

Training Programme CBA

CBA: analysis per sector

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Translating facts into vision

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Content

- General approach
- Similarities and differences per sector, 13 sectors mentioned in the Guide. For each sector: the seven steps followed, including type of effects, valuation, examples
- Example sector: waste treatment

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General approach

- The principles
 - Costs and Benefits
 - Monetarisation
 - Time element
 - Incremental approach
- The seven steps
 - (1) Objectives definition; (2) Project identification; (3) Feasibility and options analysis; (4) Financial analysis; (5) Economic analysis; (6) Multicriteria analysis; (7) Sensitivity and risk analysis

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Type of sectors Guide to CBA

1. Waste treatment
2. Water supply, transport, distribution and treatment
3. Transport
4. Energy transport and distribution
5. Energy production
6. Ports, airports and infrastructure networks
7. Training infrastructure
8. Museums and archaeological parks
9. Hospitals
10. Forests and parks
11. Telecommunications infrastructure
12. Industrial estates and technological parks
13. Industries and other productive investments

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Case: waste treatment- objectives

- The development of modern local and regional waste management sectors
- The reduction of health risks linked to an uncontrolled management of municipal and industrial waste
- The reduction in pollutant emissions such as water and air pollutants
- Innovation in new technologies for collection and waste treatments

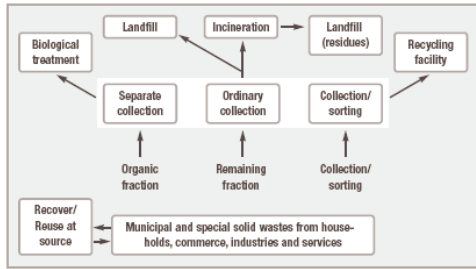
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Case: waste treatment- project identification

- Investment in collecting and recycling waste facilities (with separate collection or not), such as municipal separate collection centre
- Compost production facilities
- Household and industrial waste incineration plants and incinerators (with or without combined heat and power)
- Landfill sites

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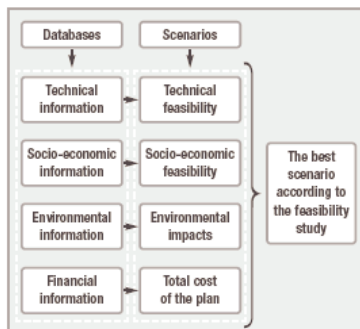
Case: waste treatment- project identification



Case: waste treatment- feasibility and options

- Do-nothing scenario ("business as usual"), without investments
- Some available alternatives inside the present proposal
- Global alternatives to the project, for example:
 - Incinerator as an alternative to a landfill
 - Separate collection centre for recycling in the place of a final disposal plant

Case: waste treatment- feasibility and options



Case: waste treatment- Financial analysis

- Revenues (price treatment, sale of recovered products, e.g. energy)
- Investment costs (land, buildings, equipment)
- Net residual values
- Stocks in raw materials or final products
- Maintenance costs:
 - Purchases in energy, commodities, goods and services used as inputs and needed for the day to day working of the plants
 - Management and administrative costs, including the insurance cost;
 - Technical and administrative personnel costs

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Case: waste treatment- Economic analysis

- The financial analysis, which estimate the relevant financial flows calculated according to current market prices
- The integration of externalities:
 - Air, waste water emissions
 - Energy recovery
 - Noise, smell
- The definition of conversion factors
- The calculation of economic benefits and costs

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Case: waste treatment- Other effects

Damage (response) Emission (dose)	Medium	Health effects mortality	Health effects morbidity	Lower agricultural yield	Forest Dis-back	Damage to buildings	Climate effects	Ecotoxics
Particulates PM10	Air	+	+	0	0	+	0	0
NO _x (and O ₃)	Air	+	+	(-)	+	+	0	(-)
SO ₂	Air	(+)	(+)	+	+	+	0	-
CO	Air	(+)	(+)	0	0	0	+	0
VOC	Air	(+)	0	0	0	0	0	0
CH ₄	Air	0	0	0	0	0	+	0
HCl, HF	Air	?	0	(-)	(-)	(-)	0	?
Dioxins	Air	(+)	-	0	0	0	0	-
Heavy metals	Air	(+)	-	0	0	0	0	-
Dioxins	Water	?	?	0	0	0	0	?
Heavy metals	Water	?	?	0	0	0	0	(-)
Salts	Water	0	0	0	0	0	0	?

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Case: waste treatment- Sensitivity and risk analysis

- Cost of investment
- Change in demand of waste disposal related to the diffusion of new products or new technologies, changes in behaviour, the variation in economic or population growth
- Variations in the sales price of recycled products, also in time

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