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How to select the scope and objectives of the TEEB country study and how to set up the process?



- 2.1 Outputs of the scoping phase
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After an overview of expected outputs of the scoping phase (Section 2.1), this chapter provides information on how to identify the highest priority concerns and determine focus areas and objectives (Section 2.2); how to set up the process of conducting a TEEB country study and its governance structure (Section 2.3); and how to identify and bring on board the relevant stakeholders (Section 2.4).

The three aspects addressed in sections 2.2-2.4 of this chapter are not independent of each other and are not consecutive steps, most likely they will have to be achieved in a closely interlinked way: e.g. depending on initial objectives or mandate, you identify relevant stakeholders and involve them in the further specification of objectives and priorities, then together with experts and potential users you agree on a conceptual framework that is able to address the questions identified.

The purpose of this chapter is to provide an overview of what to consider when getting started, to point to challenges that are likely to arise, and to highlight ways in which to address them.

Experience so far has shown that the situation at the outset differs widely between countries: some start out with concrete questions which a TEEB approach can inform, others decide to conduct a national TEEB study without yet having a clearly defined focus, while others commission a scoping study

or a feasibility study to determine if and on what specific issues to conduct a TCS. Different people could be in charge of this phase: for example, someone in a ministry in charge of kick starting a TCS, or someone from a research institution commissioned by the ministry to conduct a TCS, or an NGO or parts of the research community trying to create momentum for a TCS, or someone commissioned to conduct a feasibility study. The following chapter has been written with the view of keeping all of these possibilities in mind.

The output of this phase can be a scoping study or an interim report for example, or less elaborate, an agreement on scope and structure of the main study and who is to conduct it. Funding may or may not be available at this point. Yet clarifying objectives and setting up a governance structure will require time and effort and at least some funds for travel and communication. If a scoping study is envisaged, funding will be critical. In the event funding is not yet available, it will have to be secured before starting the study. Identifying policy-relevant questions, outlining objectives and the added value of a TCS, are also important components of a funding proposal. So in many cases, some issues addressed in this chapter will have to be worked upon in several rounds- usually starting off roughly, in order to develop a funding proposal, and then in more detail later to prepare for the main study or to conduct a scoping study.

2.1 Outputs of the scoping phase

At the end of the scoping phase of your TEEB country study you should have identified:

Objectives and thematic focus:

- ✓ An understanding of the policy context within which your study falls
- ✓ Key thematic areas on which your study will focus
- ✓ Draft objective or set of objectives for your study
- ✓ Set of key questions which your study will aim to answer
- ✓ A list of outputs to be delivered by your study (note: outputs can be delivered throughout the project, not just at the end)

Knowledge base

- ✓ An overview of the state of knowledge on natural assets – their stock, state, changes and roles
- ✓ At least a rough overview of data availability and any potential knowledge gaps

These points will help you to reflect upon the study focus given both the importance of issues and practical considerations of data availability.

Stakeholders

- ✓ An understanding of who the relevant stakeholders are and their main interests and concerns
- ✓ A plan of how and when you are going to engage them within the timeframe of your study.

Process and Governance

- ✓ A governance structure decided upon and put in place with appropriate documentation outlining the respective roles of those involved
- ✓ Work plan and milestones developed for your study: what will be delivered by when?
- ✓ Budget and plan outlining how resources will be mobilized and agreed upon for your study
- ✓ Communication strategy for the study



2.2 Identifying the thematic focus: scope and objectives

Key Messages

- There are many different starting points: TEEB country studies should be tailored to the national context and its needs!
- Use policy makers' priorities and questions as starting point for identifying objectives of the TCS to ensure it is relevant and meets the needs of at least one group of decision makers.

A TEEB country study (TCS) has the potential to be complex, covering different topics and scales, incorporating different types of information, and considering different stakeholder perspectives, while being completed in a tight timeframe. This section outlines four starting points for scoping your TEEB country study. Having clear boundaries for the scope and scale of your TEEB country study will help you ensure the TCS meets its objectives. This means you need to be realistic regarding the scale and geographical scope achievable with available resources and timeframe for the study. The scoping of your TCS does not necessarily have to be a lengthy process, nor does it have to produce a separate scoping study, but in some cases, a fully elaborated scoping study can be an important first step in determining the need for and orientation of a full study. The time spent on scoping will thus differ between TCS.

Experience to date has shown that there are a number of different starting points for deciding how a TCS can inform the issue(s) being discussed within a country and identify entry points for the results. We have characterized them as four potential starting points:

1. **A specific request from policy** that can be addressed by a TCS.
2. **General interest to learn more about the natural assets** of the country or desire to add an economic dimension to existing ecosystem services assessments.
3. A **policy where nature could play an important role** is being formulated or revised.
4. Using the 11 TEEB recommendations for focusing the scoping exercise, or a combination of the above.

These potential starting points will be outlined with examples below.

The objectives of your TEEB country study will depend on the mandate that you have and/or the needs and interests of key stakeholders, who typically will be decision makers from govern-

ment (national and local), business or civil society. A mandate or even a clear demand from a decision-making community will give the study team authority to carry out the TCS and provide an enabling environment for the implementation of study recommendations (see Box 2.3 and 2.4). See Section 1.2 for a list of reasons to do a TCS that may interest policy makers.

If you do not have a clear mandate from decision makers, it will be all the more important that you tailor the study in such a way that its results will be useful in a decision-making context. It is important to remember that your TCS should have a degree of independence, be open and transparent. Even if the focus of the study is well selected from a content point of view, there may be procedural issues hindering the success of the study, such as a mismatch between the timing of the study and of the policy process it is trying to inform. The following section will provide some recommendations on how to make the TEEB study relevant from a content point of view; the next section will highlight procedural issues for ensuring credibility and legitimacy.

Regardless of your starting point, the following tasks should be fulfilled:

1. **Define clear and relevant questions** in consultation with key audiences and users of the outputs. These questions could be applicable to a topical, political discussion or even a key national sector. A user needs assessment can contribute to defining these questions (see Box 2.1).
2. **Understand what purpose your study would best serve.** Focus could be on awareness raising, on broadening the framing of issues, on innovative responses to issues involving nature, on fundraising, or on providing direct inputs into policy design and formulation.
3. **Identify key outputs that the main study will deliver.** The outputs will be determined, in part, by the mandate you have and the audiences identified, and could include focused valuation results, or a non-prescriptive analysis of policy options or policy recommendations.

**Starting point 1:****A specific request from policy**

Opportunities include: creation of new tools, revision of existing policy tools, options or processes linked to biodiversity and ecosystem services, a policy 'window of opportunity' in the country. Requests might also arise while developing and implementing action plans under the Multilateral Environmental Agreements such as UNCCD, UNFCCC and particularly CBD and its Aichi targets (see Annex 1.2).

Sometimes there are direct requests from policy or decision makers that can be addressed with TEEB-related or TEEB-type information, such as in the case of the Indian Supreme Court to set compensation rates for the conversion of forest (see Box 2.2). Other examples include cases in which policies directly concerned with the environment are being revised or newly implemented, e.g. EIA or SEA policies, or changes in planning law or the regular revision of agricultural policy and its agro-environmental schemes. It is important to understand the framing of these policies and how their implementation is envisaged so that study

results will be useful. For example, in South Africa, planning law is based on the principle of comparing values. Thus the value of ecosystem services at the national level is relevant (see Box 2.3).

Some countries may decide to undertake a multi-report TCS echoing the international TEEB initiative which decided to focus the report on different target groups (national policy makers, local and regional policy makers, business and citizens). TEEB Netherlands is an interesting example in this regard as it combined deliverables targeted at specific groups and requested by different ministries with thematic reports (see Annex 2.1).

Box 2.1: User needs assessment

A systematic understanding of the main users and other social, economic and political target groups are vital to the success of your study. A user needs assessment at the beginning of the assessment process is a good way to begin a stakeholder engagement strategy. Ideally, the main output from such an assessment is a database of potential stakeholder groups; information about their relationship to specific ecosystem services, and their potential and capacity for engaging in the assessment. Identification of relevant initiatives is also important during this assessment. A survey is a useful tool to help you develop the stakeholder database. Ideally, the database would evolve as your study progresses and should be revisited as findings emerge (see Section 4.1).

Ash et al. (2010) suggest the following steps to be undertaken by a social scientist to develop such a stakeholder database:

1. Undertake desk research on potential users
2. Visit key potential users and carry out interviews
3. Develop a database
4. Draft a brief report summarising the results

It should be noted that there are many ways to undertake a user needs assessment and it should always be adapted to the context in which you work. A user needs assessment is not only about compiling information but can be an important step in building a relationship with your stakeholders.

