UNIVERSIDADE DO ALGARVE

Faculdade de Ciências e Tecnologia

Monitoring and Evaluation Tools for Nature-based Tourism: Case studies from Ukraine and Brazil

Dora Alexandra Ramos Leal do Rio

Mestrado em Engenharia do Ambiente

Avaliação e Gestão Ambiental

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Dora Alexandra Ramos Leal do Rio

Dissertação orientada por:
Professor Luis Nunes (FCT/UALG)

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"(...) part of facing up to the realities and complexity of nature is admitting that any approach we take will be incomplete, imperfect, provisional, and experimental. The important thing is to try and improve it."

Miller and Twining-Ward (2005)

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ABSTRACT

Nature-based tourism is any type of tourism that relies mainly on attractions directly related to the natural environment. Therefore when managed in a sustainable way Nature-based tourism may provide important economic revenues to local communities and help support nature conservation efforts. However, when not well managed nature-based tourism may have serious impacts on ecosystems and on local communities' social structure. Monitoring and evaluation has been proved to be an essential tool to evaluate long-term sustainability of nature-based tourism projects and destinations. This dissertation aims to develop two monitoring and evaluation tools for two different levels of nature-based tourism: one tool for projects and another tool for destinations. Both tools aimed to be used in conditions of low technical or/and economic resources. A mountain tourism destination in Ukraine and an ecotourism project in Brazil were used as case studies. Two different methodologies were used. The M&E tool for a mountain tourism destination was based on the use of relationship indicators to analyze the relationships between natural resource, local community and tourism industry in the destination. Two rounds of Delphi questionnaires were carried out with local stakeholders and researchers to identify suitable indicators for monitor and evaluate the case study. An evaluation questionnaire was carried out to evaluate the destination. The M&E tool for ecotourism projects was based on the use of performance indicators and benchmark derived from ecotourism certification programs to monitor and evaluate the compliance of the ecotourism project with the principles of ecotourism. Stakeholders' information, direct observation and factual data were used to collect information to evaluate the project. Results of the both case studies, shows that tourism causes positives and negative impacts on the destinations. Results showed that both tools are suitable for monitoring and evaluation tourism in conditions of low technical or/and economic resources which makes it very useful for small projects and rural destinations. The tools also provide useful benchmark data for future monitoring of case studies as well as to be used in other similar projects.

Keywords: nature-based tourism, sustainable tourism, monitoring, evaluation, indicator, Brazil, Ukraine.

RESUMO

O turismo de natureza é qualquer tipo de turismo que se baseie principalmente em atracções de natureza. Este tipo de turismo, à semelhança de outros nichos do turismo, pode beneficiar as comunidades locais e contribuir para a conservação da natureza quando é bem gerido. Contudo, quando é mal gerido, o turismo de natureza pode causar vários impactos negativos nas comunidades locais e nos ecossistemas do destino turístico. Actualmente o turismo de natureza é uma das indústrias mais importantes para muitos países que vêem no turismo uma oportunidade de desenvolvimento. Nos últimos anos o turismo de natureza tem vindo a crescer rapidamente, o que conduz a uma preocupação igualmente crescente relativamente às consequências desse crescimento ao nível dos destinos turísticos. Pois se as consequências podem ser irreversíveis ao nível dos ecossistemas num destino turístico comum, então tratando-se de um turismo que assenta sobretudo na exploração dos recursos naturais, o seu efeito será ainda mais devastador. Por esse motivo abordagens que conduzam à monitorização e a avaliação do turismo surgem como ferramentas essenciais para garantir a viabilidade a longo termo dos projectos turísticos e dos destinos turísticos. Os fracos recursos técnicos e/ou económicos existentes em muitos dos destinos de natureza impedem que a monitorização e avaliação seja uma prática comum de apoio à gestão sustentável tanto de projectos como de destinos. Com vista a colmatar esta carência, este estudo visa desenvolver duas ferramentas para monitorização e avaliação do turismo sustentável: uma das ferramentas destina-se a auxiliar a monitorização e avaliação de destinos turísticos rurais e a outra ferramenta destina-se a auxiliar a monitorização e avaliação de pequenos projectos de ecoturismo. Ambas as ferramentas assentam num requisito essencial de serem simples para poderem ser aplicadas em condições de fracos recursos técnicos e/ou económicos. Para o desenvolvimento e validação das ferramentas recorreu-se a duas metodologias distintas e a dois casos de estudo. Para a elaboração da ferramenta de monitorização e avaliação de destinos turísticos foi usado um destino turístico de montanha na Ucrânia; e para a elaboração da ferramenta de monitorização e avaliação de projectos turísticos foi usado um projecto de alojamento ecoturístico no Brasil.

A ferramenta de monitorização e avaliação para destinos sustentáveis foi elaborada a partir de uma abordagem teórica que defende que a percepção das partes interessadas

acerca das relações entre o turismo, os recursos naturais e a comunidade local são uma ferramenta eficaz para avaliar o turismo. De acordo com vários autores, o turismo, os recursos naturais e a comunidade local estabelecem relações entre si, positivas e negativas, aos níveis económicos, social e ambiental que são determinantes para alcançar a sustentabilidade do turismo nos destinos sustentáveis. Com vista a conhecer e avaliar as relações existentes entre o turismo, os recursos naturais e a comunidade local no caso de estudo, foi aplicada uma metodologia para a elaboração de indicadores de relação que permitisse, primeiramente, elaborar os indicadores, e posteriormente, avaliar o destino turístico. Para elaborar o instrumento de monitorização e avaliação foram elaborados e aplicados dois inquéritos num sistema de rondas de acordo com a técnica de Delphi. O primeiro questionário baseou-se em seis questões abertas cujo objectivo era explorar os seis aspectos das relações entre recursos naturais, a comunidade local e turismo. Os dados foram analisados através da análise de conteúdo e foram identificados 41 indicadores. Seguidamente, foi elaborado um segundo questionário Delphi composto pelos indicadores identificados na rodada anterior. As partes interessadas foram convidadas a avaliar cada indicador, em 5 pontos de escala Likert para identificar a adequação, a compreensão, e a importância de cada indicador. Após a análise descritiva dos dados foram eliminados cinco indicadores com base no critério adequação e um indicador foi reformulado. Com base nesses resultados, construiu-se um sistema de indicadores com 36 indicadores. Posteriormente elaborou-se um questionário de avaliação composta pelos 36 indicadores do sistema de indicadores para avaliar o desempenho do destino. Os resultados demonstraram que para garantir o desenvolvimento sustentável deste destino turístico é fundamental a participação dos moradores na gestão e no planeamento dos recursos naturais, a criação de receitas e oportunidades de emprego para os residentes, e controlar a redução da área de floresta causada pelo turismo. Os resultados da avaliação do caso de estudo evidenciaram que o turismo é o sector que mais contribui para os impactos negativos nos recursos naturais e ao nível social, sendo que o turismo também promove impactos positivos ao nível da dimensão social e económica.

A ferramenta de monitorização e avaliação de projectos ecoturísticos baseou-se no uso de indicadores de desempenho e valores de referência adaptados de programas de certificação do ecoturismo, para monitorizar e avaliar a conformidade da cadeia de valor do projecto com os princípios do ecoturismo. Foi definido o conceito de cadeia de valor

do ecoturismo e elaborado um mapa da cadeia de valor para o serviço dos passeios ecoturísticos. Três níveis de fornecedores foram identificados numa cadeia de valor dos passeios de ecoturismo: os fornecedores primários (o estabelecimento hoteleiro que proporciona o serviço ao turista), os fornecedores secundários (empresas de passeios ecoturísticos que organizam o passeio) e os fornecedores terciários (entidades que organizações o passeio no local ou entidades que são responsáveis pela gestão da atracção no local). A recolha de dados para a monitorização e avaliação foi feita através da aplicação de entrevistas semi-estruturadas às partes interessadas, observação directa do investigador e em dados factuais recolhidos de fontes secundárias de informação. Seis entrevistas semi-directivas foram realizadas com gestores do alojamento ecológico para colher informações para avaliar o desempenho de alojamento ecológico e seis entrevistas semi-directivas foram realizadas com os fornecedores de actividades de ecoturismo para colher informações para avaliar o desempenho de ecoturismo. Entrevistas informais também foram realizadas com os actores locais para colher informações acerca da Praia do Forte. Os dados foram analisados através de estatística descritiva e agrupados em índices. Foram criados dois índices para agrupar as performances dos fornecedores (ESPI) e do projecto ecoturístico (EPPI). Os resultados demonstraram que o projecto de ecoturismo (EPPI=2,9) tem um desempenho não conforme relativamente ao cumprimento dos princípios do ecoturismo. O projecto de ecoturismo funciona satisfatoriamente em termos de contribuição para o fomento da sensibilização ambiental e cultural, na prestação de experiências positivas para o turista, proporciona benefícios directos para a conservação e benefícios para a comunidade local. Contudo, o projecto ecoturístico tem um desempenho insatisfatório em termos de minimização do impacto sobre a ambiente. Em termos de desempenho do alojamento ecológico (ESPI=2,9), o alojamento ecológico demonstra uma performance insatisfatória devido à não conformidade com os princípios do ecoturismo um e dois. Resultados demonstram que os três operadores de ecoturismo têm um desempenho insatisfatório ($ESPI_A$=2.8; $ESPI_B$=2.2; $ESPI_C$=2.5). Contrariamente, as três organizações de conservação têm um desempenho satisfatório ($ESPI_1$=3.2; $ESPI_2$=3.4; $ESPI_3$=3.2). De uma forma geral, os operadores de ecoturismo e as organizações de conservação apresentam um nível de funcionamento insatisfatório no que se refere à minimizar dos impactos ambientais (principio 1). Os operadores de ecoturismo têm um desempenho insatisfatório também no que se refere à contribuição directa para a conservação (princípio 4). Ao contrário, todos fornecedores têm um desempenho satisfatório

relativamente à sensibilização ambiental e cultural (principio 2), proporcionando experiências positivas para os clientes (principio 3), e proporcionar benefícios para a comunidade local (principio 5).

Este estudo fornece ferramentas válidas para a monitorização e avaliação do turismo de natureza que podem aplicadas com eficácia mesmo em condições de fracos recursos técnicos e financeiros. Estas ferramentas fornecem valores de referência (*benchmark*) que podem ser usados em futuros processos de monitorização e avaliação nos casos de estudo (*benchmark interno*) ou noutros casos de estudo similares (*benchmark externo*). Este estudo contribui também para ampliar o conhecimento acerca das ferramentas de monitorização e avaliação em geral e para alertar as partes interessadas para as condições de sustentabilidade dos casos de estudo apresentados.

Palavras-chave: Turismo de natureza, turismo sustentável, monitorização, avaliação, indicador, Brasil, Ucrânia.

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CHAPTER 1 – GENERAL INTRODUCTION

1.1. Scope and Research Objectives

Tourism is widely recognized as one of the largest and fastest growing industries in the world. Tourism grew by around 25 per cent in the past 10 years. In 2008, over 922 million international tourist arrivals were registered worldwide, and this number will continue growing at the average annual rate of 4 percent (UNWTO 2010). Nowadays, nature-based tourism is considered as one of the most important industries in many countries. Nature-based tourism has increased dramatically in the recent years (Mowforth et al. 2006). The growing of tourism has led to a substantial economic, social and environmental impact in the tourism destinations (Price 1992). If tourism is not managed properly, it can damage the resources that ensure its success and sustainability. At short-term, uncontrolled growth of tourism results in significant negative impacts, harming the environment and societies and destroying the natural resource (Vereczi 2007). In contrast, when efficiently managed, tourism can contribute in a positive manner to socio-economic development and environmental protection (UNWTO 2009).

Nature-based tourism also known as 'nature-oriented' or 'nature' tourism is any type of tourism that relies mainly on attractions directly related to the natural environment. Therefore, mountain tourism, ecotourism and 3S ("sea, sand and sun") tourism can be considerate nature-based tourism. Nature-based tourism is not necessarily sustainable (Weaver 2001). Sustainability principles are applicable to all forms of tourism in all types of destinations, including nature-based tourism, mass tourism and the various niche tourism segments. When, sustainability principles are achieved, any type of tourism can be sustainable.

Concerns about the sustainable development of tourism have been expressed since 1980, when the Manila Declaration on World Tourism was signed. The term "sustainable tourism" has been used by researchers and tourism industry since the mid-1980s (Weaver 2001). According to the World Tourism Organization (UNWTO), sustainable tourism is "the tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future". However, thirty years after the Manila Declaration, concerns of sustainable development of tourism still

remain. Tourism industry, host societies, tourists and operators have become progressively aware of tourism impacts on the local destinations. Achieving sustainable tourism is a continuous process and requires constant monitoring of impacts and evaluation of impacts TIES (1990), introducing the necessary preventive and/or corrective measures whenever necessary (WTO 2004).

Therefore efficient tools for monitoring and evaluating (M&E) tourism impacts are indispensable in any sustainable tourism project or destination. M&E tools improve understanding of the tourism impacts on the local communities and environment (Hainsworth et al. 2007), increase managers awareness of the state of touristic projects and destinations (Tsaur et al. 2006) and helps establishing whether or not tourism projects or destinations are performing better or worse than expected (Hainsworth et al. 2007), working as early-warning system, anticipating emerging problems which enables managers to take corrective actions before it's too late (Tsaur et al. 2006). In addition, M&E tools assist managers in decision-making processes (MI 2000), help reflection and encourage them to act (Shapiro s/d).

In spite of variety of methods and tools elaborated so far, it is still fairly difficult to find suitable tools to monitor and evaluate projects or destinations, when technical and economic resources are scarce and no baseline data is available. To address this issue, the general objective of this dissertation is the development and testing of two monitoring and evaluation (M&E) tools to support managers of nature-based tourism projects and destinations. The general objective is facilitated by the definition of sub-objectives:

- Concerning the M&E tool for destinations: develop and test a monitoring and evaluation tool for rural touristic destinations;
- Concerning the M&E tool for projects: develop and test a monitoring and evaluation tool for small-scale ecotourism projects.

