

Table S1. Review of eight studies highlighting evaluation criteria for deliberative and analytic-deliberative processes

Source	Representation	Deliberation	Knowledge and analysis	Outcome
<i>Abelson et al. (2003)</i>	1. Representation: Legitimacy and fairness; representativeness; Inclusiveness/exclusiveness ; selection process	2. Procedural rules: Engagement in agenda, rules, experts; Deliberation process; interaction with experts; credibility and legitimacy	3. Information: Characteristics of the information; accessibility, readability, digestibility; who chooses the information and experts	4. Outcomes and decisions: legitimacy and accountability of decision-making; communication of decisions; impact of the process on decision-making; consensus
<i>Papadopoulos and Warin (2007)</i>	1. Openness and access: Inclusive and representative of stakeholders, the general public and values.	2. Quality of deliberation: Made in accordance to general principles of deliberations (e.g., enhance learning, facilitate exchange of arguments, gain understanding of different opinions)?		3. Efficiency and effectiveness: Does it improve the output (e.g., policy acceptance and efficiency, conflict resolution)?
				4. Publicity, transparency and accountability: Accountability, legitimacy and impact of the process on decision-making. (e.g., is it institutionalized, or the facto?)
<i>Renn (2004)</i>	1a. Fairness: Equal access to the process	1b. Fairness: equal opportunity to participate, make and reject claims	2. Competence (knowledge): Cognitive: systematic and anecdotal	3. Efficiency: Efficiency of decision-making procedures; Cost

Source	Representation	Deliberation	Knowledge and analysis	Outcome
		during discussion	knowledge; Reflective: meaning and relevance of knowledge; normative: legal, social and ethical consequences.	effectiveness (i.e., proportion between costs of procedures and stakes)
<i>US NRC (1996)</i>	1. Getting the right participation: Sufficient participation so that the relevant perspectives, information and concerns have been considered	2. Getting the participation right: deliberation allows for the consideration of all relevant perspectives, information and concerns	3. Getting the science right: use of best available science, which considers uncertainties, assumptions and limitations	5. Accurate, balanced, and informative synthesis: the results offer a balanced synthesis between deliberation and analysis, consider all perspectives and uncertainties and are effectively and truthfully presented.
			4. Getting the right science: the sciences and information used is relevant, adapted and adaptive to the identified risks and values	
<i>Rauschmay er and Wittmer (2006)</i>	1a. Legitimacy: Representativeness of all interests	1b. Legitimacy: Deliberative rules clear and transparent; procedures compatible with legislations.	1c. Legitimacy: accounting for procedural knowledge; representation of all interests	1b. Legitimacy: accountability for decision and policy outcome; compatibility with legislations

Source	Representation	Deliberation	Knowledge and analysis	Outcome
		2. Social dynamics: Relationship between participants, actors' empowerment and agency, social learning, leads to consensus or illustrate diversity of opinion?	3. Information: elucidation of complexity; integration of different types of information; consideration of uncertainties?	4b. Cost: cost effectiveness (i.e., proportion between costs of procedures and stakes); cost of decision failures
			4a. Cost: Consideration of cost-effectiveness of studied alternatives	
<i>Santos and Chess (2003)*</i>	1a. Access: Equal opportunity to attend the process	1b. Access: Equal opportunity to participate in the discussions	Criterion of fairness ^a	5b. Power/control: capacity for participants to influence decision-making
		2. Ability to set Agenda/discussion: participants can influence the agenda and deliberation		6. Importance of outcomes: does the process lead to substantive outcomes?
		3. Rules for deliberation: Are the participants able to influence the rules of the deliberation		
		4. Collaboration and consensus building: Free and open deliberation allowing for collaboration		

Source	Representation	Deliberation	Knowledge and analysis	Outcome
		and consensus building		
		5a. Power/control: Distribution of power over the deliberation		
<i>Chilvers (2007)</i>	1a. Engagement: Engagement of the public and stakeholders as early as possible	1b. Engagement: Participation of the public/stakeholders in framing of the problem, alternatives, evaluation criteria and scientific analysis; participation in scientific assessment and evaluation	3. Scientific analysis: Support deliberation; accessible and useful; adapted and adaptive to needs of participants; transparent; explicitly consider uncertainties and assumptions	4b. Access to information and specialist expertise: illustrate the range/diversity of views to "open up" policy framing
		2. Deliberation: Facilitate productive and critical exchanges and relationships between participants and specialists; Consider the diversity of perceptions, uncertainties and assumptions; allow enough time; have informed, independent and impartial facilitators.	4a. Access to information and specialist expertise: suitable, consequential and comprehensible; illustrate the range/diversity of views; answer to the needs of participants; participants should have access to specialist expertise.	

Source	Representation	Deliberation	Knowledge and analysis	Outcome
<i>Sheppard (2005)</i>	1. Broad representation of stakeholders	3. Engaging process: appealing, interesting and meaningful process.	6. Understandable and accurate information	8. Clearly structured decision-making process: transparent process that is clear on the impact of the process on recommendations and decisions.
	2. Open access to stakeholders: equitable inclusion with no domination of the process by any single group.	4. Credibility of the process: Understandable process clearly explained on which participants take part in the conception of the rules that are agreed upon. The approval of the process by participants is assessed.	7. Focused on assessing sustainability over time: Analysis made with structured criteria and indicators that consider ecological, social and economic values over long timeframe.	9. Appropriate scale and detail for participants and resource managers: decision-making is made based on most meaningful and significant issues, and results are clearly provided to managers.
		5. Mutual learning and capacity building		10. Feasibility: The process is realist and will feasibly be implemented.

^a In their paper, Santos and Chess (2003) use the evaluation criterion of fairness, drawing from habernas' theories of communicative competence. They do not consider the second criteria, "competence," which deals more with the use of appropriate knowledge and information.