Guidance on how to carry out a user needs assessment can be found in Ash et al. (2010, mainly Ch. 2) and on the website of the International Association for Impact Assessment (IAIA) www.iaia.org/publications-resources/.

For further information see www.unep-wcmc.org/ecosystems-and-humanwellbeing_553.html

**Box 2.2: Case Example: India – Demand created by Supreme Court**

In order to be able to set compensation rates for conversion of different types of forested land to non-forest use, the Indian Supreme Court commissioned an economic valuation study of Indian forests. By doing so the Indian Supreme Court created a demand for a valuation study.

As a basis for compensation rates, the Centrally Empowered Committee (CEC) of the Supreme Court based on published results of the Green Indian States Trust (GIST 2006) estimated the value for six different classes of forests. For this study the values of timber, fuelwood, non-timber forest products and ecotourism, bio-prospecting, ecological services of forests, and non-use values for the conservation of some charismatic species, such as the Royal Bengal tiger or the Asian lion, were taken into account. Based on the value of the different classes of forest, the Indian Supreme Court decided to establish a compensation system. In this system any party that plays part in actively converting forest into other land-uses would have to pay into an afforestation fund to improve national forest cover.

Source: TEEB National, Ch. 10, Box 10.7, Ch.4 Box 4.9 (in book)

Box 2.3: Case Example: South Africa planning law need for biodiversity and ecosystem services indicators for accounting and monitoring

South Africa is the third most mega-diverse country in the world, but biological resources are being eroded by unsustainable practices such as illegal trade, unsustainable extractive practices, habitat fragmentation and spiralling development; all are further exacerbated by climate change. Post 1994, South Africa embarked on an exhaustive planning regime and developed planning instruments and tools.

Various ministries signed a 'service delivery agreement' for ten services such as housing, energy, water, and 'biodiversity' was included as a service as well. Until 2014, status and trends of the deliverables from these services need to be reported. This generated the need to understand costs and benefits from biodiversity, to establish indicators for ecosystem services provision, and to quantify ecosystem service values for monitoring purposes, and as decision support for resource allocation.

The South African Government pursues a SA TEEB initiative at least partially with the objective to contribute to this 2014 policy goal.

Source: Interview with Kiruben Naicker (Deputy Director, Biodiversity Planning, Department of Environmental Affairs, South Africa)

Starting point 2:

General interest to learn more about the natural assets of the country or wish to add an economic dimension to existing ecosystem services assessments

One possible starting point is to undertake an assessment of natural assets, including assessments of their values, the pressures and threats they face, and the needs and opportunities for responses to initiate changes or reforms. This is likely to be the most appropriate approach in situations where the policy or decision makers voice the need for more information on the state of natural assets, and how this relates to

the provision of ecosystem services as inputs to further policies, management and (environmental or financial) accounting within specific sectors.

The starting point here is to produce an assessment of natural assets (such as an ecosystem assessment) or to take a prior such assessment as a starting point. In most cases, such a study would focus on specific regions, on certain ecosystems or on a selected range of ecosystem services. Selection criteria to determine the appropriate focus include:



- if specific threats are expected to increase rapidly;
- if demand or supply of ecosystem services is expected to shift;
- if recent or upcoming policy decisions are expected to have notable impacts;
- if livelihoods of specific groups of the population are at risk because of (policy or land-use) changes that have caused the ecosystem services they depend on to deteriorate.

In order to ensure that the results can be used in concrete policy processes, derive specific questions to guide the assessment jointly with the policy makers concerned. Examples of such questions are: identifying subsidies as pressures to certain systems or services, or identifying which services are systematically undervalued or overused.

In countries, where an ecosystem assessment, e.g. a MA sub global assessment or similar process has already been completed, this assessment could be a good starting point to identify economically relevant questions to be answered by a TEEB country study. For example, the UK National Ecosystem Assessment synthesised all available information on ecosystems and their services in order to address a list of policy questions, including three economic questions:

- Are we going to consider economic values of ecosystem services?
- Why should we incorporate the economic value of ecosystem services into decision-making?
- What are the economic implications of different plausible futures?

TEEB Nordic was commissioned to conduct an initial assessment of the socio-economic importance of ecosystem services in the Nordic countries as Box 2.4 outlines.

Box 2.4: Case Example: Lessons from TEEB Nordic for scoping and planning stages of a TCS

Objectives and scope:

Synthesis of the socio-economic importance of ecosystem services in the Nordic countries (2011 – 2012).

Based on existing data, the project identified a range of relevant ecosystem services and synthesised available information on their present status, trends and socio-economic importance. The project also explored needs and opportunities for future policy action, including possible areas for Nordic cooperation. The overarching aim of TEEB Nordic was to raise awareness on the value of Nordic nature and thereby facilitate policy action in the region.

Initiation and governance: TEEB Nordic was an independent synthesis, separate from the national ecosystem service assessment taking place in, or being initiated by, the individual Nordic countries. However, the synthesis provided a useful source of information and/or starting point for these on-going and planned in-depth assessments. TEEB Nordic was funded by the Nordic Council of Ministers (NCM), an inter-governmental body for political cooperation between the Nordic countries. The synthesis was developed by the Institute for European Environmental Policy (IEEP) and the Finnish Environment Institute (SYKE). The study was supported by a range of contributors and reviewers, including Nordic researchers and experts, and members of the international TEEB community.

Engagement, communication and outreach was carried out by: (1) engaging a range of Nordic experts in the process, both as reviewers and also as authors of stand-alone TEEB case studies (see below); (2) opening a dialogue with interested relevant stakeholders, e.g. Nordic Ministries of Environment, Nordic research institutions and initiatives, and NGOs etc.; and (3) seeking visibility for the initiative and its insights in close cooperation with UNEP TEEB office (see below).

Outputs:

- A List of Nordic ecosystem services: was developed on the basis of the classification by TEEB and the MA, reflecting the specific benefits provided by the Nordic ecosystems, such as berries, mushrooms, game, reindeer herding, recreational values and cultural values, inspiration for art and design etc.



- Identification of indicators for Nordic ecosystem services based on the existing key literature and focusing specifically on indicators useful to assess and compare ecosystem services at the national level. Biophysical and socio-economic indicators were distinguished: i.e. ecosystems' ability to provide services and the socio-economic value of these services. For each ecosystem service 2–4 biophysical and 2–4 socio-economic indicators or proxies have been identified.
- A Synthesis of the existing information: on status, trends and value of ecosystem services, was elaborated and a number of novel estimates for the biophysical status of some regulating services for Nordic countries were developed, building on work carried out by the European Commission's Joint Research Centre (JRC) and the PEER research network.
- Important knowledge gaps were identified: e.g. data on regulating and cultural services and the supporting processes and functions of ecosystems, status of and trends in eco-systems' biophysical ability to provide and maintain ecosystem services, and data on trade-offs between ecosystem services.
- Development of recommendations for policy action on ecosystem services in the Nordic countries, with close links to the green economy, supported by examples of existing initiatives for ecosystem services in the Nordic countries.
- Development of six stand-alone TEEB case studies authored by a range of Nordic experts. These focus on: recreational values of the Baltic Sea; economic benefits of visitors' spending in protected areas in Finland; ecosystem services provided by the Baltic salmon; ecosystem services in the Barents Sea and Lofoten Islands; socio-economic importance of wetland restoration in the city of Nummela, Finland; and recreational values of Danish forests to guide national afforestation.
- Outreach and communication: results were presented at several events in the region as well as internationally (e.g. side event at the Rio+20 conference).

Lessons and insights for other TEEB country studies:

- Creating a comprehensive (conceptual) framework for ecosystem services and their indicators, including systematic identification of biophysical and socio-economic indicators and understanding the linkages between the two, forms a good starting point for TEEB assessments focused on (scoping) natural assets or adding an economic dimension to existing ecosystem service assessments. Such a systematic framework helps to identify gaps and information needs, further allowing judgement of the reliability of an assessment's outcomes. It also forms a 'road map' for future research and knowledge requirements, and forms a good basis for more detailed (socio-economic) exploration of a number of selected services.
- In addition to peer-review, active engagement of relevant interested stakeholders (experts, researchers, NGOs etc.) can provide multiple benefits to the process, such as raise awareness, increase buy-in, and bring additional resources to complement the study. Cooperation with TEEB UNEP office and/or other TEEB initiatives plays an important role in increasing visibility and helping to share key messages to the wider audience.

