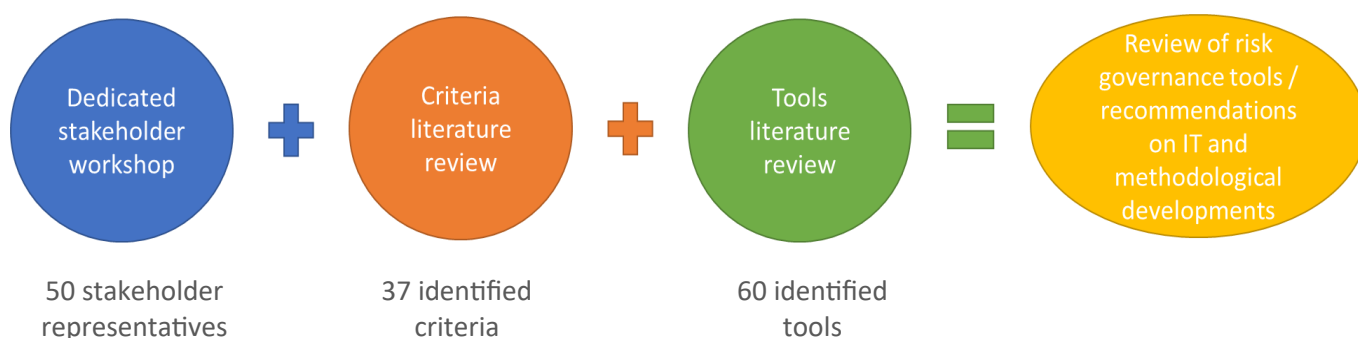


Criteria and procedures for risk evaluation, mitigation and communication

Risk communication is a cross-cutting aspect of the risk governance frameworks alongside participation, and the well known practices of risk evaluation, mitigation, assessment and management. The design of effective risk governance tools and guidance requires the development of tools with risk communication as an inherent characteristic.

In this view, an analysis and review of risk governance methods and procedures has been performed against a set of criteria. The set of criteria for risk evaluation, mitigation and communication (tolerability and acceptability of

the risk) has been identified, based on the analysis of scientific literature and the outcomes of the caLIBRAte research project, following a two step process that included a dedicated stakeholder workshop and literature review, resulting in a list of 37 criteria. A similar literature review has been performed for the identification of risk governance tools, through combined search queries, which resulted in a list of 60 relevant tools.



Criteria for risk evaluation, mitigation and communication in the context of risk governance of nanomaterials

Nine criteria were selected as the most relevant for the review and the highest priority criteria to implement in developing decision support tools for Risk Governance:

- 1) Uncertainty analysis
- 2) Structured decision making
- 3) Fair and knowledgeable communication process
- 4) Easy to use/understand, user friendliness
- 5) Quantitative information
- 6) Documented applications –Trustworthiness

- 7) Transparency of application – process
- 8) Comprehension
- 9) Influence on final policy

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Assessment of risk governance tools and their implementation in decision support

Two key questions were asked: How do risk governance tools perform against the evaluation criteria? How can the criteria support risk governance and be fulfilled through implementation in decision support?

Each risk governance tool was analysed against the set of nine evaluation criteria and the results have compiled in five relevant evaluation matrices, an example of which is presented below. Furthermore, the analysis included the draw of clear conclusions on:

- How the identified criteria for risk

evaluation, mitigation and communication support the different phases of the Risk Governance paradigm (i.e. risk pre-assessment, characterisation, appraisal, management and communication).

- Which methodological and IT procedures and techniques can help to fulfil these criteria through implementation in decision support tools and how.

Tool	Criteria								
	Easy to Use/Understand, User-Friendliness	Quantitative Information	Uncertainty Analysis	Documented Applications/Trustworthiness	Transparency of Application/Process	Comprehension	Influence on Final Policy	Structured Decision-Making	Fair and Knowledgeable Communication Process
SUNDS	+	+	+	+	+	+	±	+	+
NanoSafer	+	+	-	+	+	+	±	+	+
Stoffenmanager Nano	±	-	-	+	+	+	±	+	+

How can nano-risk governance decision support tools be improved?

A total of 57 procedures, methods and techniques for improving risk governance decision analytical tools were identified. The improvements are clustered into the following subsectors:

- 1) Decision Analysis – MCDA methodologies
- 2) Decision Analysis – Software Development
- 3) Decision Analysis – Mental modelling
- 4) Risk Assessment-Management – Models
- 5) Risk Assessment-Management – Risk Management Measures
- 6) Risk Assessment-Management – Usability
- 7) Software Development – Features
- 8) Statistical Methods – Methodology

This fact sheet is based on caLIBRAte Deliverable 4.4: *Criteria and procedures for risk evaluation, mitigation and communication* produced as a result of collaboration between Ca' Foscari University of Venice (IT), GreenDecision Srl (IT), DIALOGIK gemeinnützige Gesellschaft für Kommunikations- und Kooperationsforschung mbH (DE) and Steinbeis Advanced Risk Technologies GmbH (DE).

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