which help to identify and group them together for research:

Import/Export;

- Reporting;

Inspections;

National Authority;

- SSAC;

- Operator Duties.



DB: Legislative Framework Survey Provision Examples

- The state will implement a system to account for and control nuclear materials.
- Nuclear activities or activities involving nuclear materials require authorisation and/or licenses.
- Operators [of nuclear facilities within the state] are required to accept inspections by the competent authority and cooperate with inspectors.
- The state must provide the IAEA accounting and special reports on nuclear materials, based on accounting and operating records.
- IAEA inspectors are allowed to discharge their duties within the state.



DB: Legislative Framework Survey Provision Analysis

- Has the provision been implemented in national legislation?
- What order of instrument has been used to implement this provision at the national level? (e.g. law, regulation, guides)
- What is the focus of the legal instrument used for implementation? (e.g. safeguards-specific, radiation protection, etc.)
- Does the national legislation follow IAEA model text or use IAEA terminology?
- <u>Comment</u>: A short analysis of the implementation approach, with space to quote relevant laws and to explain things in more detail.



Provision ID 44

The State must provide information to the IAEA regarding all uranium mines, and uranium and thorium concentration plants, and their status.

Note: this refers to both initial information, once an AP is signed, and regular yearly updates on changes.

Reporting Mines AP

General Information | Comment Does the implementing Has the Provision Partial Match ○Yes

No ○Partially provision follow IAEA Been Implemented? Model? Does the implementing ○Yes ○No ○Partially ▼ First Order provision follow IAEA Order Of Instrument Terminology? Safeguards-Specific 2000 Type Of Instrument Year Introduced

Record Created

02/09/2015 15:30:39

Last Modified

10/11/2015 06:08:51

Add Next Provision >>



Provision ID

The State must provide information to the IAEA regarding all uranium mines, and uranium and thorium concentration plants, and their status.

Note: this refers to both initial information, once an AP is signed, and regular yearly updates on changes.

Reporting Mines

General Information | Comment

General Comment on Implementation of the Provision

Article 2 of the Nuclear Safeguards Act (2000) covers the provision of information and records for purposes of the Additional Protocol. The nature of the Article, what it involves and what types of information and records it relates to is left unclear, undefined and largely vague so that it captures all aspects of information and record keeping falls under the Additional Protocol agreement, According to the Article 2, as amended by the Energy Act (2013):

- (1) No obligation as to secrecy or other restriction on disclosure (whether imposed by statute or otherwise) prevents a person voluntarily giving information to the S Office for Nuclear Regulations if that person has reasonable cause to believe that it is Additional Protocol information.
- (2) The Office for Nuclear Regulations may serve a notice on any person requiring him to give the Office for Nuclear Regulations information, or information of a description, specified in the notice ¬¬– (a) within a period or at times specified in the notice; and (b) if the notice so provides, in such form as the notice may require.
- (3) The information required by a notice (a) must be information which Office for Nuclear Regulations has reasonable cause to believe is Additional Protocol information; and (b) may relate to a state of affairs subsisting before the coming into force of this Act or of the Additional Protocol.
- (4) A notice shall not require a person to give information which is required only for the purposes of sub-paragraph (ii) of Article 2.a. unless the notice sets out the terms, agreed by the United Kingdom. In which the [IAEA] has identified information for the purpose of that sub-paragraph. (...)
- (7) A person on whom a notice is served shall keep and retain such records of information in his possession (and retain any existing records) as may be necessary to enable him to comply with the notice; and a failure to do so shall be taken into account in proceedings for an office under subsection (5) in determine whether a reasonable excuse exists for a refusal to comply with the notice".

Record Created

02/09/2015 15:30:39

Last Modified

10/11/2015 06:08:51

Add Next Provision >>



DB: Analytical summaries

- 300-words limit: short analysis focused on key issues.
- 'General' summaries + subject-specific ones.
- Can be used to capture and record information that is not contained in the legal framework survey:
 - Practices;
 - Insights from regulator on the national approach;
 - Evolution of framework.
- Different access levels, depending on source and content:
 - Public;
 - Partners only;
 - Internal use only.

