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ROtI

DRAFT

GEF EVALUATION OFFICE *with* Conservation Development Centre

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Glossary of Terms

Activity	The practical, timebound actions that the project carries out to deliver the desired project outputs
Assumption	The significant factors that, if present, are expected to contribute to the ultimate realisation of project impacts, but that are largely beyond the power of the project to influence or address
Global Environmental Benefit	Lasting improvements in the status of an aspect of the global environment that safeguards environmental functioning and integrity as well as benefiting human society
Impact	A fundamental and durable change in the condition of people and their environment brought about by the project
Impact driver	The significant factors that, if present, are expected to contribute to the ultimate realisation of project impacts and that are within the ability of the project to influence
Intermediate state	The transitional conditions between the project's outcomes and impacts that must be achieved in order to deliver the intended impacts
Logical framework	The basic planning and management framework for the project, which sets out information about the key components of the project – the activities, outputs, and outcomes - in a clear, concise and systematic way, thereby describing the logic by which the project will deliver its objectives
Outcomes-impacts pathways	The means-ends relationships between project outcomes and the intended impacts that describe the specific conditions or factors that are required in order to achieve impacts. Developing a clear understanding the outcomes-impacts pathways is at the core of the ROtI methodology
Output	The goods and services that the project must deliver in order to achieve the project outcomes. Outputs are within the direct control of the project to deliver
Outcome	The short to medium term behavioural or systemic effects that the project makes a contribution towards, and that are designed to help achieve the project's impacts
Strategy	The major types of intervention employed by a project in order to deliver the intended impacts
Theory of Change	A theory-based evaluation tool that maps out the logical sequence of means-ends linkages underlying a project and thereby makes explicit both the expected results of the project and the actions or strategies that will lead to the achievement of results

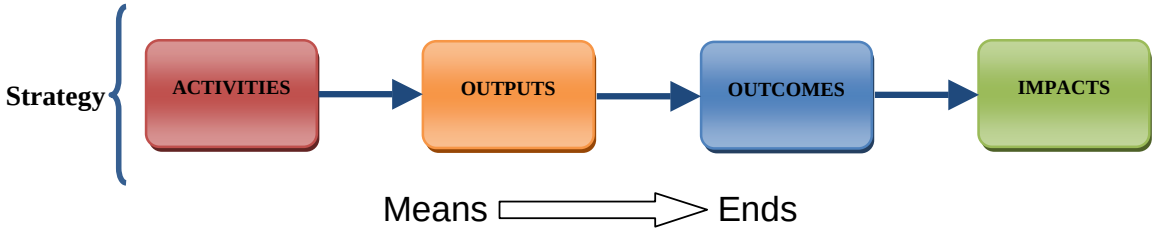
1. Introduction

This handbook provides guidelines and procedures for undertaking the "***Review of Outcomes to Impacts***, or ROtI, project evaluation method, which was developed as part of the Global Environment Facility's Fourth Operational Performance Study (OPS4). The ROtI process uses a ***Theory of Change*** (TOC) approach to evaluate the overall performance of GEF projects, designed to enable evaluators, through an in-depth analysis of the project's documentation coupled where possible with data collection at the project site, to identify and then assess the project's component results chains that guide project performance and ultimately contribute to the achievement of project impacts.

Project terminal evaluations are usually conducted at or shortly after project completion, when it is usually only possible to directly assess the achievement of the project outputs and, to a lesser extent, the project outcomes. The long timeframes and lack of long-term monitoring programmes (especially post GEF funding) mean that direct measures of project impacts would require an extensive primary field research that is not possible for routine evaluation work. The ROtI's theory of change approach seeks to overcome the challenges of measuring impacts by identifying the sequence of **conditions** and **factors** deemed necessary to convert project outcomes into the ultimate impact. An assessment of the logical process linking outcomes to impact is realistic to achieve during short evaluation missions, and provides a potentially robust indirect measure of the ultimate impact.

The generic project results chain that underlies the theory of change approach is illustrated in Figure 1 below. On the left of the diagram is the project **strategy**[1], which encompasses the entire results chain and comprises of a set of **activities** that are designed to deliver certain defined **outputs**, which in turn aim to make a significant contribution to the achievement of a set of **outcomes**. Ultimately, the outcomes are in turn expected to result in a set of long-term project **impacts**, the ultimate goal of the project concerned. All levels of the results chain are connected through a series of logical **means-end pathways** (signified by the arrows connecting the boxes). The diagram shows a single results chain; however, in practice a project often involves several strategies, each having its own particular results chain, and which all together make up what is usually referred to as the project's **logical framework**. Each of these terms is defined more fully in the Glossary of Terms at the start of this document.

Figure 1. The generic project results chain underlying the theory of change approach



The key premise of the ROtI methodology is that, once the project's theory of change has been mapped out and understood, it should then be possible to confirm whether each of the means-ends linkages in a results chain has either already occurred or is likely to occur, and therefore, ultimately, whether the project is on track in delivering its intended impacts. In this way, the ROtI method provides an **indirect** means for an evaluator to assess whether a project is in the process

[1] Strategies are defined in this handbook as "*the major types of intervention employed by a project in order to deliver the intended impacts*" GEF project-level strategies typically include capacity building, institutional strengthening, policy support, and the development, testing, dissemination, and/or scaling up of technical innovations. Project strategies can usually be discerned from the stated overall project objectives and the means employed to achieve those objectives. Because GEF projects are very often catalytic in nature and involve a range of partners, the strategy quite often refers to how the project will *contribute* to the eventual achievement of significant impacts.

of delivering its intended impacts, and to understand better the underlying reasons for this, without the requirement of actually measuring the delivery of impacts directly. As such, the method is a potentially powerful, practical and cost-effective tool, especially in the case of environmental projects whose impacts occur slowly and are difficult to measure directly.

The next section describes the overall ROtI Analytical Framework which forms the foundation for the handbook. This is then followed by a section describing the two alternative methodologies that can be used to carry out the ROtI framework: the field-based and the desk-based method.

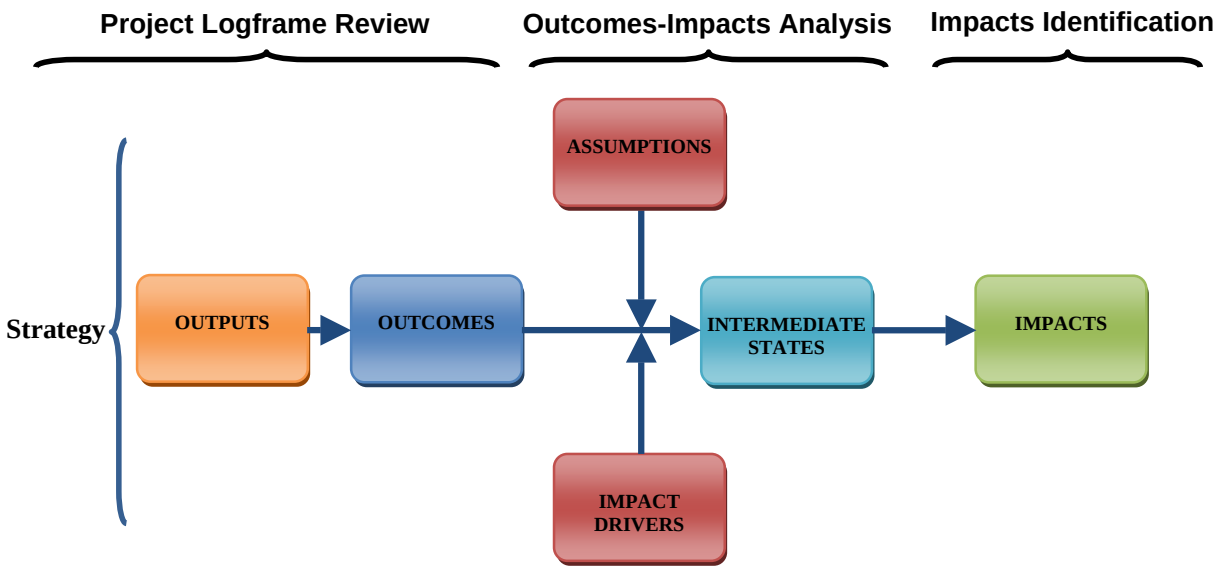
2. The ROtI Analytical Framework

Figure 2 below is a schematic diagram of the ROtI Analytical Framework showing the different major elements of the theory of change model that are used by the ROtI, as well as the three main stages of the ROtI assessment:

Stage 1: Identifying the project's intended impacts
Stage 2: Review of the project's logical framework
Stage 3: Analysis of the project's outcomes-impacts pathways

The diagram introduces several new elements to the generic project results chain shown in Figure 1 above: the **intermediate states**, **assumptions** and **impact drivers**. These three elements are central to the theory of change approach adopted in the ROtI, and are explained in detail in section 2.3 below. (Note that "activities" are no longer illustrated in the results chain as these are not directly considered again in the ROtI method.)

Figure 2. Schematic of the ROtI Analytical Framework



The three stages of the analytical framework are elaborated below.

2.1 Identifying the project's intended impacts

The identification of the project's intended impacts[2] is the first stage in the development of the project's TOC model, because it is vital to first understand what the project was ultimately trying to achieve **before** attempting to understand the theory of change that the project has employed in order to deliver impacts. In many instances, the project's intended impacts will be described in the project documentation, or even alluded to in the project title or objectives, but often it will be necessary for the evaluator to employ some form of structured scoping process to determine the project impacts.

For example, the East African Biodiversity Impacts Study developed a method for pinpointing a project's impacts based on a combination of a method to identify the project's key biodiversity targets, based on the Nature Conservancy's Conservation Action Planning methodology, coupled with desk research to crosscheck whether these targets were regarded as of global importance (e.g. international endangered species listings). This methodology is described in greater detail in Annex 1. Similar filtering methods may need to be developed to assist with the identification of impacts for the GEF's other focal areas.

The primary aim of the GEF, and of GEF projects, is to achieve a specific category of impacts that are often referred to as "**Global Environmental Benefits**" (GEBs). GEBs are defined in this handbook as: "*Lasting improvements in the status of an aspect of the global environment that safeguards environmental functioning and integrity as well as benefiting human society*".

Box 1 below gives the example of a set of biodiversity GEBs that were identified for the Bwindi and Mgahinga Conservation Project in western Uganda.

Box 1. Biodiversity GEBs in Uganda

The GEF Bwindi & Mgahinga Conservation Project in Uganda, one of the case studies in the East African Biodiversity Impacts Study, had as its overall objective: "*to establish a long-term conservation finance mechanism to support biodiversity conservation in the Bwindi Impenetrable and Mgahinga Gorilla National Parks*", but the specific project impacts, i.e., the potential Global Environmental Benefits of the project, were never explicitly defined. A combination of reviewing the project documentation, interviewing the project's implementers, coupled with the methodology described in Annex 1 and a review of international biodiversity ranking lists, enabled the study team to define the following four key GEBs that the project was likely to have delivered:

1. Improvements in the conservation status of Afro-montane and Afro-alpine ecosystems, considered to be the rarest vegetational type on the continent
2. Maintenance of the unbroken ecological continuum of lowland, transitional and montane forest, which is unique to the project area and was under threat from human activities
3. Enhanced protection and stabilisation of the status of the project area's population of 600 endangered Mountain gorillas, representing half of the world's total population of this species
4. Enhanced protection of Uganda's richest diversity of Afro-montane birds, being home to at least 330 species including one endemic subspecies and seven species listed in the International Council for Bird Preservation's Red Data Book.

