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 analyze 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:
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”
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
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:
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
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:
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


- 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.