

Assessing the Cost-Effectiveness of Environmental Policies in Europe

Benjamin Görlach, Ecologic

**(with Anneke von Raggamby, Ecologic
and Jodi Newcombe, eftec)**



Contents

- **What is cost-effectiveness and why is it relevant?**
- **Ex-post cost-effectiveness requirements in EU environmental legislation**
- **Existing guidelines and manuals for assessing cost-effectiveness**
- **Some examples**
- **Conclusions and way forward**



Outline of the project

- **Carried out by Ecologic, eftec with support from IVM, September 04 - April 05 for the European Environment Agency (EEA)**
- **Ex-post cost-effectiveness analysis of European environmental policies**
 - **Legal requirements in EC law**
 - **Guidelines and manuals for ex-post CEA**
 - **Examples of applied ex-post CEA**
- **This presentation does not necessarily represent the views of the EEA**

Cost-effectiveness analysis explained

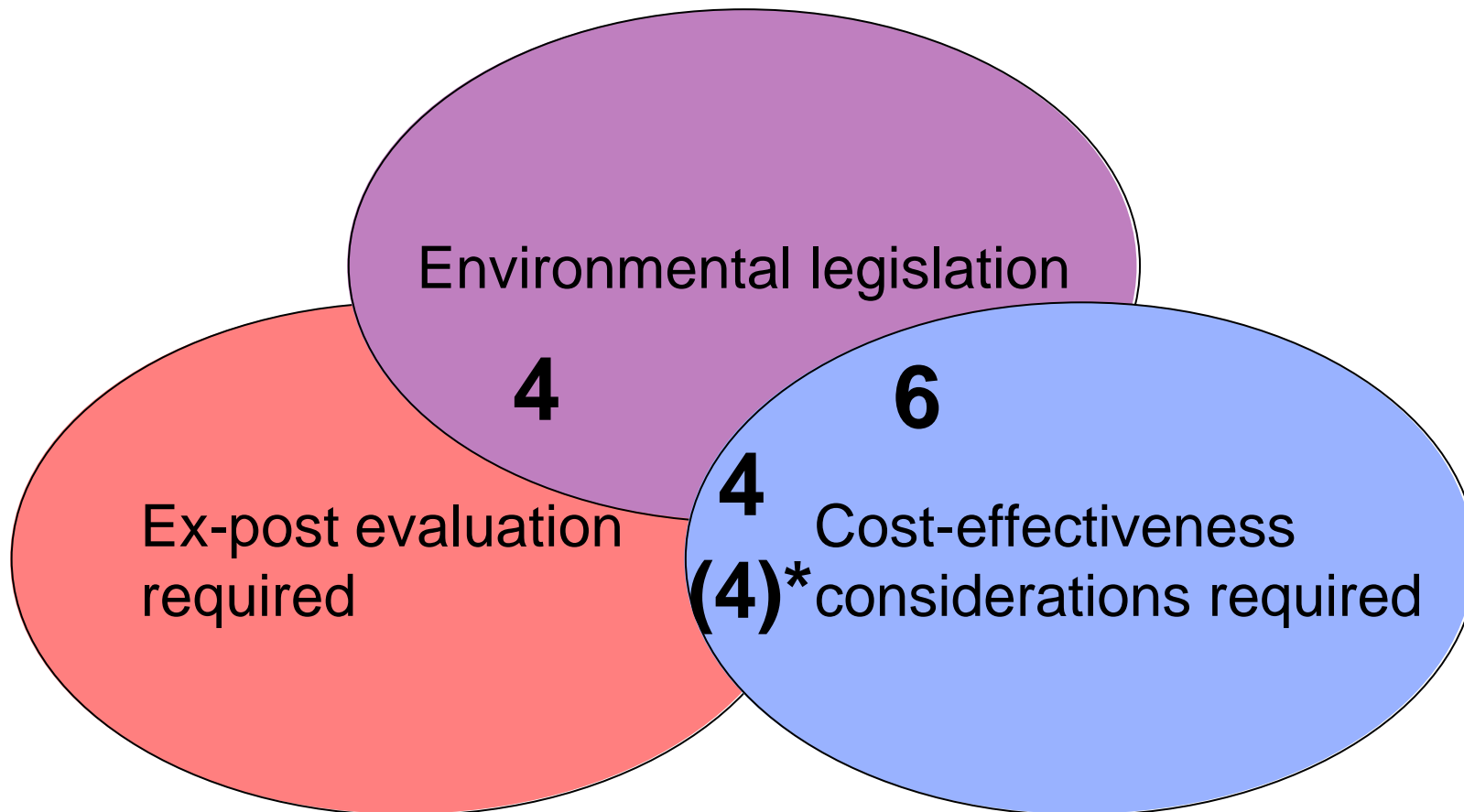
- **CEA is distinct from CBA:**
 - **CEA = achieve a given objective at least cost**
 - **CEA does not ask whether objective is worth achieving (as does CBA)**
 - **C-E can be assessed ex-ante and ex-post (focus of this project on ex-post only)**
- **Different types of ex-post CEA:**
 - **ex-ante / ex-post comparison;**
 - **cross-country comparison (benchmarking);**
 - **repeated application of CEA**