Key criteria that should be considered in identifying GEBs include:

- Relevance to GEF policies and related conventions/ protocols
- Listed on an international ranking and prioritisation mechanism (e.g. for rarity, uniqueness, threat level, etc.)

[2] Impacts are defined in this handbook as "*a fundamental and durable change in the condition of people and their environment brought about by the project*." Impacts provide the overall justification for the project, but it is important to recognise that a GEF project can only expect to **contribute** to the achievement of impacts, and that they will usually only be realised many years after project completion.

Additional examples of GEBs drawn from various GEF Portfolios include:

- management of international waters in ways that are sustainable, environmentally sound, and productive in terms of environmental services;
- decreases in the causes of Climate Change via alternative transport and energy use and resulting decreases in GHG emissions;
- decreases in the causes of Climate Change due to decreases in GHG emissions from agriculture, land use conversion, livestock production, and cement production;
- maintenance of or increases in biodiversity and in the use of biodiversity through habitat conservation, *in situ* and *ex situ* use and conservation of agrobiodiversity;
- reduced negative health effects for humans and animals due to exposure to POPs due to decreased manufacture and use and to successful elimination of existing stocks.

2.2 Review of the project's logical framework

Once the project's intended impacts have been determined, the next stage in the analysis is to verify whether the design of the project was consistent and appropriate in delivering the desired impact. This is achieved through a review of the project's **logical framework**, or logframe, which is usually set out in the original project brief as a basis for project work planning, reporting and monitoring.

Although widely used, the logframe is not always a straightforward concept for all to understand, and its introduction to GEF project design has taken place in an incremental way. As a result, not all GEF projects feature a clear logframe as the basis for their design, with older GEF projects being weakest in this regard, while the logframe is often most clearly defined in more recent GEF projects. Since, the project logframe is the main source of information for developing TOC models, this presents an immediate challenge to evaluators: the weaker the underlying logframe, the more difficult and time consuming it will be to develop the TOC models. Where the underlying logframe is especially weak, or even non-existent, the evaluator will need to reconstruct the project logic retrospectively, based on the available project documentation, and considering what the project was attempting to deliver as well as what it actually delivered. This will normally require significant relevant expertise on the part of the evaluator with the type of project concerned, and at times the geographical area concerned. In other cases it may only be necessary to carry out small modifications to the logframe where there are inconsistencies or gaps in the original design.

One of the key factors that can contribute to an inappropriate project logframe is that the original project designers do not fully appreciate the differences between the various elements of the project's logical hierarchy as illustrated in Figure 1 above. For example, some projects may have outputs at the outcome level, or *vice versa*. As a first step in verifying the project logic, therefore, it is important to first clearly define the different elements of the logical hierarchy and, where necessary, re-organise or redefine outputs and outcomes. Table 1 overpage sets out definitions for the four main elements as applied to most GEF projects, together with examples at each level.

Table 1 also gives a timeline to illustrate when the different levels of the hierarchy are likely to occur. Project activities and outputs by definition will occur within the timeframe of the project intervention, and both are tangible and within the direct control of the project to deliver. Outputs reflect where and for what project funds were used, and include: training courses and workshops held, numbers of persons trained, studies conducted, networks established, websites developed, NIPs and NAPs developed, writing of new national policies, regulations, or standards, construction of a renewable energy plant or of a new mass transit system, a new management plan for a preserved area, a new national plan for POPs disposal or safe POPs incinerator, and more. Other outputs are more technical, involving the development, testing, and dissemination of innovations; and the characterization, monitoring, and measurement of direct project impacts.

Project outcomes are the direct intended results stemming from the outputs. As such, they are less tangible, and are likely to occur either towards the end of the project or in the short term following project termination. At the GEF strategic level, projects seek to achieve the outcomes of improved and effective national institutions and governance, more effective policy instruments, and increased human capacity of various stakeholders. Not so much the number of persons trained; but how many persons who then demonstrated that they had gained and could apply the intended knowledge or skills. Not a study conducted; but evidence that the study changed the evolution or development of the project. Not so much a network of NGOs established; but that the network showed potential for functioning as intended in terms of project development, policy implementation, and project implementation.

Table 1. Definitions of the different elements of the logical hierarchy for GEF projects

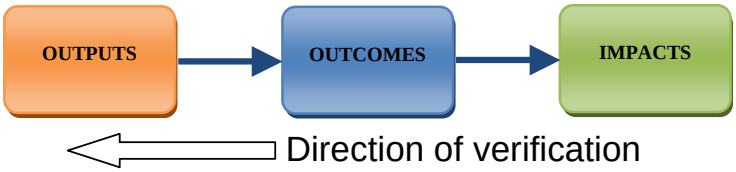
Level	Definition	Examples	Timeframe Project life Short-term post project Long-term
Activities	The practical, timebound actions that the project carries out to deliver the desired project outputs	Construction, communication, training, workshops, research activities, technical advice	
Outputs	The goods and services that the project must deliver in order to achieve the project outcomes. Outputs are within the direct control of the project to deliver.	Physical structures, trained individuals, formation of institutions, establishment of service delivery mechanisms, policy instruments and plans, implementation of pilot and demonstration projects	
Outcomes	The short to medium term behavioural or systemic effects that the project makes a contribution towards, and that are designed to help achieve the project's impacts. Achievement of outcomes will be influenced both by project outputs and additional factors that may be outside the direct control of the project.	Behavioural changes: Adoption of new practices, changed attitudes on issues Systemic changes: improved institutional competency, implementation of new or revised policies, effective decentralising of decision making processes	
Impacts	A fundamental and durable change in the condition of people and their environment brought about by the project. The intended project impacts provide the overall justification for a project. A project will only expect to contribute to the achievement of impact, and often the impact will only be realised many years after project completion.	Improved household income, increased environmental resilience. For GEF: lasting improvements in, and reduced threats to, the status of ecosystems, habitats, species and other life-support systems; maintenance and increase in GEBs	

Outcomes may include improved strategic planning in SLM stemming from workshops, training courses, and networking; decreased logging in a forest reserve due to new management plans;

safe disposal of specified quantities of POPs due to a new, safe incineration facility; decreases in deforestation and CO_2 emissions due to less fuelwood burned due to installation of solar panels; avoided deforestation due to implementation of new policies; and reduced riverine pollutants due to enforcement of new international agreements. The achievement of project outcomes will be chiefly influenced both by the project's outputs, but also by additional factors that may be outside the control of the project. Project impacts are only likely to be achieved in the long-term, sometimes many years after project completion.

Since the project's impacts, or GEBs, have already been confirmed under Stage 1 above, the evaluator will now be in a position to work backwards through the project logframe from outcomes to outputs as shown in Figure 3 below, verifying the means-ends relationships between the different levels of the project hierarchy and the specific components in accordance with the definitions given in Table 1. It will be important to verify the elements of the logframe from impacts backwards through outcomes to outputs, because the aim is to understand how the project has achieved the identified impacts, **not** to see the possible result of the project activities and outputs.

Figure 3. Sequence in verifying the project's logframe

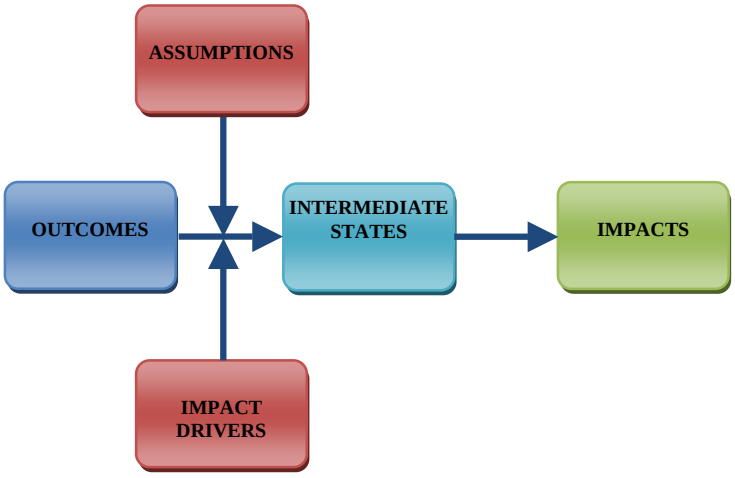


Although the overall direction of verification is backwards from impact, this will inevitably be an **iterative process**, and the evaluator will be moving backwards and forwards between the project levels as his/her understanding of the project's logical pathways and theory of change develops.

2.3 Analysis of the project's outcomes-impacts pathways

Once the evaluator has a good understanding of the project's intended impacts (or in the case of GEF projects, the Global Environmental Benefits) as well as the logic that the project has employed to work towards the achievement of these impacts, s/he will now be in a position to move on to the third and final stage of the ROtI analytical framework, which focuses attention on the specific processes that occur in converting the project's outcomes into eventual impacts, which is termed here the "**outcomes-impact pathways**". These O-I pathways are at the heart of the ROtI methodology. This final stage in the analytical framework introduces several new elements of the project's results chain, as illustrated in Figure 4 below.

Figure 4. Schematic of the outcomes-impacts pathway, showing the intermediate states, assumptions and impact drivers



The fundamental premise of the ROtI method is that process of transformation of project outcomes into impacts is in reality a complex one which occurs over an extended period of time largely outside of the lifespan of the project itself (see Table 1). The theory of change underlying the transformation process can be modelled using the new elements introduced in Figure 4: **intermediate states**, **impact drivers** and **assumptions**. These new elements are defined below:

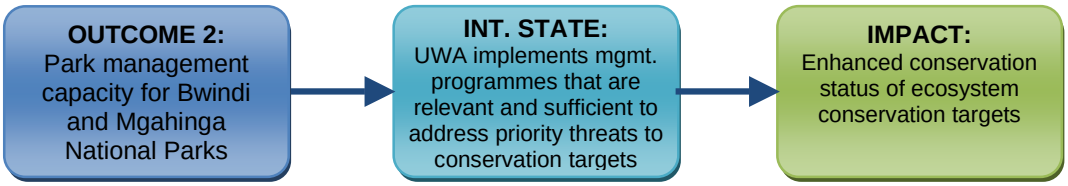
- **Intermediate states**. These are the transitional conditions between the project's outcomes and impacts that must be achieved in order to deliver the intended impacts
- **Impact drivers**. These are the significant factors that, if present, are expected to contribute to the ultimate realisation of project impacts and that are within the ability of the project to influence
- **Assumptions**. These are the significant factors that, if present, are expected to contribute to the ultimate realisation of project impacts, but that are largely beyond the power of the project to influence or address

The following sections describe these different elements of the outcomes-impacts pathways in more detail.

2.3.1 Intermediate states

As shown in Figure 4, the intermediate states occur between the project outcomes and the ultimate impacts, and are achievements that build the sustainability of project outcomes and lead to their scaling up and out towards eventual impacts, or in GEF terms, Global Environmental Benefits. Projects are successful if and once they achieve intermediate states that will or should lead to impacts in terms of GEBs. Intermediate states may include decreases in greenhouse gas generation due to use of alternative energy sources, increased bird biodiversity due to effective management plans leading to decreased deforestation in a reserve; reduced lake eutrophication due to decreased riverine pollutants as a result of compliance with new international agreements; and reduced soil erosion and land degradation in areas where sustainable land management systems are adopted.

