

Risk management tools: Users' perspectives

A set of tools for prevention, assessment and management of risks of nanomaterials were selected, validated, and tested with users during the caLIBRAte project. The purpose was to investigate the appraisal from stakeholders on the functionalities and adequacy of information requirements and outputs provided by the tools. More than 100 stakeholders from research, business, policy makers and regulators were

involved. They concluded that the main drivers to make use of the tools include improving environmental and workers' safety assessment, performing risk management and ensuring compliance with regulation and alignment with state-of-the-art data. The user groups and job functions that could benefit the most in using the tools are seen as researchers/technicians, safety managers, regulators, and project coordinators.

Application domains for risk management tools

Key features and application		GN	LIC	NSCB	SPM	SFM	SB4N	SUN
TARGET USERS	Researcher/Technician	✓	✓		✓	✓	✓	✓
	CEO/R&D Manager/Coordinator	✓	✓		✓	✓		✓
	Workers and users' representatives	✓	✓	✓				✓
	Safety Manager, Consultant	✓		✓	✓	✓	✓	✓
	Insurers	✓			✓	✓		✓
	Regulators, authorities, inspectors						✓	✓
	Focus on SMEs		✓		✓			
DOMAINS	Workers (R&D labs)			✓				
	Workers (All)	✓	✓	✓	✓	✓		✓
	Users & Consumers	✓	✓		✓			✓
	Environment	✓	✓		✓		✓	✓
	Waste/end-of-life				✓		✓	
	All Life Cycle	✓	✓				✓	✓
OUTPUTS	Human Risk Assessment	✓	✓		✓	✓		✓
	Environmental Risk Assessment	✓	✓		✓		✓	✓
	Risk-Benefit -Social Impact Assessment		✓					✓
	Risk Management			✓		✓		✓
TYPE OF OUTPUTS	Qualitative/predictive		✓	✓	✓	✓	✓	✓
	Semi-quantitative	✓						✓
	Quantitative	✓					✓	

GN: [GUIDENano](#)
 LIC: [Licara nanoSCAN](#)
 NSCB: [NanoSafer Control Banding](#)
 SPM: [Swiss Precautionary Matrix](#)

SFM: [Stoffenmanager Nano](#)
 SB4N: [SimpleBox4.0-Nano](#)
 SUNDs: [Decision Support System](#)

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What purpose and benefits in using the tools?

Stakeholders underlined that the ability to perform nano-specific human and environmental risk assessments are the most significant reasons to use the tools. A very positive opinion was expressed on the type of data managed by the tools, in particular:

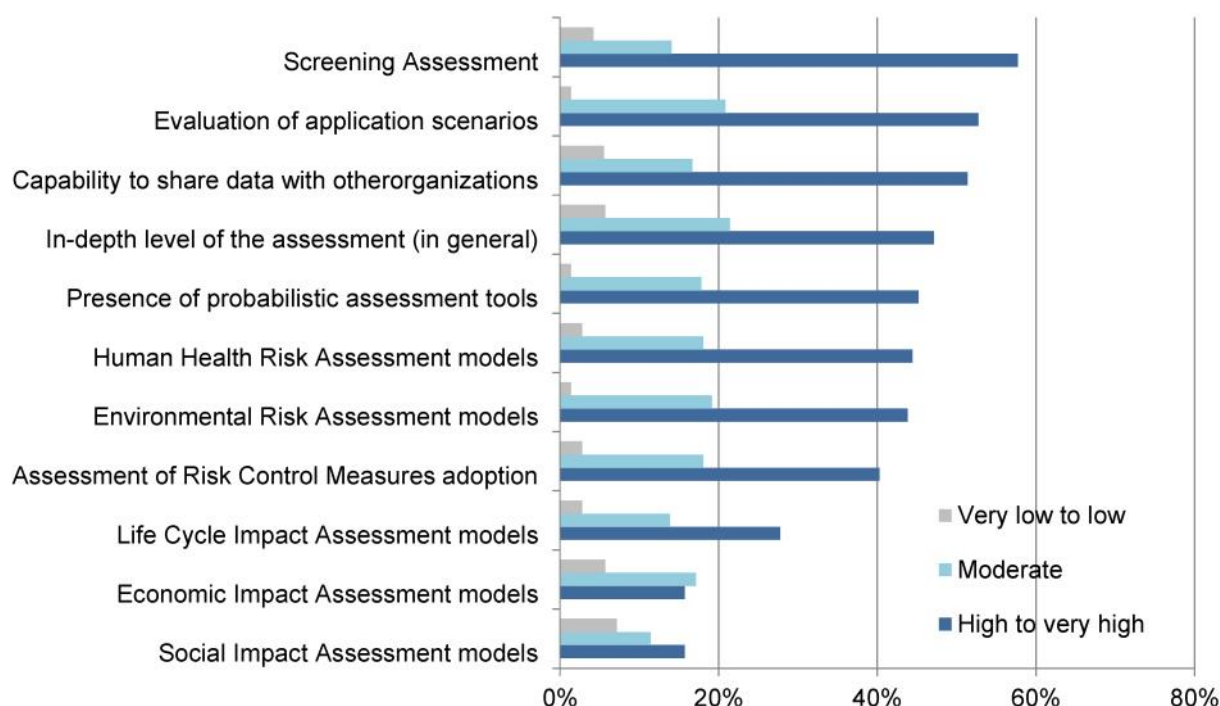
Input data: physico-chemical properties (e.g. particle size, solubility, etc.) and risk management

information (e.g. prevention measures)

Output data: hazard and exposure assessment, risk bands and risk management measures.

The majority of stakeholders rated as 'quite good' the user friendliness of the tools. Stakeholders also generated a ranking of the quality and relevance of some of the *functions* of the tools (see figure)

Quality and relevance of tool functions



Recommendations to develop the tools further include: i) improve user access to information on regulatory requirements/limits ii) provide technical specifications (e.g. OECD, ISO, CEN), safety guidelines, and standard operational procedures for data generation iii) provide cases and

scenario, and built-in databases/libraries.

The lack of comprehensive data on characterization and safety of nanomaterials in literature could influence the efficacy of the tools, at least for some nanomaterials.

This fact sheet is based on caLIBRAte Deliverable 7.3 "Stakeholder requirements and recommendations on risk governance models and usability of the risk governance tools" produced by Airi (IT), NRCWE (DK), Green Decision (IT), Leitat (ES), TNO (NL), RIVM (NL), EMPA (CH), Tampere University (FI)

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