In addition, this dissertation attempts to develop tools that may be applied when low technical and/or economic resources are available. A mountain tourism destination in Ukraine and an ecotourism project in Brazil were used as examples.

The development of simple tools for monitoring and evaluation for nature-based tourism projects and destinations becomes the most relevant contribution given by this

dissertation. This dissertation also gives a contribution to the body of knowledge of monitoring and evaluation tools for tourism, information regarding to performances of case studies, and aspires to encourage managers to apply monitoring and evaluation practices in both case studies as well as elsewhere.

1.2. Limitation of the study

The research has faced some problems during the fieldwork. The study took place in several locations: Portugal, Ukraine, The Netherlands and Brazil. All these features required a great deal of organization and flexibility by all. In addition, time had to be organized and managed carefully so that all the tasks were fulfilled in each location.

However, problems encountered during the field work were often unexpected and unpredictable, requiring changes and adjustments on the methodology and delays in developing the study. It is important to note that social, cultural and economic issues in developing countries such as Ukraine and Brazil can add additional difficulties to the research. In those countries the resources are modest, and simple tasks were often difficult and time consuming to perform. Particularly in the case study of Ukraine, it was very difficult to establish contact with stakeholders. Travel to and from the study sites has required more additional time and effort than expected. Cultural issues were also an obstacle against exploring issues that could have been addressed more thoroughly, particularly in Ukraine. Also in Ukraine, the language was a major difficulty, as very few people can speak English, and English literature is also very scarce, precluding further deeper characterization of the case study.

Furthermore, in both case studies, monitoring data was scarce and it was difficult to find secondary data. In addition, it is important to note that the study was being led by a foreigner, which may have caused some apprehension from people and entities limiting their cooperation.

1.3. Definitions

This study makes recurrent use of specific definitions for which the following definitions are used:

Baseline - A starting point (point of departure) from where implementation begins, improvement is judged, or comparison is made. It is the existing level of performance within an operation (Synergy 2000)

Benchmark - A given value of some phenomenon against which the performance of an operation or destination can be judged. For example, a benchmark of 2% might be regarded as the desirable standard of growth in visitor intake that a certain ecotourism destination can sustain (Weaver 2001).

Benchmarking - The process of comparing performances and processes within an industry to assess relative position either against a set industry standard or against those that are 'best in class' (Synergy 2000)

Community - People living in one place, district, state or country (EAA 2000).

Ecotourism - Travel to fragile, pristine, and usually protected an area that strives to be low impact and (usually) small scale. It helps educate the traveller; provides funds for conservation; directly benefits the economic development and political empowerment of local communities; and fosters respect for different cultures and for human rights (Honey 2002).

Ecotourist - A tourist who participates in ecotourism activities (Weaver 2001).

Indicator - A measurable element of the criteria that the verification process will assess (Black et al. 2007).

Natural resources - Resources that occur naturally in the environment. They are subdivided into four categories: mineral and energy resources, soil resources, water resources and biological resources (OECD 1997)

Nature tourism/nature-based tourism - Any type of tourism that relies mainly on attractions directly related to the natural environment. Ecotourism and 3S ('Sea, sand and sun') tourism are both types of nature-based tourism (Weaver, 2001).

Stakeholders - All parties having an interest in a particular tourism issue (Honey 2001). They may include environmentalists, protected area managers, tourism industry representatives, consumers, host countries, host communities, funders and financiers, and others who have an interest in a particular tourism project (Black et al. 2007).

Standards - Level of quality set according to the ability of applicants to meet a minimum performance on a series of indicators. Minimum performances are based on benchmarks for that specific indicator against the average performance within the sector (Black et al. 2007).

Tourism - The activities of persons travelling to and staying in places outside their usual environment for more than 1 day and less than 1 continuous year for leisure, business and other purposes (Black et al. 2007).

Tourists - People who "travel to and stay in places outside their usual environment for more than twenty-four hours and not more than one consecutive year for leisure, business and other purposes not related to the exercise of an activity remunerated from within the place visited"(WTO 1995).

Tourism industry - A service industry with three main *foci*: transport, accommodation and services (catering, retailing, entertainment, etc) (Uherek 2006).

Sustainable tourism - According to the World Tourism Organization, 'envisaged as leading to management of all resources in such a way that economic, social and aesthetic needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity, and life support systems' (Honey, 2002).

1.4. Structure of the dissertation

Chapter 1 introduces the scope and researches objectives of the dissertation, problems encountered during the study and introduce specific definitions that are recurrent used in the dissertation.

Chapter 2 explores the main theoretical concepts of the dissertation. It starts with the definition of sustainable tourism, distinguishing other types of tourism and clarifies the terms monitoring and evaluation, finally presents a review of indicators used in monitoring and evaluation for sustainable tourism.

Chapter 3 presents the study undertaken in the case study in Ukraine, which aimed at develop and test a Monitoring and Evaluation tool for a rural tourism destination. This chapter presents a revision of the Monitoring and Evaluation tools for destinations, description of the method, results achieved, discussion, conclusions and recommendations.

Chapter 4 presents the study undertaken in Brazil, which intended develop and test a Monitoring and Evaluation tool for an ecotourism project. This chapter presents a revision of the Monitoring and Evaluation tools for sustainable tourism projects, description of the method, results achieved, conclusions and recommendations.

Finally, chapter 5 presents the general conclusion of the dissertation.

CHAPTER 2 – MONITORING AND EVALUATION IN SUSTAINABLE TOURISM

2. Sustainability in Tourism

This chapter introduces the main topics of this study. Firstly, definitions of types of tourism and sustainability principles are clarified. Subsequently, definitions for Monitoring and Evaluation are explored and types of indicators for monitoring and evaluation are presented.

2.1. Tourism & Sustainability Principles

Nature-based tourism also known as 'nature-oriented' or 'nature' tourism is any type of tourism that relies mainly on attractions directly related to the natural environment. Therefore, mountain tourism, ecotourism and 3S tourism ("sea, sand and sun") can be considerate nature-based tourism. Nature-based tourism is not necessarily sustainable (Weaver 2001). Sustainability principles are applicable to all forms of tourism in all types of destinations, including nature-based tourism, mass tourism and the various other niche tourism segments. When, sustainability principles are achieved any kind of tourism turned to be sustainable tourism (WTO 2004).

The World Tourism Organization (UNWTO) defined sustainable tourism as the "tourism that meets the needs of present tourists and host regions while protecting and enhancing opportunities for the future". Sustainable tourism is distinguished from other forms of tourism because it follows sustainability principles. Sustainability principles refer to the suitable balance between environmental, economic and socio-cultural aspects of tourism development (Steck 1999). Therefore, sustainable tourism should make optimal use of environmental resources that constitute a key element in tourism development, maintaining essential ecological processes and helping to preserve natural heritage and biodiversity; respect socio-cultural authenticity of host communities, preserve their built and living cultural heritage and traditional values, and contribute to inter-cultural understanding and tolerance; and ensure viable, long-term economic operations, providing socio-economic benefits to all stakeholders that are fairly distributed, including stable employment and income-earning opportunities and social services to host communities, and contributing to poverty alleviation (WTO 2004).

Ecotourism also fulfils the sustainability principles. Ecotourism is defined in many ways in the tourism and environmental literature. For the last fifteen years, Fennell (2003) examined fifteen definitions of ecotourism and observed that ecotourism definition has emphasized different aspects of nature, relationships with local people, conservation and preservation. In 1990, The International Ecotourism Society proposed one of the oldest and most frequently quoted definitions of ecotourism which is that "ecotourism is responsible travel to natural areas that conserves the environment and improves the welfare of local people". Later on, The World Conservation Union and the Commission on National Parks and Protected Areas defined ecotourism as "environmentally responsible travel and visitation to relatively undisturbed natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features both past and present) that promotes conservation, has low visitor impact, and provides for beneficially active socio-economic involvement of local populations" (Ceballos-Lascurain 1996). According to The International Ecotourism Society (2006) anyone "who implement and participate in ecotourism activities should follow the following ecotourism principles: minimize impact; build environmental and cultural awareness and respect; provide positive experiences for both visitors and hosts; provide direct financial benefits for conservation; provide financial benefits and empowerment for local people; and raise sensitivity to host countries' political, environmental, and social climate."

2.2. Monitoring and Evaluation

Monitoring and Evaluation are complementary processes, though distinct processes, with different purposes (Shapiro s/d). Monitoring is the process of taking regular measurements of something in order to provide a better understanding of the current situation (Hainsworth et al. 2007). Monitoring involves establishing indicators; setting up systems to collect information relating to these indicators; collecting and recording the information; analysing the information; and using the information to inform day-to-day management. If done properly, monitoring is an invaluable tool for good management, and it provides a useful base for evaluation (Shapiro s/d). At some point the information collected during the monitoring needs to be brought together. This is when evaluation starts (Koopmans 2008).

Evaluation is the comparison of actual project results, against the agreed strategic plans. It appraises at what has been set out to do, what has been accomplished, and how it was accomplished. It can be formative, taking place during the life of a project or organisation, with the intention of improving the strategy or way of functioning of the project. It can also be summative, drawing learning from a completed project that is no longer functioning (Shapiro s/d). So, evaluation is the process of assessing what has happened in a specific place or project, in a detailed time, and which lessons can be learned from this to improve future activities (Koopmans 2008).

As conclusion, monitoring is a routine and ongoing process, while evaluation is an in-depth study that take places at specific times during the project duration (Koopmans 2008).

2.3. Types of Indicators for Monitoring and Evaluating

Indicators can be describe as "something that helps you to understand where you are, which way you are going and how far you are from where you want to be" (Miller et al. 2005). Indicators are essential tools for the planning, management and monitoring of any tourism activities (Vereczi 2007). Indicators have been demonstrated to be effective tools for site-evaluation because, they are: practical: facilitate prediction; sensitive to temporal and spatial variation (Kreutzwiser 1993).

There are many different types of indicators and classifications. The European Environment Agency (EEA) described four types of indicators (EPSIM 1999):

- Type A or descriptive indicators of what is happening to the environment or human health (e.g. emissions and concentrations of pollutants);
- Type B or performance indicators linked to a reference value or policy target, illustrating how far the indicator is from a desired level;
- Type C or efficiency indicators illustrating the efficiency of production and consumption processes (e.g. energy consumption per unit of output);

- Type D or total welfare indicators which aggregate together economic, social and environmental dimensions to illustrate whether, overall, welfare is increasing.

Type A or Descriptive indicators are indicators that described what is happening to the environment or human health. The Driving force–Pressure–State–Impact–Response (DPSIR) Framework proposed by the European Environment Agency are an example of descriptive indicators (Smeets et al. 1999). This framework is one of the most commonly used frameworks for organizing the development and selection of variables and indicators. The DPSIR Model is a general framework for organizing information about the state of the environment. This model is based in the use of the Driving forces, Pressure, State, Impact and Response indicators. These type of indicators can be described as: Driving forces indicators, which are activities and processes that cause Pressure, including natural causes such as disasters; Pressures are direct causes of environmental and economic problems; States are the current condition and tendencies of variables; Impacts are effects of changes of state; and Responses are policy and management options to solve problems (Odermatt 2004).

The indicators mentioned above all reflect the situation as it is, without reference to how the situation should be. In contrast, type B or performance indicators compare actual conditions with a specific set of reference conditions. They measure the "distance(s)" between the current situation and the desired situation (target) (Smeets et al. 1999). These indicators measure the actions taken to address a particular issue (e.g. stakeholder meetings, budgets or staff allocated to a particular task) (Font et al. 2005). Performance indicators are relevant if specific groups or institutions may be held accountable for changes in pressures or states. Performance indicators are developed mostly for monitoring their progress towards certain targets (Smeets et al. 1999). These indicators are also known as management performance indicators (Font et al. 2005).

The type C or efficiency indicators are those that illustrate the efficiency of production and consumption processes. These indicators relate pressures to human activities and provide insight to the efficiency of products and processes. Efficiency in terms of the resources used, emissions and waste generated per unit of desired output (Smeets et al.

1999). These indicators are also known as operational performance indicators (Font et al. 2005).

Indicators type D or the total welfare indicators aggregate together economic, social and environmental dimensions to illustrate whether, overall, welfare is increasing (e.g. Index of Sustainable Economic Welfare) (Smeets et al. 1999).

Independently of the type of indicators, they can be expressed and portrayed in different ways, depending on a number of factors, such as the method of data and information gathering, the means of calculation, adequacy of the policy or sustainability issues in question and the technical capacities of managers to process the information, as well as the level of understanding of users (Vereczi 2007).

Indicators are used as either quantitative or qualitative/normative measurements. Indicators that use quantitative measurements are expressed in raw data (e.g. number of tourists visiting a site/year/month, or volume of waste generated/month/week expressed in tonnes); ratios, where one data set is related to another showing a relationship (e.g. the ratio of the number of tourists to local residents in the high season, showing whether tourists out of number locals, and if so by how much); percentage, where data are related to a total, a benchmark or an earlier measure (e.g. per cent of waste water receiving treatment, per cent of local population with educational degrees of different levels, percent change in tourist arrivals and expenditures over last year) (Vereczi 2007).

Indicators can also be expressed in qualitative/normative measurements: category indicators describe a state or level of attainment on a graded list (e.g. level of protection of natural areas according to the International Union for Conservation of Nature (IUCN) Index and grades in the scales of environmental certification systems); normative indicators are related to the existence of certain elements of tourism management and operation (e.g. existence of a tourism development plan or a plan with tourism components at local, regional and national levels, the existence of beach clean-up programmes, beach zoning, etc.); nominal indicators are in essence labels (e.g. existence/application of certification systems). They are expressed as a single nominal (Yes/No); and Opinion-based indicators (e.g. level of tourists' satisfaction or level of

satisfaction of local residents relative to tourism or specific elements). When qualitative data are quantified, qualitative indicators may be expressed as numbers or percentages.