The diagram below provides a worked example of a outcomes-impacts pathway taken from the GEF-supported *Bwindi and Mgahinga National Park Conservation Project* in Uganda.



The rationale is that the project outcome "*Park management capacity for Bwindi and Mgahinga National Parks strengthened*" will realise impact provided that the Intermediate State "*Uganda Wildlife Authority implements management programmes that are relevant and sufficient to address priority threats to conservation targets*" is achieved. The achievement of this intermediate state will enable park management to apply sufficient resources and properly targeted actions that will lead to the achievement of the intended impact.

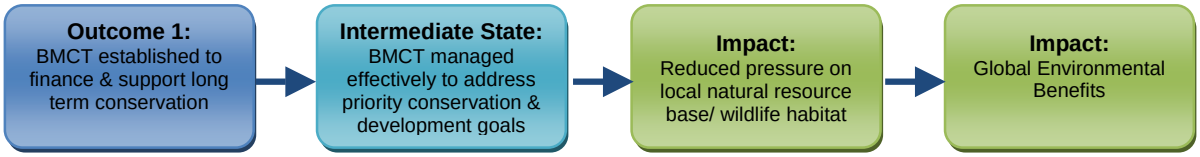
This section provides some key questions that should be considered in identifying and defining intermediate states, with examples given for illustration.

Are there missing gaps between the project outcome and the expected impact?

The first task for the evaluator is to decide whether an intermediate state will be required to transform the project outcome into an ultimate impact. In certain cases an outcome may be stated

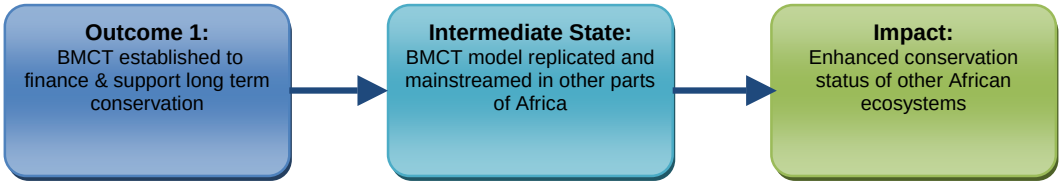
at a sufficiently high level that, if fully implemented, it will directly deliver the desired impact. This is illustrated in the results chain below taken from the Lewa Wildlife Conservancy Project in Kenya. The achievement of Outcome 2 will lead directly to strengthened wildlife protection and management operations which, in turn, will directly lead to reduced threats and enhanced status of the GEBs (i.e. endangered wildlife species), without the requirement for any Intermediate State to be achieved.

In most cases, however, and especially if outcomes have been correctly stated as behavioural or systemic changes, there will be a need for additional state(s) in the outcomes-impacts pathway before logically arriving at the intended impact. For example, for Outcome 1 of the Bwindi & Mgahinga Conservation Project in Uganda (see results chain below), the intermediate state, "*BMCT managed effectively to address priority conservation and development goals*" was identified because, although Outcome 1 relates to the establishment of the Bwindi Trust, this does not necessarily lead to impact without the intermediate state first being achieved. The Bwindi Trust needed to develop a clearly articulated strategic programme aimed at achieving long-term conservation objectives, as well as putting in place a range of diverse funding mechanisms and sources to ensure secure, long-term finances to implement the Trust's programme. The particular factors for delivering this intermediate state were later articulated through the identification of the impact drivers and assumptions.



Are the necessary conditions in place for enabling scaling up and mainstreaming?

Promoting catalytic effects is central to the GEF mission, and it is important for the evaluator to identify potential intermediate states that will enable the scaling up of the intended project impacts to national or global levels. In the extract below, the intermediate state "*BMCT environmental fund model replicated and mainstreamed in other parts of Africa*" was identified for the scaling up of the impact of the Bwindi project to other ecosystems elsewhere in Africa through replication of the trust model.



2.3.2 Identifying impact drivers and assumptions

Impact drivers are the important factors that are needed in order to realise project impacts. They may be generated by the project itself through the project's outputs and outcomes, already existing in the project's wider context, developed by another parallel project by GEF or another agency, or established by the host government, community or other institutional partner post project as a

means of securing the project's Impacts. Or they may be missing, in which case, the project's impacts will be diminished or eliminated.

Impact drivers often act by addressing and ultimately overcoming **barriers** to the achievement of the project intermediate states and impacts. These barriers often revolve around the sustainability of the project's achievements, or the scaling up of these achievements. As a result, impact drivers are often characterised in terms of sustainability and catalytic criteria (see Table 2 overpage).

External assumptions are closely related to impact drivers, except that it is judged that they are *largely beyond the power of the project to influence or address*. The critical assumptions that have already been identified in project documentation may well be a useful starting point for identifying the assumptions likely to influence the outcomes-impacts pathways.

Implicit and explicit assumptions underlying projects need to be identified and assessed in terms of validity. Assumptions that turn out to be incorrect need to be addressed; although some can turn out to be project "killer" assumptions. Assumptions that may turn out to be unfounded include: that governments will enforce agreed upon policies; that the private sector will participate; that technical alternatives function as thought; that development - environment trade-offs can be reconciled; that the price of fossil fuels will remain high; that human expansion into forests or reserves can be controlled; and many, many more.

Table 2 below shows the criteria that can help to identify both impact drivers and assumptions, under two main categories, Sustainability and Catalytic Effects. Examples of generic impact drivers and assumptions that meet the various criteria are also given. These are not exhaustive and other generic or specific drivers and assumptions may be identified to meet the criteria according to individual project circumstances.

Table 2. Categories, criteria and generic examples of impact drivers and assumptions

Category	Criteria	Examples of generic impact drivers & assumptions
Sustainability	**Financial**: long-term income generation and fundraising streams	▸ ID: Fundraising, investment and revenue-generating strategies are sufficient to enable the continuation and expansion of project-initiated mechanisms post-project ▸ ID: Suitable markets are identified for the products of conservation-compatible income-generating ventures ▸ ID: Mechanisms are in place to ensure that the products of environmental enterprises are of a sufficient quality and quantity for intended markets
	Institutional: capacity to continue roles and responsibilities	▸ ID: Exit strategies are in place to build the management capacity of local and national partners ▸ ID: Indigenous institutions have been established/ strengthened to provide leadership and technical support to consolidate project conservation and development activities ▸ ID: Collaboration mechanisms between government agencies and local communities established to implement project-initiated sustainable natural resource management approaches ▸ A: Local management capacity and institutional knowledge is not lost through the departure of key personnel

Category	Criteria	Examples of generic impact drivers & assumptions
	Socio-political and economic: relevance and appropriateness to the local context	▸ ID: The local leadership are sufficiently informed and involved in the project and committed to promoting the scaling up of pilot project initiatives ▸ ID: Equitable distribution of conservation benefits generated by the project in the target communities, including marginalised groups ▸ ID: The project establishes mechanisms that ensure clear linkages and contingencies between social initiatives and conservation goals ▸ A: Conservation land-uses introduced by the GEF project produce sufficient returns to be competitive with other non-conservation land-uses
Catalytic effects	**Replication**: scaling up of initiatives at local and global levels	▸ ID: Demonstration sites and study visits are organised to encourage other groups to adopt successful environmental practices and enterprises ▸ ID: Government agencies are encouraged/enabled to facilitate the wider adoption of successfully piloted environmental initiatives ▸ ID: Pragmatic lessons learnt regarding the implementation of environmental initiatives are widely disseminated through appropriate forums and media
	Mainstreaming: national policies and government competencies with respect to the environment	▸ ID: Advocacy of the relevant government agencies and donors undertaken to support the adoption of the project's environmental policy recommendations and their inclusion as national priorities ▸ ID: Successfully piloted environmental policies and management approaches are published as user-friendly national guidelines for field-level implementation and roll-out ▸ A: Senior and influential government officials endorse the project's innovative approaches and champion the development of a more enabling policy environment for wider adoption

2.3.3 Synthesising the project's theory of change model

Based on the foregoing analyses of the project's outcomes-impacts pathways, coupled with the previous stages examining the project's impacts and logical framework, the evaluator will now be in a position to construct the project's overall theory of change model and to determine to what extent the project has conceptualized (both thought through and then worked through) from the initial strategies towards ultimate impacts in terms of GEBs. In Table 3 overpage, an example of an outcomes-impacts theory of change is provided in tabular form for the Seychelles Marine Ecosystem Management Project (SEYMEMP – GEF ID#: 800). The project features three main strategies implemented through four main project outcomes. The same theory of change is illustrated in diagrammatic form in Annex 2.

In summary, the ROtI analytical framework will enable the evaluator to:

1. Identify the project's intended impacts, or for GEF projects, its Global Environmental Benefits

2. Review the project's logical framework and, where necessary, revise it retrospectively to ensure that there is a logical and incremental progression between the different levels of the project's logical hierarchy in working towards the achievement of impacts

3. Analyse the project's outcomes-impacts pathways, including identifying necessary intermediate states, assumptions, and impact drivers that the evaluator considers are necessary to eventually convert project outcomes into ultimate impacts, and to synthesise an overall theory of change model for the entire project.

Table 3. The SEYMEMP outcomes-impacts theory of change

STRATEGIES	OUTCOMES	DRIVERS & ASSUMPTIONS	INTERMEDIATE STATES	IMPACTS
STRATEGY #1: Conservation Action	Outcome 1: Seychelles marine ecosystems and their values are better understood	ID: Research and monitoring methodology integrated into ongoing initiatives/ institutions	IS: Coping mechanisms addressing major threats to marine ecosystems are rolled out nationally	REDUCED HUMAN AND NATURAL THREATS TO SEYCHELLES FRAGILE MARINE ECOSYSTEM HABITATS AND FAUNA ↓ ENHANCED CONSERVATION STATUS OF FOUR MARINE GEBS
		ID: Research & monitoring capacity built in Seychellois institutions responsible for marine protection		
	Outcome 2: Coping mechanisms that directly address marine ecosystem degradation introduced	ID: Coping mechanisms integrated and funded by existing structures		
STRATEGY #2: Systems Strengthening	Outcome 3: Integrated MPA System operationalised	ID: MPA network is adapted to adequately protect key ecosystem functions and processes	IS: MPA network is being managed effectively to achieve conservation goals	
		ID: Financial sustainability of MPA network is established		
		A: Government/ DoE has a clear vision of what it wants from plan and takes leadership		
		A: There is sufficient buy-in and common ground between stakeholders		
STRATEGY #3: Mainstreaming	Outcome 4: Broad stakeholder involvement and cooperation in the implementation of regional marine conservation programmes	ID: Regulations established, understood and enforced	IS: Implementation and mainstreaming of enabling marine policies at national and regional levels	
		ID: There are sufficient incentives for marine users to participate in programmes		
		A: Political leadership is committed to prioritising marine issues		

In the next section, the methodology for undertaking ROtI assessments is described, based on this analytical framework.

3. ROtI methodology

This handbook describes two different but complementary methodologies for undertaking ROtI assessments, the choice of which will depend on the time and resources available for the assessment and the overall objective of carrying it out.

