Codebook for 2020 ChemLEXIS Measure-Level Data
As of January 6, 2020

Variable 001
**Variable Name:** State Name
Variable Description: UN Member State Names
Variable Values and Labels: e.g., Afghanistan .... Zimbabwe
Source: [https://unstats.un.org/unsd/methodology/m49/](https://unstats.un.org/unsd/methodology/m49/)
Special Coding Rules: N/A

Variable 002
**Variable Name:** Region Name
Variable Description: Region Name
Variable Values and Labels: N/A
Source(s): Determined by coders at The Henry L. Stimson Center.
Special Coding Rules: N/A

Variable 003
**Variable Name:** UN State Code
Variable Description: UN Member State M49 ISO codes
Variable Values and Labels: 004-894
Source: [https://unstats.un.org/unsd/methodology/m49/](https://unstats.un.org/unsd/methodology/m49/)
Special Coding Rules: N/A

Variable 004
**Variable Name:** State Measure Identifier
Variable Description: UN Member State M49 ISO code plus unique number for each measure.
Variable Values and Labels: M49 ISO numeric code plus 0.001-0.999
Source(s): [https://unstats.un.org/unsd/methodology/m49/](https://unstats.un.org/unsd/methodology/m49/)
Special Coding Rules: N/A

Variable 005
**Variable Name:** State Measure Type
Variable Description: Categorization of the type of measure (i.e. International Obligation, Transportation, Environmental, Trade, Chemical Safety, Industrial, Security, or Other).
Variable Values and Labels: International Obligation, Transportation, Environmental, Trade, Chemical Safety, Industrial, Security, or Other.
Source(s): Determined by coders at The Henry L. Stimson Center.
Special Coding Rules:
Chemical Safety - A measure to protect the life and health of humans and the environment against harmful effects arising from toxic/hazardous substances caused by their manufacturing, packaging, marketing, labeling, acquisition, transportation, import/export, storage, use or treatment. Outlines specific safety measures and duties of care. This type of law outlines measures to prevent major accidents and limit consequences related to chemical substances.

Environmental - A measure to manage and control hazardous substances and wastes throughout their life cycles to prevent any harmful effects on the environment and human health.

Industrial - A measure to regulate and control the importation, storage, manufacture, sale, transportation, disposal, custody, and use of pesticides and toxic chemicals. This type of law is different from ‘Chemical Safety’ because its primary purpose is procedural rather than protective for human/environmental health.

International Obligation - A measure to provide legislative basis for national implementation of the Chemical Weapons Convention to comply with international obligations.

Security – A measure to secure hazardous/toxic substances, wastes and/or related facilities from unauthorized access, theft, diversion, and illicit use.

Trade - A measure to manage and conduct domestic and foreign trade (import, export, re-export, transit, transshipment) of chemical-related goods.

Transportation - A measure to outline conditions under which transportation of toxic/hazardous substances and wastes is safely and securely performed and activities related to that transport (preparation for transport, loading, unloading, etc.).

Other - A measure that does not fit under any of the law types defined above.

Variable 006

Variable Name: State Measure Title
Variable Description: Official Title of Measure
Variable Values and Labels: N/A
Source(s): As specified in the legal measure.
Special Coding Rules: N/A
Variable 007

**Variable Name: Names of Regulatory Bodies**
Variable Description: The name(s) of the government bodies in the measure that exercise regulatory jurisdiction over main elements of law or regulation.
Variable Values and Labels: N/A
Source(s): As specified in the legal measure.
Special Coding Rules: Include a URL to each body in parentheses.

Variable 008

**Variable Name: Requirements to Secure Chemical Weapons-Related Materials and Facilities**
Variable Description: Does the measure create requirements to secure toxic chemicals, other chemicals of proliferation concern, and/or related facilities, technology, and equipment by stakeholders (e.g., are authorized holders required to take steps to prevent unauthorized access to sources)?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 009

**Variable Name: Text Location of Requirements to Secure**
Variable Description: Specific paragraph or article with security requirements
Variable Values and Labels: N/A
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 010

**Variable Name: Defines Criminal Offenses and Violations**
Variable Description: Does the measure define as offences or violations those criminal or intentional unauthorized acts involving or direct at toxic chemicals, other chemicals of proliferation concern, and/or related facilities, technology, and equipment?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A
Variable 011
**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)
**Variable Values and Labels:** N/A
**Source(s):** As specified in the legal measure.
**Special Coding Rules:** N/A

Variable 012
**Variable Name:** Penalty Provision – Imprisonment
**Variable Description:** Does the measure include imprisonment as a penalty?
**Variable Values and Labels:** ‘Yes’ or ‘No’
**Source(s):** As specified in the legal measure.
**Special Coding Rules:** N/A

Variable 013
**Variable Name:** Maximum Prison Sentence
**Variable Description:** The measure’s maximum prison sentence for any defined offense or violation in months, with a maximum of 600 months for life imprisonment.
**Variable Values and Labels:** 0-600, with no prison penalty option counted as 0.
**Source(s):** As specified in the legal measure.
**Special Coding Rules:** Life imprisonment = 600 months.

