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The development and consideration of alternatives in Strategic Environmental Assessment provides a meaningful way to address environmental and social issues while informing and influencing decision-making.



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**FASTIPS**

No. 7 | March 2014

# Alternatives in Strategic Environmental Assessment of Plans and Programs

The development and consideration of alternatives—different ways of meeting the objectives of policies, plans, programs (referred to as “plans” hereon)—is at the heart of Strategic Environmental Assessment (SEA), and a meaningful way to address environmental issues (not limited to biophysical aspects) while informing and influencing decision-making. However, this has historically been one of the most difficult and poorly done aspects of SEA.

SEA should help identify robust and reasonable alternatives. Although in practice most alternatives are “within plan” (i.e., related to the contents of the plan), they should challenge both the policies that underpin plans, as well as the plan objectives, if these are framed too narrowly. Alternatives should be part of the plan development process, not a *post-hoc* add-on. They should be developed using a structured and transparent approach, and can be framed around one or several themes:

- Strategic (high-level options that achieve a given objective)
- Values-oriented (addressing policy priorities, cultural values or safety issues)
- Effects-oriented (addressing the sources of any potential impacts identified during scoping)
- Sectoral (formulated to address sectoral feasibility and needs or to promote one sector versus another)
- Spatial (location options for the implementation of planning policies and/or objectives)
- Modal (technologies/methods for achieving the same objective)
- Temporal (timing of implementation of plan measures)

Alternatives assessment aims then to compare the identified alternatives using a consistent set of sustainability criteria, and to a similar level of detail. This is normally done qualitatively, using expert judgment that takes account of stakeholder and local knowledge. Geographic Information Systems (GIS), multi-criteria assessment, and modelling approaches, amongst other techniques, are used as support tools that contribute to systematic, quantitative and transparent assessments. The selected alternative(s) should be socially, economically, and above all, environmentally viable. However, when a planning decision is not the most environmentally or socially sound option, the SEA report should explain the reasoning behind this choice.

## FURTHER READING, EXAMPLES, ETC.

EPA (2014) Developing and assessing alternatives in Strategic Environmental Assessment. Environmental Protection Agency: Ireland.

Collingwood Environmental Planning, Land Use Consultants, Levett-Therivel Sustainability Consultants, Scott Wilson, Treweek Environmental Consultants and C4S (2006) Do's and Don'ts Guide to Generating and Developing Alternatives. [http://www.sea-info.net/files/general/Options\\_Do's\\_Dont's\\_Guide\\_\(Dec\\_06\).pdf](http://www.sea-info.net/files/general/Options_Do's_Dont's_Guide_(Dec_06).pdf).

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## FIVE IMPORTANT THINGS TO KNOW

1. Identification of reasonable alternatives is done jointly among the plan-makers and the SEA team.
2. The “business as usual” alternative represents how things would develop if similar planning policies continue. It offers a *status quo* comparative reference to assess benefits or limitations of other alternatives.
3. Alternatives reflect the objectives and geographical scale of the plan. At higher planning tiers (e.g., national waste management plan), SEA alternatives entail consideration of strategic policy objectives. At lower tiers (e.g., local area plans), alternatives commonly consider zoning, location and route options.
4. Alternatives need to be:
  - Reasonable: take account of environmental and socio-economic evidence (i.e., baseline and trends), as well as legislative and policy requirements (e.g., planning law or habitat protection legislation) to provide sustainable solutions capable of achieving the plan objectives.
  - Viable: technically and economically possible, institutionally feasible and implementable within the plan period. That said, alternatives that are politically difficult or objectionable are not necessarily unviable, since they may be acceptable to a different future administration.

**Example A:** Development of reasonable and viable alternatives for a strategic energy plan would require:

- Reasonable: Considering energy provision options that meet the plan objectives (e.g., an 80% reduction in energy supply dependency) under different scenarios (e.g., differing electricity demands based on population or climate change projections).
- Viable: Considering their institutional feasibility (e.g., stakeholder and public acceptance and support for the various alternatives).

**Example B:** Development of reasonable and viable alternatives for a local area renewable energy plan would require:

- Reasonable: Consider different renewable energy options on the basis of the issues/problems identified during scoping (e.g., ways of avoiding sensitive land uses such as floodplains or deciduous forests of significant ecological value, addressing the source of potential impacts on vulnerable species, or avoiding disruption of indigenous communities and health impacts) and ensuring that alternatives do not conflict with higher plan objectives.
- Viable: Considering their technical feasibility (e.g., best available techniques not entailing excessive cost for renewable energy development and their resilience to climate change).

5. Tradeoffs and associated risks need to be addressed in SEA alternatives assessment (e.g., balancing environmental losses with societal needs); the selection process should take account of environmental, societal, and economic benefits and costs.

## FIVE IMPORTANT THINGS TO DO

1. Develop alternatives early in the SEA process (e.g., when initiating planning discussions or when drafting a plan).
2. Adopt a participatory approach (e.g., focus groups or workshops) to the development and assessment of alternatives so statutory consultees, stakeholders, and the public are given a meaningful opportunity to suggest alternatives and give their views on the possible impacts of alternatives before a decision as to the preferred alternative is made.
3. Apply a two-stage approach to assess the alternatives. In the first stage, undertake a general comparison of all considered alternatives. This should include comparisons and should take account of legal thresholds and requirements, and decisions already made within the plan area (e.g., permitted projects). This first strategic assessment stage should be used as a funnelling process to select a limited number of options for detailed examination. The second stage entails a more detailed comparative analysis of the selected alternatives.
4. Assess all alternatives to the same level of detail and adopt a systematic assessment approach. Apply robust methods (e.g., using qualitative criteria and data that captures environmental, institutional, and socio-economic benefits and limitations of alternatives or contrasting spatially-specific policy areas with previously prepared baseline environment or environmental sensitivity maps) to ensure transparency and comparability of assessment results.
5. Report the “storyline” of how alternatives were considered in the SEA. The SEA report should include a clear, focused and concise account of:
  - How the alternatives were developed.
  - Which stakeholders were considered and which were consulted.
  - Any alternatives that were eliminated early on and why these were excluded from further consideration.
  - Outline of the proposed alternatives.
  - How they were assessed and the assessment outcomes (e.g., associated risks).
  - Why the preferred alternative(s) was selected.
  - Any data gaps and limitations affecting the development and assessment of alternatives.
  - The applicability of SEA alternatives assessment findings to strengthen the evaluation of project alternatives.