Source: Kettunen et al. (2013): [Socio-economic-importance-of-ecosystem-services-in-the-nordic-countries-synthesis](#)

**Starting point 3:**

A policy is being formulated or revised where the consideration of nature could play an important role or make a significant contribution, but policy makers in charge are often not yet aware of this.

This includes the necessity to mainstream ecosystem services/ecosystem-based solutions across relevant policy areas; e.g. in policy formulation or revision, wherever a policy is being formulated or revised where more explicit consideration of nature could lead to better outcomes with regards to ecosystem service provision (e.g. development planning, agricultural policy, trade and finance decisions, etc., see Box 2.5). In these cases, the scoping process is all the more

important and it can be helpful to have a strong study leader and support from within the government and other strong stakeholders (e.g. a leading NGO) to help get the relevant parties on board (see also Section 2.4).

Further opportunities where TCS can be linked and fed into the formulation of other policies include: policy design for climate change mitigation and adaptation (see Annex 2.2); disaster prevention strategies that highlight the economic potential of diverse and resilient ecosystems; and poverty alleviation and sustainable livelihoods policies, whereby gains can be made from taking better note of the specific role of ecosystem services and the potential to enhance this.

Box 2.5: Case Example: TEEB Brazil – Mainstreaming the value of nature

Inspired by the CBD COP-10 in Nagoya, Japan and the attention created by the international TEEB process, the Brazilian Ministry of the Environment (MMA) has started a national TEEB initiative. TEEB Brazil aims to develop the following four main reports: (1) TEEB Brazil for National Policy Makers; (2) TEEB Brazil for Local and Regional Governments; (3) TEEB Brazil for the Business Sector; and (4) TEEB Brazil for Citizens.

One of the main topics of the initiative is mainstreaming the work of MMA to other ministries and different sectors; even to ministries and sectors without direct visible link to biodiversity. Identified as key actors to be involved are the ministries of:

- Finance,
- Health,
- Agriculture, Livestock and Supply,
- Mines and Energy,
- Tourism,
- Planning, Budget and Management,
- Social development and hunger alleviation,
- Science and Technology,
- Fisheries and Aquaculture,
- Development, Industry and Trade,

In addition, the Institute for Applied Economic Research (IPEA), the Secretariat of Strategic Affairs of the Presidency and the National Confederation of Industry (CNI) are expected to play a key role.

An Executive Commission and a Coordinating Commission, comprising these ministries and institutions, were proposed as governance bodies of TEEB Brazil. The engagement of all identified key actors is a challenging process and not all are involved yet, but several are already taking part in the initiative.

The Brazilian TEEB for Local Policy Makers (joint initiative of the Ministry of Environment, GIZ and CNI), for instance, is an example of coordination between different stakeholders. Its overall goal is to mainstream the values of ecosystem services and biodiversity into public and private decision-making processes. The initiative aims to raise awareness on environmental impacts and opportunities at the sub-national level. Implementation and findings of the TEEB for Local Policy Makers, however, will at a later stage serve as useful case examples for the national TEEB Brazil initiative.

For further information see: www.teebweb.org/brazil/



The regular revision of agricultural and forestry policies in Europe, for example, is now giving increased consideration to ecosystem services, albeit sometimes only implicitly. For example, the forestry sector in many countries is increasingly looking for sources of revenue beyond that from timber production (e.g. recreational access, watershed protection – both of which are ecosystem services). In the face of declining timber revenues, for example, where value is not converted to a revenue stream from users (capturing), value evidence can be powerful in making business cases and persuading policy makers about the values (recognising and demonstrating). This could help to increase public investment to the sector or rewarding changes in management practices, such as establishing PES schemes that recompense forest owners for sustainable management of forests.

The scoping of different sectors, as discussed above, can help to identify currently important issues and upcoming policy needs. Some TEEB initiatives, such as TEEB Brazil, have from the outset, involved a broad number of ministries in the scoping and selection phases to mainstream the scoping

process and to incorporate valuable inputs from each ministry (see Box 2.5). The German TEEB study was commissioned by the Ministry of the Environment's Nature Conservation Policy Directorate with a request to illustrate the economic importance and values generated by ecosystems and biodiversity. During the scoping phase, a consultation process among a broad range of stakeholders identified policy-relevant issues where economic information on the role of biodiversity could provide added value. This will be used to select relevant examples and to structure the reports (see Box 2.6 on topics and Box 2.11 on process). Table 2.1 may serve as starting point for approaching relevant stakeholders to identify policy relevant questions. If you have access to high level policy makers directly, you may start out by listening to their concerns and then deriving links to ecosystems and biodiversity so that you can identify relevant questions for your TCS to address (see TCS guidance webpage for an example from Tanzania).

Table 2.1 might serve as starting point for approaching relevant stakeholders to identify policy relevant questions.

Box 2.6: Case example: Thematic focus of TEEB Germany

For the German TEEB country study ('Natural Capital Germany'), four main thematic reports are being developed:

1. The role of ecosystem services for climate change: mitigation and adaptation
2. The role of ecosystem services in urban areas: health and quality of life
3. The role of ecosystem services in rural areas: forestry, agriculture, and nature conservation conflicts; and
4. Instruments to better address the economic importance of Natural Capital and Synthesis.

These foci were chosen to mainstream TEEB beyond the most commonly monitored environmental concerns, and beyond nature conservation. In particular, within the first report on climate change, the focus lies on illustrating the advantages of explicitly considering ecosystem services relating to climate change. All reports aim at informing important current policy discussions, such as for example, agricultural policy or the ongoing German 'energy transition' – Energiewende: the nuclear phase out and transition towards renewable sources of energy. Biodiversity and ecosystem services are being affected e.g. via increased bioenergy production and new transmission lines and should be considered more explicitly in policy design.

As there is already quite an active Business and Biodiversity initiative in Germany, it was decided to provide only a brief report aiming to further raise awareness in the business sector. This report is called "Natural Capital Germany – The business perspective: prepared for new challenges". For more information, see www.naturkapitalteeb.de



Table 2.1: Selected examples of needs and opportunities for the integration of ecosystem services across a wider range of policy areas (beyond the environmental sector).

Sector	Example questions	Example opportunities	Further reading in TEEB-Reports
Basic service provisioning	<ul style="list-style-type: none"> How could ecosystems and ecosystem based approaches contribute to raw materials, food, genetic resources, water etc. (see also separate sector discussions below) 	<ul style="list-style-type: none"> Protection and/or restoration of important ecosystems (e.g. coral reefs, mangroves, forests) that provide basic provisioning services for local communities and other beneficiaries. 	NAT Ch. 5, 6, 7, 8 & 9
Transport, infrastructure development	<ul style="list-style-type: none"> How can transport infrastructure be designed so as to minimise impacts on ecosystems and their services? 	<ul style="list-style-type: none"> Integrating green infrastructure elements into transport planning, and impacts duly integrated into EIAs and SEAs. 	LCL Ch. 6.1
	<ul style="list-style-type: none"> Where infrastructure is built to help people enjoy recreational benefits from nature, how can trade-offs be avoided? 	<ul style="list-style-type: none"> Facilitating access of citizens to ecosystems, thus increasing the benefits gained, and value derived from, ecosystems. 	NAT Ch. 4
Health and protection against natural disasters	<ul style="list-style-type: none"> Are there ecosystems which are essential for protection against natural disasters, e.g. flooding, land slides, or avalanches? Could restoring ecosystems help to protect against natural disasters in the future? 	<ul style="list-style-type: none"> Potential of biodiversity to contribute to public health. Recognising and using the potential of vital ecosystems for safe-guarding human beings against tidal surges and storms, floods, landslides, fire, droughts & desertification etc. by preventing ecosystem degradation. 	LCL Ch. 4.3 (table 4.1 report; 4.2 book version) Ch. 5.5 & 5.6, Ch. 6, Ch. 7 NAT Ch. 7, Ch. 9
	<ul style="list-style-type: none"> Can ecosystems contribute to waste water treatment? If so can they do this in a cost-effective way? When major investments in water treatment infrastructure are necessary, is there scope for making use of natural systems? 	<ul style="list-style-type: none"> Natural vs. technical options in waste water treatment. Manage local and regional ecosystems to enhance water supply and treatment. Evaluate potential co-benefits such as recreation and habitat conservation. 	LCL Ch. 4.3 Water and Wetlands
	<ul style="list-style-type: none"> Can ecosystems and biodiversity provide natural resources for medicine (e. g. herbs, plants, mushrooms)? 	<ul style="list-style-type: none"> Preservation of traditional knowledge will ensure that local communities will continue to use traditional medicines derived from plants, for example. By protecting relevant habitats, this potential will be enhanced. 	LCL Ch. 1.6