Variable 014
**Variable Name:** Maximum Minimum Prison Sentence
**Variable Description:** The measure’s maximum for any minimum prison sentence for any defined offense or violation in months, with a maximum of 600 months for life imprisonment.
**Variable Values and Labels:** 0-600, with no minimum prison penalty counted as 0
**Source(s):** As specified in the legal measure.
**Special Coding Rules:** Life imprisonment = 600 months.

Variable 015
**Variable Name:** Penalty Provision – Fines
**Variable Description:** Does the measure include fines as a penalty?
**Variable Values and Labels:** ‘Yes’ or ‘No’
**Source(s):** As specified in the legal measure.
**Special Coding Rules:** N/A
Variable 016  
**Variable Name: Maximum Monetary Penalty**  
Variable Description: The measure’s maximum monetary penalty for any defined offense or violation in national currency and/or US dollars (as converted in 2019).  
Variable Values and Labels: 0-999,999,999, with no monetary penalty option counted as 0. ‘Undefined’ indicates that the measure has fines but does not define what the monetary amount is.  
Source(s): As specified in the legal measure.  
Special Coding Rules: N/A

Variable 017  
**Variable Name: Maximum Minimum Monetary Penalty**  
Variable Description: The measure’s maximum for any minimum monetary penalty for any defined offense or violation in national currency and/or US dollars (as converted in 2019).  
Variable Values and Labels: 0-999,999,999, with no monetary penalty option counted as 0. ‘Undefined’ indicates that a measure has fines but does not define what the monetary amount is.  
Source(s): As specified in the legal measure.  
Special Coding Rules: N/A

Variable 018  
**Variable Name: Defines Other Penalties**  
Variable Description: Does the measure include penalties other than imprisonment or fines (e.g. search and seizure, suspension of license, etc.)?  
Variable Values and Labels: ‘Yes’ or ‘No’  
Source(s): As specified in the legal measure.  
Special Coding Rules: N/A

Variable 019  
**Variable Name: Text Location for Other Penalties**  
Variable Description: Specific paragraph or article of the other penalties (e.g., suspend, stop, seize)  
Variable Values and Labels: N/A  
Source(s): As specified in the legal measure.  
Special Coding Rules: N/A
Variable 020

**Variable Name: Registration System**

Variable Description: Does the measure require facilities or users to register toxic chemicals, other chemicals of proliferation concern, and/or related facilities, technology, and equipment?

Variable Values and Labels: ‘Yes’ or ‘No’

Source(s): As specified in the legal measure.

Special Coding Rules: N/A

Variable 021

**Variable Name: Authorization or Licensing System**

Variable Description: Does the measure establish or maintain a system for authorizing activities, e.g., issuing licenses for toxic chemicals, other chemicals of proliferation concern, and/or related facilities, technology, and equipment?

Variable Values and Labels: ‘Yes’ or ‘No’

Source(s): As specified in the legal measure.

Special Coding Rules: N/A

Variable 022

**Variable Name: Inspector Authority or System**

Variable Description: Does the measure establish or maintain a system for inspecting users, activities, stockpiles, or facilities?

Variable Values and Labels: ‘Yes’ or ‘No’

Source(s): As specified in the legal measure.

Special Coding Rules: N/A

Variable 023

**Variable Name: Requires Access Controls**

Variable Description: Does the measure require controls on access to toxic chemicals, other chemicals of proliferation concern, and/or related facilities, technology, and equipment?

Variable Values and Labels: ‘Yes’ or ‘No’

Source(s): As specified in the legal measure.

Special Coding Rules: N/A
Variable 024
**Variable Name: Requires Physical Security**
Variable Description: Does the measure require physical security or physical protection measures (e.g. gates)?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 025
**Variable Name: Requires Security Guards**
Variable Description: Does the measure require use of security guards for facilities or activities?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 026
**Variable Name: Requires Background Checks**
Variable Description: Does the measure require background checks for users or those accessing facilities or chemicals of proliferation concern?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 027
**Variable Name: National Registry of Chemicals of Concern**
Variable Description: Does the measure establish or refer to a national registry of chemicals of concern?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: The national registry refers only to a national registry of chemicals or items of concern that indicates who controls the chemical, the nature of the chemical, 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. Needs specific reference to chemicals.
Variable 028

Variable Name: National Registry of Registrations / Licenses
Variable Description: Does the measure establish a national registry of user registrations or licenses?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: It does not refer to a HS code or appearance on a trade control list of similar listing, nor to the registry of chemicals of concern, if one exists. It needs to be explicit.

Variable 029

Variable Name: Refers to a List of Controlled Chemicals, Technologies, and/or Equipment of Concern
Variable Description: Does the measure establish, include, or reference a list of controlled chemicals, technologies, and/or equipment of concern?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: This differs from a registry because a registry is a list of everything a facility has. This is a list of only what is controlled.