In the present study performance indicators are expressed as qualitative measurements (opinion-based indicators) in chapter 3; and performance indicators are expressed as qualitative measurements (normative and nominal indicators) and quantitative measurements (raw data and ratios) in chapter 4.

CHAPTER 3 – MONITORING AND EVALUATION TOOL FOR TOURISM DESTINATIONS: CASE STUDY FROM UKRAINE

Summary

Sustainable tourism destinations may provide important economic revenues to local communities and help support nature conservation efforts. However, tourism destinations may have serious impacts on ecosystems and on local communities' social structure. Therefore, monitoring and evaluation of impacts emerges as a key tool to evaluate the viability of tourism destinations. In order to develop a monitoring and evaluation tool for a tourism destination, subjective measures (opinion-based indicators) were used to analyze the relationships between natural resource, local community and tourism industry in a mountain destination in Ukraine. Indicators that described the relationships between natural resource, local community and tourism industry have already been used with success by other authors to evaluate tourism destinations. Two rounds of Delphi questionnaires were carried out to identify and select indicators. Stakeholders included residents and members of the local authority, hoteliers, natural resource administration, local NGO and researchers. The first Delphi questionnaire consists of six open-ended questions that explore the six relationships aspects between natural resource, local community and tourism industry, and it was carried out to identify indicators. Data were content analysed and 41 indicators were identified. A second Delphi questionnaire composed by the indicators identified in the previous round was carried out to selected indicators. Stakeholders were asked to rate each indicator in a 5-points Likert scale to evaluate the suitability, comprehensibility and importance of each indicator. Descriptive data analysis was performed and five indicators were removed based on the suitability and one indicator was reformulated based on the unsatisfactory comprehensibility. A system of indicators totalled 36 indicators was elaborated based on the criteria importance. An evaluation questionnaire composed by 36 indicators was carried out to evaluate the destination. Results showed that to guarantee the sustainable development of the destination it is very important monitor and evaluates the economic impact of tourism, local community and natural resources administration. Results also showed that tourism is the sector that causes more negative environmental impacts (e.g. constructed area; pollution of rivers, groundwater and air; incorrect wastewater and solid wastes management practices) followed by societal impacts (e.g. traffic congestion; loss of traditional culture). However tourism also promoted positive impacts at the societal dimension (e.g. social welfare; improvement of roads and accessibilities) and economic dimension (e.g. increase

income; more jobs). The study presents a suitable tool for monitoring and evaluating rural destinations. The tool may be applied when low technical and/or economic resources are available and is easily adapted to other similar projects worldwide. This study gives a contribution to the body of knowledge of monitoring and evaluation tools for tourism destinations, and provide useful benchmark data for future monitoring.

Keywords: Sustainable tourism, monitoring, evaluation, relationship indicator, Ukraine

3.1. Introduction

Nature-based tourism destinations when well-managed provides important benefits to local communities by preserving local culture, natural resources and improving the social conditions of the local communities. However, when destinations are poorly managed, tourism can have a serious impact on the often fragile ecosystems and can contributes to the loss of cultural integrity and identity of the destination (Charters et al. 2007). Therefore, managers should make use of efficient tools for monitoring and evaluation to achieve better results in terms of sustainability of destinations.

A diversity of tools for monitoring and evaluation tourism destinations has been developed by international organizations. However, many of the M&E tools developed so far are too complex to be applied in rural destinations due to insufficient scientific, technical and economic resources. In addition, some destinations, especially those in rural areas, may not be able to conveniently offer a comprehensive set of data to allow the use of standardized indicators (Tsaur et al. 2006). Thus researchers have developed site-specific frameworks for evaluate case studies. Usually, these frameworks are simpler than tools created by international organization, however not so simple than they can be used with conditions of low technical and financial resources. In addition, some tools are so specific that are not suitable for being applied in other destinations.

In order to overcome these constraints, this chapter describes the development and test of a monitoring and evaluation tool for rural tourism destination. The tool aims to be simple and applicable where low technical and financial resources are available. A rural destination in the southwest of Ukraine was chosen as case study.

3.2. Monitoring and Evaluation Tools for tourism destinations

3.2.1. Standardized tools

A diversity of tools for monitoring and evaluation tourism destinations has been developed by international organizations. Some of the well-known tools are the Barometer of Tourism Sustainability (BTS), Tourism Ecological Footprint, Core Set

Indicators (CSI) of Sustainable Tourism Development of Eurostat, and Sustainable Tourism Indicators System of World Tourism Organization (UNWTO).

Although such tools are widely used to assess tourism not all are adequate for sustainable tourism. Cordeiro et al (2010) argue that the first three tools do not allow the evaluation of the economic, social and environmental dimensions of sustainable tourism. The Barometer of Tourism Sustainability developed by Ko (2001) was based on the Barometer of Sustainability of the World Conservation Union (IUCN) and The International Development Research Centre (IDRC). The BTS model represents the comprehensive level of tourism sustainability in a given destination, combining human and natural indicators into an index of sustainable tourism development, without trading one off against the other (Ko 2005). However, the tool has received criticism for not being able to assess the economic dimension of tourism, despite its wider application in evaluating tourism destinations (Cordeiro et al. 2010).

The Tourism Ecological Footprint was suggested by WWF-UK (2002) and Gössling et al. (2002) which was adapted from the Ecological Footprint of Global Footprint Network (Louette 2009). The Tourism Ecological Footprint measures the extent to which the ecological demand of tourism stays within or exceeds the capacity of the biosphere to supply goods and services (Gössling et al. 2002).

Similarly, The Core Set Indicators (CSI) of Sustainable Tourism Development of Eurostat only evaluates the environmental dimension of tourism. The CSI consists of a set of twenty environmental indicators, which were developed based on the DPSIR model[1], and which was validated in tourist destinations (Cordeiro et al. 2010). Regarding to the Tourism Ecological Footprint and CSI, Cordeiro (2000) criticizes these tools arguing that they only evaluate the ecological dimension of tourism, neglecting the social and economic dimensions.

[1] The causal framework for describing the interactions between society and the environment adopted by the European Environment Agency: driving forces, pressures, states, impacts, responses (extension of PSR model developed by OECD) (EEA 2010).

Contrary to the previous tools, the Sustainable Tourism Indicators System (STIS) of World Tourism Organization (UNWTO) is composed by different types of indicators (e.g. well-being of local communities, economic benefits from tourism, protection of natural resources, etc.) allowing to measure the three dimension of sustainable development. Furthermore, this tool allows the evaluation of tourism at different scales (e.g. destinations, countries, etc) (Cordeiro et al. 2010). However, the STIS is composed by a wide range of indicators which requires considerable monitoring and evaluation time and resources. Furthermore, these indicators should be complemented with others, more specific, adjusted to the reality of each case (e.g. site, ecosystem, etc.) after testing the STIS in case studies (Moniz 2009).

Other methods to assess and monitor the social and biophysical impacts of tourism include environmental impact assessment (EIA), estimations of carrying capacity, limits of acceptable change (LAC), cost-benefits analysis (CBA) and visitor impact management (VIM) (Ross et al. 1999a).

3.2.2. Site-specific tools

Site-specific tools are tools developed by researchers to evaluate specific case studies. Getz and Jamal (1994), Ross and Wall (1999a), Tsaur et al. (2006) have used theoretical frameworks to elaborate evaluation approaches.

Getz and Jamal (1994) developed a theoretical framework based on the proposition that sustainable tourism can be achieved through recognition that public and private sectors, host communities and natural environment are interdependent stakeholders in a complex tourism 'domain', where no single individual, agency or group can resolve strategic tourism issues by acting alone. Therefore authors defend that planning and management of sustainable tourism require a collaborative 'theory' between stakeholders. In order to demonstrate the theoretical and practical applications of the framework, Getz and Jamal (1994) carried out a survey in the mountain community of Canmore, Alberta (Canada).

Ross and Wall (1999a) developed a theoretical framework according to the ecotourism paradigm: in successful ecotourism, the dynamics between people, resources and

tourism are such that each makes positive contributions to the others. The framework implies that tourism, much like any industry striving to be sustainable, should be considered in the contexts of both the natural environment and the aspirations of local communities. Although simple, the framework emphasizes the significance of fostering positive links between people, natural resources or biodiversity and tourism. The strength or weakness of any one link has implications for other links. Thus, an examination of the relationships that exist, or have the potential to exist, between local communities, natural resource or biodiversity and tourism may be a good starting point from which to evaluate an ecotourism site, using a list of relevant indicators informed by consultation with stakeholders (Wallace et al. 1996). These authors defined indicators to describe the relationship between local communities, natural resource or biodiversity and tourism in ecotourism destinations. The evaluation framework was tested in three ecotourism destinations in Indonesia, and it proved to be efficient for evaluating destinations (Ross et al. 1999b).

Tsaur et al. (2006) consider that understanding the relationships between stakeholders is fundamental to achieve sustainability in tourism. They adopted the evaluation framework of Ross and Wall (1999a) to their studies (Figure 3.1), and introduced economic, social and environmental dimensions to the analysis. According to Briassoulis (2001), changes in economic, social and environmental dimensions are the three dimensions influenced by each other. Tsaur et al. (2006) interviewed local residents, tourists and resources administration to explore each group's perception of its relationship with the other two groups – so as to form the evaluation basis associated with the sustainability of an ecotourism site. Each stakeholder's interests in ecotourism from economic, social and environment dimensions were collected through the application of the Delphi technique. Based on the above data, inter-relationships were measured between stakeholders from economic, social and environmental dimensions, making used of the Barometer of Sustainability proposed by Prescott-Allen (1997), to express the sustainability of the destination. This evaluation framework was tested in a Taiwanese indigenous ecotourism site.

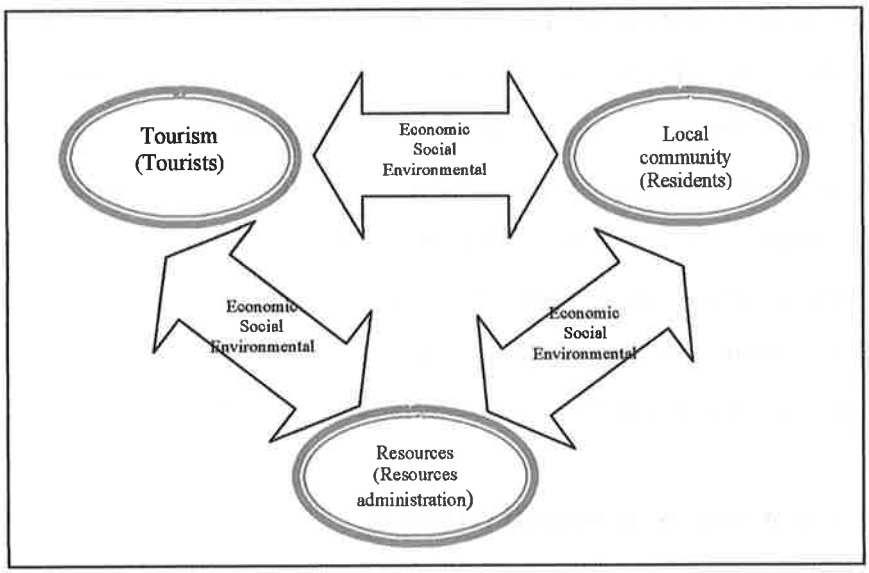


Figure 3.1 – The evaluation framework for sustainable ecotourism. Source: Tsaur et al. (2006).

According to Tsaur et al. (2006) and Ross and Wall (1999a,b) the evaluation framework developed by Ross and Wall (1999a) demonstrated a wide applicability for assessing ecotourism at specific sites.

3.2.3. Natural resources, local community and tourism in a tourism destination

Many authors have described the influence of natural resources, local community and tourism in a tourism destination. Those relationships can be summarized in the following:

Influence of natural resources on local community

Usually nature resource administration administers resource conservation, utilization and management. From the environmental point of view, the nature resources administration protects local resources such as water and forestry, through appropriate conservation measures, which provides residents with sustainable utilization of nature resources, monitoring of pollutant emissions and at least quality of life to local communities (Tsaur et al. 2006). When dependence on resource exploitation is high,

nature resource administration attempts to regulate or prohibit resource use which may foster resentment on the part of local people (Ross et al. 1999a). These administrative strategies positively influence the sustainable development of tourism areas. From the standpoint of economics, residents directly participate in tour guiding or environmental conservation work which increases residents' employment opportunities. As for the social dimension, residents elevate their awareness of environmental protection which further stimulates their supports for resource conservation (Ross et al. 1999a). However, when nature resource administration and residents cannot co-exist harmoniously, it is a critical factor for sustainable tourism development (Tsaur et al. 2006).

Influence of community on natural resources

The local community mainly influences natural resources in terms of the environmental and social dimensions (Tsaur et al. 2006). Residents can act as stewards of natural resources to effectively care for and conserve local resources. On the other hand, community can be excessively reliant on resources, such as hunting, which will damages the nature resources (Ross et al. 1999a). In social terms, community participation in the process of sustainable tourism development is important (Ryan 2002).

Influence of natural resources on tourism

The symbiotic relationship between natural resources and tourism can be described, in general as: natural resources attract tourists which generate income through entrance and parking fees, guiding services, etc. which provide the financial resources for the management and conservation. In addition people who enjoy a high-quality experience in nature will obtain greater environmental awareness and respect for nature (Tsaur et al. 2006), will be more willing to pay fees (Ross et al. 1999a), to donate to environmental protection and to participate in resource conservation (Miller 2001).

