

Step 3. Selecting tools or methodologies

Several methods or tools can be used in SIA depending on the stage of the assessment, the desired depth of scrutiny, and the specific impacts to be examined. The Sustainability A-Test,² a European Commission (EC) 6th Framework project involving collaboration by over 40 researchers from Europe and Canada, evaluated tools for integrated assessments of sustainable development. It has published a web book describing the various tools, instructions on their use and case studies (www.sustainabilityA-test.net). Each tool can be used to address different issues, including cost-benefits, short and long-term effects, global competitiveness and many key aspects of sustainable development. The tools selected for an SIA should match the resources, capacities and timeframe available for the exercise. They should be flexible and easy to adapt to a given policy or context, and should be able to be combined so that one tool can cover areas not covered by another tool.

Sustainability impact assessments balance qualitative and quantitative information in the different stages to achieve a sound and reliable assessment. The Sustainability A-Test presents and explains the basic instruments for performing particular tasks.

The different categories of tools in the Sustainability A-Test include:

1. Assessment frameworks: procedural tools describing how different types of assessments are carried out (*e.g.* environmental impact assessment, integrated sustainability assessment).
2. Participatory tools: tools that provide broad input by stakeholders and outside experts (*e.g.* Delphi surveys, focus groups).
3. Scenario tools: tools that develop alternative visions of future developments or trends (*e.g.* trends analysis, simulations, foresight exercises).
4. Multi-criteria analysis (MCA): tools that allow joint consideration of criteria based on different measurement units (*e.g.* analytic hierarchy process, preference rankings, weighted summation).
5. Cost-benefit analysis (CBA): tools that assess financial and economic parameters in comparing costs and benefits (*e.g.* cost-benefit analysis, cost-effectiveness analysis – CEA).
6. Accounting tools: tools that present physical as well as economic and other attributes (*e.g.* indicator sets, measures of well-being, ecological footprints).
7. Models: tools that simulate real-world processes (*e.g.* general equilibrium models, demographic models, climate models).

These tools can be used in the different steps of a sustainability impact assessment, including screening and scoping (*e.g.* participatory tools, scenarios), impact assessment (*e.g.* indicator sets, cost-benefit analysis), identifying synergies and trade-offs (*e.g.* multi-criteria analysis), and proposing mitigating measures (*e.g.* modelling) (Table 4.1). The selection of assessment tools should be based on: (i) the stage of the assessment; (ii) the depth of the assessment; (iii) the tasks to be completed; (iv) the tool group most suited to the tasks; and (v) the available resources.

2. SustainabilityA-Test, a STREP project commissioned by the European Commission under the 6th Framework research programme.

Table 4.1. **The role of tools in sustainability assessment phases**

	Phase I Problem analysis	Phase II Finding options	Phase III Analysis	Phase IV Follow-up
Participatory tools	Problem framing (mobilising and integrating knowledge and values)	Supporting scenario building	Providing the context for and improve robustness of MCA, CBA and CEA	Evaluating the assessment process
Scenario tools	Providing the future perspectives to problem framing	Visioning futures, finding options and setting objectives	Providing references for the application of analytical tools	–
Multi-criteria analysis tools (MCA)	–	Definition of criteria	Comparing different alternatives	–
Cost-benefit analysis (CBA) Cost-effectiveness analysis (CEA) Accounting Physical analysis Indicator sets Modelling	Providing the analytical basis for problem-framing	Supporting objective setting	Full analytical characterisation of options to enable comparison	<i>Ex post</i> assessment

Source: OECD (2008b), *Conducting Sustainability Assessments*, OECD, Paris.

Often combinations of tools are needed for an integrated assessment. A precondition for devising efficient tool combinations is to know the tools which exist and the analytical results they can provide.

In reality, quite often a mixture of approaches and methods is quite often used. The choice of SIA framework and methodology is usually made through political and administrative debate and a process of seeking consensus. Whatever the choice of method and methodology, an SIA is an *aid* to political decision-making, *not a substitute for it*. SIA is more an extended process than a one-off event and the choice of instruments is not the only factor in the final quality of the results of an SIA.