- The **desk-based ROtI** assessment. In this method, the evaluator chiefly relies on existing project documentation such as the project brief and the terminal evaluation plus, where necessary and feasible, follow-up telephone or e-mail consultations with the project executants and key informants. The desk-based ROtI is therefore a rapid assessment approach with cost and time efficiency, but for the reasons explained later, it cannot provide the quality or quantity of information on the project's outcomes-impacts pathways that can be achieved with the field-based ROtI. However, it has the advantage of enabling a large number of projects to be assessed relatively quickly, and as such it provides a good foundation for making summary and comparative conclusions about particular programmes areas or project types.

- The **field-based ROtI** assessment. In this method, the evaluator will employ a variety of information collection methods alongside the documentation review used by the desk-based ROtI, including interviews and working sessions with project executants and key informants, as well as visits to project field sites to verify findings. Because the field-based technique relies on the collection of new post completion information about the project, it is possible to gather more conclusive evidence about the status of achievement of the outcomes-impact pathways, including the achievement of intermediate states, and the realisation of impact drivers and assumptions. The quantity and quality of information available from the field-based ROtI enables the evaluator to make much-more in-depth analyses of the theory of change concerned, and the reasons why the project has either succeeded or failed in its progress towards delivering impacts. However, because the field-based ROtI is time and cost intensive, it is not easy to replicate in large numbers, and is therefore less suitable for developing broader findings about specific programme areas or types of projects.

The two ROtI methods are described in the following sections.

3.1 The field-based ROtI

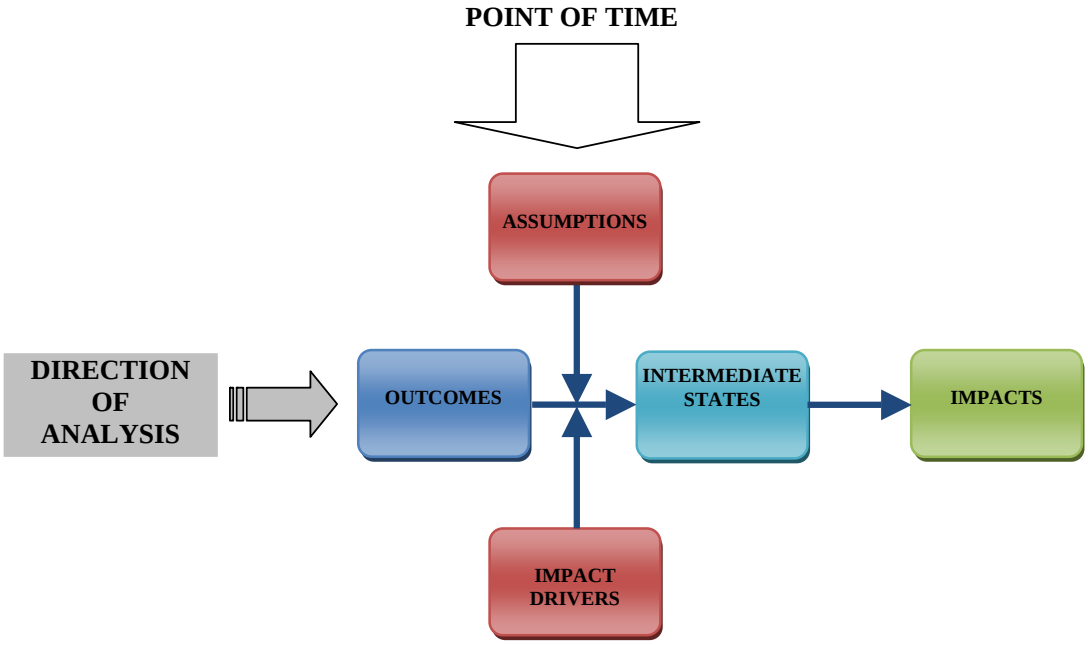
3.1.1 Implementation rationale

As shown in Table 1 above, the process of converting project outcomes to impacts is a long-term process and unlikely to occur within the lifespan of the project. This implies that the three elements of the outcome-impact pathway, the intermediate states, impact drivers and assumptions, must also chiefly be realised post project. For this reason, the field-based ROtI assessment hinges on the collection of new information about the project's achievements post project termination. This is illustrated in Figure 5 overpage, which shows the approximate **Point of Time** when the field assessment is likely to take place. At this time, there is likely to be relatively good evidence for the realisation of the impact drivers and assumptions, and there may also be measurable evidence of the achievement of the intermediate states.

The other important feature about the field-based ROtI assessment shown in Figure 5 is that the **Direction of Analysis** is horizontal – that is, the evaluator assesses each of the project's means-ends pathways independently. The horizontal analysis enables a more nuanced understanding and assessment of the means-ends relationships that are contained in the project. This is a key difference with the desk-based ROtI assessment, which carries out a vertical analysis of the TOC,

because of the more limited information available to the evaluator from the existing project documentation (see section 3.2.1 below).

Figure 5. ROtI TOC model showing the implementation rational of the field-based ROtI assessment



For these reasons, the ROtI field-based assessment potentially has a stronger basis of factual evidence on which to evaluate the delivery of the different components of the TOC compared with the desk-based assessment. The more time that has elapsed between the end of the project and the field-based exercise, the greater will be the strength of the assessment.

3.1.2 Field-based assessment process

The field-based ROtI uses a combination of three different information collection methods, as shown in Figure 6 below, beginning with initial desk research, following on with consultations with key project informants, and finishing where possible with fact-finding at the project site. Ideally, following field investigation, there will be a final step of further consultation with key informants to confirm information collected in the field, and even further desk research to where possible confirm facts in the project documentation (as illustrated in the diagram).

Figure 6. Steps in the field-based ROtI assessment process

Throughout this assessment process, it will be necessary to gradually develop an understanding of the status of the intermediate states, impact drivers and assumptions, through a combination of the different steps shown in Figure 6 above, until the evaluator is able to draw clear conclusions and proceed on to developing their qualitative and quantitative findings. Further guidance on the key steps in the process is given below.

Desk research

As far as possible, all relevant documentation should be consulted during the initial desk research step. This should include the official evaluation documents available from the GEF Evaluation Office database (Egnyte), the project written outputs/ terminal reports, and any subsequent reports relating to the sustainability or follow-up to the project. At a minimum, a thorough knowledge of the project brief and terminal evaluation is an essential foundation for undertaking the subsequent steps of the field-based ROtI assessment. A useful output of the initial desk research step is a "Key Issues Checklist" that summarises the key information that the ROtI assessment needs to focus on in order to validate and assess the project theory of change, as illustrated for the Seychelles Marine Ecosystem Management Project in Table 4 below. The checklist is organised by the various implementers of the project, as this is how information will be collected and analysed (during the desk research and any consultations/ fieldwork that may be undertaken later on).

Table 4. Extract of key issues checklist for the SEYMEMP project

Implementers	Main activity areas	Key issues
Ministry of Foreign Affairs	▸ Financial oversight of the project and financial processing, including disbursements and account keeping	▸ Do they have any follow-up on financial sustainability following project closure?
Ministry of Environment and Natural Resources (MENR)	▸ Technical oversight of the project, as the government agency responsible for environmental protection	▸ What is the vision for implementation of the Seychelles Integrated Marine Protected Area System Plan (IMPASP)
▸ Marine Unit (Conservation Section)	▸ Established at the start of the project, in charge of all marine research and monitoring activities	▸ What level of capacity is there in the unit to continue the research and monitoring activities?
▸ Wetlands Unit	▸ Capacity building for wetland monitoring, assessment and management ▸ Mapping of wetlands using orthophotos and GIS ▸ Regulatory framework in the form of National Wetlands Conservation Policy drafted	▸ What is the level of community participation in monitoring, management and protection of wetlands? ▸ Has the wetlands policy been approved and implemented? And how? ▸ Accession of Seychelles to Ramsar Convention in order to get overall benefits to all the wetland sites?
Marine Parks Authority	▸ Parastatal forming the executive arm of the MENR with responsibility for the management and protection of marine national parks in the Seychelles	▸ What is the capacity to lead the implementation of an integrated MPA? ▸ What steps have been taken to expand or improve the MPA network?
Marine Conservation Society of Seychelles	▸ Whale shark monitoring ▸ Environmental moorings ▸ Control of coral predatory organisms	▸ Extent monitoring and mitigation measures have been continued/ scaled-up following project closure ▸ The extent that monitoring has informed marine management decisions
Consultant	▸ Coral Reef Study (scleractinian coral and reef associated fish communities)	▸ How are the findings and recommendations of the study being implemented ▸ The extent to which the monitoring programme has been replicated
	▸ Production of the Seychelles Integrated Marine Protected Area System Plan (IMPASP)	▸ The extent to which the IMPASP has been implemented
Consultant	▸ Marine turtle studies and long-term monitoring	▸ To what extent are local institutions implementing a follow-up turtle monitoring programme?

Key informants

The **consultation with key informants** provides an opportunity to obtain documents either produced or resulting from the project, which will assist in crosschecking and validating the assessment. The consultation should be undertaken in the following order:

- ***Officials.*** The consultation process should start with the officials involved in the project, e.g. the GEF Focal Point, officials from participating government departments, and representatives of the GEF Implementing Agencies. These consultations are important to get an overview of the broader country-level issues of GEF performance, relevance and impact and to identify key individuals that may have been omitted from the consultation process.

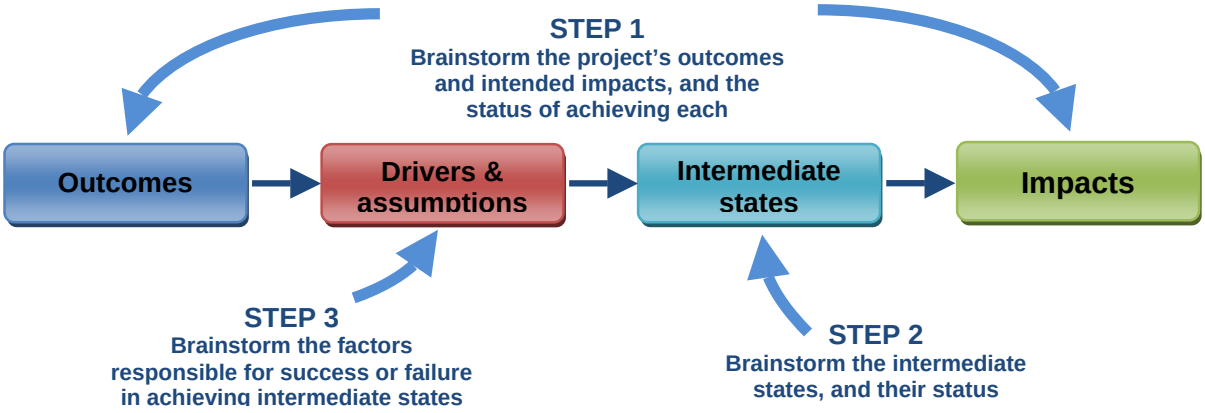
- ***Focus groups.*** The ROtI field assessment exercise is ideally conducted as a group exercise with a cross section of individuals that were responsible for the design and implementation of the specific GEF project being assessed. Organising focus groups can often be challenging because of the difficulty in getting the group members to make the necessary time available (between half a day and one day). For this reason, it is recommended that focus group sessions are organised in collaboration with the country GEF Focal Point and other officials in advance of the visit. In some cases, it may be necessary to hold more than one focus group for a particular project depending on the logistics and the politics of bringing various individuals together. In other cases, it may not be possible to convene focus groups and in these instances it will be necessary to discuss the relevant section of the theory of change with each individual or institution in turn.