New Zealand

|▼|

Summary Text

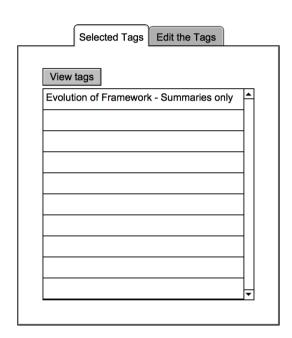
The New Zealand Parliament is currently considering the Radiation Safety Bill 2014 which, once adopted, will repeal and replace the Radiation Protection Act 1965 and its Regulations (Radiation Protection Act Commencement Order 1973, the Radiation Protection (Appeals) Regulations 1974, and the Radiation Protection Regulations 1982).

The new Act is intended to provide an enhanced legislative framework for radiation safety that responds effectively to the range of technological, scientific, and organisational changes that have occurred over the last five decades while the current Act has been in force. As well addressing both existing and emerging risks relating to radiation safety and security, it will enable New Zealand to ratify the CPPNM (amended) and ISCANT.

The Bill is also specifically intended to consolidate New Zealand's legislative framework to implement its IAEA safeguards agreements (through its provisions on international (IAEA) inspections). The new Act will also amend the Terrorism Suppression Act 2002, with respect to the definition of radioactive material, the import/export of nuclear material and in regard to demands, intimidation and use of force to obtain radioactive material. Nothing in the Bill affects or derogates from the New Zealand Nuclear Free Zone, Disarmament and Arms Control Act 1987 and the Nuclear-Test-Ban Act 1999. The provisions of the Bill will apply in conjunction with the provisions of the Atomic Energy Act 1945.

Access

- Public
- O Partner Only
- O Internal Use Only



Country Tags

Asia-Pacific	Ŀ
Australia and Oceania	l
Common Law	l
CSA Signatory	l
CSA In Force	l
AP Signatory	Ļ
	Ľ



DB: Search and report functions

A Database is an ideal tool because it can store a large amount of information, which can then be searched and sorted in different ways.

- Every single data point can be used as a search parameter.
- Special reporting function for summaries and legislative framework survey:
 - Countries can be selected using country profile tags;
 - Can find all summaries/survey provisions, or focus on specific subject areas.

Countries	○ All⑤ Specify country○ Select tag(s)	Specify a specific country	United Kingdom		
	O Select tag(s)		Finland		
			New Zealand		
			Norway		
			Senegal		
			South Africa		
			United Kingdom		
			Zambia		

sion Tags	O All			
	Select tag(s)	Specify (a) tag(s)	☐ Administrative and legal arrangements	☐ Sites and design information
			⊠AP	Source material
			□ CSA	□SQP
			☐ Decommissioning	□SSAC
			☐ Definitions	☐ State duties
			☐ Enforcement	
			☐ Exemption and termination	
			☐ IAEA cooperation, rights and duties	
			☐ Import/export	
			☐ Inspections	
			☐ Liabilities and finances	
			☐ Licensing	
			Mines	
			☐ National authority	
			☐ Notifications	
			☐ Nuclear fuel cycle development	
			☐ Nuclear waste	
			☐ Operator duties	
			☐ Record keeping	
			Reporting	

