

Supplementary materials.

Translation of core terms of chemical risk assessment into the language of systematic review: research protocol

Table S-1. The process for defining a core SR term. SEVCO: Scientific Evidence Code System. PG, project group; SAG, scientific advisory group, SEVCO, Scientific Evidence Code System; SR, systematic review.

Step	What and who is responsible
1. Definitions of core SR terms available in SEVCO are identified.	Relevant SEVCO definitions will be collected. These definitions are the preferred definitions for the terms and used as starting point (step 5).
2. Commonly used definitions of the core SR terms are identified. <i>This step is only performed for terms without a SEVCO definition.</i>	Definitions will be collected from the documents in Table 1. If definitions are not available in these documents, glossaries from the institutions preparing the manuals/handbooks will be used. Two PG members will extract the definitions from the documents independently, and then meet to prepare a table containing all identified definitions of the core SR terms. The table will be made available as supplementary materials.
3. Suggestion of preferred definitions of the core SR terms. <i>This step is only performed for terms without a SEVCO definition.</i>	Based on the collected definitions for each term (step 2), a preferred definition will be suggested by the PG, and these will be finalised after feedback from the SAG.
4. Assembling of an expert group with PG members, SAG members, and additional experts, all self-	PG and SAG members will distribute information on the possibility to participate in the SR expert group through their networks.

Step	What and who is responsible
identifying as having relevant SR expertise.	PG will send information about the role of the expert group members to all interested participants.
5. Discussion of suggested definitions in expert group meetings.	<p>The group will have weekly online meetings and be chaired by a PG member. The preferred definitions will be the starting point for the discussions.</p> <p>PG will distribute the preferred definitions to the expert group members five working days before each meeting.</p> <p>The expert group will discuss and agree on definitions of the terms. Definitions for three SR terms are planned to be discussed at each meeting.</p> <p>The preferred definitions will be revised according to the discussion.</p>
6. Identification of agreement on discussed definitions.	<p>After each meeting, the expert group members will vote (online) “agree” or “not agree” on the revised definition within five working days.</p> <p>PG will send a reminder on day four to expert group members who have not voted. Votes and feedback received after the deadline will not be included.</p> <p>The criteria for agreement are: i) unanimous voting for “agree” AND ii) ≥5 voters.</p> <p>PG will collect votes from the expert group and create an overview of the definitions where there was agreement and the definitions where the voting results did not fulfil the criteria for agreement.</p>
7. Suggestion of changes to the	For those definitions that did not reach unanimous agreement, the expert group members will be

Step	What and who is responsible
definitions where no agreement was reached.	<p>requested to suggest alternative definitions together with rationales for the suggested changes by email.</p> <p>PG will create an overview of all suggested alternative definitions and the rationales for the suggested changes.</p>
<p>8. Discussion of alternative definitions in expert group meetings</p>	<p>The alternative definitions will be discussed in a second meeting. The alternative definitions will be distributed by a PG member five working days before the meeting.</p> <p>The definitions are revised according to the discussion.</p>
<p>9. Identification of agreement on discussed alternative definitions</p>	<p>Same process as step 6.</p> <p>The criteria for agreement for definitions for terms that are discussed for the second time are: i) at least 80% of the voters voted “agree” and ii) ≥5 voters.</p>
<p>10. Repeat steps 7 to 9 for definitions where no agreement was reached.</p>	<p>For those definitions where agreement was not reached after two rounds of voting, step 7-9 should be repeated until 80% agreement is reached.</p>
<p>11. Publishing of the definitions of the SR terms.</p>	<p>PG will draft the manuscript and all co-authors review the manuscript before submission by the PG.</p>

Table S-2. Illustrating the cross-mapping process.

Step	What
<p>1. Identification of relationships between core CRA terms and core SR terms.</p>	<p>PG will suggest related terms based on the SR definitions derived in phase 3 and the CRA definitions identified in phase 2. PG will finalise the mapping of relationships between the terms after feedback from the SAG.</p>
<p>2. Performance of the pilot cross-mapping.</p>	<p>A pilot cross-mapping will be performed to create draft descriptions of the relationship between related core CRA and SR terms.</p> <p>Note that the CRA definitions will be restricted to a maximum of three definitions for each term that are selected by expert judgement by PG and SAG from the overview created in phase 2.</p>
<p>3. Assembling of an expert group with PG members, SAG members, and additional experts, all self-identifying as having relevant SR and/or CRA expertise.</p>	<p>PG and SAG members will distribute information on the possibility to participate in the expert group through their networks.</p> <p>PG will send information about the role of the expert group members to all interested participants.</p>
<p>4. Discussion of suggested descriptions in expert group meetings.</p>	<p>The group will have weekly online meetings and be chaired by a PG member.</p> <p>The expert group will discuss and agree on descriptions of the relationships between CRA and SR terms. The drafted descriptions of the relationship between CRA and SR terms created in the pilot cross-mapping will be the starting point for the discussion in the meetings.</p> <p>PG will send the draft descriptions of the relationship between CRA and SR terms to be discussed at the</p>