Influence of tourism on natural resources

In environmental terms, tourism has impact on the ecological environment which arises from the influx of tourists into destinations (Tsaur, Lin et al. 2006). In the social

dimension, high-quality environmental education can add to the visitors' experience, direct people towards appropriate behaviours and encourage appreciation of natural areas, which can result in environmental advocacy (Orams 1995). From the economic standpoint, tourism income can support conservation, if correct management's practices are implemented (Ross et al. 1999a).

Influence of local community on tourism

Generally, the local community may not welcome tourism at all, but in many destinations, tourism is often seen to be one among a limited number of development options (Ross et al. 1999a). In general, local community provides social interaction (i.e. culture exchanges, etc.) for tourists which result attractive for tourism (Ross et al. 1999b). In addition to enriching tourists' spiritual feelings, the interaction process may also allow tourists to cherish local culture resources, which would in turn raise their willingness to revisit or recommend the destination to others (Tsaur et al. 2006).

Influence of tourism on local community

In environmental terms, tourism may damaged the environment, which may lead to long term negative impacts on local community (Tsaur et al. 2006). In social terms, a massive influx of tourists may lead to traffic inconvenience and congestion (WTO 1996). In addition, a massive influx of tourists can cause an increase in local crime, corruption of social ethos and a loss of traditional culture and regional language (Miller 2001). On the other hand, income due to tourism may help the local government to improve social welfare, transportation and facilities which will benefit communities (Ross et al. 1999b). From the economic point of view, this added income may help boost residents' employment opportunities, community sharing in the distribution of revenues and compensations, and further improves residents' quality of life (Tsaur et al. 2006). However, tourism development may also attract foreign workers and greatly reduce local employment opportunities (Miller, 2001), as well as increase criminality rates.

3.3. Case study

Palyanytsya (also known as Polyanitsa, Polyanicya or Poljanytsja) (BSR 2007) is one of the most important tourism destinations in Ukraine. Located in western Ukraine, Palyanytsya is a rural village located 30 km from the Yaremcha - the capital of the district, and at 110 km from the Ivano-Frankovsk - the capital of the region, 80 km from the Romanian border and 180 km from the Hungarian, Polish and Slovak borders (Vanda 2006) (Fig.3.2). The population of Yaremcha is 21,5 thousands inhabitants, 11,9 thousand is urban population and 9,6 thousand is rural population (Vanda 2006).

Figure 3.2 – Map of the case study area. Adapted from BSR (2007).

During the last decade, tourism has grown rapidly in Palyanytsya as well as in Yaremcha district, turning it to one of the most important mountain tourism destinations in Ukraine. The Carpathian National Nature Park (CNNP) and the Bukovel ski resort (Vanda 2006) are the two main attraction for tourists. In addition, the Mount Goverla, which is the higher mountain of Ukraine, is also located in the CNNP. Nature-based tourism activities such as hiking, skiing, or appreciation of the natural environments are the main features that attract tourists to visit Palyanytsya.

The CNNP is part of the Carpathians or Carpathian Mountains – the largest mountain ecosystem in Europe (Carpathian Convention 2003). The CNNP was established in 1980 and it was the first national park in Ukraine (Vanda 2006). Carpathian Mountains are one of the richest mountain areas in Europe in terms of species and ecological value. In general, Carpathian Mountains are well preserved and constitute an important part of

Europe's natural resources due to its high level of biodiversity (Oszlányi et al. 2004). Currently human pressure in the mountain region has reached its critical limit, mainly due to forests destruction, poaching, industrial pollution, intensification of agriculture, tourism development, expansion of regional transportation network and other economic activities (Carpathian Convention 2003).

The Bukovel ski resort is a famous touristic complex classified as Ukraine's first European-class resort and second biggest of Ukraine. It is popular for its accommodation service (hotel and cottages, nightclubs, pubs, restaurants, saunas, fitness centres and paintball) and ski conditions (14 lifts and 50 km of slopes, 7 chairlifts). The ski resort will be expand to 278 km of runs and 35 lifts by the 2011-2012 season, which will make it one of the 20 largest ski resorts in the world. The ski resort will host the 2018 Winter Olympics (BSR 2007).

For the last years, ecotourism is becoming very popular in Yaremcha district. From 2003 to 2005, the local authority has registered 117 ecolodges in the Yaremcha district (Vanda 2006). In 2005, Yaremcha district received 305,200 tourists who contributed to 22.9 percent (143,774 Euros) of the local budget. However, less than 2 percent (2,735 Euros) of that income was used for managing tourism developments. According to Vanda (2006), the rapid growth of tourism (i.e. hotels, guest houses and bed and breakfasts) in Yaremcha has lead to enormous impacts on natural resources. In addition, many businesses operated illegally due to the fast expansion of touristic infrastructures which led to the incapacity of local authorities to effectively monitor and supervise the tourism development. Thus, management practices which lead to sustainable development of the destination are urgently needed (Vanda 2006).

3.4. Methodology

This section descripts the survey method and the research design used in this chapter.

3.4.1. Survey methods

- **The Delphi Technique**

The Delphi technique was mainly developed by Dalkey and Helmer (1963) in the 1950s.This technique is a valuable survey method for collecting information and

developing opinion-based indicators (Tsaur et al. 2006). It has been applied in various fields such as program planning, needs assessment, policy determination, and resource utilization (Hsu et al. 2007). Predicated on the rationale that "two heads are better than one, or...*n* heads are better than one", the Delphi technique is designed as a group communication process that aims at conducting detailed examinations and discussions of a specific issue for the purpose of goal setting, policy investigation, or predicting the occurrence of future events (Ludwig 1997). In addition, this technique is also widely used and accepted as a method for achieving convergence of opinion concerning real-world knowledge solicited from experts within certain topic areas (Hsu et al. 2007).

The implementation of the Delphi technique consists in delivering Likert questionnaires using multiple rounds (i.e. iterations) to collect data from a panel of selected subjects (Hsu et al. 2007). A Likert questionnaire is a questionnaire composed by Likert questions or items. Likert questions fall under the category of closed format questions. Likert questions assess how the respondent feels towards a certain issue and how strongly the respondent agrees with a particular statement (Hill et al. 2000). Likert questions are based on the Likert scale which is usually a five points scale: 1 = strongly unfavourable to the concept, 2= somewhat unfavourable to the concept; 3 = undecided, 4= somewhat favourable to the concept, 5= strongly favourable to the concept (Trochim 2006). The format of a typical five-level Likert question (or item) is strongly disagree, disagree, neither agree nor disagree, agree, strongly agree, respectively (Dawes 2008).

An example of the Delphi process is described for up to four rounds by (Hsu et al. 2007):

- In the first round, the Delphi process traditionally begins with an open-ended questionnaire. The open-ended questionnaire serves for soliciting specific information from the Delphi participants about a content area. After receiving subjects' responses, investigators need to convert the collected information into a well-structured questionnaire. This questionnaire is used as the survey instrument for the second round of data collection;
- In the second round, each Delphi participant receives a second questionnaire which is a Likert questionnaire. Delphi participant is asked to review the items summarized by the investigators. As a result, Delphi participants may be required to rate or "rank-order items to establish priorities among items;

- In the third round, each Delphi participant receives a questionnaire that includes the items and ratings summarized by the investigators in the previous round and are asked to revise his/her judgments or "to specify the reasons for remaining outside the consensus". This round gives Delphi participant an opportunity to make further clarifications of both the information and their judgments of the relative importance of the items. However, compared to the previous round, only a slight increase in the degree of consensus can be expected;
- In the fourth and often final round, the list of remaining items, their ratings, minority opinions, and items achieving consensus are distributed to the Delphi participants. This round provides a final opportunity for Delphi participants to revise their judgments.

The number of Delphi rounds depends largely on the stop criterion. Thus the stop criterion should be defined when the Delphi process is planned. Pre-defined stop criterion is usually a pre-defined number of rounds or the achievement of consensus (Rowe et al. 1999). A pre-defined stop criterion is usually from three to five rounds. According to Ludwig (1997) three rounds of questionnaires are often sufficient to collect information or to reach a consensus. The increase of rounds increases the convergence of responses, but decreases response rates (Tsaur et al. 2006). Some researchers argue that consensus can be achieved for each question by having 80 percent of Delphi participants "votes" fall within two categories on a seven-point scale question of a questionnaire (Ulschak, 1983). Green (1982) suggests at least 70 percent of Delphi participants need to rate three or higher on a four point Likert-type scale, and median has to be at 3.25 or higher. Hsu (2007) suggests measuring the stability of Delphi participants' responses in successive iterations using *t-test*. The *t-test* assesses whether the means of two groups are *statistically* different from each other (Fowler et al. 1992).

In the Delphi process, the selection of participants is the most important step, which it is directly related to the quality of the results (Taylor et al. 1989). Individuals are considered eligible to participate in a Delphi study if they have background and experiences concerning the target issue (Pill 1971). However, consensus on the optimal number of Delphi participants has no consensus in the literature. Ludwig (1997) refers that the majority of Delphi studies have used between 15 and 20 participants. If the

sample size of a Delphi study is too small, the participants may not be considered as having provided a representative pooling of judgments regarding the target issue. If the sample size is too large, there is potentially low response rates and the time spend by the respondents and the researcher increases (Hsu et al. 2007).

The Delphi process involves both qualitative and quantitative data. The analysis of qualitative data is done by the open-ended questions of the first Delphi questionnaire, and the analysis of quantitative data is done by the Likert questions in subsequent rounds.

- **Methods for the analysis of open-ended questions**

Open-ended questions are usually content analysed. Content analysis is one of the most common techniques used on empirical researches. This technique allows the description of objective, systematic and quantitative content of the communication (Silva and Pinto 1986). Bardin (1988) refers that analysis of categorical analysis, evaluation, analysis of enunciation, expression analysis, analysis of relations and discourse analysis are the possible techniques used in content analysis. One of the most used techniques is the categorical analysis. This technique provides a simplified representation of the survey data. Theme, word or phrase (which is the unit of analysis/register) is collected from the respondents' statements and placed in pre-defined categories. The theme is the affirmation of a subject and the words are defined as keywords or categories of words (e.g. nouns, adjectives, verbs, and so on) (Bardin 1988).

- **Methods for analysis of Likert questions**

Likert questions are ordinal variables. Before perform the analysis, the Likert question or item is coded according: Strongly disagree = 1, disagree = 2, neutral = 3, agree = 4, strongly agree = 5 (Trochim 2006). Likert questions can be analysed using description statistic and inferential techniques. Researchers usually apply measures of central tendency (means, median, and mode) and level of dispersion (standard deviation and inter-quartile range) in order to present information concerning the collective judgments of respondents (Hasson et al. 2000).

Inferential techniques, which are test hypotheses, are also applied to the analysis of the Likert questions. The inferential analysis is based on the information observed or experienced, and allows drawing conclusions for a wider area where these elements came from (Marocco 2003). A popular approach is to analyze responses using analysis of variance techniques, such as the Kruskal Wallis test. The Kruskal-Wallis test is a simply non-parametric test for ordinal variable to compare the medians of three or more samples (Fowler et al. 1992). Significance levels of Kruskal-Wallis test below 0.05 indicate that the group locations differ. The Kruskal-Wallis test is applied to ordinal variables (Gageiro et al. 2000).

3.4.2. Research design

A particular methodology was created to the development and tests the M&E tool. The methodology was carried out in three phases (Figure 3.3):

- First phase – Literature review;
- Second phase – development of the tool;
- Third phase – test of the M&E tool/evaluation of case study performance.

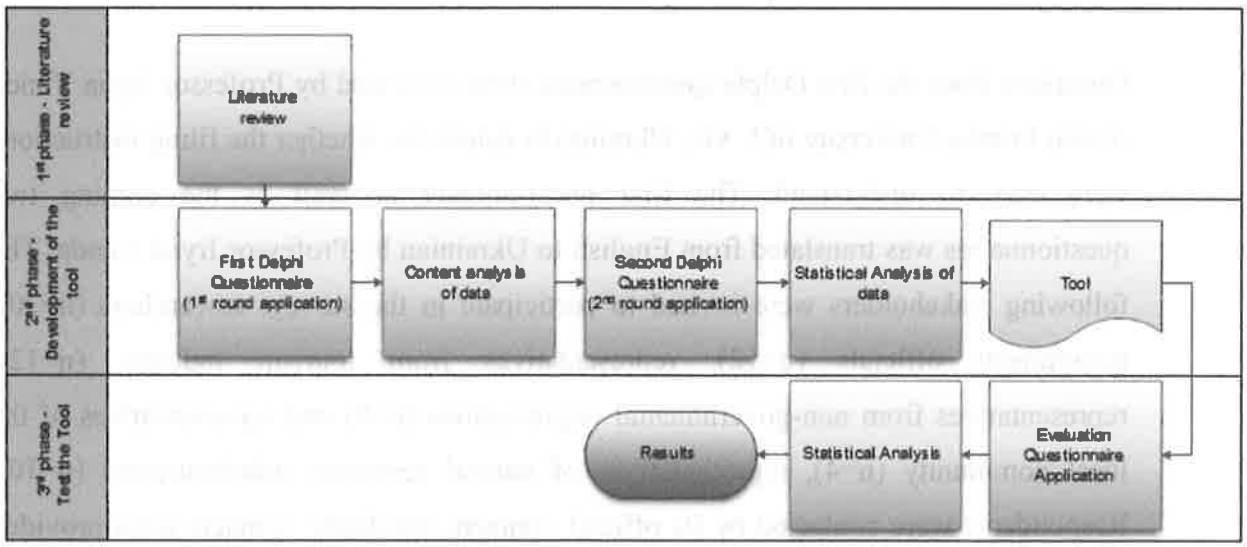


Figure 3.3 – Phases of the research.

Literature review on monitoring and evaluation tools and methods for develop indicators was carried out. In addition, background information about the destination was gathered from researches at the Geography department of Ivano Franko University

to optimise the field work. The evaluation framework of Tsaur et al. (2006) was adapted for the development of the relationship indicators.

