

Codebook for Radiological Source Security National Measures Database 18 September 2018 version 1.7

To better understand what the Stimson Center's database shows, please reference this Codebook. This Codebook outlines the 47 variables used to develop the database, what they mean, and any coding rules related to each variable. Additionally, this document includes information on the Stimson Center's coding strategy and search strategy to find and analyzed the laws and regulations contained in the database. Should you have questions about the Codebook or the database, please contact Dr. Richard T. Cupitt, Director of the Partnerships in Proliferation Prevention Program: rcupitt@stimson.org.

Variable 001

Variable Name: State Name

Variable Description: UN Member State Names

Value Type: Alpha

Variable Values and Labels: e.g., Afghanistan Zimbabwe

Source: <https://unstats.un.org/unsd/methodology/m49/11>

Special Coding Rules:

Variable 002

Variable Name: State Code

Variable Description: UN Member State M49 ISO codes

Value Type: Numeric

Variable Values and Labels: 4-894

Source: <https://unstats.un.org/unsd/methodology/m49/>

Special Coding Rules:

Variable 003

Variable Name: State Measure Identifier

Variable Description: UN Member State M49 ISO code plus unique number for each measure

Value Type: Numeric

Variable Values and Labels: M49 ISO code plus 0.001-0.999

Source(s): <https://unstats.un.org/unsd/methodology/m49/>

Special Coding Rules:

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Variable 004

Variable Name: State Measure Title

Variable Description: Official Title of Measure

Value Type: Alpha

Variable Values and Labels: Include

Source(s): Measure

Special Coding Rules: Official full title or official short title, but if not available put "unofficial" in parentheses.

Variable 005

Variable Name: Language of Origin

Values: Alpha

Variable Values and Labels:

Variable Description: Original Language of Measure

Source(s): Measure

Special Coding Rules: If not clear, leave it as missing data.

Variable 006

Variable Name: Language Used

Variable Description: Language of Measure Used in Data Collection

Values: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Include a URL link in parentheses or list "URL unavailable" or "URL under construction"

Variable 007

Variable Name: Regulatory Bodies

Variable Description: The name(s) of the government bodies in the measure that exercise regulatory jurisdiction over offenses and violations

Values: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: The regulatory bodies need not be a specialized nuclear regulatory authority. If the measure lists a regulatory body within a Ministry or higher bureaucratic body, link to the agency, not the higher body. Include a URL to each body in parentheses or list "URL_unavailable" or "URL under construction." Don't name a specific entity? Enter "Uncertain"

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Variable 008

Variable Name: Number of Regulatory Bodies

Variable Description: The number of government bodies in the measure that exercise regulatory jurisdiction over offenses and violations identified in the measure or linked to another measure?

Values: Numeric

Variable Values and Labels: 0, 1, 2, ...

Source(s): Measure

Special Coding Rules:

Variable 009

Variable Name: Regulatory Body Type(s)

Variable Description: The type(s) of the government bodies in the measure that exercise regulatory jurisdiction over offenses and violations

Value Type: Numeric

Variable Values and Labels: Recode as 1 = Nuclear Regulatory Authority; 2 = Other Authority; 3 = Both 1 and 2

Source(s): Measure

Special Coding Rules:

Variable 010

Variable Name: Requirements to Secure Rad Sources

Variable Description: Measure creates requirements for securing radioactive sources by stakeholders, e.g., authorized holders must take steps to prevent unauthorized access to sources.

Value Type: Numeric

Variable Values and Labels: 1 = Has requirements; 0 = No requirements

Source(s): Measure

Special Coding Rules: 1 = If the measure creates any security requirements on stakeholders, even if relatively general; 0 = No security requirements on stakeholders

Variable 011

Variable Name: Text Location of Security Requirements

Variable Description: Specific paragraph or article with security requirements

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the requirements are defined.

Variable 012

Variable Name: Prohibitions

Variable Description: Measure prohibits activities related to radioactive sources

Value Type: Numeric

Variable Values and Labels: 1 = Prohibits activities; 0 = No activity prohibitions

Source(s): Measure

Special Coding Rules: Include as 1 even if the language is very general (e.g., infringes on these requirements).

Variable 013

Variable Name: Text Location of Prohibitions

Variable Description: Specific paragraph or article of prohibitions

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the offenses are defined.

Variable 014

Variable Name: Offenses and Violations

Variable Description: Measure defines as offences or violations those **criminal or intentional unauthorized acts** involving or directed at nuclear material, other radioactive material, associated facilities or associated activities (from NSS 20, 3.5)

Value Type: Numeric

Variable Values and Labels: 1 = Defines offenses or violations; 0 = No offenses or violations defined

Source(s): Measure

Special Coding Rules: Include as 1 even if the language is very general (e.g., infringes on these requirements).