- ***Individual experts.*** After the focus group exercise, it will often be necessary to follow up and crosscheck findings with key individuals who were not able to attend the focus group meetings.

Since the project being evaluated will already have finished, project personnel are likely to have taken up new employment, and they may not have the time or strong interest to participate in an assessment that they feel has limited relevance to their current work. Therefore, to maximise on the efficiency and value of a short field visit, a list of the key informants should as far as possible be identified and meetings with them arranged in advance, especially with regard the focus group. Hiring a local consultant to assist with making these advance arrangements is recommended.

The basic order of activities to undertake during the ROtI exercise with the focus group and individual experts (although more expedited in the latter case) is illustrated in Figure 7 and described below.

Figure 7. Steps in the focus group ROtI exercise



1. **Validation of the project logic**. This is best done by presenting the outcomes and impacts identified during the desk review stage and getting the focus group to validate and comment on them. The specific questions to ask are:

- *What was the project ultimately trying to achieve*? (i.e. project impact)
- *What did the project actually achieve at completion*? (i.e. project outcomes)

2. **Assessment of intermediate states**. Ideally the focus group should then identify the intermediate states, followed by a comparison with those identified during the desk review. The specific questions to ask in identifying and assessing the intermediate states are:
   - *What has already been achieved since project completion to contribute to impact*?
   - *What else needs to happen to deliver the intended impact*?

3. **Assessment of the impact delivery process**. Once an understanding has been developed of the achievement or otherwise of the intermediate state, it is then possible to look at the factors that may have resulted in this situation, by examining the presence or absence of the identified impact drivers and assumptions. The basic question to ask is:
   - What were the reasons for success or failure in delivering the intermediate states?

It is recommended that the ROtI exercise with the focus groups (and to a lesser extent with individual experts) uses visualisation techniques to present the elements of the theory of change and to facilitate a collective process of thinking. One effective technique is to write the elements of the TOC on **cards**, which can then be stuck on a board/wall/table, and then read, discussed, arranged, moved, removed, replaced, amended … all with the awareness and understanding of the whole group, until consensus is achieved, or, where consensus is unattainable, differences are revealed and noted.

The end result will be the establishment of a stakeholder consensus for the outcomes-impacts theory of change model for the specific project, plus a more detailed understanding of the status of the project's outcomes-impacts pathways and the key underlying factors responsible for success or failure. A typical outcome of this process is shown in Table 3 above, which shows the TOC model developed by the focus group ROtI exercise for the Seychelles Marine Ecosystem Management Project.

Field investigations

The project TOC models and the initial assessment given during the key informant focus groups and consultations should then be cross-checked through field visits to former project sites and discussion with relevant beneficiary institutions/ communities. This is also a good opportunity to gather statistics to back up the overall assessment findings. These field findings should then be further crosschecked with the key informants and available literature collected during the process (see Figure 6 above).

3.1.3 Reporting of the assessment findings

The Field ROtI Rating System, given in Table 5 below, seeks to provide a simple score that can provide a quick indication of the expected impact of the project. The rating system is applied at the different hierarchical levels of the Theory of Change; i.e. at the **individual TOC element level** (outcomes, impact drivers, assumptions and intermediate states), at the **overall strategy level**, and at the **overall project level.**

Table 5. Field ROtI Rating System

Rating	Description
0	Not achieved
1	Poorly achieved
2	Partially achieved
3	Fully achieved

Below the rating scores are elaborated with descriptions of the general interpretations implied from a theoretical and/ or delivery perspective. These descriptions are provided as guidance for scoring;

it is recognised that projects are extremely complicated and that value judgements will be needed by the evaluator to score projects that will inevitably exhibit elements of more than one scoring level.

Not achieved – (0)

From a *theoretical perspective*, the Theory of Change (TOC) aspect is not explicitly or implicitly identified by the project, and/ or from a *delivery perspective*, very little progress has been made towards achieving the TOC, and the conditions are not in place for future progress

Poorly achieved – (1)

From a *theoretical perspective*, there are no appropriate mechanisms set out to achieve the TOC aspect after GEF funding ended, and/ or from a *delivery perspective*, little progress has been made towards achieving the TOC aspect, but the conditions are in place for future progress.

Partially achieved – (2)

From a *theoretical perspective*, the Theory of Change (TOC) aspect is explicitly recognised and the mechanisms set out to achieve it are appropriate but insufficient (e.g. there is no clear allocation of responsibilities for implementing the mechanisms after GEF funding ends). From a *delivery perspective* moderate and continuing progress is being made towards achieving the TOC aspect, although there is not yet a strong basis for the eventual delivery of the intended Global Environmental Benefits.

Fully achieved – (3)

From a *theoretical perspective*, the Theory of Change (TOC) aspect is explicitly recognised and appropriate and sufficient mechanisms to achieve it are apparent (e.g. specific allocation of responsibilities after GEF funding ended), and/ or from a *delivery perspective* substantial progress has been made towards achieving the TOC aspect and a strong basis is in place for eventual delivery of the intended Global Environment Benefits.

The reporting of the ROtI assessment is initially done for each strategy, assessing the **individual TOC element level** comprising the strategy, i.e. the outcomes, impact drivers, assumptions and intermediate states. The assessment for the intermediate states by virtue of the means-ends logic of the TOC model is based both a direct assessment of the intermediate state itself and the contributing individual assessments of the relevant outcomes, impact drivers and assumptions. This is necessarily an inexact measurement, based on the evaluator's eventual judgement of the achievement of the intermediate state rather than on any definitive measure of achievement.

Table 6 below sets out a framework for reporting the findings of the Outcomes-Impacts Assessment for a specific strategy. The table gives a brief qualitative assessment in the second column, as well as a quantitative score in the third column, based on the rating system shown below.

Table 6. Framework for reporting assessment findings for a specific strategy

TOC component	Qualitative Assessment	Rating
Outcome:	▸	
Impact Driver:	▸	
Impact Driver:	▸	
Assumption:	▸	
Assumption:	▸	
Intermediate State:	▸	

Table 7 overpage gives an example of the assessment findings for Strategy 1 of the Seychelles Marine Ecosystem Management Project (SEYMEMP), as per the assessment reporting framework.

Table 7. Reporting outcomes-impacts assessment findings for Strategy 1 of the SEYMEMP Project

TOC component	Qualitative Assessment	Rating
Outcome 1: Marine ecosystems understood **Outcome 2:** Measures addressing marine degradation introduced	· Outcome 1 and 2 were well achieved by project end. Detailed research activities (focusing on ~60 protected and non protected coral reef sites and turtle nesting areas) enabled a good assessment of the impact of the 1998 coral bleaching event and established good monitoring baselines. Coping mechanisms were introduced including the management of coastal wetlands, the deployment of mooring installations and the control of plague organisms on coral reefs.	2
ID: Research and monitoring methodology integrated into ongoing initiatives/ institutions	· The ecosystem monitoring protocols adopted by the project proved statistically stronger, simpler and more time efficient than previous approaches and have since been adopted more widely (e.g. by the GEF ASCLME project) · Research findings have fed into Status of Coral Reefs of the World 2008 (Global Coral Reef Monitoring Network) · Turtle Action Group formed at project close and is continuing the standardised tagging mechanism for understanding turtle movements and nesting patterns · New research now looking at spawning aggregations and fish behaviour to assess whether the MPA network is big enough	2
ID: Research & monitoring capacity built in Seychellois institutions	· Since project completion, the Wetlands Unit (now Waterways Management Section) has classified all wetlands and is using GIS mapping as an integral part of EIAs · The research studies were contracted to Reefcare International and independent consultants, resulting in limited capacity built in country · The Marine Unit was established in the conservation division of the MET to have responsibility for marine research, but since project closure it has not been active; lacking funds and expertise (only one person) and it is likely to be closed down in 2009.	1
ID: Mitigation strategies integrated and funded by existing structures	· Whale shark programme continued by MCSS following project closure · The enactment of strict guidelines (Wetlands Policy 2005) has enabled the Wetlands Unit to police illegal activities (dumping/ reclamation) and to ensure major new developments comply with guidelines and undertake EIAs. However, capacity is not sufficient yet to enforce guidelines at the household level. · Wetlands taskforce grew to 40 staff mandated to remove waste (removing 1.5 tonne/ week in Victoria) and maintain wetlands, but under recent restructuring this work is being contracted out under one or two supervisors · The initial plan that MCSS monitor the managers of marine areas (i.e. SCMRT/MPA and private entities) to maintain the mooring installations has not worked. SCMRT/MPA is due to take on this responsibility? · Mitigation measures to control marine grazing was stopped following project closure	2
Intermediate State: Ongoing research informing decision making and scaling up of actions to protect the marine ecosystems	· Ecosystem understanding, especially the extensive research on turtle nesting areas (Dr. Mortimer) has informed decision making: ▪ E.g. the identification of new refugia for protection led to government decision not to allow increased fisheries in sensitive areas (around Curieuse Island MNP – recommended for special reserve status and Conception) · Enforcement of wetland regulations by Wetlands Unit is reducing risk of landslides and waste entering marine ecosystem, but techniques (such as grills) have not been scaled up from original project pilots · Socio-economic valuation work (by Dutch consultant Herman Cesar) has not been utilised, nor integrated into development planning/ EIAs · Marine Parks Authority (SCMRT/MPA) is not using research & monitoring findings to inform management of marine national parks. This is attributed to the Marine Unit being established in the conservation section of the DoE rather than the SCMRT/MPA where the current lack of scientists has restricted their activities to controlling access and collecting revenue.	2

At the end of a ROtI assessment a summary table is provided of the overall rating for each strategy and the overall project, as illustrated in Table 8 below for the SEYMEMP project.

Table 8. Overall rating of SEYMEMP project impact

	OUTCOMES - IMPACTS ASSESSMENT
Strategy 1: Conservation Action	2
Strategy 2: Systems Strengthening	1
Strategy 3: Mainstreaming	1
Overall project	**1**
Rating description	From a theoretic perspective, the project's design is in line with the Theory of Change, but the project did not identify mechanisms to remove barriers and continue the change process after GEF funding ended. From a delivery perspective, little progress has been made in removing barriers and delivering the Theory of Change, but the conditions are in place for future progress.

Once the assessment is completed, it is worth comparing the ROTI findings with the sustainability and impact rating of the project's Terminal Evaluation/ Implementation Completion Report.

3.2 The desk-based ROtI

3.2.1 Implementation rationale

The desk-based ROtI assessment, relying as it does on documentation relating to the lifespan of the project, will primarily reflect the status **at the end of the project**, when the project outcomes are in the process of being realised, and when the process of converting project outcomes to impacts is in its infancy (see Table 1). This is illustrated in Figure 8 overpage by the **Point of Time** arrow. At this stage, the intermediate states are unlikely to have been delivered; hence these are shown as dotted in the figure. Similarly, the assumptions and impact drivers may not yet have been realised. However, well conceived projects and project logics will have anticipated assumptions that need to be addressed, barriers that need to be removed, and the need for certain impact drivers in order to achieve ultimate impact; in these instances, the needed actions should have been built into the project design, and this is what the evaluator will mainly be assessing.