The second phase was based in the application of the Delphi technique to collect information for the development of the relationship indicators. Therefore two rounds of Delphi surveys were carried out. The first Delphi questionnaire (Annex A1) was composed by open-ended questions. Open-ended questions were elaborated according to the six relationships described in the evaluation framework of Tsaur et al. (2006). Table 3.1 shows the questions applied on the first Delphi questionnaire.

Table 3.1 - Questions of the first Delphi questionnaire.

Relationship aspect	Question
Tourism - Resources	What is the influence of the tourism sector on the natural resources?
	What is the influence of the nature resources on the tourism sector?
Tourism – Local community	What is the influence of the tourism sector on the local community?
	What is influence of the local community on the tourism sectors?
Local community - Resources	What is the influence of the local community on the nature resources?
	What is the influence of the nature resources on the local community?

Questions from the first Delphi questionnaire were reviewed by Professor Iryna Vanda (Ivano Franko University of L´viv, Ukraine) to determine whether the filing instructions were easy to understand. The first questionnaire as well as the coming two questionnaires was translated from English to Ukrainian by Professor Iryna Vanda. The following stakeholders were invited to participate in the survey: researchers (n=20), government officials (n=12), representatives from tourism industry (n=12), representatives from non-governmental organizations (n=8) and representatives of the local community (n=4), representatives of natural resources administration (n=10). Respondents were contacted by its official contacts, residents' contacts were provided by other respondents, and researchers' contacts were obtained by publications available online.

The first questionnaire was sent by fax and e-mail. A cover letter (Annex A2) and a consent form (Annex A3) were provided together with the questionnaire. Due to communication difficulties, invalid faxes numbers and incorrect electronic and postal

addresses, high response time and low response rata, some questionnaires had to be delivered twice. The second delivery of questionnaires was made in person. A PhD student in Tourism helped in the translation during the first visit to the case study. Questionnaires were administrated directly (i.e. the questionnaire was delivered to the respondent) or indirectly (i.e. questions were asked by the interviewer and recorded) according to respondent preferences and without an "official" appointment. Questionnaires which were indirectly administrated were filled in approximately thirty minutes. Written and oral records were translated from Ukrainian to English. Data analysis of the first questionnaire was performed qualitatively by content analysis. A system of categories, subcategories and unit of analysis/register were elaborated before the content analysis started. The theme was used as unit of analysis. A template (Table 3.2) was elaborated to assist in the content analysis. Some statements were made shorter or reformulated to turn them more objective.

Table 3.2 - Template used for content analysis.

Category of analysis (relationship aspect)	Sub-category of analysis (dimension of analysis)	units of analysis/register (indicator)
Influence of Local community on Natural resources	**Environment**	...
	Economy	...
	Society	...
Influence of Nature resource on Local community	**Environment**	...
	Economy	...
	Society	...
Influence of Local community on Tourism	**Environment**	...
	Economy	...
	Society	...
Influence of Tourism on Local community	**Environment**	...
	Economy	...
	Society	...
Influence of Tourism on Natural resources	**Environment**	...
	Economy	...
	Society	...
Influence of Natural resources on Tourism	**Environment**	...
	Economy	...
	Society	...

The second Delphi questionnaire (Annex A4) was elaborated based on the results of the first Delphi questionnaire. The second Delphi questionnaire was composed by Linker questions and an open ended question was also provided for respondents to add

comments. Delphi participants were asked to rate each indicator in a five points Likert scale (1= completely disagree; 2= disagree; 3= neither agree nor disagree; 4=agree; 5= completely agree) about its suitability, importance and comprehensibility. The information about the terminology "importance", "suitability" and "comprehensibility" was provided in the questionnaire, as follows: "Importance'' indicates that indicator was deemed important for the destination's sustainable development; ''Suitability'' indicates that indicator was suitable to evaluate the sustainable development conditions of the destination; ''Comprehensibility'' indicates that indicator could be easily understood. An example of the second Delphi questionnaire is provided in Table 3.3. Four questionnaires were delivered by e-mail and the rest of the questionnaires were delivered in person. Each questionnaire took approximately ten minutes to fill in.

Table 3.3 – Example of the second Delphi questionnaire.

Indicators		Strongly disagree	Disagree	neither agree nor disagree	Agree	Strongly agree
Incorrect practices of solid waste (garbage) disposal by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry creates acceptable incomes for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP provides environmental education opportunities for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5

Data were statistical analysed. Likert item scale was converted into points: 1= completely disagree; 2= disagree; 3= not disagree nor agree; 4=agree; 5= completely agree. Each Likert item was analyzed for all questionnaires, separately. The measure of central tendency of suitability, importance and comprehensibility of each item were analyzed using the arithmetic mean ($\bar{x}$).

Interval scales were elaborated to interpret the results of suitability, importance and comprehensibility (Table 3.4):

- Relationship indicators for which the mean of suitability ($\bar{x}_s$) was lower than 2.4 were removed since it denotes that the indicator was not suitable for monitoring and evaluation of the destination;

- Relationship indicator for which the mean of comprehensibility ($\bar{x}_c$) was lower than 2.4 were re-formulated since it denotes that the indicator was not comprehensible for the respondents; and
- Relationship indicator for which mean of importance ($\bar{x}_i$) lower than 2.4 were removed since it denotes that indicator was not important for monitoring and evaluation of the destination.

Table 3.4 – Interval scales to assess importance, suitability and comprehensibility

$\bar{x}$ / criteria	≤2.4	2.5-3.4	3.5-4.4	≥4.5
Importance	Not important	Neutral	Important	Very important
Suitability	Not suitable	Suitable	Suitable	Suitable
Comprehensibility	Not comprehensible	Comprehensible	Comprehensible	Comprehensible

Finally a system of indicators was elaborated based on the relationship indicators. The third phase of the method was undertaken after elaborating the system of indicators. The aim of this phase was to test the tool in the case study. Thus, an evaluation questionnaire (Annex A5) was elaborated based on the list of indicators. Respondents were asked to express their opinion in a five points Likert scale (1= completely disagree; 2= disagree; 3= neither disagree nor agree; 4=agree; 5= completely agree) that best describes the current situation of the community of Palyanytsya, tourism and the Carpathian National Natural Park. Table 3.5, gives an example of the questions in the evaluation questionnaire.

Table 3.5 – Example of the questions in the evaluation questionnaire.

Relationship Indicators	Strongly disagree	Disagree	Neither disagree nor agree	Agree	Strongly agree
Tourism industry causes pollution of rivers and groundwater	1	2	3	4	5
Reduction of forest area is caused by residents	1	2	3	4	5
CNNP provides economic benefits for residents	1	2	3	4	5

Interval scales were used to the interpret results. Each Likert item was converted into points: 1= completely disagree; 2= disagree; 3= neither disagree nor agree; 4=agree; 5=

completely agree, and data were analysed by arithmetic mean. Table 3.6 shows the interpretation of the results of the evaluation questionnaire.

Table 3.6 – Interval scales for evaluate indicators.

$\bar{x}$ / Interpretation	≤1.4	1.5–2.4	2.5-3.4	3.4-4.4	≥4.5
Interpretation of results	Completely disagree	Disagree	Not agree nor disagree	Agree	Completely agree

3.5. Results

This chapter begins with a description of the results obtained from the first and second questionnaires – development of M&E tool phase. Then results obtained from the evaluation questionnaire – test of M&E tool are also presented.

Development of the M&E tool – first and second phases

The study was undertaken from February to April 2008. The case study site was visited three times. The first visit was made in March to fill in the first questionnaire; the second and third visits were made in April to fill in the second and the evaluation questionnaires. Three Delphi rounds were planned. However, the Delphi survey finished after the second round due to difficulties in contacting stakeholders, long journey to the case study and delays in receiving questionnaires.

The first round of the questionnaires ended in late March 2008. Twenty-eight questionnaires were returned: six from researches, eight from employees of the Carpathian National Natural Park administration station, seven from representatives from the tourism industry, three from members of nongovernmental organizations and four from representatives from residents (residents, members of the local authority and teachers of the elementary school).

After content analysis the data of the first Delphi questionnaires 41 relationship indicators were indentified (Table 3.7).

Table 3.7 – Results from the first Delphi questionnaire.

Relationship aspect	Dimension	Indicator
Influence of Local community on Natural resources	Environment	Incorrect practices of solid waste (garbage) disposal by residents
		Incorrect practices of wastewater disposal by residents
		Soil erosion is caused by residents
		Increase of constructed area is caused by residents
		Reduction of the forestry area is caused by residents
		Noise pollution (i.e. traffic, construction, etc) is caused by residents
		High level of poaching is caused by residents
		High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents
	Society	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)
		Residents participate on resource management and planning
Influence of Natural resource on Local community	Economy	CNNP provides economical benefits (e.g. compensation) for residents
	Environment	CNNP contributes to conservation
		CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)
	Society	CNNP provides environmental education opportunities for residents
Influence of Local community on Tourism	Society	Community provides cultural experiences for tourist
Influence of Tourism on Local community	Economy	Tourism industry creates acceptable incomes for residents
		Tourism industry creates employment opportunities for residents
	Society	Residents' environmental awareness is increasing due to tourism
		Tourism causes public insecurity
		The increase of the energy supply system is due to tourism
		Tourism causes traffic congestion in peak periods
		Tourism promotes social welfare (e.g. health and education)
		Improvements of roads and accessibilities is promoted by tourism
		The daily lives of residents is disturbed by tourists

		Residents are satisfied for tourism development
		Tourism causes loss of traditional culture
Influence of Tourism on Natural resources	**Economy**	Tourism industry makes indirect economic contribution for conservation
		Tourists make direct economic contribution for conservation (e.g. entry fees, donations)
	Environment	Increase of constructed area is caused by tourism
		Tourism in peak periods destroy natural resources
		Tourism industry causes pollution of rivers and groundwater
		Tourism industry causes air pollution (due to transportation)
		Incorrect practices of wastewater disposal by tourism industry
		Incorrect practices of solid waste disposal by tourism industry
		Reduction of the forestry area is caused by tourism industry
		Tourism causes visual impact (due to winter sports)
		Noise pollution (i.e. traffic, construction, etc) is caused by tourism
		Tourism causes environmental impacts
	Society	Tourists participate in conservation activities
Influence of Natural resources on Tourism	**Economy**	CNNP attracts tourists (which causes tourism development)
	Society	CNNP increases tourists' environmental awareness

The second Delphi questionnaire was composed by 41 closed format questions. The second round of the questionnaire finished in the second week of April 2008. Sixteen questionnaires were returned: three from researches, six employees of the Carpathian National Natural Park, three from representatives from the tourism industry, one from a member of a nongovernmental organization and three from representatives from residents. Data collected in the second questionnaire for the suitability (Annex B1), comprehensibility (Annex B2) and importance (Annex 3) were statistically analysed using SPSS 13.0. The mean was used as the descriptive analysis of the distribution of the opinions. The mode was also analysed showing the same results of the mean. After data analysis, five indicators were removed based on the suitability ($\bar{x}_s \leq 2.4$) and one indicator was re-formulated ($\bar{x}_c \leq 2.4$). Results of suitability and comprehensibility are shown in Table 3.8.

Table 3.8 – Results of suitability and comprehensibility

Relationship aspect	Dimension	Indicator	Suitability mean score	Comprehensibility mean score
Influence of Local community on Natural resources	Environment	Incorrect practices of solid waste (garbage) disposal by residents	4.2	4.3
		Incorrect practices of wastewater disposal by residents	3.9	4.1
		Soil erosion is caused by residents	4.2	3.8
		Increase of constructed area is caused by residents	4.2	3.2
		Reduction of the forestry area is caused by residents	4.6	4.1
		Noise pollution (i.e. traffic, construction, etc) is caused by residents	4.1	4.3
		High level of poaching is caused by residents	2.3	4.2
		High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	2.9	3.4
	Society	Residents support nature conservation (i.e. taking part in activities. environmental projects, etc.)	3.1	3.8
		Residents participate on resource management and planning	3.9	3.2
Influence of Natural resource on Local community	Economy	CNNP provides economical benefits (e.g. compensation) for residents	3.4	3.9
	Environment	CNNP contributes to conservation	3.9	2.4
		CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	3.8	3.9
	Society	CNNP provides environmental education opportunities for residents	4.2	3.7
Influence of Local community on Tourism	Society	Community provides cultural experiences for tourist	4.5	4.1
Influence of Tourism on Local community	Economy	Tourism industry creates acceptable incomes for residents	4.2	3.9
		Tourism industry creates employment opportunities for residents	4.3	3.8
	Society	Residents' environmental awareness is increasing due to tourism	3.9	3.6
		Tourism causes public insecurity	4.1	3.9
		The increase of the energy supply system is due to tourism	2.2	4.0

		Tourism causes traffic congestion in peak periods	3.2	3.8
		Tourism promotes social welfare (e.g. health and education)	3.9	3.9
		Improvements of roads and accessibilities is promoted by tourism	4.1	3.5
		The daily lives of residents is disturbed by tourists	3.9	3.6
		Residents are satisfied for tourism development	4.1	4.0
		Tourism causes loss of traditional culture	3.9	3.9
Influence of Tourism on Natural resources	**Economy**	Tourism industry makes indirect economic contribution for conservation	2.3	3.6
		Tourists make direct economic contribution for conservation (e.g. entry fees, donations, etc.)	3.8	3.9
	Environment	Increase of constructed area is caused by tourism	4.1	4.0
		Tourism in peak periods destroy natural resources	4.0	3.0
		Tourism industry causes pollution of rivers and groundwater	4.3	4.0
		Tourism industry causes air pollution (due to transportation)	4.1	3.8
		Incorrect practices of wastewater disposal by tourism industry	4.3	4.0
		Incorrect practices of solid waste disposal by tourism industry	4.2	3.9
		Reduction of the forestry area is caused by tourism industry	3.9	4.0
		Tourism causes visual impact (due to winter sports)	3.3	3.4
		Noise pollution (i.e. traffic, construction, etc) is caused by tourism	2.2	3.5
		Tourism causes environmental impacts	3.7	3.5
	Society	Tourists participate in conservation activities	2.4	3.9
Influence of Natural resources on Tourism	**Economy**	CNNP attracts tourists (which causes tourism development)	3.8	4
	Society	CNNP increases tourists' environmental awareness	3.9	3.9

A System of Indicators (Table 3.9) based on the importance was established totalling 36 indicators. A label was added to indicators to facilitate managers' identification. Results showed that besides the fact that respondent mentioned more indicators of the environmental dimension (n=18) than social dimension (n=13) or economic dimension

(n=5), indicators that express economic concerns are identified more important ($\bar{x}$ =4.3) than indicators that express environmental ($\bar{x}$ =4.0) and societal concerns ($\bar{x}$ =4.0).