Variable 015

Variable Name: Text Location of Offences Violations

Variable Description: Specific paragraph or article of definitions of offences or violations (i.e. **criminal or intentional unauthorized acts**)

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the offenses are defined.

Variable 016

Variable Name: Graduated Penalties for Offences or Violations

Variable Description: Establishes appropriate penalties that are proportionate to the gravity of the harm that could be caused by commission of the offences or violations (from NSS 20, 3.5, (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, etc.)

Value Type: Numeric

Variable Values and Labels: 1 = Has graduated penalties; 0 = Does not have graduated penalties.

Source(s): Measure

Special Coding Rules: Increases for repeat offenders, etc., counts as 1.

Variable 017

Variable Name: Combinations of Penalties

Variable Description: Imprisonment, Fines, Combinations for Offences or Violations

Value Type: Numeric

Variable Values and Labels 1 = at least some penalty combines imprisonment and fines; 0 = no combination penalties.

Source(s): Measure

Special Coding Rules:

Variable 018

Variable Name: Death Penalty

Variable Description: Inclusion of death as a penalty.

Value Type: Numeric

Variable Values and Labels: 1 = Has the death penalty; 0 = does not have the death penalty

Source(s): Measure

Special Coding Rules:

Variable 019

Variable Name: Max Prison

Variable Description: The maximum prison sentence for any defined offense or violation in months.

Value Type: Numeric

Variable Values and Labels: 0-360 or greater, with no prison penalty option counted as 0

Source(s): Measure

Special Coding Rules: Life imprisonment = 600 months; 'shall be liable to imprisonment for a term of #' = maximum and minimum value are the same number (but not 0); has prison terms, but no numerical value = blank entries

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Variable 020

Variable Name: Max Min Prison

Variable Description: The maximum for any minimum prison sentence for any defined offense or violation in months

Value Type: Numeric

Variable Values and Labels: 0-600, with no minimum prison penalty counted as 0

Source(s): Measure

Special Coding Rules: 'shall be liable to imprisonment for a term of #' = maximum and minimum value are the same number (but not 0); 'shall be liable to imprisonment not exceeding #' = minimum is 0; has prison terms, but no numerical value = blank entries

Variable 021

Variable Name: Max Monetary Local

Variable Description: The maximum monetary penalty for any defined offense or violation, in national currency

Value Type: Numeric

Variable Values and Labels: 0-999,999,999, with no monetary penalty option counted as 0

Source(s): Measure

Special Coding Rules: 'shall be liable to a fine of #' = maximum and minimum value are the same number (but not 0); has fines, but no numerical value = blank entries.

Variable 022

Variable Name: Max Min Monetary Local

Variable Description: The maximum minimum monetary penalty for any defined offense or violation, in national currency

Value Type: Numeric

Variable Values and Labels: 0-999,999,999, with no monetary penalty option counted as 0

Source(s): Measure

Special Coding Rules: shall be liable to a fine of #' = maximum and minimum value are the same number (but not 0); 'shall be liable to a fine not exceeding #' = minimum is 0; has fines, but no numerical value = blank entries

Variable 023

Variable Name: Max Fine USD

Variable Description: The maximum fine for any defined offense or violation, in USD

Value Type: Numeric

Variable Values and Labels: 0-999,999,999, with no fine penalty counted as 0

Source(s): Measure

Special Coding Rules:

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Variable 024

Variable Name: Max Min Fine USD

Variable Description: The minimum fine prison for any defined offense or violation, in USD

Value Type: Numeric

Variable Values and Labels: 0-999,999,999, with no monetary penalty counted as 0

Source(s): Measure

Special Coding Rules:

Variable 025

Variable Name: Enforcement Bodies

Variable Description: The name(s) of the government bodies in the measure that exercise jurisdiction over offenses and violations

Values: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Include a URL to each body in parentheses or list "URL unavailable" or "URL under construction"

Difficulty: Unclear in many instances, often looks as if it's assumed to be the police

Variable 026

Variable Name: Number of Enforcement Bodies

Variable Description: The number of government bodies in the measure that exercise jurisdiction over offenses and violations

Values: Numeric

Variable Values and Labels: 0, 1, 2, ...

Source(s): Measure

Special Coding Rules: See above

Variable 027

Variable Name: Enforcement Body Type(s)

Variable Description: The type(s) of government bodies in the measure that exercise enforcement over offenses and violations

Value Type: Numeric

Variable Values and Labels: Recode as 1 = nuclear authority; 2 = other authority; 3 = combination

Source(s): Measure

Variable 028

Variable Name: Authorization or Licensing System

Variable Description: Establishes or maintains a system for authorizing activities, e.g., issuing licenses (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, Code of Conduct, Guidance)

Value Type: Numeric

Variable Values and Labels: 1 = Has an authorization system; 0 = Does not have an authorization system

Source(s): Measure

Special Coding Rules:

Variable 029

Variable Name: Licensing Penalty

Variable Description: Modify, suspend, relinquish, revoke or otherwise establishes or maintains a system for penalizing violations or offenses (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, Code of Conduct, etc.)

