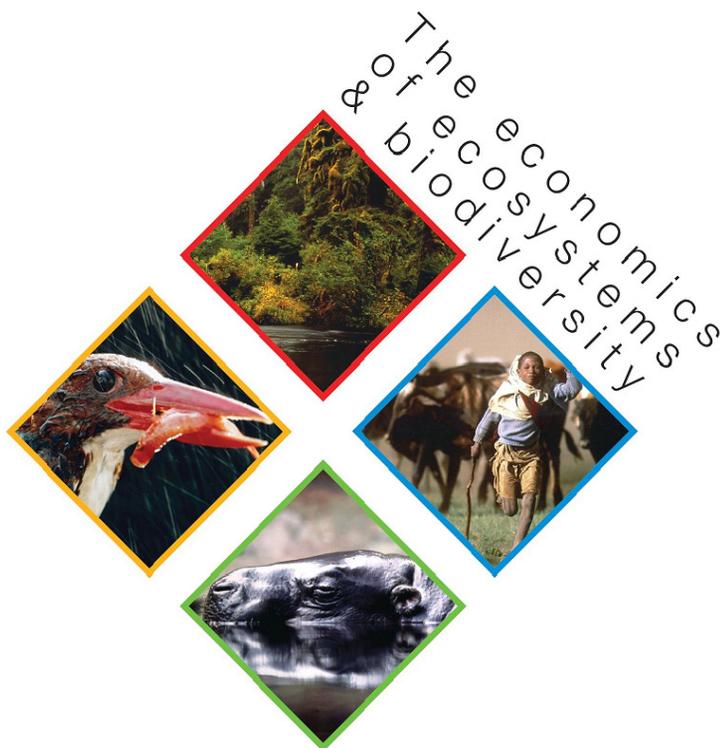




Introducing the TEEB stepwise approach to appraising ecosystem services



Augustin Berghöfer
Member of TEEB Scientific Coordination
Member of TEEB for Local/Regional Policy



CBD CAPACITY-BUILDING WORKSHOP
FOR NORTHAFRICA AND THE MIDDLE EAST
ON TEEB

Beirut, 21–23 February 2012



TEEB's call to mainstream a focus on ecosystem services can be very helpful for awareness raising, advocacy, decision support, policy reform, budget allocation, fundraising, and for tackling poverty



But there are important challenges for conducting valuations and employing valuation results

- Difficult task – no fix blueprints
- Limited validity of results - easily misunderstood
- Cannot resolve problems of poor governance, high inequality or value plurality
- Can have side effects and forsters utility maximising relation with nature



„Relax, we're from Conservation, Inc. ...“
(Chapin 2004)



The TEEB stepwise approach is intended to guide ES appraisal to have best results according to needs.

The stepwise approach is complementary to full ES assessments at national/regional level and has been developed for sector or local policy settings

Six steps....



The TEEB stepwise approach

Step 1:

Specify and agree on the policy issue with key stakeholders

- are key people on board?
- are all relevant aspects being considered?
- are there different perspectives on the same issue?



The TEEB stepwise approach

Step 2:

Identify the relevant ecosystem services

- Which ecosystem services are central to the issue/region?
- Who depends on them most?
- Which services are at risk?
- How do policies affect them?



The TEEB stepwise approach

Step 3: Define information needs and select appropriate methods

Before commissioning an assessment determine what kind of information on which ecosystem services you need. This depends on how you want to use results, on available data and capacity

Options: Qualitative description, Biophysical Quantification, Monetary valuation, combination thereof, others,...



The TEEB stepwise approach

Step 4: Have ecosystem services assessed

For example:

- Role of ES in livelihood situation
- Trade-off analysis between equally important ES
- Mapping of ES distribution
- Comparing ES changes for different scenarios
- Cost-benefit-analysis
- Cost-effectiveness analysis



The TEEB stepwise approach

Step 5: Identify and appraise policy options

Insights from the assessment can feed into policy in different ways, e.g.:

- Inform debate within government, within commissions, local authority, or within a participatory process,
- Provide the basis for a project proposal or gov. programme
- Serve as input for a decision support instrument (multi-criteria analysis)



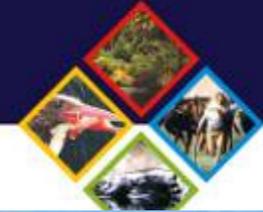
The TEEB stepwise approach

Step 6: Assess distributional impacts

Changes in availability or distribution of ecosystem services affect people differently, and poor people often the most.