Table 3.9 – Relationship Indicators System.

Relationship aspect	Dimension	Indicator	Importance mean score	Importance label
Influence of Local community on Natural resources	**Environment**	Incorrect practices of solid waste (garbage) disposal by residents	4.2	☺
		Incorrect practices of wastewater disposal by residents	4.1	☺
		Soil erosion is caused by residents	3.3	😐
		Increase of constructed area is caused by residents	3.2	😐
		Reduction of the forestry area is caused by residents	3.8	☺
		Noise pollution (i.e. traffic, construction, etc) is caused by residents	4.2	☺
		High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	3.8	☺
	Society	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3.5	☺
		Residents participate on resource management and planning	4.5	☺☺
Influence of Natural resource on Local community	**Economy**	CNNP provides economical benefits (e.g. compensation) for residents	3.5	☺
	Environment	CNNP contributes to conservation	4	☺
		CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	3.3	😐
	Society	CNNP provides environmental education opportunities for residents	4	☺
Influence of Local community on Tourism	**Society**	Community provides cultural experiences for tourist	4.2	☺
Influence of Tourism on Local community	**Economy**	Tourism industry creates acceptable incomes for residents	4.6	☺☺
		Tourism industry creates employment opportunities for residents	4.7	☺☺
	Society	Residents' environmental awareness is increasing due to tourism	3.8	☺
		Tourism causes public insecurity	3.2	😐
		Tourism causes traffic congestion in peak periods	4	☺
		Tourism promotes social welfare (e.g. health and education)	4.2	☺
		Improvements of roads and accessibilities is promoted by tourism	4.2	☺
		The daily lives of residents is disturbed by tourists	3.8	☺

		Residents are satisfied for tourism development	4.3	☺
		Tourism causes loss of traditional culture	4	☺
Influence of Tourism on Natural resources	**Economy**	Tourists make direct economic contribution for conservation (e.g. entry fees in CNNP, tours, donations)	4.2	☺
	Environment	Increase of constructed area is caused by tourism	4.1	☺
		Tourism in peak periods destroy natural resources	4.1	☺
		Tourism industry causes pollution of rivers and groundwater	4.2	☺
		Tourism industry causes air pollution (due to transportation)	4.3	☺
		Incorrect practices of wastewater disposal by tourism industry	4.2	☺
		Incorrect practices of solid waste disposal by tourism industry	3.8	☺
		Reduction of the forestry area is caused by tourism industry	4.8	☺☺
		Tourism causes visual impact (due to winter sports)	4	☺
		Tourism causes environmental impacts	3.8	☺
Influence of Natural resources on Tourism	**Economy**	CNNP attracts tourists (which causes tourism development)	4.3	☺
	Society	CNNP increases tourists' environmental awareness	4.4	☺

Legend of the table

☹☹	☹	😐	☺	☺☺
Not important	Not important	Neutral	Important	Very important

Results also showed that for monitoring the influence of local community on the natural resources, at environmental level it is important to monitor the incorrect practices of solid waste and wastewater management, reduction of the forestry area, noise pollution, and the high pressure on agriculture. At social dimension, it is important monitor residents' support of nature conservation and is very important residents' participation on the resource management and planning. To evaluate the influence of natural resource on the local community, it is important monitor the provision of economic benefits for residents, contributions from natural resources administration for conservation and the provision of environmental opportunities for residents.

The influence of local community on tourism should be assessed by monitoring the provision of diverse cultural experiences for tourists. In order to monitor the influence of tourism on the local community at society level, it is important monitor the increase

of the residents environmental awareness, the traffic congestion in peak periods, promotion of social welfare (e.g. health, education, etc.), improvement of roads and accessibilities, the disturbance of the daily lives of residents, the residents' satisfaction concerning tourism developments and the loss of traditional culture. At the economic level, it is very important monitor the creation of incomes and employment opportunities for residents originated by tourism industry.

The influence of tourism on natural resources should be assessed by monitoring the direct economic contribution for conservation. At the environmental level, the increase of constructed area, the destruction of natural resources caused by the overloading capacity of tourism, the pollution of rivers and groundwater, air pollution due to transportation, incorrect disposal of wastewater and solid waste disposal, the visual impact and environmental impact due to winter sports are important to be monitored. To assess the influence natural resources on tourism, it is important monitor the attraction of visitors and the increases of tourists' environmental awareness.

Kruskal-Wallis test was used to analyse the variance of data because of Delphi technique was not conducted to the third round as recommended in the literature. Thus homogeneity of answers was not guaranteed. Results of the Kruskal-Wallis test showed that stakeholders' opinions do not diverge from each others, except for the following:

- Comprehensibility (p=0.014) of the indicator "tourism causes environmental impacts";
- Suitability (p=0.030) of the indicators "tourism causes visual impact (due to winter sports)";
- Suitability (p=0.022) of the indicator "tourism causes environmental impacts";
- Importance (p=0.038) of the indicator "residents are satisfied with the tourism development".

Test the tool and site evaluation – third phase

The evaluation questionnaire was carried out in late April 2008. Twelve evaluation questionnaires were returned: three from researchers, four from the Carpathian National Natural Park, two from tourism industry representatives and three from representatives from the local community. Data collected (ANNEX B4) were introduced and

statistically analysed. Results are shown in Table 3.10. A label was added to indicators to facilitate identification by managers.

Table 3.10 – Results of the M&E questionnaire.

Relationship aspect	Dimension	Indicator	Evaluation mean score	Evaluation label
Influence of Local community on Natural resources	Environment	Incorrect practices of solid waste (garbage) disposal by residents	4.1	☺
		Incorrect practices of wastewater disposal by residents	3.8	☺
		Soil erosion is caused by residents	3.1	😐
		Increase of constructed area is caused by residents	3.1	😐
		Reduction of the forestry area is caused by residents	2.9	😐
		Noise pollution (i.e. traffic, construction, etc) is caused by residents	2.8	😐
		High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	2.7	😐
	Society	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3.5	☺
		Residents participate on resource management and planning	2.7	😐
Influence of Natural resource on Local community	Economy	CNNP provides economical benefits (e.g. compensation) for residents	2.7	😐
	Environment	CNNP implements conservation measures (i.e.to conserve mineral, water, and soil resources, animals, forestry).	4.1	☺
		CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	3.6	☺
	Society	CNNP provides environmental education opportunities for residents	4.1	☺
Influence of Local community on Tourism	Society	Community provides cultural experiences for tourist	3.8	☺
Influence of Tourism on Local community	Economy	Tourism industry creates acceptable incomes for residents	4.3	☺
		Tourism industry creates employment opportunities for residents	4.3	☺
	Society	Residents' environmental awareness is increasing due to tourism	3.3	😐
		Tourism causes public insecurity	3.4	😐
		Tourism causes traffic congestion in peak periods	3.9	☺
		Tourism promotes social welfare (e.g. health and education)	4	☺
		Improvements of roads and accessibilities is promoted by tourism	4.3	☺

		The daily lives of residents is disturbed by tourists	3.6	☺
		Residents are satisfied for tourism development	4.3	☺
		Tourism causes loss of traditional culture	2.6	😐
Influence of Tourism on Natural resources	**Economy**	Tourists make direct economic contribution for conservation (e.g. entry fees in CNNP, tours, donations)	3.7	☺
	Environment	Increase of constructed area is caused by tourism	4.5	☺
		Tourism in peak periods destroy natural resources	4.3	☺
		Tourism industry causes pollution of rivers and groundwater	4.3	☺
		Tourism industry causes air pollution (due to transportation)	3.8	☺
		Incorrect practices of wastewater disposal by tourism industry	3.7	☺
		Incorrect practices of solid waste disposal by tourism industry	3.9	☺
		Reduction of the forestry area is caused by tourism industry	3.2	😐
		Tourism causes visual impact (due to winter sports)	2.8	😐
		Tourism causes environmental impacts	3.8	☺
Influence of Natural resources on Tourism	**Economy**	CNNP attracts tourists (which causes tourism development)	4.1	☺
	Society	CNNP increases tourists' environmental awareness	4.2	☺

Legend of the table

☹☹	☹	😐	☺	☺☺
completely disagree	disagree	neither agree nor disagree	agree	completely agree

In relation to the influence of local community on natural resources, there is an incorrect management of domestic solid waste and incorrect domestic disposal of wastewater by residents. However, residents support nature conservation (i.e. taking part in activities, environmental projects, etc.). Results of the influence of natural resources on local community, demonstrate that CNNP implements conservation measures, implement measures to guarantee the sustainable harvest (farming, fishing, hunting, etc) and provides environmental education opportunities for residents.

The local community influence on tourism occurs by the provision of diverse cultural experiences for tourists. The tourism influence on local community takes place by the

creation of acceptable incomes for residents and employment opportunities. At society level, tourism industry improves roads and accessibilities, promotes social welfare (e.g. health, education, etc). Results showed that residents are satisfied with tourism development. However, tourism causes traffic congestion in peak periods and disturbs the daily lives of residents.

In relation to the influence of tourism on natural resources, tourists make economic contribution for conservation (e.g. payment of fees, etc). However, tourism is responsible for the increase of constructed area, destruction of natural resources in peak periods, rivers and groundwater pollution, air pollution due to transportation, incorrect practices of wastewater disposal and solid waste disposal and environmental impacts. Concerning the influence of natural resources on tourism, stakeholders consider that CNNP attract tourists and increases tourists' environmental awareness.

Results also showed that tourism causes more negative environmental impacts (e.g. constructed area; pollution of rivers, groundwater and air; incorrect wastewater and solid wastes management practices) than local community and nature resources administration, followed by societal impacts (e.g. traffic congestion; loss of traditional culture). However tourism also promoted positive impacts at the societal dimension (e.g. social welfare; improvement of roads and accessibilities) and economic dimension (e.g. increase income; more jobs).

Stakeholders neither agree nor disagree concerning twelve indicators of which nine are from the environmental dimension. Results showed that stakeholders could also not achieve agreement or disagreement concerning two of the very important indicators: reduction of forestry area caused by tourism industry and residents participation on resources management and planning.

Inferential analysis was carried out to drawing conclusion for a wide universe of respondents, about each stakeholders group' opinion, due to the small rate of questionnaire responses (n=12). However, it is important to note that the majority of Delphi studies have used between 15 and 20 participants. Figure 3.4 shows the dendrogram obtained by calculating the square of Euclidean distance and using Average Linkage (Between Groups). The analysis of the dendrogram shows four groups: the first

group composed by nature resources representatives and local community representatives; the second group composed by a representative from local community; a third group composed by tourism industry representatives and one researcher and the fourth group composed by researchers.