Value Type: Numeric

Variable Values and Labels: 1 = Has a licensing penalty; 0 = Does not have a licensing penalty

Source(s): Measure

Special Coding Rules:

Variable 030

Variable Name: Text Locations Licensing Penalty

Variable Description: Specific paragraph or article of licensing penalties (i.e. revoke, suspend)

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the penalties are defined.

Variable 031

Variable Name: Inspector Authority or System

Variable Description: Establishes or maintains a system for inspecting activities (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, Code of Conduct, Guidance)

Value Type: Numeric

Variable Values and Labels: 1 = has an inspector authority/system; 0 = Does not have an inspector authority/system

Source(s): Measure

Special Coding Rules:

Variable 032

Variable Name: Inspector Penalty Authority

Variable Description: Immediate enforcement measures may need to be taken directly by inspectors, particularly in cases which may pose an imminent risk of radiological injury to persons or substantial damage to property or the environment. In this regard, inspectors should have the authority to suspend or prohibit activities and to require corrective actions by the authorized person (licensee) (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, Code of Conduct, etc.)

Value Type: Numeric

Variable Values and Labels: 1 = Inspector has authority to suspend activities and require corrective actions; 0 = Inspector does not have such authority

Source(s): Measure

Special Coding Rules: Inspector has authority to impose penalties or take other enforcement actions.

Variable 033

Variable Name: Text Location for Inspector Penalty Authority

Variable Description: Specific paragraph or article of inspector penalty authority.

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the penalties are defined.

Variable 034

Variable Name: Warning Penalty

Variable Description: Other measure for minor violations to prompt corrective action (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION)

Value Type: Numeric

Variable Values and Labels: 1 = Can issue a warning; 0 = Does not have a warning penalty

Source(s): Measure

Special Coding Rules: Needs to be explicit.

Variable 035

Variable Name: Text Location for Warning Penalty

Variable Description: Specific paragraph or article of warning

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the penalties are defined.

Variable 036

Variable Name: Immediate Action

Variable Description: Requires responsible parties (generally, the user) to take corrective action as soon as possible (from HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, Code of Conduct, etc.)

Value Type: Numeric

Variable Values and Labels: 1 = Responsible party must take corrective action as soon as possible; 0 = Responsible party does not have to take corrective action as soon as possible

Source(s): Measure

Special Coding Rules: Inspector has authority to require immediate action by the responsible party. Need to see the words immediate, as soon as possible. Requiring a prior written letter or other measure means it's not immediate.

Variable 037

Variable Name: Text Location for Immediate Action

Variable Description: Specific paragraph or article of licensing penalties (i.e. revoke, suspend)

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the immediate action is defined.

Variable 038

Variable Name: National Registry of Sources

Variable Description: Does the measure establish a national registry of radioactive sources

Value Type: Numeric

Variable Values and Labels: 1 = Has a national registry; 0 = Does not have a national registry;

Source(s): Measure

Special Coding Rules: The national registry refers only to a national registry of radioactive sources that indicates who has controls the source, the nature of the source, and where it is located (including if it's mobile). It does not refer to a HS code or appearance on a trade control list of similar listing. Define – get official IAEA definition. Need specific reference to sources. It needs to be explicit.

Variable 039

Variable Name: Linking Penalties and Registry of Sources

Variable Description: Does the measure link the penalties with the registry from (NSS 20, 3.5, HANDBOOK ON NUCLEAR LAW: IMPLEMENTING LEGISLATION, etc.)

Value Type: Numeric

Variable Values and Labels: 1 = Links; 0 = Does not link with national registry

Source(s): Measure

Special Coding Rules: The national registry refers only to a national registry of radioactive sources that indicates who has controls the source, the nature of the source, and where it is located (including if it's mobile). It does not refer to a HS code or appearance on a trade control list of similar listing. It does not cover a registry of licenses (see variable on licensing registry)

Variable 040

Variable Name: National Registry of Licenses

Variable Description: Does the measure establish a national registry of radioactive licenses

Value Type: Numeric

Variable Values and Labels: 1 = Has a national registry; 0 = Does not have a national registry;

Special Coding Rules: The national registry refers only to a national registry of licenses. It does not refer to a HS code or appearance on a trade control list of similar listing, nor to the registry of sources, if one exists. It needs to be explicit.