Step	What
	<p>meeting and definitions of the terms. The information will be sent at least five days before each meeting. The information will be sent to all persons that have received or been forwarded the meeting invitation.</p> <p>Three descriptions of relationships are planned to be discussed at each meeting.</p> <p>The drafted descriptions will be revised according to the discussion.</p>
<p>5. Identification of agreement on discussed descriptions.</p>	<p>After each meeting, the expert group will vote (online) “agree” or “not agree” on each discussed descriptions within five working days. Feedback received after the deadline will not be included.</p> <p>PG will send a reminder on day four to expert group members who have not voted. Votes and feedback received after the deadline will not be included.</p> <p>The criteria for agreement are: i) unanimous voting for “agree” AND ii) ≥5 voters.</p> <p>PG will collect votes from the expert group and create an overview of the descriptions where there was agreement and the descriptions where there was no agreement.</p>
<p>6. Suggestion of changes to the descriptions where no agreement was reached.</p>	<p>The expert group will be requested to suggest alternative descriptions for the terms where agreement was not reached. Rationales for the suggested changes should be included.</p> <p>For those descriptions that did reach unanimous agreement, the expert group members will be requested to suggest alternative descriptions together with rationales for the suggested changes.</p>

Step	What
	PG will create an overview of all suggested alternative descriptions and the rationales for the suggested changes.
7. Discussion of alternative descriptions in expert group meetings	<p>The alternative descriptions will be discussed in a second meeting. The alternative definitions will be distributed to the expert group members by a PG member five working days before the meeting.</p> <p>The definitions are revised according to the discussion.</p>
8. Identification of agreement on discussed alternative descriptions.	<p>Same process as step 5.</p> <p>The criteria for agreement for definitions for terms that are discussed for the second time are: i) at least 80% of the voters voted “agree” AND ii) ≥ 5 voters.</p>
9. Repeat steps 6 to 8 for descriptions where no agreement was reached.	For those descriptions where agreement was not reached after two rounds of voting, step 6-8 should be repeated until 80% agreement is reached.
10. Publishing of the descriptions of the relationship between the SR and the CRA terms.	PG will draft the manuscript and all co-authors review the manuscript before submission by the PG.

Table S-3. Illustrating the presentation of the SR and CRA core terms.

Category	Core SR terms (in alphabetical order)	Core CRA terms (in alphabetical order)
“Very important”	Term 1, term 2, etc.	Term 1, term 2, etc.
“Important”	Term 1, term 2, etc.	Term 1, term 2, etc.
“Moderately important”	Term 1, term 2, etc.	Term 1, term 2, etc.

Table S-4. Illustrating the presentation of the catalogued definitions of the core CRA terms.

Core CRA term (in alphabetical order)	CRA Term Definition
Term 1	[Definition 1]
	[Definition 2]
	[Definition 3]
Term 2	[Definition 1]
	[Definition 2]
	[Definition 3]
Term 3	[Definition 1]
	[Definition 2]
Etc.	

Table S-5. Illustrating the presentation of the authoritative definitions of preferred SR terms and synonymous SR terms.

Core SR term (in alphabetical order)	SR Term Definition	Synonymous Core SR Term
Term 1	[Definition]	
Term 2	[Definition]	
Term 3	See Term 1	Term 3 is a synonym of term 1
Term 4	[Definition]	
Etc.		

Table S-6. Participant characteristics of experts participating as online expert meetings in phase 3 for the derivation of authoritative SR definitions. The table summarises characteristics of the participants that participated in two or more meetings. “N” indicates the number of participants selecting an alternative.

Country of residence	Country A Country B Country C and so on. <i>In alphabetical order</i>
Main employer	Main employer A Main employer B Main employer C and so on. <i>In alphabetical order</i>
Gender	Female: N; Male: N
Years of experience with systematic reviews	No experience: N Some experience (<i>e.g., been involved in one systematic review or peer-reviewed several systematic reviews</i>): N Moderate experience (<i>conducted study appraisal in at least one systematic review</i>): N Extensive experience (<i>have designed the methods, including selection, modification, or developed study assessment methods, for at least one systematic review</i>): N

Table S-7. Illustrating the final presentation of the cross-mapping of CRA terms on the SR terms. The SR terms “external validity”, “internal validity”, “precision”, and “validity”, and the CRA terms “generalisability”, “relevance”, and “reliability” are used as examples.

CRA Term	CRA Term Definitions	Related SR Terms	SR Term Definition	Cross-mapping – description of relationships between terms
Reliability	[definition 1] [definition 2] [definition 3]	Internal validity	[insert definition]	Tendency toward truth is internal validity in SR, whereas consistency of results is more of a precision-related concept (an imprecise study will tend toward the truth on multiple repetitions, but in a one-off situation it will not be clear how close to the truth the measurement is, hence not being reliable).

Table S-8. Illustrating the SR terms and the related CRA terms and conceptual overlap.

SR Term	SR Term Definition	Related CRA Terms	Related CRA Term Definitions
Internal validity	[insert definition]	Reliability	[definition1] [definition 2] [definition 3]
		Validity	[definition 1] [definition 2]
External validity	[insert definition]	Generalisability	[definition1]
		Relevance	[definition1] [definition 2]
		Validity	[definition1] [definition 2]
Indirectness	Synonym of external validity	See External Validity	

Table S-9. Participant characteristics of experts participating in online meetings in phase 4 for the identification of conceptual overlap between CRA and SR terms. The table summarises characteristics of the participants that participated in two or more meetings. “N” indicates the number of participants selecting an alternative.

Country of residence	Country A Country B Country C and so on. <i>In alphabetical order</i>
Main employer	Main employer A Main employer B Main employer C and so on. <i>In alphabetical order</i>
Gender	Female: N; Male: N
Years of experience with chemical risk assessment	No experience: N 1-3 years: N 4-6 years: N More than 6 years: N
Years of experience with systematic reviews	No experience: N Some experience (<i>e.g., been involved in one systematic review or peer-reviewed several systematic reviews</i>): N Moderate experience (<i>conducted study appraisal in at least one systematic review</i>): N Extensive experience (<i>have designed the methods, including selection, modification, or developed study assessment methods, for at least one systematic review</i>): N N