- Look for hidden consequences of changed ES flows.
- Consider ES in poverty assessment tools
- Making ES visible begs the question of who owns them
- Assess appropriateness of instrument for a given context

The Economics of Ecosystems & Biodiversity



Example: Kala Oya River Basin, Sri Lanka



photos: J Schreiber, www.srilanka.com, CES



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 1: Agree on the issue

Two challenges were identified by the regional authority, IUCN and residents:

- (i) competing water demands between traditional users, hydro power and modern agriculture; and
- (ii) the need for improved tank management.

Step 2: Identify relevant ecosystem services

It became clear that, apart from the water tanks' benefit for rice cultivation, they provided other important ecosystem services: fish stocks, lotus flowers, fodder and drinking water.



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 3: Identify info needs and select methods:

- Value of the tank's provisioning services would offer insights about people's dependence on them.
- It was decided to use participatory appraisal methods, market prices and labour costs.
- For assessing regulating/ habitat services: qualitative trend analysis (using literature and expert judgment)
- For improving tank condition: comparison of management options

The Economics of Ecosystems & Biodiversity



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 4: Have ES assessed:

The Value of Tank Water and Biological Resources in Rajangana and Angamauwa Sub-Catchments of the Kala Oya Basin (per tank)

Resource	% of households	Value per Household (US\$/hh/yr)	Value per Unit Area* (US\$/ha/yr)
Paddy cultivation	13%	177	161
Vegetable cultivation	7%	86	39
Banana cultivation	3%	1150	209
Coconut cultivation	13%	238	216
Domestic water	93%	226	1,469
Livestock water	15%	369	335
Commercial water	2%	132	12
Fishery	16%	309	351
Lotus flowers	10%	106	72
Lotus roots	7%	235	107
		Total	2,972

* Total inundated area



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 5: Identify and appraise policy options

- Comparison of costs and benefits of four different management scenarios:

Scenario	Net Present Value (NPV)				Indirect use trends (index)	Accumulated Natural Capital
	Investment cost (US\$ '000)	Operating costs (US\$ '000)	Incremental tank benefits (US\$ '000)	Quantifiable net benefit (US\$ '000)		
S1: Do nothing	0	0	0	0	-7	↓ ↓ NC1
S2: Raise spill	0.4	0	24.2	23.8	-4	↓ NC2
S3: Raise spill and rehabilitate tank reservation	23.3	12.5	64.6	28.8	6	↑ NC3
S4: Remove silt and rehabilitate tank reservation	50.3	12.5	120.7	57.9	7	↑ ↑ NC4



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 6: Assess distributional impacts:

- Value of the tank's provisioning services would offer insights about people's dependence on them.
- It was decided to use participatory appraisal methods, market prices and labour costs.
- For assessing regulating/ habitat services: qualitative trend analysis (using literature and expert judgment)
- For improving tank condition: comparison of management options



Example: Traditional Water management in Kala Oya, Sri Lanka

Step 6: Assess distributional impact:

- Management option 4 was the most expensive option, requiring silt removal.
- Local costs in terms of collective labour for tank maintenance were traditionally acceptable
- As intact tanks would provide strong local benefits (secure water supply for 93% of households) these costs were accepted locally.



In sum, the main ideas of the stepwise approach are:

- 1. Gear any ES assessment to the problem**
- 2. Connect it to potential policy responses - and pay attention to rights and to social impacts of ES changes**
- 3. Value estimates can be constructed in various ways: adapt assessment design to your needs.**
- 4. In order to get useful results you need to understand (and decide) what is being measured or valued - and how.**
- 5. Communicate assumptions and what the results can tell. Keep ES values disaggregate.**
- 6. Have the key people/organisations involved.**

The Economics of Ecosystems & Biodiversity



Thank you!

- For further information: www.teebweb.org,
www.teeb4me.com
- Scientific coordination: teeb@ufz.de



European Environment Agency



Federal Ministry for the Environment, Nature Conservation and Nuclear Safety



Rijksoverheid