Sector	Example questions	Example opportunities	Further reading in TEEB-Reports
	<ul style="list-style-type: none"> To what extent can ecosystems and biodiversity help avoid the spread of diseases beyond their role in providing medicines? 	<ul style="list-style-type: none"> The management and restoration of ecosystems can provide benefits via pest control (e.g. insect predation by bats) and can avoid becoming sources of pests (e.g. mosquito breeding grounds). 	<p>LCL Ch. 1.6</p>
	<ul style="list-style-type: none"> Are opportunities to harness the capacity of ecosystems to improve the environment in urban areas exploited in optimal ways? Can the incidence of allergies in urban children be reduced and the recovery of patients after illness be accelerated? 	<ul style="list-style-type: none"> Adequate provision of green infrastructure in urban areas (parks, gardens, urban trees and green roofs) can offer opportunities for recreation and contribute to microclimate control, air quality improvements, and water management. They also enhance recovery after illness and new results point to their importance in avoiding allergic diseases. 	<p>LCL Ch. 4.3 NAT Ch. 8 & 9</p>
Tourism and recreation	<ul style="list-style-type: none"> Is there unused potential of ecosystems and landscapes (e. g. beautiful landscapes or natural features that are so far undeveloped as tourist destinations)? How can opportunities for tourism and recreation be aligned with biodiversity conservation objectives? 	<ul style="list-style-type: none"> Ecotourism Zoning of sites – to have core areas for conservation and other areas for recreation and tourism. 	<p>LCL Ch. 5.4, see also LCL Ch. 7.1 p. 137 in report, p. 210 in book</p>
Energy provisioning	<ul style="list-style-type: none"> How can ecosystems be used as sustainable sources of energy and how can biomass be harvested in a way that does not jeopardise the provision of other ecosystem services? 	<ul style="list-style-type: none"> Sustainable harvesting of wood/other biomass for the production of second generation biofuels. Improved use of biofuels in cooking stoves reducing fuel consumption and health risks. 	<p>LCL Ch. 1 & 10 (Ch.1.5 in book)</p>
Agriculture, forestry and water management	<ul style="list-style-type: none"> Are agricultural practices causing problems (e.g. soil erosion, nitrification, high water consumption, degradation of ability to regulate natural fluxes or disasters etc.)? Are there market opportunities for high nature value /organic farming or forestry? 	<ul style="list-style-type: none"> Re introducing traditional environmentally friendly agricultural practices. Introducing organic agriculture or agroforestry systems. Invest in certification and labelling schemes to help consumers make informed choices and producers access higher margin markets. 	<p>LCL Ch. 5.1</p>



Sector	Example questions	Example opportunities	Further reading in TEEB-Reports
Climate change mitigation and adaptation	<ul style="list-style-type: none"> • How can a forest, grassland or wetland ecosystem be managed in a way that enhances their capacity to store carbon? • How can green nature based solutions (e.g. natural water retention measures) be implemented to reduce the risk of floods/drought and other natural disasters /extreme weather events? 	<ul style="list-style-type: none"> • Carbon storage capacity of natural ecosystems – which can be enhanced via protection, management or restoration - .e.g. peatlands, agricultural land etc. • Water retention/regulation capacity from natural ecosystems – e.g. via flood plain restoration, PES, etc. • REDD+ (Reducing Emissions from Deforestation and Forest Degradation). 	NAT Ch. 2, Box 2.9, Ch. 3, Box 3.1., Ch. 5.2. Ch. 8 & Ch. 9
Poverty alleviation	<ul style="list-style-type: none"> • How much do poor people’s livelihoods depend on ecosystem services? • How can poor people be incentivised to use ecosystems in sustainable ways so as to maintain reliable sources of revenues in the long term? • What are the implications for poverty eradication/development if sustainable land-use is not achieved? 	<ul style="list-style-type: none"> • Integrate appreciation of wider ecosystem services to support rural well-being and livelihoods into development cooperation and poverty alleviation strategies. 	NAT Ch. 2., Table 2.3.; Ch. 3 LCL Ch. 1, more extensively in book version.
Cultural and natural heritage and education	<p>Which parts of the natural environment are unique/rare and would merit being promoted/studied/better understood and more widely appreciated?</p> <ul style="list-style-type: none"> • Do citizens have easy access to a natural environment with a good quality for outdoor activities? • Does the educational system help develop appreciation for natural assets, such that citizens value and take pride in them? • Are natural assets (e.g. charismatic species and cultural landscapes) being protected and promoted in view of encouraging ecotourism? 	<ul style="list-style-type: none"> • Education/Science: Research funding to understand ecosystem function and services, including benefits from genetic material (linked to ABS regimes) and biomimicry benefits from widely (e.g. products, process). • Citizens quality of life and health might be enhanced by ensuring/increasing access to a natural environment of a good quality. • Conservation and promotion of natural assets can create opportunities for ecotourism (i.e. loss of natural assets and cultural landscapes reduces a country’s appeal for tourists). 	NAT Ch. 5., Section 5.1. Ch. 8 LCL Ch. 7
<p>The TEEBcases contain plenty of local and regional examples for all of these areas. Many of them also include relevant policies implemented or suggested to realise the ecosystem service opportunities identified (see: www.teebweb.org/resources/teeb-case-studies/).</p>			

**Starting point 4:
Use the TEEB recommendations for scoping**

The global TEEB study has summarized its main conclusions and general recommendations for the improved incorporation of nature's economic potential in eleven points (see Chapter 1.2 above). These can be found in Chapter 4 of the TEEB Synthesis report. This list can serve as a checklist to identify areas of concern for a given country, and also to

structure what kind of information is already available and what kind of policies are already in place, addressing some of the issues. This approach has been used by the TEEB Flanders feasibility study to structure available knowledge and tools and compare them with user needs. Box 2.7 summarises the experience of TEEB Norway which has also used the TEEB recommendations for identifying what to address.

Box 2.7: TEEB Norway: Using the TEEB recommendations as a starting point for a TCS.

Norway has taken a key interest in TEEB since 2008. It supports and participates in various international TEEB related projects, and has encouraged the use and development of TEEB in multilateral environmental agreements (MEAs). Norway also draws on TEEB findings and recommendations at the national level, seeing the potential in better recognising, demonstrating and capturing values of biodiversity and ecosystem services in public policy and management.

In October 2011 the Norwegian Government established a National Expert Commission on Values of Ecosystem Services. The interdisciplinary commission consists of twelve experts with wide professional and scientific backgrounds, including from economics and ecological sciences. The main objective is to provide advice to national policy makers, but also seeks to influence local and regional policy makers, business, research communities and the public at large. The commission has therefore been requested to engage key stakeholders in its work, including affected economic sectors and relevant organisations, and will build on input from key research institutions. The Secretariat for the commission is provided by the Ministry of the Environment.

The commission has been given a broad and fairly open mandate from the Government, which can be broadly summarised as follows:

- To base its work on the conclusions and recommendations of the TEEB study, and assess which elements and recommendations are particularly relevant to Norway
- Consider if and how ecosystem services terms and approaches may be relevant for human well-being in Norway.
- Describe the status and trends for ecosystems and ecosystem services in Norway.
- Review methods for valuation and recognition of values of ecosystem services, and to consider advantages and disadvantages of monetary valuation.
- Investigate values of Norwegian ecosystem services based on existing studies.
- Review and consider methods for demonstrating values of ecosystem services in public decision-making.
- Consider possible means for capturing values of ecosystem services in economic and regulatory instruments.
- Review and consider ways of estimating or calculating values of ecosystem services as part of Norway's national wealth.

The mandate covers all ecosystems in Norway, including marine and Arctic ecosystems, agricultural land and urban ecosystems. The commission will also consider and reflect on Norway's relationships with ecosystems and ecosystem services in other countries, including through investments, trade and development cooperation.

The commission will present its findings and recommendations in a National Official Report (NOU), which will be delivered to the Government by 31 August 2013. The report will be subject to a broad public hearing and will be used as a basis for development of possible new policies and efforts related to values of ecosystem services. Selected recommendations may be included in Norway's revised NBSAP to be presented in 2014 as a follow-up of the Convention on Biological Diversity's strategic plan and its Aichi targets.



