Cost benefit analysis: introduction and basics

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What is cost benefit analysis?

*Framework* to assess the merits of a project from the perspective of society (not a single individual)

Essentially involves:

- Measuring the gains and losses (‘benefits’ and ‘costs’) from a project or activity to the community using money as the measuring rod
- Summing those monetary values of the gains and losses and expressing them as net community gains or losses
What is it used for?

1 Decision making:

- Is a project or activity worthwhile?
  - Should we invest in this project?
- Which of these projects/activities should we choose?
  - Which project will give us the best pay off per dollar invested?
  - Which project will generate the highest value to society once we have paid for it?

2 Project assessment:

- Has investing in this project been worthwhile?

3 Information generated can also inform how to proceed/adjust project implementation
Broad steps

1. Define problem and identify possible options/alternatives
2. Identify inputs and outputs (impacts) of each option
3. Value benefits and costs of each option (‘net benefits’)
4. Compare net benefits of each option
5. Identify ‘best’ option?

What does/did it take to make the benefits actually materialise (pre-conditions)?
Builds on existing tools
e.g. Kiribati Project Appraisal Criteria

1. Consistent with government policy and NSDS
2. Rationale for the project
3. Consultation

4. Viability
   - are the costs and benefits clearly described?
   - are benefits and costs (capital and recurrent) quantified?
   - Is it clear that the benefit exceed the costs?

5. Implementation arrangements
6. Sustainability
Why CBA?

Forced to consider

- the *overall impact* of projects *from the perspective of the group*
- the *distribution* of benefits and costs across the community

⇒ identification of risks (e.g., distributional issues, climate and disaster risks) and strategies to address them

⇒ more informed decisions

⇒ Not the only tool that can enhance evidence-based decision making but outcomes can feed *into* other decision-making systems

⇒ More about the process than the numbers
Economic feasibility vs. financial feasibility

<table>
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<tr>
<th>CBA</th>
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<th>Financial feasibility</th>
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<tr>
<td>Net values</td>
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<td>Profits</td>
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<td>Benefits and costs</td>
<td>Revenues and costs</td>
<td>Monetary impacts</td>
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<td>Social impacts</td>
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<td>Environmental impacts</td>
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<td>Distributional impacts</td>
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<td>All community groups</td>
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<td>Groups that pay or receive money only</td>
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Mainstreaming tool
Engaging with Ministry of Finance and Planning

Talking their language

Assisting to meet their requirements (e.g. project appraisal, budget submission process)

Good mainstreaming tool
Life in the project cycle

CBAs:

*Before* a project is supported (should we do it?)

*While* a project is supported (are things on track? Do we need to change anything?)

*After* a project (project evaluation)
Kiribati beach mining example

Tarawa

- Need for sand
- Sand mining and erosion
- Lagoon potential
  ⇒ Preliminary CBA ...
  - Likely to be sustainable but....
  - negative impact on some families
  - competition from those families
  - current controls already failing
  ⇒ Need for community participation plan (s)
  ⇒ need for strategic communications and shift
  ⇒ need for business plan

⇒ project underway (€2.2 million)
Tuvalu PACC

Lofeagai Water Cistern

*Project already underway so limited opportunity to influence choice of options*
*Strong community management plan needed*
*Expansion of the catchment area would increase project*