Variable 041

Variable Name: List of Controlled Sources

Variable Description: Measure establishes, includes or references a list of controlled radioactive sources

Value Type:

Variable Values and Labels: 1 = Refers to a list of radioactive sources; 0 = No list of radioactive sources

Source(s): Measure

Special Coding Rules: General, but at least identify some specific types of sources

Variable 042

Variable Name: Other Penalties

Variable Description: Penalties other than imprisonment, fines, licensing, warning, or corrective action identified in other variables

Value Type:

Variable Values and Labels: 1 = Has other penalties; 0 = does not have other penalties

Source(s): Measure

Special Coding Rules: Include a note in the comment variable on the type of penalties. E.g., Seizures, but we might want to keep track

Variable 043

Variable Name: Text Location for Other Penalty or Penalties

Variable Description: Specific paragraph or article of the other penalties (e. g., seize)

Value Type: Alpha

Variable Values and Labels:

Source(s): Measure

Special Coding Rules: Only list the articles where the other penalties are defined.

Variable 044

Variable Name: Training for Stakeholders

Variable Description: Does the measure establish or maintain a training program for stakeholders, e.g., users, industry, other government ministries (from Code of Conduct)

Value Type: Numeric

Variable Values and Labels: 1 = Has a training program; 0 = Does not have a training program

Source(s): Measure

Special Coding Rules:

Variable 045

Variable Name: Awareness Raising for Stakeholders

Variable Description: Does the measure establish or maintain awareness raising for stakeholders, e.g., users, industry (from Code of Conduct)

Value Type: Numeric

Variable Values and Labels: 1 = Has an awareness raising program; 0 = Does not have an outreach program

Source(s): Measure

Special Coding Rules: Includes informing them if there is an incident or general education

Variable 046

Variable Name: Awareness raising for the Public

Variable Description: Does the measure establish or maintain awareness raising for the general public (from Code of Conduct)

Value Type: Numeric

Variable Values and Labels: 1 = Has an awareness raising program for the general public; 0 = Does not have an outreach program for the general public

Source(s): Measure

Special Coding Rules: Includes informing them if there is an incident or general education

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Variable 047

Variable Name: Comment

Variable Description: Space for comments by the coder

Value Type: Alpha

Variable Values and Labels:

Source(s): Coder

Special Coding Rules:

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30
years

Additional Coding Rules

- Don't include IAEA agreements
- Don't include repealed Acts or Regulations
- Limit to laws and regulations
- Keep one ROW just for the country and code with no measure numbers, e.g., country, number, then all missing data until the comment section. This allows for some general comments on the country to be kept in this database.

Search Strategy Decisions

- Only include acts that include radioactive, radiological, or nuclear in the text. Exclude general customs, health or environmental acts without specific references to those terms.
- Separately, coders should keep track of how much time it takes to code each measure found
- Start with the measures listed in the 1540 Matrix for each country, using the sections on accounting for, securing and physically protecting nuclear weapons related materials
- Review the VERTIC database on nuclear measures for that country
- Search for additional measures on the websites of the national regulatory bodies
- Review <http://www.paclii.org/>, ILO's NATLEX, FAO, Lexadin, wipolex, <https://www.oecd-ilibrary.org/fr/nuclear-energy/nuclear-law-bulletin>, <http://referenceworks.brillonline.com.turing.library.northwestern.edu/browse/foreign-law-guide>, or similar databases
- Special search terms: penalty, violation, offence (or offense), regist(ry), cadastre, fine, (im)prison, death, life, warn(ing), license, authoriz(ation), nuclear, radio(active/logical), atomic, sanction, infringe(ment), infraction, seize
- Treat measures not in English or an easily translatable language as missing data (for now), but record original language, although if possible translate the above terms
- Treat measures not found besides the title as missing data (for now)

- Review statements by States at the IAEA General Conferences since 2014 for new measures and other IAEA presentations
- Include transport/export laws if there is a security obligation for radiological sources.
- When security implications are ambiguous, leave the Measure Identifier Code blank.
- If a law/regulation requires access controls, fences, security/police force, these are considered security obligations. Surveillance measures may be considered security obligations or may only be considered safety obligations. This will depend on the law/regulation and what type of surveillance is required.
- Include Criminal/Penal Codes only when a law/regulation refers to it for penalties
- For countries where you are unable to access texts of laws/regulations, include the name of the law/regulation and leave as missing data.
- For laws/regulations that cannot be translated via Google Translate, do not include in the database, but do make a note of their existence for future work/review.
- If a law/regulation had penalties but defined those penalties by referencing another document, include the penalties from the referenced document in that entry and then note in 'Comments' which document those penalties were found in.
- When the law/regulation does not have a defined fine (i.e. 5x monthly wages), denote as the law/regulation stipulates.
- When the law/regulation has fines, but does not stipulate what those fines are, leave blank and then note in 'Comments' that the law has fines but does not provide a numerical value.