TEEB recommendations and the ecosystem services approach are also being used in various parts of national policy independently of the expert commission. Examples of this include reflecting biodiversity in national indicators on sustainable development in the national budget, using the ecosystem services approach in integrated plans for large marine areas and drawing on ecosystem services in climate change mitigation and adaptation, and in efforts to improve public health.

By Finn Katerås, Senior adviser, Secretariat for the Government's expert commission on values of ecosystem services, Norwegian Ministry of the Environment. See also: www.regjeringen.no/okosystemtjenester.

A check list for what you will have at the end of a successful scoping process to help shape the TCS

Independent of your starting point, the scoping process should allow you to prioritize:

- ✓ **Key issues in terms of policy** – you would aim to have a list of policy themes (such as forests) or of particular policies (e.g. PES schemes, or EIA regulation).
- ✓ **Objectives of the study** – you would aim to have these written down and agreed by the key stakeholders which you have identified in the scoping process (for further details see Section 2.4 below).

- ✓ **Key questions** to address in main study, (see Chapter 3) and **an adequate conceptual framework** that facilitates addressing these questions (see Box 2.8).
- ✓ The role of economic and monetary valuation and other economic arguments in answering the identified questions (see Chapter 3 for details).
- ✓ **Outputs of the study** – this may be an initial list of outputs that might be refined as the study progresses.
- ✓ Some idea on **desirable formats** of these outputs (e.g. policy briefs, technical reports, databases, or software tools).

The process of identifying priorities and objectives and setting up a team and a governance structure are parallel and inter-dependent. Different options are outlined in the next sections.

Box 2.8: Developing Conceptual Frameworks in Assessment Processes

A conceptual framework is a concise summary in words or pictures of the relationships between people and nature – in other words, the key components and interactions between humans and ecological systems. Conceptual frameworks can further clarify and focus thinking about complex relationships, including how those relationships may be changing over time and how they may be influenced by decision-making and policy.

Conceptual frameworks are common tools used within assessment processes and can help immensely to facilitate communication between different actors involved in a TCS. They can be useful when identifying which issues will be covered and to what extent. They are also instrumental in establishing the relationships of nature and other relevant issues and concerns in different policy fields. It might, therefore, even make sense to apply more than one framework for different aspects of a TEEB country study (e.g. nature's potential for poverty reduction strategies, or for climate change mitigation).

Deciding which conceptual frameworks are adequate depends on the questions you would like to answer and on the particular perspectives you would like to include. In this sense the process of agreeing on an adequate conceptual framework can help to clarify these points and reach agreement or at least a mutual understanding among the different parties involved. One lesson learnt from on-going TCS is that a conceptual framework can help avoid For further information on different conceptual frameworks that are apt for addressing biodiversity and ecosystem services in different contexts see the TEEB website and:

- Ash et al. (2010), Ch. 3 - Conceptual Frameworks for Ecosystem Assessment: Their Development, Ownership, and Use.
- TEEB Local: Ch. 2 Conceptual Frameworks for considering the benefits of nature.
- IPBES/1/INF/9 - Outcome of an informal expert workshop on main issues relating to the development of a conceptual framework for the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (www.ipbes.net/plenary/ipbes-1).



2.3 How to design the study and the process?

Key Messages

- Carefully balance roles and responsibilities of different groups and bodies to achieve a credible and relevant result.
- Try to involve all potentially relevant actors in adequate roles.

How you design your TEEB country study will reflect the mandate you have, the focus of the study, the scale (e.g. National) or nested scales (e.g. national with local case studies) of the TCS and of course, your ambitions. The design needs to be fit for purpose and reflect the objectives and other elements that you need to achieve. A TCS is a collective effort of a number of different actors in different roles. Coordination among relevant actors and potentially different study groups (e.g. local, national and business, or different thematic foci) is, therefore, key. It needs to be ensured that all activities under a national TEEB project inform and complement each other and take place within the agreed policy context.

Architecture and governance: ability to deliver while ensuring credibility and relevance

While there is no one right way to design an assessment, many assessment processes have found that governance and leadership are critical to ensuring the most is obtained from the collective capacity of an assessment team and the communication of findings. There are many different elements that could make up the architecture for a TEEB country study, which are outlined below. One rule of thumb however, is to not over complicate the design but ensure that it is balanced and allows for engagement of the research community and other stakeholders. In fact, it is all about balance.

Credibility, legitimacy and relevance. Keep in mind that policy makers can obtain a broad range of scientific knowledge via consultancies or service contracts and are often approached by the scientific community with new results. What distinguishes an assessment process from such consultancy contracts is the level of credibility and legitimacy it can achieve. To ensure both of these qualities are achieved, independence of the assessment process is crucial. Balancing these requirements while producing policy-relevant results is a challenge and trade-offs frequently arise as illustrated in Box 2.9.

Be transparent in the process. In whichever way you develop the governance structure for your TEEB country study, both credibility and legitimacy can be improved by making the process as transparent as possible: Ensure the process of selection of members of different groups is clear, documented and communicated. You may also consider drawing up 'Terms of References' for the different bodies and their roles. To ensure responsibilities are understood and it is clear who has decision-making powers for what (for examples of different ToR please see TCS guidance web-page).

Open architecture. The global TEEB study was structured so that people who wanted to contribute could do so via a number of different means, such as: via calls for evidence (also translated into several languages), in stakeholder workshops, as authors or reviewers. An open architecture can also help increase legitimacy and relevance, but needs to avoid imbalances, such as listening only to those who have the capacity to become involved on their own accounts. One way to balance this is active stakeholder engagement.

Active stakeholder engagement. The roles and rights of the stakeholders need to be decided at this stage together with a plan for engagement. As outlined in Section 2.4 and Chapter 4, there are a number of good reasons to involve stakeholders - one important reason is to achieve a balanced and comprehensive understanding of the different perspectives on the issues involved. The balance to strike here is to ensure you can consider and include stakeholder inputs, and avoid giving the impression that their inputs are not being considered and merely being used to legitimize the results. Managing expectations on what can be done and how it will be done is crucial here.

**Box 2.9: Credibility, legitimacy and relevance and how to balance them**

Policy makers can obtain a broad range of scientific knowledge via direct consultancies or service contracts. What distinguishes an assessment process from such consultancy contracts is the level of credibility and legitimacy it can achieve. For this, independence is crucial.

Credibility is the “perceived quality, validity and scientific adequacy of the people, processes and knowledge” involved in producing the TCS. To ensure credibility of a TCS, scientific robustness is essential and can be achieved by involving key experts and state-of-the-art knowledge. But this is not enough – how others see the process is vital. Independence from external control and vested interest is crucial. It is therefore important to be cautious when making links and partnerships with other organizations. Transparency is key so that interested parties can understand: what assumptions were made, who was involved, in what role, how experts and approaches were chosen, and where the funding for the TCS comes from? In short: the foundation of the assessment should be documented and comprehensible to outsiders.

Relevance is the responsiveness of the TCS to policy and societal needs, the adequacy of the results in terms of scope, scale, timing, quality, level of detail etc. It is crucial for achieving impact and key to motivating participation for all participants, no one wants to lose time. “A policy mandate can enhance relevance as it builds a direct line to policy but, it may also limit flexibility to explore the wider issues and can diminish independence and legitimacy”.

Legitimacy is the “perceived fairness and balance” of the TCS process. “It is particularly important when knowledge is contested, when policy decisions involve winners and losers and in all other situations where conflict may arise”. A sufficiently comprehensive approach and including different perspectives will provide a broad knowledge base and increase legitimacy as well as credibility. But for legitimacy the balance of involved experts and stakeholder is key. Successful conflict management also enhances legitimacy. When decisions have to be taken - reaching a compromise is in practice often more realistic and fairer than trying to achieve a consensus. Continuity in collaboration is important to have a stable basis of knowledge and skills and to strengthen relationships and build trust. Extended peer review of TCS reports through external experts, from a broad range of backgrounds as well as other stakeholders can build trust and increase both legitimacy and relevance.

Source: spiral-project.eu/sites/default/files/07_Keep-it-CRELE.pdf

Trade-offs:

Between these criteria, different trade-offs arise and have to be balanced. Finding sufficient funding for your TCS and ensuring an appropriate level of independence will not always go hand in hand. Another important trade-off is the Speed-Quality trade-off: Timely and rapid responses to policy needs enhance relevance, but time-consuming quality assessment and consensus building increase credibility and legitimacy. The clarity complexity trade-off: While formulating strong and clear messages within a TEEB-report can increase relevance whereas communicating assumptions and limitations of methods or findings as well as uncertainties will increase credibility. The Push Pull trade-off is also likely to arise: where immediate policy demand exists and can be followed, a short-term policy relevance of the TCS can be reached. But policy needs can change very quickly and emerging problems and innovative long-term solutions are unlikely to be found.