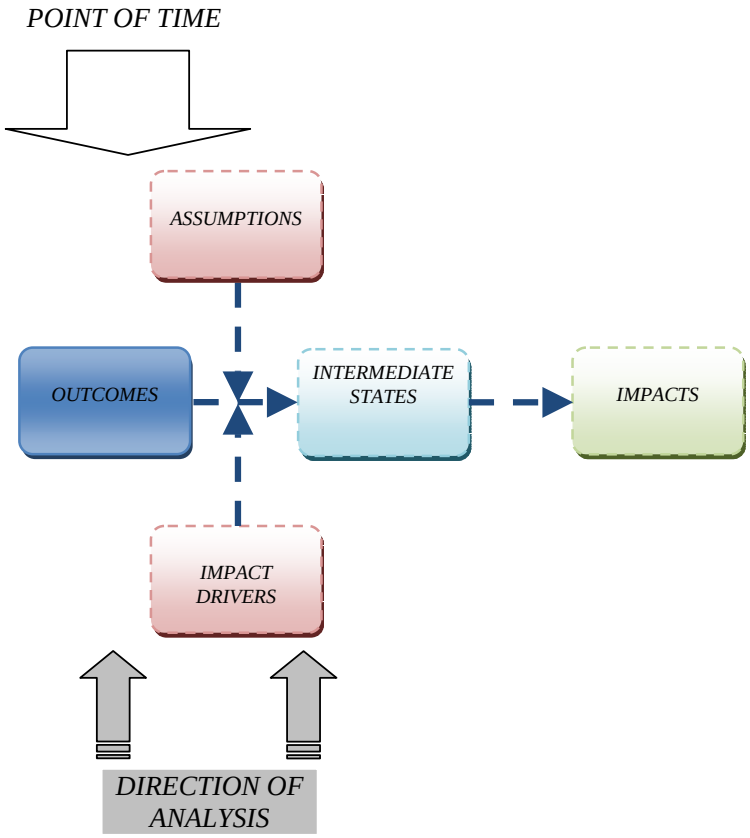
As a result, the main functions of the desk-based ROtI assessment will be to:

- identify missing project outcomes, based on the fuller understanding of the project's TOC. It will also be possible to draw conclusions on the foundation provided by the project outcomes for the successful achievement of intermediate states and eventually to impacts.

- identify and assess the foundation that the project has laid for the subsequent delivery of impact drivers, and the likelihood that the assumptions will be realised. The desk-based evaluation may also be able to hypothesize on whether or not the expected intermediate states are likely to be achieved based on what was known about the project at the terminal evaluation.

Figure 8 also shows the **Direction of Analysis** for the desk-based ROtI, which is vertical – that is, the evaluator consolidates the assessment for each level of the project hierarchy (all outcomes together, all intermediate states together, etc.). This consolidation is necessitated by the relatively limited information available to the evaluator in the desk-based ROtI compared to the much more extensive information likely to be available in the field-based ROtI. While this consolidation limits the opportunities for developing detailed understanding of the processes underway in the project's theory of change, as mentioned previously, it does allow for rapid and cost effective implementation of the assessment, as well as consolidation and comparison of findings across multiple projects and project types.

Figure 8. ROtI TOC model showing the implementation rational of the desk-based ROtI assessment



3.2.2 Desk-based assessment process

The desk-based ROtI is primarily based on project terminal evaluations, but also relies on other relevant GEF project evaluation documents (i.e. TER, PIRs), as well as project briefs (with an emphasis on the project's logframes). As with field-based ROtIs, developing desk ROtIs requires a thorough knowledge of the project brief and terminal evaluation.

Understanding project logic. Based on the project logical framework, outputs, outcomes and impacts are identified and mapped in a diagram. Since projects tend to adapt their logical frameworks during implementation (adaptive management), final project frameworks assessed in Terminal Evaluations are used to build the diagram. This step in the process usually requires the clarification/modification of the logical framework elements, as their definition varies from project to project. Also, the desk ROtI provides the opportunity for the creator to infer missing or partially defined intentions, impact drivers and external assumptions, within the project logic, as the pathway toward impact is delineated.

Assessment of intermediate states. Once the project logical framework is in place, intended and actual intermediate states are defined. Intermediate states included in the project logical framework and achieved through implementation are marked with distinct importance (as it is assumed that this shows a higher understanding in project design and execution of pathways towards impacts).

Assessment of the impact delivery process or linkages. Once an understanding has been developed of the likelihood of achieving intermediate state(s), factors that may increase this likelihood are identified (*i.e*. intended and actual impact drivers and assumptions).

3.2.3 Reporting of the assessment findings

Once the assessment has been completed, the evaluator then summarises the findings of the assessment both quantitatively and qualitatively. In this regard, the rating matrix employed by the desk-based assessment is shown in Table 9. Note that the achievement of outputs (activities carried out with project funding) is largely assumed and is therefore not rated.

Table 9. Desk-based ROtI rating matrix

Outcome Rating	Rating on progress toward Intermediate States	Impact Rating
D: The project's intended outcomes were not delivered	D: No measures taken to move towards intermediate states.	Rating "+" : Measurable impacts achieved and documented within the project life-span
C: The project's intended outcomes were delivered, but were not designed to feed into a continuing process after GEF funding	C: The measures designed to move towards intermediate states have started, but have not produced results.	
B: The project's intended outcomes were delivered, and were designed to feed into a continuing process, but with no prior allocation of responsibilities after GEF funding	B: The measures designed to move towards intermediate states have started and have produced results, which give no indication that they can progress towards the intended Global Environment Benefit.	
A: The project's intended outcomes were delivered, and were designed to feed into a continuing process, with specific allocation of responsibilities after GEF funding.	A: The measures designed to move towards intermediate states have started and have produced results, which clearly indicate that they can progress towards the intended Global Environment Benefit.	

The desk- based ROtI methodology uses a four-letter scale, from A to D, to rate both project outcomes achieved, and the intermediate states necessary to achieve GEBs.

The steps involved in undertaking the rating are as follows:

Outcomes identified in the TOC are listed in the first column and then rated (impact drivers and assumptions are also considered) from "D' through "A" as per the criteria above.

Intermediate states: These are listed in the second column and rated, (impact drivers and assumptions are also considered), from "D" through "A" as per the criteria. Finally *Impact* is considered and given an added "+" in the case that measurable impacts have been achieved and documented within the project life-span

Outputs, outcomes, intermediate states, and possible impacts in terms of GEBs can be listed in the form shown in Table 10.. Ratings are assigned to the outcomes, and to intermediate states, and any impact within the project lifetime is noted as a "+".

Impact drivers and external assumptions, which appear in the diagram format of the ROtI, are analyzed by understanding their inclusion in project design and achievement, or lack thereof, by project completion. Ratings of outcomes and intermediate states are input with results of the impact drivers and assumptions analysis.

Examples of ratings of the projects diagrammed in terms of their respective Theories of Change are given in Annex 3.

Table 10. Desk-based ROtI assessment template

Results rating of: Project X							
Outputs	Outcomes	Rating (D – A)	Intermediate	Rating (D - A)	Impact (GEBs)	Rating (+)	Overall
1.	1.		1.		1.		
2.	2.		2.		2.		
3.	3.		3.		3.		
4.	4.		4.				
	Rating justification:		Rating justification:		Rating justification:		

Interpreting the rating

The identification, detailing, and rating of outcomes and intermediate states, and the assessment of achievement of GEBs (rare and generally not expected) provides an open, transparent, and operationalized rating that can be reviewed by anyone so inclined. The rating system is intended to recognize project preparation and conceptualization that builds on lessons learned from past or parallel projects, that considers its own assumptions, and that seeks to remove barriers to future scaling up and out. Projects that are a part of a long-term process need not at all be "penalized" for not achieving impacts in the lifetime of the project: the system recognizes projects' forward thinking to eventual impacts, even if those impacts are eventually achieved by other partners and stakeholders, albeit with achievements based on present day, present project building blocks.

For example, a project receiving an "AA" rating appears likely to contribute to GEBs, while a project receiving a "DD" rating seems unlikely to deliver GEBs, due to low achievement in outcomes and/or unlikelihood of achieving intermediate states. In addition, projects that achieve documented changes in environmental status during the project's lifetime receive a positive impact rating, indicated by a "+."

The overall likelihood of achieving impacts is shown in Table 11 below (a + score above moves the double letter rating up one space in the 6-point scale).

Validating the rating

Since desk-based ROtIs are usually developed by an individual and are based mainly in project documents, an independent revision process is essential for the validation of ROtIs. At least two reviewers assess the analysis and rating following a protocol.

Table 11. Overall likelihood of impact achievement

Highly likely	Likely	Moderately likely	Moderately unlikely	Unlikely	Highly unlikely
AA BA AB CA BB+ CB+ DA+ DB+	BB CB DA DB AC+ BC+	AC BC CC+ DC+	CC DC AD+ BD+	AD BD CD+ DD+	CD DD

Limitations of the desk-based ROtIs

In addition to the limitations already mentioned above, desk-based ROtI ratings are only as good as the information on which they are based, which are primarily project terminal evaluations. In turn, terminal evaluations rely to varying degrees on internal project data to draw conclusions and make assessments. For example, insufficient project-level monitoring systems to track project results, particularly with regard to biodiversity impacts, would therefore affect the terminal evaluation's conclusions.

Annex 1. Biodiversity GEB filtering process

The first task in developing the project's TOC model is the identification of the project's intended impacts, referred to by the GEF as the project's Global Environmental Benefits (GEBs). As explained in section 2, the project's GEBs are rarely defined in the project documentation or monitoring systems, and it is therefore necessary for project evaluators to employ some form of GEB scoping and prioritisation process.

This annex describes the Nature Conservancy's **Conservation Action Planning** (CAP) methodology that can support the identification of GEBs for the GEF's biodiversity focal area. TNC has developed the CAP approach over many years and it has now been widely tested around the world. The methodology was developed as a way of assessing and monitoring the status of an ecosystem or conservation area, by focusing on the most important biodiversity and ecological characteristics of the area.

The biodiversity GEB filtering processes has adapted the initial stages of the CAP methodology, with the inclusion of an additional screening stage, as follows:

- The identification of conservation targets
- Determining which targets are GEBs (additional stage)
- The selection of the key ecological attributes
- The identification and ranking of threats

Each of these stages is elaborated in the following sections. For a more detailed methodology please refer to the CAP information materials that have been prepared by TNC[3]

1.1 Identifying conservation targets

The cornerstone of the CAP methodology is the identification of **conservation targets**, which are the key biodiversity components of the ecosystem or conservation area that are believed to be critical for the long-term survival of the ecosystem. The conservation targets (CTs) are chosen to encapsulate the key ecological components of the system, and may be at the system level itself (e.g. river systems), or at the habitat/community level (e.g. a forest or woodland), or at the species level (e.g. a keystone species such as elephants that play a critical role in the ecosystem, or are a key characteristic of the ecosystem). The premise underpinning the CAP methodology is that focusing conservation action on the CTs will result in the maintenance of the ecological health of the entire ecosystem. Equally, an understanding of the status of the CTs is a strong proxy measure for assessing overall ecosystem health.