C-E requirements in EU legislation

18 legislative items, 4 types of requirements:

- **Non-environmental legislation (but with environmental impact) requiring CEA - 4 items**
- **Environmental legislation requiring ex-post CEA (or CE aspects) - 4 items**
- **Environmental legislation requiring ex-ante CEA (or CE aspects) - 6 items**
- **Environmental legislation requiring ex-post evaluation, but not (necessarily) CE - 4 items**

C-E requirements in EU legislation II



*only most relevant for the environment

Existing guidelines and manuals

- **Academic literature tends to focus on CBA, mentioning CEA in passing**
- **Some tailored guidance on CEA for specific policies, e.g. Water Framework Directive**
- **Some general guidance on policy evaluation, not necessarily focused on economic tools**
 - **UK: Green Book**
 - **NL: Wegwijzer Evaluatieonderzoek**
 - **Commission: DG Budget, DG Regions**



Existing guidelines and manuals

- **Many useful elements in different documents, together provide good insights on ex-post CEA - but none that has it all.**
 - **General focus on ex-ante assessment**
 - **Work on ex-post evaluation does not necessarily cover cost-effectiveness**
 - **Few docs specific to environmental policy**
 - **Little focus on real-life difficulties**
 - **Good examples esp. from NL, UK, US**



Case studies of applied ex-post CEA

- **Non-exhaustive selection of (mainly) European (mainly) ex-post CEA**
- **88 studies surveyed, 17 analysed in-depth**
 - e.g. biodiversity management in Scotland
 - US evidence on CFC phase-out
 - CO2-based taxes in European countries
 - IMPOL studies on large combustion plant Dir, Municipal Waste Incineration Dir, EMAS
 - Dutch Manure and Fertiliser Policy



Lessons learnt from Case Studies

- **Diversity of topics covered**
- **Diversity of methods and shortcuts applied:**
 - **Few studies have applied discounting**
 - **Importance & difficulty of defining a baseline**
 - **Sensitivity testing only in some cases**
 - **Marginal abatement cost taken as proxy for compliance cost**
 - **Effects on national economy blended out**
 - **Results presented in qualitative form**



Summary CEA in environmental policy

- **Ex-post evaluation has been around for a while, but systematic C-E assessment of environmental policy is still fairly recent**
 - some experiences in UK, NL
 - little on EU level so far
 - few cases where ex-post CEA is an “institutionalised” part of the analysis
- **Ex-post CEA traditionally applied to**
 - projects rather than policies & programmes
 - health care issues rather than environment



Challenges and issues in ex-post CEA

- **Causality between policy measures and observed effects / blend out other influences**
- **Data gathering - much more difficult ex-post unless monitoring existed up front**
- **Moving up to higher (spatial/temporal) scale of analysis: increases uncertainty**
- **Other issues:**
 - **which cost types to consider,**
 - **intermediate / final goals (pressures/impacts)**



Conclusions

- **Ex-post CEAs differ in scope, level of detail and methodological rigour**
- **No single “common approach” to ex-post CEA across countries or policy issues**
- **Ex-post evaluation requires clear targets and good data - both difficult to find ex-post**
- **Guidance required for “real-life solutions”:
methodological shortcuts to deal with time & political pressure, data gaps etc.**



Conclusions II

- **Link to the EU Commission procedure for impact assessments**
 - **Integrating C-E assessments into the policy process (rather than up-front only?)**
 - **Ex-ante assessments need to define issues, monitoring and reporting requirements with view to ex-post assessment**
 - **What can be learned from ex-ante / ex-post discrepancies?**

Thank you for your attention.

Benjamin Görlach

Ecologic, Pfalzburger Str. 43-44, D-10717 Berlin

☎ +49-30-86880-0, 📄 +49-30-86880-100

goerlach@ecologic.de, www.ecologic.de