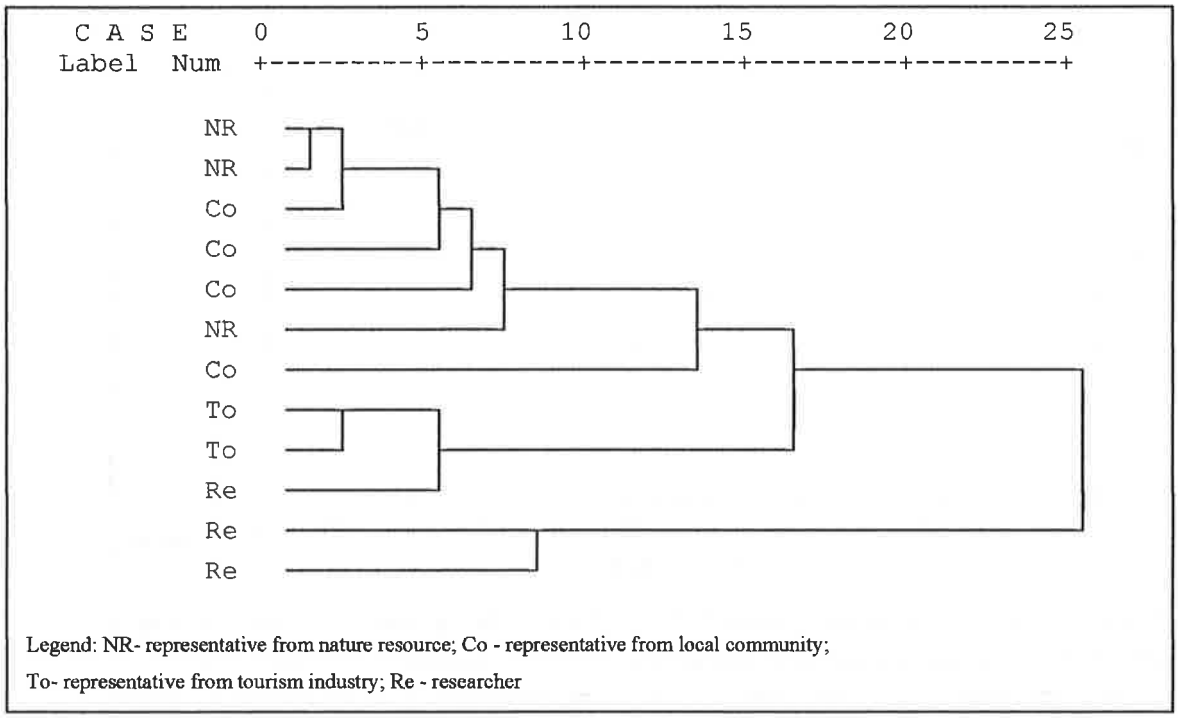
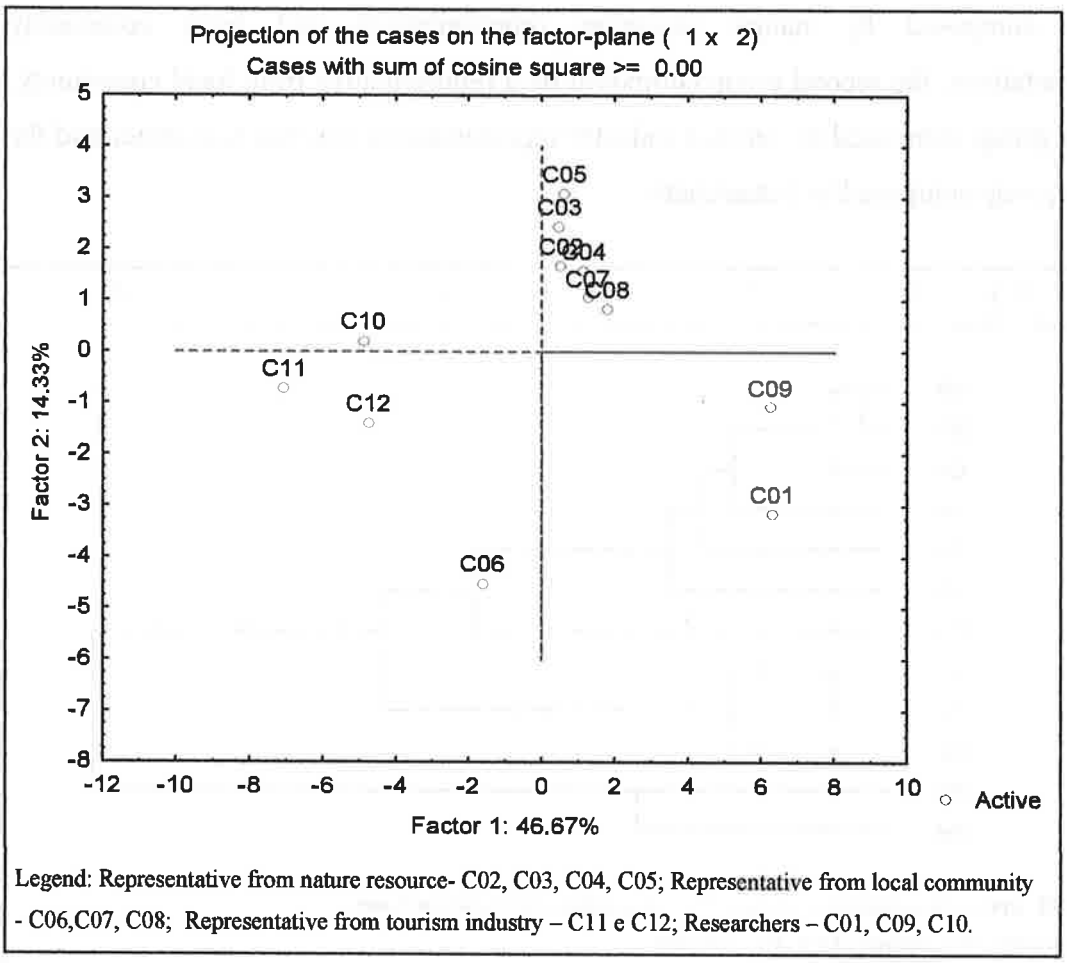


Figure 3.4 - Dendrogram representation of the stakeholders' opinions

The Principal Component Analysis (PCA) was made using Statistica (version 7). Results of the PCA showed the projection of the four groups for the factors 1 and 2 (Figure 3.5).

The PCA shows that local community and nature resources representatives have similar perceptions about each indicator performance. Results also show that the previous group, the tourism industry and researchers have different perceptions about each indicator performance.



Legend: Representative from nature resource- C02, C03, C04, C05; Representative from local community - C06,C07, C08; Representative from tourism industry – C11 e C12; Researchers – C01, C09, C10.

Figure 3.5 – PCA representation of stakeholders' opinions

3.6. Discussion

Results showed that Delphi surveys demonstrated to be a suitable method for developing indicators, and the use of stakeholders' perceptions demonstrated to be a good method to collect information for the development of indicators as well as to evaluate destinations. However, the application of the tool in the case study showed a number of weaknesses:

- The lack of expertise of stakeholders: stakeholders rated with "neither agree nor disagree" 4 indicators of the system of indicators and 12 indicators on the evaluation phase which occurred mostly for indicators of the environmental dimension.

- Stakeholder sample was based on their co-operation and availability, which may skew the results as the scientific knowledge and the level of involvement of respondents will condition their answers and consequently the results.
- The Delphi Technique was not carried out until the third round which may compromise tool competence. Extra rounds could come up with new indicators.
- Categories of 5-points Likert scale such as "neither agree nor disagree" difficult the drawing of conclusions. However, having forced stakeholders to assume a clear opinion using a 4 point Likert scale would have resulted in less realistic information.

It is important to note that the study was strongly influenced by communication difficulties as the researcher was not proficient in Ukrainian or Russian which may have led to loss of important information and which strongly influenced the design of the methodology. The methodology was developed to use the minimum of translations, due to the unavailability of a translator, and to prevent loss of information in the translation process. This drawback also conditioned the literature review, collection of data from official entities to characterize the case study and the communication with stakeholders.

Nevertheless the study presents a suitable tool for monitoring and evaluating rural destinations due to this methodology did not require high level of technical and economic resources, vast amount of baseline data and time. In additional, the M&E tool is simple for being applied by managers without experience on monitoring and evaluation.

The tool can be used as:

- "standard" Tool by applying the System of Indicators in similar case studies or
- conceptual model by applying the methodological guidelines for the design and implementation of a monitoring process.

The tool can be used as pre-set of indicators in similar projects or as a conceptual model for developing and evaluating a new system of indicators. If tool is used as pre-set of indicators, it provides useful intern and extern benchmark data for future monitoring.

Although the study focuses on one destination as basis for empirical research, the tool can be applied to other destinations worldwide of any dimension and any type of tourism destination (e.g. ecotourism, historical tourism, etc). When used as a conceptual model, the M&E tool is very versatile because it is based on a participatory approach which fully reflects local economic, social and environmental concerns of any destination. In both cases, as long as the indicators remain constant over time, changes in the evaluation scores in the future monitoring years, would be a signal that the situation in the destination is suffering changes whether improving or deteriorating with respect to touristic developments. Thus M&E tool is able to illustrate whether tourism destinations development has deviated from the previous level or not.

3.7. Conclusions and Recommendations

The study presents an adequate tool for monitoring and evaluating rural destinations even where technical and economic resources are scarce. This study gives a contribution to the body of knowledge of monitoring and evaluation tools for rural tourism destinations and provide useful benchmark data for future monitoring. The tool is easily adapted to other similar projects worldwide.

The study shows that economic sustainability is the most important factor in ensuring the sustainability of tourism development in a destination. For this particular case study, tourism industry is who causes more negative impacts at environmental and societal dimensions, and also more positive impacts at societal and economic levels when compared with the local community and nature resources administration.

In order to improve the destination performance, managers should make use of the results of the evaluation to explore opportunities to improve destination. Monitoring and evaluation practices should be regularly carried out by managers. The final M&E tool is available in the Annex C which is composed by instructions to assist managers and the frameworks. Attention should be given to indicators rated very important which should be improved first. In addition attention should be given to indicators that demonstrate a negative impact. M&E tool can illustrate the state, pressures and impact that results from the relationship between local community, tourism and nature resources but is unable to provide detailed information for management. Thus, managers should be

supported by other tools to identify the proper actions to improve destination performance.

To improve M&E tool some recommendations are made for future applications: the developing phase of indicators should be carried out only with experts if they were available and if they have good knowledge of the destination. In addition, secondary information should be provided to stakeholders to assists them to better understand the situation of the destination. Efforts should be made to include more stakeholders in the process of defining indicators as well as in the process of evaluating destination. Finally, M&E tool should be applied in different countries, by different managers and in different destination situation to validate the tool.

CHAPTER 4 – MONITORING AND EVALUATION TOOL FOR ECOTOURISM PROJECTS: CASE STUDY FROM BRAZIL

Summary

Ecotourism projects should help preserve the environment while improving welfare for local people. However, in some cases, ecotourism projects fail to bring benefits to local communities and assure conservation. Monitoring and evaluation has being proving to be an essential tool to evaluate long-term sustainability of ecotourism projects. However, many monitoring tools developed so far are too complex for local projects where technical and/or economic resources are limited. To assess whether quality ecotourism is being achieved or not, there is needed for a meaningful method of evaluating whether the underlying principles of ecotourism are being achieved or not. Thus, a simply monitoring and evaluation tool for small-scale ecotourism projects was developed and applied to a Brazilian ecolodge. It is based on the use of performance indicators and benchmarks which were adapted from ecotourism certification programs. The tool aims to monitor and evaluate compliance of the value chain of the ecotourism project with the principles of ecotourism. Three levels of suppliers were identified in the value chain map: the first supplier (ecolodge which provide the ecotour to the guest), second suppliers (excursions operators which organize the ecotour) and third suppliers (conservation organizations which manage the experience at the site). Stakeholders' information, direct observation and factual data were all used to collect information to evaluate the project. Six semi-directive interviews were conducted to ecolodge managers to collect information to evaluate ecolodge performance and six semi-directive interviews were conducted to ecotour suppliers to collect information to evaluate ecotour performance. Collected information was content analysed and used in the evaluation of each performance indicators. Informal interviews were also carried out with local stakeholders to explore the background of the case study. Stakeholders included residents, members of the local authority and local non-governmental organizations. Data was analyzed using descriptive statistics and clustered indexes. Two indexes were created to group the performance of suppliers and the ecotourism project. The results demonstrated that the ecotourism project performance does not comply with the principles of ecotourism, nor does the ecolodge and the ecotour operators. On the other hand, conservation organizations demonstrate compliance with the ecotourism principles. Results showed that the tool is suitable for monitoring and evaluation of small-scale ecotourism projects and provides useful benchmark data for future monitoring that can be useful in the case study as well as in other similar projects. In

addition, it may be applied with low technical and/or economic resources which turn it very useful for small ecotourism projects.

Keywords: ecotourism, ecolodge, monitoring, evaluation, indicator, principles of ecotourism, Brazil

4.1. Introduction

Ecotourism has been widely recognized as a form of nature tourism which is expected to contribute to local development (Ross et al. 1999b) and a way to invest in conservation and local communities (Ceballos-Lascurain 2008). Ecotourism is considered an important sustainable development tool (Wood 2002). However, stakeholders have also recognized that several of the promises around ecotouristic projects have faults. Achievement and failure in ecotourism to comply to sustainability have varied over time.The creation of economic incentives may or may not lead to conservation outcomes. In some cases, economic benefits are sufficient for gaining at least a modicum of local support for conservation. In other cases, economic benefits from ecotourism were insufficient for conservation, to build incentives for conservation among host communities, and ecotouristic businesses create relatively few jobs. In the worst cases, ecotourism generated conflicts and other social problems that ultimately diminished rather than increased chances for collective action for conservation (Stronza et al. 2008). In the last decade, ecotourism became one of the fastest-growing segments in the travel industry (Ceballos-Lascurain 2008) with annual growth rates between 10% and 30% representing about 20% of the world travel (McKercher 2001). Due to the probability of such a fast growing in ecotourism to cause damages on the local communities and natural resources, tourism industry, governments and society are calling ecotourism projects performances to be evaluated.

The Quebec Declaration on Ecotourism, among other things, recommends that integral and regular monitoring of ecotourism activities should be conducted (Vereczi 2007) to prevent negative impacts of ecotourism projects. Researcher also argue that monitoring and evaluation is crucial to the long-term viability of ecotourism projects (Durham 2008). However, monitoring in ecotourism needs more attention than it has received to date.

Although the literature on ecotourism is growing rapidly, only limited information is available concerning means for assessing whether a site is meeting the multiple goals of ecotourism, and a standardized means for site-level assessment of ecotourism has yet to be proposed (Ross et al. 1999b). In addition, the accommodation performance has rarely been considered in the studies of ecotourism, even if their services and practices are

critical components of ecotourism The accommodation sector is a critical component of an ecotourism project since their design and operation influence the natural environment, their employment and purchases practices affect the local community, and the ways they serve their guests have an impact on the education and satisfaction of ecotourists. (Osland et al. 2004). Little empirical, academic research has also been produced on monitoring and evaluation of ecolodges (Wood 2008).

Ecolodge are a specialized type of ecotourism accommodation usually located in or near a protected area or other ecotourism venue, and is managed in an environmentally and socio-culturally sustainable manner (Weaver 2001). According to Osland and Mackoy (2004) an ecolodge is defined as "a nature-dependent lodge that meets the philosophy and principles of ecotourism".

Fennel (1999) identified thirteen principles of ecotourism. He argues that most of the principles explore the need of ecotourism to contribute to conservation and benefit of local people. Honey (1999) has gone further in the definition of principles of a "genuine ecotourism", which includes providing direct financial benefits for conservation. Despite the lack of consensus on the fairly 'fuzzy' delineation of the exact bounds of the basic principles of ecotourism, there is a clear consensus on the key principles of ecotourism: "a natural area focus, ecological sustainability, provision of interpretation or education, returns to the local environment and community and cultural sensitivity" (Black et al. 2007). One of the more quoted principles of ecotourism is defined by TIES (2006): anyone who implements and participates in ecotourism should follow the following principles "minimize impact; build environmental and cultural awareness and respect; provide positive experiences for both visitors and hosts; provide direct financial benefits for conservation; provide financial benefits and empowerment for local people; raise sensitivity to host countries' political, environmental, and social climate".