The key steps involved in identifying the conservation targets for a project area are:

- Identify the project area's viable ecological systems
- Identify nested species and habitats "captured" within these ecological systems
- Identify priority species/habitats that have conservation requirements not adequately captured within these categories
- Review and where possible group ecological systems, habitats and species that co-occur in the same area, and share common ecological requirements and threats
- Select a maximum of eight conservation targets from these groupings

[3] TNC (2007). Conservation Action Planning. Developing Strategies, Taking Action, and Measuring Success at Any Scale: Overview of Basic Practices. February 2007 (http://conserveonline.org/workspaces/cbdgateway/cap)

1.2 Determining global significance

The CAP method's conservation targets are equivalent to the environmental benefits that a particular ecosystem provides. Consequently, the methodology provides a mechanism of identifying the key environmental benefits of an ecosystem. However, a further stage to the methodology is needed in order to determine whether these environmental benefits are of potential global environmental significance, i.e. are they GEBs? This can be done by referring to existing international biodiversity prioritisation and ranking mechanisms. For example, at the species level, internationally recognised databases of globally endemic, range restricted or "endangered" species, can be checked such as the IUCN Red List or the World Bird Database (by Birdlife). At higher levels of biological organisation, lists produced by international conservation organisations that identify critical biodiversity rich ecosystems, such as Conservation International's Hotspots or WWF's Global Ecoregions, can be consulted. In this way, using the CAP method in combination with international biodiversity lists, it is possible to identify a project's expected Global Environmental Benefits.

1.3 Selecting key ecological attributes

The CAP method uses the concept of the **key ecological attributes** (KEAs) of the conservation targets (GEBs), which can be defined as "*those factors of a conservation target's ecology that if degraded would seriously jeopardize the target's ability to survive over the long-term*". KEAs are generally attributes of: biological composition (e.g. population size/structure, sex ratios, genetic diversity); environmental requirements (e.g. key habitats, prey species, connectivity); or ecological interactions (e.g. keystone species, fire). The identification of KEAs enables the development of a more comprehensive understanding of each conservation target, and a mechanism for determining the status of the GEB in question – if the KEAs are found to be deteriorating, it is an indication that the conservation status of the GEB is declining, and *vice versa*.

The key steps involved in identifying the key ecological attributes are:

- **Brainstorm the key ecological attributes for each conservation target (GEB)**
- **Select a maximum of 3 - 5 of the most important for each target.** It is important to avoid selecting a large numbers of desirable or descriptive characteristics and to concentrate on identifying the attributes that are critical for long-term viability of conservation targets or that may be seriously degraded by future threats

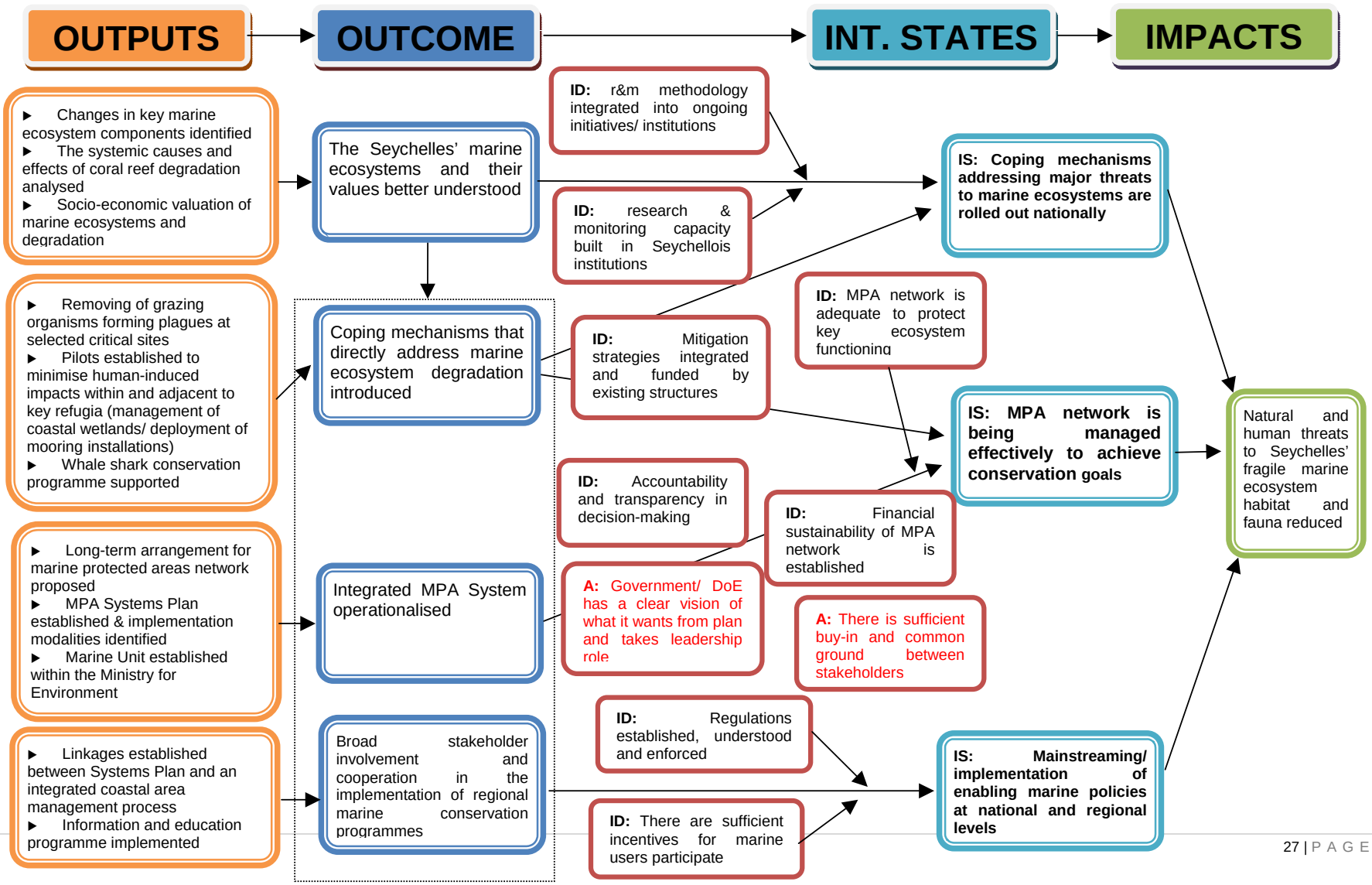
1.4 Identifying threats

The final component of the CAP methodology used for this exercise is the determination of **threats** to the GEBs, or more appropriately to their key ecological attributes. The CAP defines threats as "*human pressures that result in the destruction or degradation of a conservation target or its key ecological attributes*". The focus should be on the direct threats (termed **stresses** in the CAP) rather than the sources of threats (termed **sources** of the stresses in the CAP) and against which mitigation measures can be taken. These threats may either be current or likely to occur in the next ten years. Threats may be specific to a GEB or cross cutting all GEBs.

Overpage are given two examples of the information about the GEBs that should be generated during this process. Black rhino GEB is taken for the Lewa Wildlife Conservancy Project in Kenya and the Afro-montane habitat GEB is taken from the Bwindi & Mgahinga Conservation Project in Uganda.

Conservation Target	Rationale for global significance	Key ecological attributes	Threats
Black rhino	Classified as critically endangered by the IUCN and included in CITES Appendix 1. The global population has declined drastically over last 30 years and remains vulnerable.	▸ Suitable woodland habitat ▸ Productivity ▸ Population distribution ▸ Genetic diversity	▸ Poaching and snaring ▸ Insufficient secure areas ▸ Habitat loss
Afro-montane habitat	One of the most diverse tropical forest habitats in East Africa and key justification for Conservation International's Eastern Afromontane Hotspot and WWF's Albertine Rift Ecoregion	▸ Forest size and extent ▸ Canopy cover ▸ Forest regeneration processes ▸ Habitat diversity	▸ Pitsawing ▸ Encroachment ▸ Fire

Annex 2. Schematic of SEYMEMP theory of change (GEF ID#: 800)



Annex 3. Example desk-based ROtI assessments

3.1 Development of Mnazi Bay-Ruvuma Estuary Park Project, Tanzania

The main goal of the project, which can also be interpreted as a GEB, is "*to conserve a representative example of globally significant biodiversity in the Western Indian Ocean*". The main objective was to "*enable national and local stakeholders to protect and utilize sustainably the marine biodiversity and marine resources of Mnazi Bay MPA in Tanzania*".

Three main potential conditions that the project was trying to achieve in order to achieve impact:

1. Stakeholder support for conservation and management of the MPA
2. Stakeholder engagement in actively managing the MPA
3. Wide adoption of AIG activities, as an alternative to unsustainable use of MPA resources

Despite delivering intended outcomes the project did not take into account assumptions, impact drivers and thus the measures taken to move towards intermediate state were absent.

Results rating sheet

Results rating of: Development of Mnazi Bay – Ruvuma Estuary Park Project(Tanzania)							
		Rating (D – A)		**Rating (D – A)**		**Rating (+)**	**Overall**
Outputs	**Outcomes**		**Intermediate**		**Impact (GEBs)**		
1. legislation, meetings, information documents, lessons learned documents	1. Local communities and key decision makers aware of marine problems, benefits and responsibilities of MPA and use information in decisions making	C	1. MPA stakeholders strongly support the MPA and the achievement of its conservation and livelihood aims	D	1.Pressure on the natural resources of Mnazi Bay reduced. 2. GEB: globally significant biodiversity in the Western Indian Ocean conserved		CD U
2. Marine information center, assessments of resources, socio-economic, cultural factors,, marine and land use environmental issues.	2. A knowledge base supports marine environmental planning and sustainable development		2. UNMET Int. State: MPA stakeholders are actively engaged in management and conservation of the park		2.		
3. Park management plan, monitoring system, MPA financing strategy, legislation, policies, financing mechanisms	3. Marine park management plan implemented with externalities addressed		3. UNMET Int. State: AIG activities have a long-term impact on enhancing sustainable use of MPA		3.		
4. : training program	4. Improved capacity of key stakeholders and institutions for MPA conservation and management		4. AIG's are scaled up throughout the MPA		4.		
5. MPA advisory committee established, training program, sustainable use methods, AIG pilot	5. AIG and sustainable use activities are researched, developed, piloted and adopted		5.		5.		
	Justification for score: Outcomes		**Justification for score:** Measures for achieving		**Justification for score:** In spite of sound outputs and		

