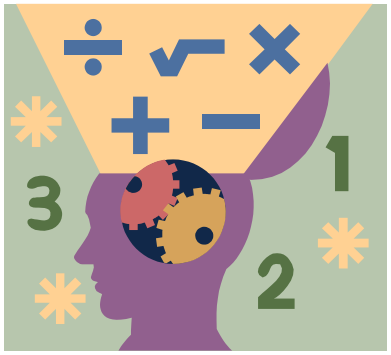
Cost benefit analysis: introduction and basics



Paula Holland

Manager, Natural Resources Governance

Technical Support Services programme

SOPAC/ SPC

This presentation

What is it and why use it

Life in the project cycle

Examples

Challenges

CBA: what is it?

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

Framework

Define problem and identify possible options/ alternatives

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Identify inputs and outputs (impacts) of each option

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Value benefits and costs of each option (‘net benefits’)

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Compare net benefits of each option

↓

Identify ‘best’ option?

What does/did it take to make the benefits actually materialise (pre-conditions)?

Why CBA? Why not 'normal' decision making?

Common ways to make decisions in the Pacific:

- voting systems – perceptions, individual gains
- consensus – 'Pacific Way'

Coastal project: protect reefs through a groyne; improved fisheries and diving but …

… interferes with longshore drift and erosion further along the coast

Voting versus CBA

Voting? Yes/ No: 3:2 – the 'Yesses' win

Stakeholder	Benefits ($)	Costs ($)	Net benefits ($)	Vote
Sasa village	10	20	-10	-1
Fisheries group	20	10	10	1
Dalo village	20	40	-20	-1
Ecotourism/ diving group	20	15	5	1
Scientific community	15	10	5	1
Overall social impact	85	95	-10	**-1**

Consensus?

CBA?

Same example, different impacts?

Stakeholder	Benefits ($)	Costs ($)	Net benefits ($)	Vote
Sasa village	10	20	-10	-1
Fisheries group	25	10	15	1
Dalo village	20	40	-20	-1
Ecotourism/ diving group	25	10	15	1
Scientific community	20	10	10	1
Overall social impact	100	90	10	**1**

Do you foresee any challenges in executing this project?

CBA advantage

Forced to consider

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

⇒ More informed decisions
⇒ identification of risks (eg., distributional issues) and strategies

⇒ CBA outcomes can *feed into* voting and consensus systems

⇒ more informed decisions

Economic feasibility vs. financial feasibility

CBA	≠	**Financial feasibility**
Net values		Profits
Benefits and costs		Revenues and costs
Social impacts		Monetary impacts
Environmental impacts		
Distributional impacts		
Social impacts … etc.		
All community groups		Groups that pay or earn money only

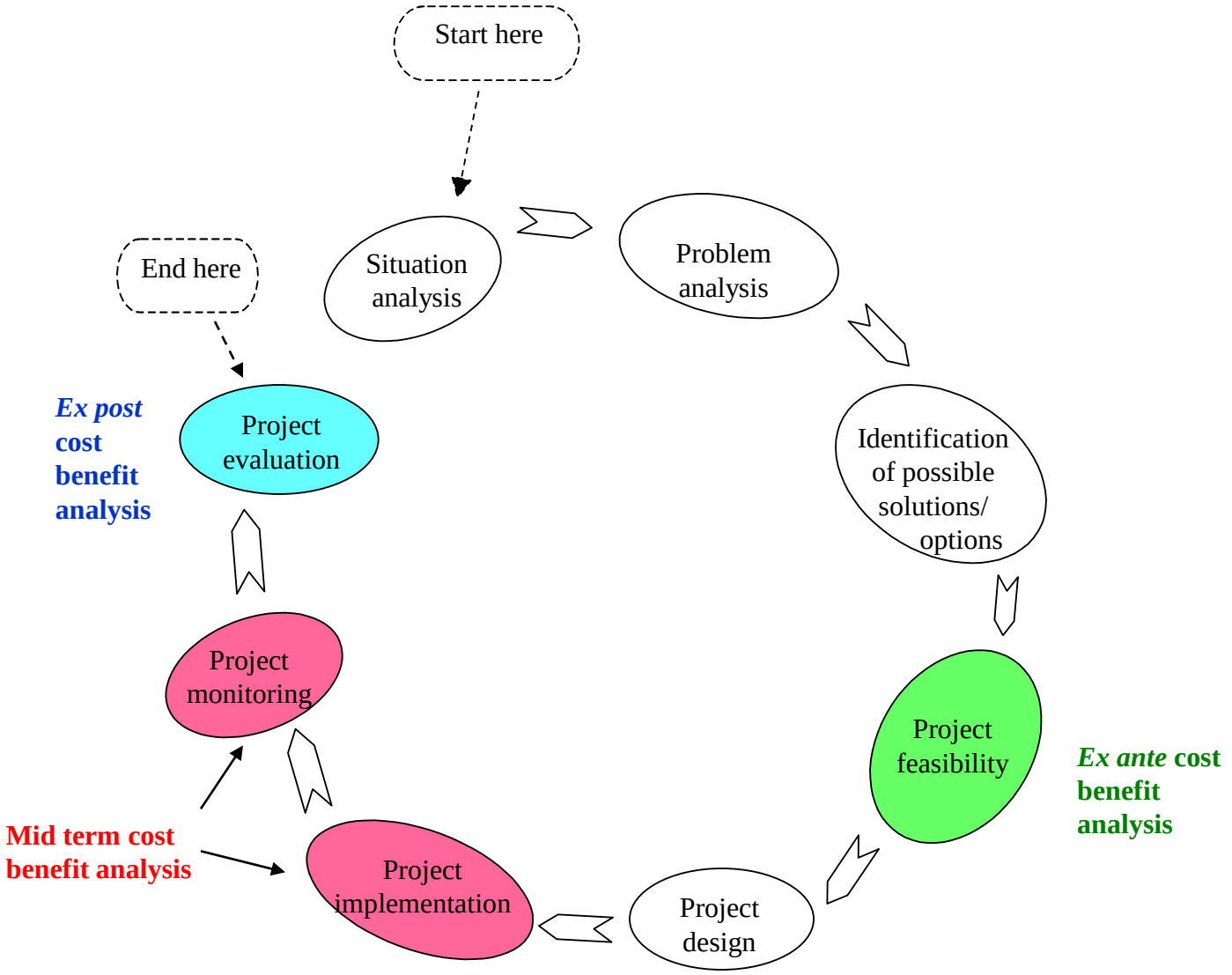
Life in the project cycle

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)



What purpose would your CBA serve?

Kiribati *ex ante* CBA 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 (shared benefits)

⇒ need for strategic communications and shift in attitudes

⇒ need for business plan

⇒ project underway (€2.2 million)

Images courtesy Arthur Webb, SOPAC

Samoa mid term CBA example

Apia

- Regular floods

- Which to choose?

⇒ Preliminary CBA

- Development of an action plan with possible actions:
  - Structural flood management options:
    .. Construction of floodwalls, construction of a by-pass channel, construction of a reservoir, increasing channel conveyance, pumping, river maintenance
  - Non structural flood management options:
    .. Development control (raised floor heights), improved flood forecasting system

Samoa cont'd

Preliminary CBA:

⇒ structural flood management *inviable* due to high construction and maintenance costs

⇒ high payoffs for non-structural measures esp. raised floor heights

=> Interest from donors on what to support, lobbying of government

Challenges

Data, data, data….

Inputs

Selling the outputs (it's all about balance)
- Net benefits vs. social need
- Projects with expensive start up costs

Vinaka vaka levu

Questions?