Cancel

Print

Countries	○ All ○ Specify country				
	Select tag(s)	□ ACP Group □ Advanced Nuclear Technology □ Africa □ Africa NWFZ □ African Union ⋈ AP In Force □ AP Signatory □ ASEAN □ Asia □ Asia-Pacific □ Australia and Oceania □ Caribbean □ CARICOM □ Central America □ Central Asia □ Central Asia NWFZ □ Civil Law □ Closed Fuel Cycle ⋈ Common Law □ Convention on Civil Liability	□ CSA In Force □ CSA Signatory □ CTBT □ Dualist □ East Asia □ Eastern Europe □ EU □ EURATOM □ Europe □ Exporter of Nuclear Technologies □ G7 □ ICSANT □ Large Fuel Cycle □ Latin America NWFZ ■ Middle East □ Mixed Monist-Dualist	Monist New Agenda Coalition No Fuel Cycle Activities Non-Aligned Movement North Africa North America NPT Nuclear Suppliers Group OECD Original SQP P5 Planned Nuclear Activities SE Asia NWFZ Small Fuel Cycle South Asia South East Asia South East Asia Southern America Uranium Mining Uranium Prospecting	□ West Africa □ Western Europe □ Zangger Committee
Provision Tags	Select tag(s)	Administrative and legal arrange AP CSA Decommissioning Definitions Enforcement Exemption and termination IAEA cooperation, rights and du Import/export Inspections Liabilities and finances Licensing Mines National authority Notifications Nuclear fuel cycle development Nuclear waste Coperator duties Record keeping Reporting	☐ Source material ☐ SQP ☐ SSAC ☐ State duties		

Cancel

Print

Provisions for Countries

New Zealand

11 Nuclear activities or activities involving nuclear materials requiring authorisation and/or licenses.

Note: there may be thresholds or conditions - such as type of material, or minimum amounts of material - that determine whether the activity requires licenses or authorisation. Please note if this is the case.

Tags Licensing • National authority • CSA

Has the provision been implemented? Enabling Provision

Order of instrument First Order

Type of instrument Nuclear or radioactive-specific

Does implementing provision follow IAEA model?

Does implementing provision follow IAEA terminology?

Date introduced 2014

Date introduced 20

General comment on implementation of the provision

The most recent iteration of relevant provisions are specified in the 2014 Radiation Safety Bill (not in force). In particular:

Section 14 Activities that require authorization under this Act

Section 18 Source licence

Section 22 Use licence

Section 25 Grant of consent to import or export radioactive material

Section 66 Offence to do certain things without authorisation [This is a strict liability offence, with defences specified in Section 76]

Section 68 Duties of persons who hold authorisations

Summary: Section 14 specifies the activities requiring authorisation: the manufacture, possession, management and control of a radiation source (source licence); the use of a radiation source (use licence); and the import or export of radioactive material (consent). (There are certain exceptions to the requirement for source and use licences, in Sections 16 and 17). Authorisation requests are made to, and approved by, the Director for Radiation Safety. It is an offence under Section 66 to conduct an activity in Section 14 without authorisation, with penalties of up to NZ\$100,000 (individuals) and NZ \$500,000 (organisation). It is an offence under Section 68 for source and use licence holders and consent holders to breach their duties under Sections 21, 24 and 26 respectively, with penalties of up to NZ\$50,000 (individual) and NZ\$250,000 (organisation). Offences under Sections 66 and 68 are strict liability (no requirement to prove an intent to commit the offence): Section 76 specifies certain defences (the offence was due to an act/omission of another person; an accident; some other cause outside the defendant's control; or the defendant took all reasonable steps to avoid the commission of the offence (s)).

ng trust through verification VERT C

Current Status of Database

- Final prototype;
- We are constantly working on expanding our library of case studies.
- Currently available through VERTIC:
 - Provide information to our partner countries on request;
 - Use it during our workshops;
- Plans for a new phase of the project:
 - New Graphic User Interface;
 - Considering the possibility of having parts of the database publicly accessible through an internet platform;
 - Expanding functions and use in our assistance activities.

Building trust through verification VERT C

Your Perspective

We are interested in the opinions of Safeguards practitioners:

- Expansion to 3S (Safety, Security, Safeguards);
- Issues and areas which can most benefit from knowledge- and experience-sharing:
 - ex.1: independence and legal mandate of regulator;
 - ex.2: inter-agency cooperation.
- Increasing focus on practice: which procedures and systems used for implementing Safeguards should be highlighted?
 - e.g. we will provide additional information on licensing in different countries.
- What else?