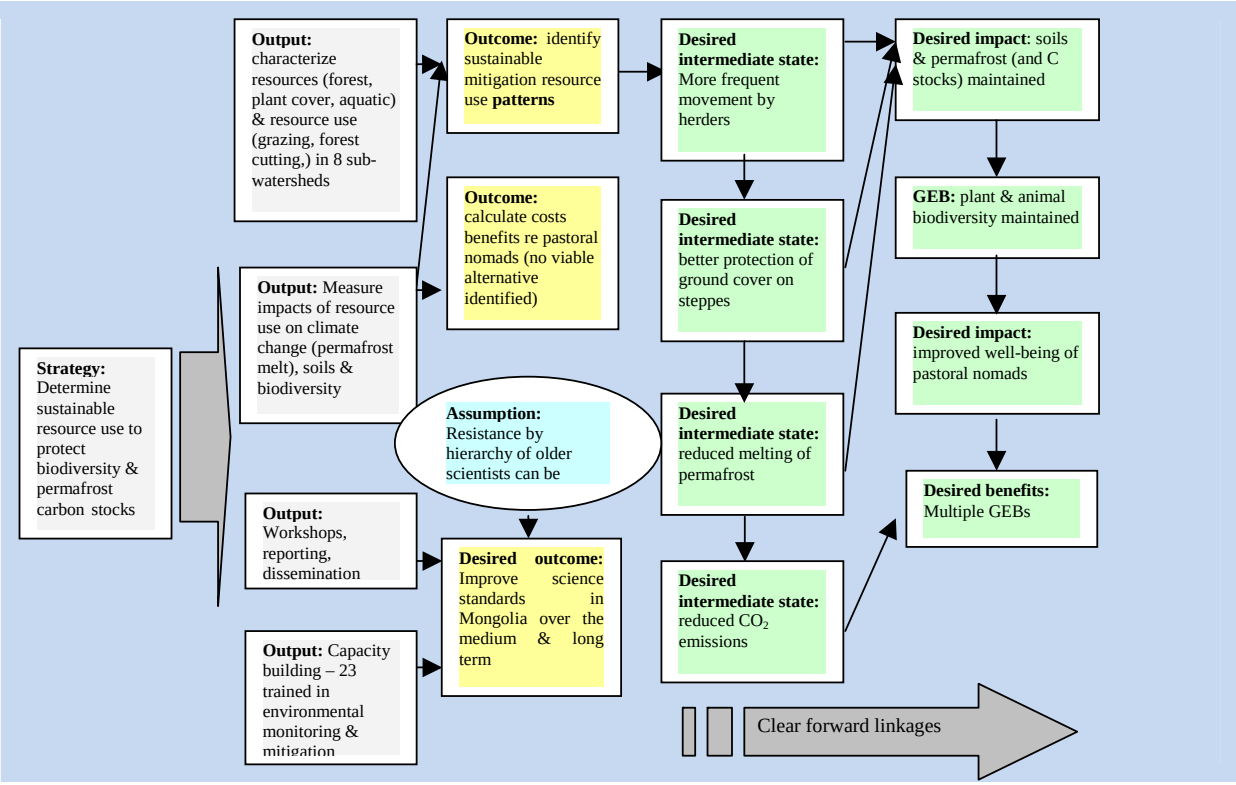
	delivered; a formulation of good outcomes which could have led to IS had assumptions and impact drivers been taken into account during implementation.		sustainability and intermediary states seems rudimentary at the very least for this project. No forward linkages for establishing financial sustainability(impact driver) for the project according to the TE this is also true for sustainability of AIG activities		in spite of some outcomes achieved and some forward linkages, there is little possibility of intermediary stage achievement due to barriers not removed or unmet assumptions. Thus leaving little room for achieving impacts during project implementation or the near foreseeable future.		

Sources: Project documents (Project Brief, TER, TE, PIR)

3.2 Biodiversity loss & permafrost melt in LHNP, Mongolia

This science-based project sought sustainable forest, plant, and aquatic resource use, protection of biodiversity, and reduced CO2 emissions from permafrost melt. As outputs, resources and resources use where carefully examined, as were alternative resource use systems. Workshops were held, reports prepared and disseminated; and 23 young scientists were trained. The outcomes were: the identification of a superior system of resource use and management – basically more frequent movement by herders – and improved science standards in Mongolia in the medium to long terms. A barrier that could no be overcome, however, was resistance by the hierarchy of older scientists. More frequent movement by herders would result in less damage to the permafrost, reducing melting and consequent GHG emissions, protection and improved productivity of soils and groundcover, and maintenance of plant and animal biodiversity. Multiple GEBs would be obtained if adoption of more frequent movement by herders would be scaled up and out – a result that would depend on the financial attractiveness of the option compared to less frequent movement.

Certainly, this example project is small and quite highly focused. It should not be taken that only such projects have clearly envisioned their pathways to achievement of impact.



The main outcome of the research was an objective assessment of the physical, biological and human dynamics affecting the shifting transition zone between the taiga forest and the steppe. Twenty-three young Mongolian graduates were hired and trained in specific scientific areas for

monitoring environmental change and mitigation. Specific scientific training included augmenting their earlier training in climate change, plant ecology, carbon budgets, forest insect assessment, forest regeneration processes, forest tree growth and age-structure analyses, soil characterization, bird and small and large mammal population assessments, water quality analysis, algae diversity, aquatic insect and fish population analyses, and socio-economic and marketing analyses and marketing. The overall objective of this targeted research was to identify sustainable land use practices that will protect biodiversity, ecosystem function, and permafrost. The specific objective and capacity building of Mongolian environmental scientists was achieved. Scaling up and out of the strategy of more frequent movement by herders is needed and possible if the costs-benefits of so doing could be improved.

Results rating sheet

Box 2b. Example: Results rating of: Biodiversity loss & permafrost melt, Mongolia

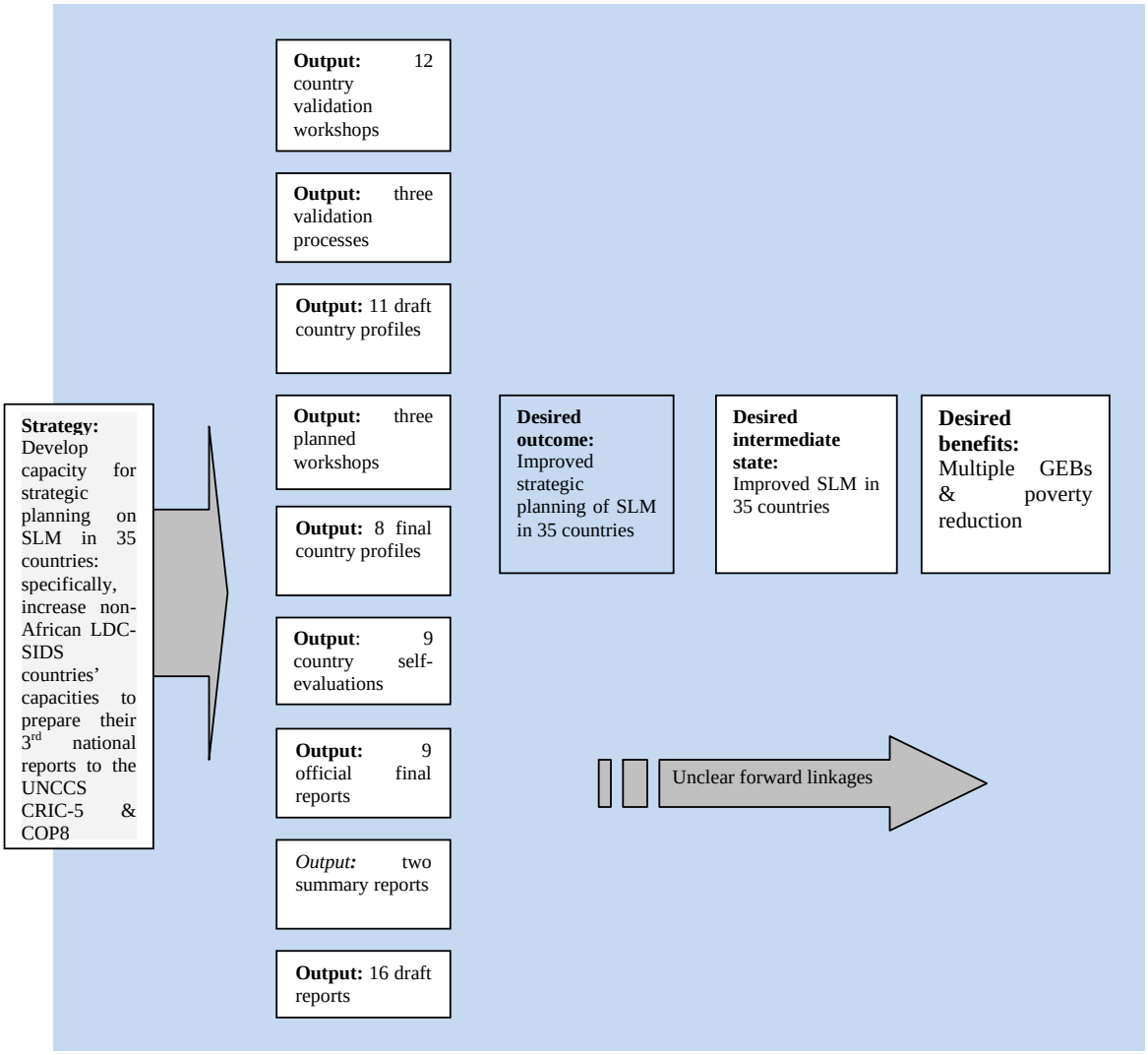
Outputs	Outcomes	Rate (D - A)	Intermediate	Rate (D - A)	Impact (GEBs)	Rate (+)	Overall
1. Characterize resources (forest, plant cover, aquatic) and resource use (grazing, forest cutting,) in 8 sub-watersheds.	1. Identify sustainable mitigation resource use patterns	**A**	1. More frequent movement by herders	**B**	1. Reduced permafrost melt and resulting reduced CO_2 emissions could substantially mitigate GHG emissions if scaled up and out to level of all Mongolian permafrost/pasture areas.		**AB**
2. Measure impacts of resource use on climate change (permafrost melt), soils and biodiversity.	2. Calculate costs benefits re pastoral nomads (albeit no viable alternative was identified).		2. Better protection of ground cover on steppes.		2.		
3. Workshops, reporting, and results dissemination.	3. Improve science standards in Mongolia over the medium and long term (albeit resistance by hierarchy of older scientists was not overcome).		3. Reduced melting of permafrost.		3.		
4. Capacity building – 23 persons trained in environmental monitoring and mitigation	4.		4. Reduced CO_2 emissions				
	Justification for rating: Outcomes stemmed directly from the outputs and represent sound scientific problem solving to generate a specific CC mitigation strategy.		**Justification for rating:** A concrete, science-based mitigation strategy was identified and tested.		**Justification for rating:** Scaling up and out not yet achieved.		

3.3 A theory of change approach to capacity building/CRIC5/COP8

The strategy of this project was to develop capacity for strategic planning for Sustainable Land Management in 35 countries. Such capacity would ideally lead to better planning, adoption of improved SLM practices in the 35 countries, and, eventually, in the generation of multiple GEBs and in poverty reduction. The outputs were concrete enough: 12 country validation workshops, three validation processes, three planned workshops; 9 country self-evaluations; 8 final country profiles, 11 draft country profiles; 9 official final reports, 16 draft reports, and two summary reports. Unfortunately the project documents and the terminal evaluation indicate that there was little to no evidence of improved strategic planning of SLM in 35 countries (the desired outcome) and less

evidence of improved SLM in 35 countries (the desired intermediate state). Although not impossible, there appears to be a low likelihood of the project contributing to the generation of GEBs.

The terminal evaluation of this project also stated, "The 3rd national reporting process is not likely to have any significant direct effect on the availability of human or financial resources for the preparation of the NRs."



Results rating sheet

Outputs	Outcomes	Rating (D – A)	Intermediate	Rating (D – A)	Impact GEBs)	Rating (+)	Rating
1. Twelve country validation workshops, three validation processes, three planned workshops; nine country self-evaluations; eight final country profiles;, 11 draft country profiles; nine official final reports, 16 draft reports, and two summary reports.	1. The desired outcome was improved strategic planning of SLM in 35 countries. According to the TER: ""The 3rd national reporting process is not likely to have any significant direct effect on the availability of human or financial resources for the preparation of the NRs."	C	1.	D	1.		**CD**
	Rating justification: Evidence (or lack thereof) provided in the TER and the above statement provided by the evaluator		**Rating justification:** Project scored "C" for outcomes (making achievement of intermediate states unlikely).		**Rating justification:**		