Managing trade offs:

When developing the process of a TCS, it is difficult to anticipate where trade-offs will arise and they cannot be entirely avoided. It is therefore essential to be alert and understand how trade-offs can be managed in order to ensure an appropriate level of credibility, legitimacy and independence. The SPIRAL Briefs and further information on the SPIRAL webpage provide valuable assistance and inspiration (spiral-project.eu/content/documents#jump2briefs).

Source: http://www.spiral-project.eu/sites/default/files/13_Brief_CRELE-choices.pdf



Building a governance structure

Different elements that may be considered when establishing the governance structure for a TCS and achieving the balance mentioned above are discussed here. Some examples from different TCS can be found on the TCS guidance webpage.

A study leader/chair: A Study Leader or Chair can contribute legitimacy and momentum for the entire study. Typically, someone in this role would oversee the technical analysis but maintain a broad overview. They would also provide a 'face' for the study and take the lead in communicating findings to stakeholders. This role does not necessarily have to be taken by one person alone.

Such a person should be:

- Credible (not perceived as representing only a certain sector or position, not 'usual suspect', not too 'green', yet close enough to technical expertise),
- A good speaker (able to appear in public regularly, give engaging speeches, talk to different audiences), and
- Strategic and visionary (strong enough to maintain independence, able to balance different interests, listen and understand concerns of different groups, not micro manage).

The study leader / chair will be supported in these tasks by other groups (e.g. core team, steering or coordination group, advisory board, secretariat), he or she should really be able to focus on what they are best at.

Steering (coordination or implementation) group: This group will make decisions to guide the study, ensuring that the project is delivered to meet its agreed objectives. It needs to involve the management of the study as well as, quite often, project funders. Funders often know what is needed, how issues need to be framed, and if they come from a policy or administration background, are aware of changes that the study might have to react to. The steering group should guide the study to focus on the right areas, but should not seek to influence the actual results, as this would impact independence, which should always be maintained.

If your funding does not directly come from policy, it helps to include the policy perspective and knowledge on current purposes via other groups.

Advisory Board/Expert Panel: You would typically bring together a group of experts from relevant disciplines who would lead in the design and review of the technical aspects of the study. This type of group can provide specific input (scientific, policy, stakeholder, etc.), quality assurance, help develop key messages and facilitate outreach and communication to the scientific community. This group would also advise the chairs and secretariat on technical aspects of the study.

An advisory board can be important beyond technical aspects. In the international TEEB initiative, the advisory board was composed of experts from different sectors, not only science. This opens the possibility for the board to contribute to: outreach activities, coordination with other relevant ongoing processes, strategic decisions, and help reach different contexts (beyond academics and beyond policy making, e.g. involving key opinion formers). This enhances the chance to engage in the wider societal debate. By including as many constituencies as possible, a cross sectoral debate can be achieved, which is one of the most important potentials for producing broadly relevant results (Examples of the composition of TEEB global and TEEB Germany advisory boards can be found on the TCS guidance webpage).

Author Teams: Author teams are often partnerships of organizations or individuals who undertake the technical work outlined in the design of the study. Their efforts can be complemented by: a call for evidence, workshops, and special sessions at events that gather relevant additional expertise. Authors can come from a range of organisations including universities and other academic organizations, government departments/ministries, independent consultancies, and further stakeholder groups. Author teams who bring together individuals from different types of organizations usually deliver not only the required outputs, but can also: foster deeper understanding of different positions, build important capacity, and establish new contacts and networks, which may assist in the dissemination of findings. The choice of organisations can also help with the legitimacy of the study and facilitate linkage to other processes, whether analysis, decision making or policy processes. This is particularly true when civil servants from different ministries or departments are involved: using in-house people can build important capacity and make people work across sectors but also uses limited manpower. It has proven helpful to have lead authors or coordinating lead authors in charge of different chapters.



Authors play a crucial role and often end up with most of the work. It is important to ensure focus and relevance while leaving content and results to their expertise. Yet there are some typical challenges that can be encountered. One such challenge is that academic authors have strong preference for consistency in terms of structure (usually according to academic categories) these are often not helpful for ensuring policy-relevant results, where structuring according to decision domains, order in which decisions are taken, or other practical terms can be more conducive. Also academic authors often tend to write in very abstract terms, which can make results difficult to use in practice. Illustrating with concrete examples as well as involving decision makers and targeted users of the results can help bridge this gap.

TEEB international had so called **core teams** and individual coordinators for each of its reports. The core teams involved users and experts close to the potential users of the reports. It played a paramount role in developing the overall content, writing most of the chapters (usually constituted the coordinating/lead authors) and in identifying and engaging adequate additional experts for each of the aspects included. Core teams met several times throughout the process of writing. Even if you do not set up core teams, authors' workshops are very helpful in achieving consistency and useful results.

Peer Reviewers and Review Editors: Reviewers should be independent, and it is worth spending time to ensure that appropriate reviewers are included. You may decide to also include Review Editors (Chapter Review Editors). The role of Review Editors is to work with the author teams to ensure all peer review comments (that can be conflicting) are addressed appropriately and the revision process is adequately recorded. This is an important part of quality assurance, and contributes to credibility. Written reviews can be complemented by open calls for comments e.g. via internet, or targeted events to discuss specific issues with one or more groups. Endorsement by the international TEEB Advisory board, which follows a clear protocol for review, can also contribute to credibility. The UNEP TEEB Office can assist you in identifying appropriate reviewers or, if you choose to have your TCS endorsed, it can validate reviewers for this purpose (for details see TCS guidance webpage).

Stakeholder/user groups: Such a group can provide insights necessary to ensure project outputs meet specific needs of key users, thereby maximizing value, influence and impact, as well as ensuring ownership. Stakeholders can be

part of the authors or reviewers but it makes sense to also involve them separately to comment on overall strategy and design. Within your country there may also be an existing landscape of alliances, projects and initiatives that will either inform or complement your TCS. You may consider having representatives join your stakeholder group (for further details on stakeholder involvement see next section).

Overall coordination/Secretariat: The size and composition of the Secretariat depends on the scope and scale of the TCS and the magnitude of the coordination role expected of the Secretariat. Whatever the size of the Secretariat, it is essential that someone is responsible for overseeing the entire process including administration, project management, and financing. The Secretariat also has an important role in facilitating opportunities for communication and outreach. The Secretariat also needs to maintain communication and facilitate links between all the different groups involved in the TCS. In addition to the Secretariat, TEEB international had a scientific coordination team to ensure consistency between the different reports that were all written in parallel.

Communication/outreach: can be part of the Secretariat's role, but professional communication has proven useful. The communication strategy needs to be closely coordinated with all bodies involved and particularly with stakeholders. When engaging professional communicators, make sure they fully understand your approach and are also able to establish 'two way communication channels' - many agencies are used to marketing a product or idea, whereas a TCS has a lot to gain from triggering or enhancing dialogue and debate. Aggressive campaigning of easy messages can be quite counterproductive. For further details on communication strategy, see below.

Budget and workplan

One important step in the design process is estimating the budget for the TCS. Aspects which help define the budget include: spatial scale of the study, size and nature of technical efforts (e.g. the specific ecosystem services included and the scope and preciseness of analysis required), size and nature of stakeholder and communication efforts envisaged and availability of information/data; and local capacities. Budgets will also vary greatly between countries so it is difficult to provide concrete figures on the cost of conducting a TEEB country study. For many studies and assessments of this sort, in-kind contributions (from individuals and organisations) are a significant way to add to nee-



ded resources. These can be in terms of expert time, data, analysis, but also use of offices, meeting rooms and equipment, compiling data or even media coverage. It is highly unlikely that you will find enough funding to pay professional rates for every step of work, but experience so far has indicated that there is substantial willingness to contribute, even without remuneration.

Providing a good platform for the results creates an important incentive for contributions. Experience so far has been that there is a lot of willingness to contribute and to provide inputs. The bottleneck is often the capacity to deal with the input, incorporate it and manage the process. It is therefore crucial to provide good management and dedicate sufficient personnel to this process, workshop organisation, receiving and understanding the inputs and incorporating them are time-consuming tasks. But be aware to balance professional process design with sufficient technical understanding of the subject matter. An assessment is neither an academic process nor a consultancy nor a policy negotiation. Enough technical understanding to ensure credibility (see Box 2.9 above), a timely and transparent process to ensure legitimacy, and good communication (two way!) are key.