Variable 030

Variable Name: Requires Supply Chain Verification
Variable Description: Does the measure require some supply chain verification practices (e.g. end-user verification)?
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A

Variable 031

Variable Name: Requires Proliferation-Resistant Chemistry
Variable Description: Does the measure require some efforts to design or operate in ways that reduce the risk of proliferation (e.g. reducing the mixtures of chemicals of concern)? Similar to the concept of Green Chemistry.
Variable Values and Labels: ‘Yes’ or ‘No’
Source(s): As specified in the legal measure.
Special Coding Rules: N/A
Variable 032  
**Variable Name: Requires Incident Reporting**  
Variable Description: Does the measure require reporting of incidents to authorities?  
Variable Values and Labels: ‘Yes’ or ‘No’  
Source(s): As specified in the legal measure.  
Special Coding Rules: Incidents include theft, diversion, fraud, breach of facility, tampering with material/equipment, cyber sabotage, etc. For instance, see US DHS Risk-Based Performance Standards Guidance Document.

Variable 033  
**Variable Name: Requires Threat Reporting**  
Variable Description: Does the measure require reporting of threats to authorities?  
Variable Values and Labels: ‘Yes’ or ‘No’  
Source(s): As specified in the legal measure.  
Special Coding Rules: Threats include threats of theft, diversion, fraud, breach of facility, cyber sabotage, other criminal activity. For instance, see American and European versions of Responsible Care Security Code.

Variable 034  
**Variable Name: Requires Risk-Based Security System**  
Variable Description: Does the measure require facilities or users to implement a risk-based security system or risk-based security plans?  
Variable Values and Labels: ‘Yes’ or ‘No’  
Source(s): As specified in the legal measure.  
Special Coding Rules: N/A

Variable 035  
**Variable Name: Training for Stakeholders**  
Variable Description: Does the measure establish or maintain a training program for key stakeholders (e.g. users, industry, other governmental ministries, etc.)?  
Variable Values and Labels: ‘Yes’ or ‘No’  
Source(s): As specified in the legal measure.  
Special Coding Rules: Stakeholders include: users, industry, other government ministries, facility employees, contractors, service providers, value chain partners, transport staff, scientists, students, safety officers, researchers—all personnel who do come into contact with chemical materials, equipment, and technology. For instance, see US DHS Chemical Sector Security Awareness Guide and The Hague Ethical Guidelines.
Variable 036  
**Variable Name:** Awareness Raising for Stakeholders  
**Variable Description:** Does the measure establish or maintain awareness-raising activities for stakeholders (e.g. users, industry)?  
**Variable Values and Labels:** ‘Yes’ or ‘No’  
**Source(s):** As specified in the legal measure.  
**Special Coding Rules:** N/A

Variable 037  
**Variable Name:** Chemical Security Measure Index Score  
**Variable Description:** A cumulative score of chemical security indicators found within an individual measure that ranges from 0 (a measure has no security indicators) to 21 (a measure has all security indicators).  
**Variable Values and Labels:** Ranges from 0 (no indicators) to 21 (has all chemical security indicators)  
**Source(s):** Determined by coders at The Henry L. Stimson Center. Index scores are based upon the number of ‘Yes’ values indicated in the following variables:  
- 010 Defines Criminal Offenses and Violations  
- 013 Penalty Provision: Imprisonment  
- 015 Penalty Provision: Fines  
- 018 Defines Other Offenses  
- 020 Registration through 036 Awareness Raising for Stakeholders (inclusive)  
**Special Coding Rules:** N/A

Variable 038  
**Variable Name:** URL Link to Legal Text  
**Variable Description:** Link to text of state measure.  
**Variable Values and Labels:**  
**Source(s):**  
**Special Coding Rules:** N/A
Search Strategy Decisions

- Only include acts that include chemicals or other items of chemical weapons proliferation concern. Exclude general customs, health or environmental acts without specific references to those terms.

- Laws/regulations related to pesticides and/or dangerous/hazardous substances and/or wastes that are defined as chemicals and/or toxic should be coded.

- Start with the measures listed in the 1540 Matrix for each country, using the sections on accounting for, securing and physically protecting chemical weapons related materials and the sections on trade in such materials. Also review the narrative national reports for each country.

- Search for additional measures on the websites of the national authorities for the CWC, then other related regulatory bodies as they are identified.


- Special search terms: penalty, violation, offence (or offense), regist(ry), cadastre, fine, (im)prison, license, authoriz(ation), chemical, sanction, infringe(ment), infraction, seize, Chemical Weapons Convention, Chemical(s) of Concern (COC), physical security, toxic chemical(s).

- Review statements by States at the CWC Conference of State Parties since 2015 for new measures.

- Laws/regulations that only discuss ‘hazardous waste’ and ‘hazardous substances’ and make no explicit reference to chemical substances/materials/waste and/or toxic substances/materials/waste should not be coded.

- Laws/regulations that discuss ‘explosive’ substances/chemicals for demolition and pyrotechnic purposes should not be coded.
- Laws/regulations implementing the CWC that require security for an actual chemical weapon (either abandoned or in the process of destruction) and/or that require security of OPCW inspectors should **not** be coded.

- If a measure does not talk about chemical storage in a sense that the chemicals must be physically secured during storage, then the measure should **not** be coded.