The proportion of the budget that you allocate to the different activities should reflect the objective that you set for the study. Mobilising resources is always difficult. However, you are likely to have greater success if your TEEB country study is demand-driven and is responding to the needs of decision makers. Early engagement of potential funders will increase their buy in to the process and commitment to mobilise funds. Further information on mobilising funds can be found at IUCN (2012).

An overview of important budget lines, with descriptions of what you might likely need, can be found on the TCS guidance webpage.

Study planning

The outputs of your TCS can be manifold and should complement each other. While creating a large research report or book has value and creates incentives for researchers to contribute, it may not fulfil the needs of most potential users. Different reports targeted to specific audiences, executive summaries for policy makers, databases, illustrated case examples, models and scenarios, value calculators, and well-designed websites (e.g. www.naturkapital-teeb.de/ or <http://teebnegociosbrasil.com.br>) can all constitute complements or alternatives.

There are many advantages to organising a TCS in different phases, including: greater ease in managing the study process; capacity to learn and improve along the way and the consecutive results of the different phases provide a series of communication opportunities and can thus help to sustain interest from key audiences. It can also help address immediate opportunities in a timely manner while still addressing a broader picture by complementing this later in the process. Careful planning on whom to involve and at what stage and in what role (author, reviewer, coordinator, etc.) can also help avoid overburdening a limited amount of people. For this, it helps to go beyond the usual suspects and academic expertise to reduce risk of overburdening and to ensure results are broadly understandable to different audiences (see authors above).

While it can be a successful strategy to address different national stakeholders, coordination among the different parts of the study is key to ensuring harmonised messages are provided. The scoping process should outline all deliverables, and ensure national priorities are duly taken into account. For example, it should be avoided that prioritization of issues to be studied should not be based upon the fact that certain stakeholder groups are better organized than others or that important links in the analysis are overlooked. The different TEEB components need to inform and reinforce each other and should not be developed independently.

¹ E.g. database of valuation studies available at the ACB E-Library: http://chm.aseanbiodiversity.org/index.php?option=com_wrapper&view=wrapper&Itemid=214¤t=214

² See for example: *A Tool for the Economic Valuation of Ecosystem Services in Flanders* [URL]: www.lne.be/themas/beleid/milieueconomie/engelse-brochure-economische-waardering-van-esd/at_download/file



Communication strategy

As part of undertaking a TCS, a communication strategy should be made right at the start and updated regularly. This strategy should:

- identify potential stakeholders and target audiences;
- identify communication objectives and key messages;
- determine which communication channels to use. Channels can be - electronic, offline, face to face, or through opinion leaders etc. The selection of an appropriate communication channel depends on its degree of accessibility for the target audience and on its suitability for presenting the message. For example, publications are excellent formats to present the findings of the TCS as they can accommodate detailed information, however because they are by nature bulky for audiences, such as policy actors or a general public, extracting the key messages and presenting them in much lighter formats such as policy briefs, executive summaries or brochures is advised;
- use culturally acceptable but also innovative dissemination and public relations channels: e.g. newspapers, TV and radio programmes (news, nonfiction and even fiction – in some countries a lot of social messaging is done through soap operas for example), and social media;

- plan events and publications throughout the study: to gather information at the beginning (e.g. to identify priority environmental concerns and policy options TEEB should focus on), throughout (e.g. for data input, to test the draft assessments and presentation formats) and at the end (e.g. to present the results and the process to different groups of stakeholders); and
- identify events (e.g. World Earth Day that's celebrated globally, but also more national days like independence days etc.) where both the past and the future of a country are thought and talked about. But also alert to options to link TEEB questions or results to any ongoing discussion on related issues.

TEEB country studies should operate a two-way communication process. For this involve stakeholders, understand their issues, and incorporate as broad an expertise base as possible, including practical, local and indigenous knowledge. Listening to policy makers and other stakeholders and understanding their concerns and incorporating this into the design of your TCS contributes immensely to the relevance of your results. TEEB Germany uses several means for two-way communication including an online survey to enable stakeholder input on wireframes see Box 2.11).

Box 2.10: Case Example: Communication and Mainstreaming of TEEB Germany

Starting with a workshop of the steering group identifying the different target groups, aims, messages and communication channels, a strategic concept for communication of “Natural Capital Germany – TEEB DE” has been developed. Communication activities shall reach a broad range of actors, with a focus on decision makers in politics and public administration (e.g. organizations for nature conservation, water, forestry, agriculture, tourism, cities). In addition, companies and research as well as NGOs are addressed. The challenge is to identify targeted messages and adequate communication channels for each and prioritize between these groups.

Different communication channels are used to disseminate the messages of TEEB Germany to the different target groups – inter alia the website www.naturkapital-teeb.de, project flyers (German and English), banners for events, four major and two brief reports, short versions of the major reports for policy makers. Besides these products, the process is designed to enhance two-way communication by: a stakeholder committee (PAG) meets twice a year and provides inputs, comprehensive reviews and options to comment via a webtool, a series of workshops for discussing and structuring the content of each of the four main reports, as well as separate launch events for all reports.

Mainstreaming is seen as an important element of the strategic communication. The discussion on the economic significance of ecosystem services and biodiversity and on the possibilities and limits of economic valuation is carried into different stakeholder groups. The study leader and members of the steering group are active ‘messengers’ for TEEB Germany and widely use opportunities for speeches, panel discussions and actively pursue input at external events. The members of the advisory board and the stakeholder committee, which includes a broad set of stakeholders, play an important role in mainstreaming the messages of TEEB Germany; in addition, they help to identify relevant thematic foci and opportunities for mainstreaming.

By Bernd Hansjürgens, study leader, and Miriam Brenck, team member TEEB Germany



Further useful tips:

- Using concrete real world examples is important to generate interest and facilitate communication ideally using examples from your own country but also inspiring, off-the-beaten-track examples from elsewhere. Make sure at least some of your examples illustrate solutions and not just values at risk.
- Involving writers from environmental and business fields in addition to science writers will provide diversity in language and approach.
- Soft knowledge (e.g. on process) is relevant – whom to involve in what order and by whom? In this context peer to peer communication can be very effective.
- An advisory board with members from different sectors and societal fields can be extremely helpful in addressing different constituencies via some of their own members.
- In order to disseminate your results to as many potentially interested audiences as possible, make the information available online and enable translation into relevant languages. Make sure you plan for adequate resources and capacities for this early on in the process.

- Do not underestimate the work needed to make a data base understandable and useable via the internet as it can easily take several months and is not always the most helpful output for the general public.

Managing expectations about results should ensure that those results that do not provide either perfect coverage of all concerns or high levels of certainty are not seen as worthless. Full coverage and perfect certainty about results do not exist (and are not even needed for the TEEB process to facilitate change). The secret lies in carefully communicating the uncertainties involved and illustrating different options to deal with them.

Key References

- TEEB National Ch. 2: Framework and guiding principles for the policy response.
- Booth et al. (2010): Lessons Learned from carrying out ecosystem assessments: Experiences from members of the Sub-Global Assessment Network.
- Ash et al. (2010) Ch. 1: Assessing Ecosystems, Ecosystems Services, and Human Wellbeing.

2.4 Getting stakeholders on board: Who should be involved? How to engage them?

Key Message

- It is essential that your TEEB country study engages stakeholders and addresses their needs.
- The early engagement of stakeholders will encourage a demand-driven process and the uptake of results or at least ensure support to the TCS.
- It is important to achieve a balanced involvement of stakeholder groups.

A stakeholder is a person, group or organisation with direct or indirect interests in your TEEB country study and its findings. It is important to remember that assessments such as TCS do not only produce results, they are also social processes.

The process of conducting a study is often at least as important as the resulting reports or tools. When carefully designed, the process offers the opportunity to raise interest in the topic, to get people enthusiastic, to get to know their concerns and address them; being involved in the process can transport much more meaning than just looking at some results. The

international TEEB study was carried out using an open architecture to ensure maximum sustained and genuine participation of interested individuals. In fact, a key lesson learned from many sub global ecosystem assessment is to be inclusive.

Potential stakeholder groups for a TEEB country study may include, but are not limited to: scientists/experts from different disciplines (not just economists and ecologists), different government departments (e.g. environment, treasury, health, water, agriculture) and levels (communal, sub national and national), government implementing agencies



such as environmental protection, public health, cultural and natural heritage, land managers such as foresters, non-government organisations, business and local communities, and the media. Box 2.11 provides examples of how to engage with stakeholders for TCS.

Identifying stakeholders and deciding on their roles is an essential element to consider during the scoping phase of your TEEB country study. To engage stakeholders will provide benefits, and importantly strengthen the credibility, legitimacy and relevance of your TEEB country study (compare Box 2.9 above).

Benefits for having stakeholders participate in a TEEB country study include that broad participation, when carefully managed:

- fosters shared understanding of objectives and processes of the assessment;
- builds trust between governments and stakeholders;
- incorporates different disciplines and expertise;
- draws on a wide range of expertise and perspectives;

- promotes information sharing and networking;
- strengthens knowledge and capacity;
- potentially narrows areas of disagreement;
- fosters agreement on criteria and methods to be employed in the analysis;
- generates full and open discussion, sharpens conclusions and avoids unsupported opinions;
- broadens interest in assessment findings, their implications and necessary responses;
- promotes a culture of responsibility among all participants;
- leads to wider awareness and distribution of findings through stakeholder networks; and
- increases the chance that results will be supported and used by stakeholders.

Stakeholders will fall roughly into two groups: a)experts (from all stakeholder groups, as well as independent) who provide technical inputs to the study and b)users of the information, such as Government Ministries, NGOs, Private Sector and even researchers (some stakeholders may actually belong to both groups). How you engage with these groups of stakeholders will differ.

Box 2.11: Different examples on how to engage stakeholders in TEEB studies

TEEB Nordic public participation

Engagement of stakeholders formed an important part of TEEB Nordic, (see Box 2.4). The purpose of the engagement process was to increase awareness and common understanding of the value of nature among different stakeholders, develop a synthesis of existing information, and allow relevant experts and institutions to showcase their work. The engagement was carried out via establishing a quality review process, inviting relevant Nordic experts to contribute their experiences as case studies, and opening a dialogue with a range of relevant stakeholders. Amongst others representatives of Nordic Ministries of Environment, NGOs, and a range of Nordic research institutions and initiatives were included in these processes.

Besides the obvious benefits of increasing the quality of study via peer-review, the engagement process helped to create a common understanding on the issues among experts, researchers and other stakeholders, creating concrete buy-in to the study and successfully paving the way for the uptake of its results. It helped to identify synergies, enabled the development of stand-alone TEEB case studies with no additional resources, without risking the integrity and/or question the evidence-based nature of the study.

Jointly with TEEB Nordic, a related project by the Nordic Council of Ministers was carried out to increase awareness at the local level and to explore, via the use of participatory stakeholder workshops, the possible applicability and usefulness of the ecosystem service framework for integrating the value of nature into municipal decision-making. This project conducted stakeholder workshops in three pilot municipalities (Holbaek/Denmark, Raseborg/ Finland, Botkyrka /Sweden). Based on the results, the ecosystem service concept was considered to have a considerable potential to support decision-making at local level by: supporting communication by providing a common language, helping to identify key issues related to the importance and management of ecosystem services, and serving as a tool for awareness raising and education.



In particular, the concept was considered to help “bridging” different municipal departments and actors, making the monetary valuation of ecosystem services not always necessary to demonstrate their value. It is thus hoped that these encouraging insights will lead to the application of ecosystem services framework in concrete decision-making in the case study municipalities.

Source for TEEB for Nordic municipalities: Project leader Louise Hård af Segerstad (AI-baeco), see also project blog at www.teeblocal.wordpress.com

TEEB Germany: online consultations

In order to allow a broad range of inputs from different stakeholder groups and ensure that topics covered in the reports are comprehensive and relevant TEEB Germany places its report wireframes (structure with brief explanation of the envisaged content) on the web. Any interested party can then comment via a prepared questionnaire allowing for open comments as well. The open access tool www.surveymonkey.com/ was used for capturing and analysing the results. The consultation for the first report generated comments from 276 different individuals from over 60 groups (declaration optional) as different as NGOs, administration, research institutes and private individuals. A scientific peer review and a wider review – mainly by different relevant organization – are intended through a web-survey as well. More detail can be found on the TCS guidance webpage

TEEB in Brazil

In Brazil, the involvement of stakeholders is essential for mainstreaming the TEEB approach into the various bodies and spheres as a collaborative process is essential. The challenges encountered so far include:

- In Brazil, many relevant parties are not convinced of the utility of a TEEB approach due to the lack of practical methodology for implementing it and, furthermore, TEEB is commonly associated with economic valuation only, leading in particular to payments for ecosystem services.
- The Governance of the TEEB Initiative in the country is not yet established – a proposal for a ministerial decree to officially establish the governance of the TEEB initiative, including the establishment of the Coordinating Committee and the Executive Committee, as well as other guidelines, is still under discussion and its approval is not expected in the short-term.

To address this it was therefore crucial to include the Ministry of Finance in the stakeholder process, and to build strategic alliances with national and international bodies holding the relevant expertise. It was also decided to follow a stepwise approach avoiding overly ambitious objectives in the first phase of the study to build trust in the process and build on this in the further steps.

The TCS team can also explore collaboration with similar initiatives (as mentioned in Section 1.3) to use their contacts and findings. Many international donor organizations have poverty and environment related programmes in a number of countries, which have studied policy options, collected data and engaged stakeholders already. This also works the other way around and the team could consider becoming part of other initiatives, advisory boards etc.

Achieving a balanced involvement of stakeholder groups will contribute to the success of your study. Stakeholder identification and engagement can be made more effective by paying attention to the following:

- Identify potential providers (stakeholders) of information on relevant ecosystem services at different scales;

- Identify a comprehensive and representative, but not exhaustive, list of groups of stakeholders who are potentially affected by the findings of the study and/or by subsequent policy changes affecting biodiversity or the stock, flow, and/or distribution of ecosystem services;
- Create a conceptual map of the groups of stakeholders, identifying their likely areas of (dis-) agreement on the management of natural wealth, identifying likely gaps and/or over-representation of likely positions;
- Practice transparency in identifying and recruiting stakeholder groups such that all interested parties have the opportunity to be heard and to participate; and
- Use an iterative, ‘snowball,’ stakeholder identification process to ensure comprehensive involvement.



Stakeholder participation can include the following forms:

- Face-to-face, or virtual meetings with ‘experts’ and stakeholders to identify priorities, concerns, and existing information;
- Focus groups to drill down to more specific priorities and concerns of a particular group or groups;
- Assistance in collecting relevant information;
- Refinement, dissemination and implementation of the report’s findings and recommendations;
- Monitoring the implementation of the TCS recommendations.

Try to avoid the following:

- Over- or under- representation of any group or groups of stakeholders;
- Attempts to inappropriately influence the objectivity of the process, particularly by more powerful or wealthy stakeholders, potentially including businesses, NGOs, and/or politically connected individuals;
- Granting exclusive rights to contributors or publishers, particularly if the TCS is supported in part by public funds;
- Dilution of the findings of the report due to a consensus-based process, rather than providing for minority opinion, dissention and caveats or concerns within the reporting framework,
- Providing equal weight to all opinions, regardless of their objectively evaluated merit, strengths and weaknesses.

Ideally stakeholders will achieve a mutual understanding of positions and interests in participating. This will enhance stakeholders’ understanding of the requirements and usefulness of the TEEB process and willingness to accept its limitations. It will make the results of the study much more useful to them and constitutes a result in itself: enhancing societal dialogue about the value of nature is a very important precondition for any change in decision-making. The specific role each group of stakeholders plays in the process depends on the architecture of the TCS discussed in the previous point.

Throughout the engagement with stakeholders, the role of the TEEB team should be one of the enabler. While they are part of an assessment process that follows scientific

principles to ensure robustness of results, stakeholders should not feel as if they are contributing to an academic study that may or may not produce useful results. They should feel that the TEEB team is there to help them answer questions they have been asking for a long time and also reach answers that they realise they had in themselves all along (Wegner and Pascual 2011). In other words, the TEEB team should engage with the stakeholders in a way that a business or life coach engages with their client. Such coaches do not take the questions, go away, work at them and come back with answers. They work with their clients to identify what the questions, opportunities and challenges are and help their clients to concentrate on the opportunities (and through that, identify new avenues and partners they may not have thought of on their own). This is an empowering process that results in actions being owned by the stakeholders, which in turn increases the chances of them being implemented. This means that you should also be prepared to refine or even readjust TCS scope and/or objective as the process proceeds according to key stakeholder needs, preferences and resolution of conflicting interests!

Key references

- Ash et al. (2010) Ch. 2: Stakeholder Participation, Governance, Communication and Outreach, p. 39-45.
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