According to Vereczi (2007) to assess whether quality ecotourism is being achieved or not, a meaningful method of evaluating whether the underlying principles of ecotourism are being achieved and performance monitored is needed. Since the early 1990s, tourism industry made use of several voluntary tools to show their commitment to sustainable tourism (Ayuso 2006). Some of the most common tools are codes of conduct, certification and eco-labels and environmental management systems (Ayuso

2006) and most recently tourism value chain analysis. Indicators, benchmark and target values have been used as monitoring instruments to monitor the compliance of the ecotourism projects with desired performance. There is however a need for a simple tool that can be easily applied in small-scale ecotourism projects: a tool that can be applied for managers with little experience on monitoring and evaluation and that can be easily applied without having large technical and financial resources.

This chapter presents results from the development and testing of such a monitoring and evaluation tool for a small ecotouristic projects. An ecolodge in the northeast of Brazil was chosen as case study.

4.2. Monitoring and Evaluation in Sustainable Tourism projects

Developing organizations, tourism industry and researchers have made used a variety of tools for monitoring and evaluating the compliance of tourism projects to the principles of sustainability in order to show their commitment to sustainable tourism. Some of these approaches are described in the following.

4.2.1. Voluntary Initiatives

Sustainable tourism projects as community-based tourism are embraced by communities; other ecotourism or nature-based tourism projects are embraced by organizations or companies, or can also results from a co-operation between international organizations and local communities. Whether it is an organization, a business or a community the promoter of the project, responsibility has to be assumed in order to ensure that the project does not cause deterioration on the environment or in the living conditions of the destination. In order to take responsibility for the social, ecological and economic impacts of tourism, since the late 1980s, a set of sustainability standards for touristic projects have been developed by tourism industry (Wood 2008). Voluntary tools have been used as awareness-raising instruments, to monitor impacts and to provide information about the tourism performance (Black et al. 2007). Some of the most common voluntary tools are the codes of conduct, certification and eco-labels and environmental management systems (Ayuso 2006).

Codes of conduct in the tourism industry were first developed in the 1980s by international bodies (World Tourism Organisation (WTO), United Nations, The International Ecotourism Society (TIES) etc.). Codes of conduct tend to be voluntary or informal and vary considerably according to sub-sector (hotels, cruises, airlines and operators) and the issues that are addressed (labour, environment, social and economic aspects) (Dodds et al. 2005). Two types of codes of conduct can be described in the tourism sector: sectoral and company code of conduct. The sectoral codes are usually created by organisations such as the Wold Tourism Organization or by industry associations. Contrarily, company codes of conduct are self-imposed guidelines of what business behaviour (Synergy 2000). A code of conduct does not only describe good practices, but also contains mechanisms and principles for its execution. Codes of conduct have to specify how their requirements and recommendations can contribute to sustainable development. A code of conduct does not only exist in theory, it also has to be executed. An internal system has to be developed to make sure that the code is followed and the progress is assessed (Slob et al. 2006).

Certification programs are used as a means of communicating information about the social or environmental conditions with regard to the production of goods or the provision of services (Ponte 2004). The logo allow business to demonstrate that company exceed a specific sustainability standard (Synergy 2000). Over the last 10–15 years a lot of attention has been given to the certification programmes (Black et al. 2007) and there is a wide range of initiatives that provide a marketable logo (Synergy 2000). Additionally of being a marketing tool, certifications programs also improve environmental management performance by identifying negative impacts and solutions for overcoming them, encouraging responsible practices, educating suppliers and consumers about environmental management practices (Rome 1999). There are two types of certification programs: the process-based certification (e.g. environmental management systems), or performance-based certification (i.e. environmental criteria, socio-cultural and economic criteria and benchmarks) (Honey 2002).

In the hospitality industry, process-based systems are used to set up a system for monitoring and improving the environmental performance. The most popular process-based systems for tourism industry are Eco-Management and Auditing Scheme (EMAS), ISO14001, Green Globe 21 and life cycle assessment. (Honey 2002).

Environmental Management System (EMS) refers to a company's structure for managing its processes or activities, to meet the organization's objectives including the minimization of impacts to the environment, satisfying the customer's quality requirements, complying with regulations while allowing the company to achieve continual improvement of its environmental performance (Zamudio 2005). Honey et al (2002) argue that is possible for a company to meet ISO requirements, gain certification, while at the same time it is in litigation and in conflict with environmentalists and local communities. Therefore EMS-based programs cannot guarantee that companies are performing in environmental and socially responsibility ways. The processed-based certifications measure the intent more than the outcome (Honey 2003). Credible programs must include performance-based standards, which contrarily to the process-based methodologies, state goals or targets that must be achieved (Honey 2002). In addition, process-based certifications tend to be very costly because they require outside consultants to implement, and focus only in environmental issues, not social or cultural areas, which are also vital in a genuine ecotourism (Honey 2003).

Contrarily, performance-based certifications programs are easier and cheaper to implement (Honey 2003). They do not require setting up complex and costly management systems which becomes more attractive to small and medium size enterprises. However, many standards and criteria are qualitative, subjective, and imprecise and therefore difficult to measure (Honey 2002). This type of certification programs measure achievement, that is, they set clear environmental and social performance standards or benchmarks against which business are measured (Honey 2003). They measure these issues both internally (as pertaining directly to the business, service, or product), and externally as pertaining to the surrounding community and physical environment. It involves consultation with a variety of stakeholders and uses primarily a performance-based system, third-party auditors and occasionally participation of staff and clients. Often, sustainable tourism certification involves a individual or site-specific business, such as hotels or lodges (Honey 2002). Performance-based certifications include Costa Rica's Certification for Sustainable Tourism (CST), Ecocertification or Australia's Nature and Ecotourism Accreditation Program (NEAP), and South Africa's Fair Trade in Tourism (Spenceley 2003). The Australia's Nature and Ecotourism Accreditation Program (NEAP) is one of the best

known ecotourism certification program (Honey 2002). EcoCertification was originally launched in January 1996 as NEAP. The EcoCertification represents the third edition, released in November 2003. The assessment criteria contained in the document represent the outcome of experience gained in assessing over 400 ecotourism products under the NEAP (editions I and II) criteria, as well as additional consultation, industry comment and application in the field. The criteria have been designed for nature tourism and ecotourism accommodation, tour and attraction products (Ecotourism Australia 2003).

4.2.2. Value chain Analysis

Performance of tourism projects is very complex to achieve as it involves from large multinational corporations to small family-owned companies, plus a wide range of services. Sectors such as transportation, accommodation, catering, tour operators and travel agencies are directly linked with the production of the services that make the tourism-product. Since the tourism demand is met by the joint effort of various players, it is difficult to coordinate everybody's work and ensure quality services that meet everyone's satisfaction. Some models to visualize and evaluate the whole tourism-product have been proposed on the basis of the value chain approach (Andrade 2008).

Value Chain (VC) describes the interrelationship between a range of functional activities, service providers (first-, second-, and third-tier suppliers), customers and supporting institutions (Ashley et al. 2007). In tourism value chains, for each service the tourist consumes, further secondary service providers will be required (e.g. schools for hotel management, catering services, maintenance, workshops, etc) (Springer-Heinze 2007). In a tourism destination, at the destination level, the main services provided are accommodation, food and attractions/activities. This is where the lodging and catering sectors participate, as well as travel agents in case of pre-arranged attractions and activities.

An illustration of a generic tourism value chain is shown in the Figure 4.1.

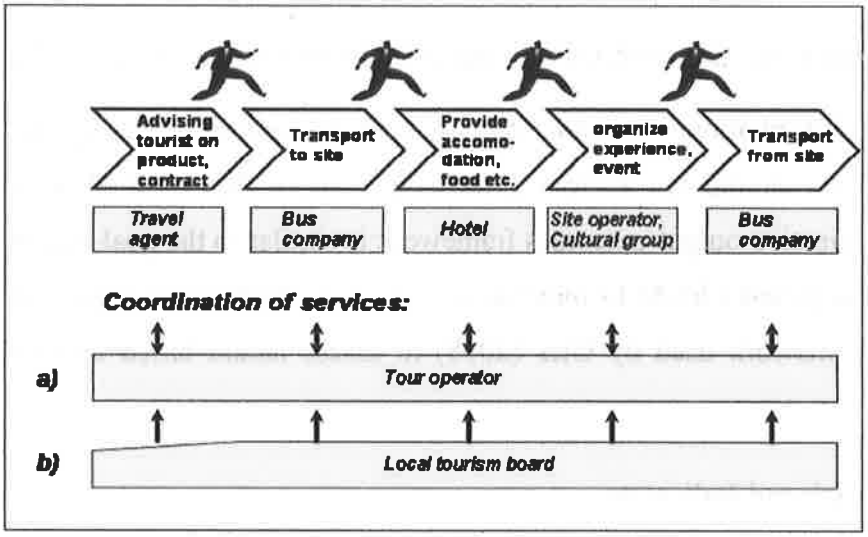


Figure 4.1 – Tourism value chain. Source: Springer-Heinze (2007)

Value Chain analysis (VCA) can be used as mapping tool or an objective. As mapping tool, VC contributes to enhancing the understanding by informing many different kinds of intervention whether or not their overall aim is to enhance performance of the chain. As objective VC aims to intervene at key points in the VC so as to change how they operate, and improve the performance of the chain from the desired perspective (Ashley et al. 2007). Value Chain Analysis has been adapted in Pro-Poor Tourism[2] (PPT) for monitoring and evaluating pro poor tourism projects contributions, to understand how to maximize the economic value that can be captured by the poor, and to maximize the capture of economic value for the poor (Ashley et al. 2007). The critical factor of this approach is that an increase in the net benefits that go to poor people can be demonstrated (Pro-Poor Tourism Partnership 2005). Several organizations as International Finance Corporation (IFC), SNV –Netherlands Development Organization, Overseas Development Institute (ODI) are increasingly adopting VCA to monitor Pro Poor Tourism impacts (Ashley et al. 2007).

4.2.3. Objectives-Outputs-Outcomes framework

The Objectives-Outputs-Outcomes framework is frequently used for monitoring and evaluating the compliance of the tourism projects with the stated objectives. It consists on the assessment of the outputs of a project face to the desire objectives for each

[2] PPT is an approach of tourism which aim is increasing the net benefits for poor people (Pro-Poor Tourism Partnership 2005).

indicator. Outputs (what were the results?) are 'things' that pop up at the end of a program or activity. Information regarding the outputs is collected during the monitoring. Outcomes (what did we achieve?) indicate changes that resulted from outputs (Gies 2008). Objective-output-outcomes framework is similar to the goal-matrix framework used by Koopmans (2008) to monitor and evaluate rural tourism projects and the goal-matrix framework used by Gies (2008) to assess nature based tourism projects.

4.2.4. Benchmark and Indicators

Monitoring instruments such as benchmarking and indicators are hardly used. These monitoring instruments are used as stand-alone tools (Black et al. 2007) or combined. Vereczi (2007) suggests a hybrid method, based on performance and benchmarking indicators to better understand the performance of complex systems such as ecotourism.

Performance indicators are divided into management performance and operational performance indicators. The management performance indicators measure the actions taken to address a particular issue, for instance stakeholder meetings, budgets or staff allocated to a particular task. The operational performance indicators are usually the actual quantitative measurements of the impact, for example: carbon emissions, litres of water per client per night, or purchases from local suppliers measured in the local currency (Font et al. 2005).

Benchmarking is the process of comparing performances and processes within an industry to assess relative position against either a set industry standard or against those that are "best in class" (Black et al. 2007). Other means of benchmarking include evaluating progress against codes of management practices developed by trade associations. Performance can also be measured against principles established by other voluntary initiatives, against standards, goals, or corporate management system standards; and development of indices to evaluate progress from year to year (GEMI 1998). An example of evaluation systems that make used of benchmarking indicators are certification programmes (Font et al. 2005).

Performance index (PI) can be a useful way of measuring performance. A PI usually consists of one number or a score that represents an aggregation of the performance of all of a company's operations. Scoring or indexing helps to measure progress from previous years and drive continuing improvements. Progress can be quantified and compared against previous years' performance or against corporate goals. Such as any system have its advantages and disadvantages. The advantages are system provides a single number that is easily understood by corporate management and external stakeholders; Identifies areas in need of improvement or corrective action; provides a means of facility-to-facility benchmarking. As disadvantages, the system may be difficult to develop, aggregate and interpret; subjective judgments concerning data not included and weighting can skew results; the taking of timely corrective action may be hampered because the index is usually based on lagging indicators; and users may focus on index number rather than real performance (GEMI 1998).

4.3. Description of the case study

In 2005, 5.4 million of tourists visited Brazil (Bartholo et al. 2008) and this number is growing every year. Tourism is the most important economic activity in Bahia. In 1991, local government invested €0,96 thousand million in infrastructures, aiming to produce touristic investments of €2,1 billion by 2012 (SEBRAE 2004).

To face the tourism grow, governments, stakeholders and other Brazilian interested parties have made efforts to build sustainability into ecotourism business (Bartholo et al. 2008). In 1994, Brazilian government published the Guidelines for the Ecotourism National Policy. In 2002, the Hospitality Institute created the Brazil Sustainable Tourism Program to develop a national certification system for sustainable practices in accommodation sector. In 2008, the National Standard (ABNT NBR 15.401) for tourism accommodation was edited. In addition, Brazilian Adventure Tourism Trade Organization (ABETA) has been working in the Adventure Tourism Certification. By 2008, thirty one adventure tourism standards were created (Instituto EcoBrasil 2009). Governments, stakeholders and other Brazilian interested parties have made efforts to build sustainability into ecotourism business. However, for many small communities,

the reality is that the increase of tourism failed to bring the benefits that Brazilian government promised (Bartholo et al. 2008).

Praia do Forte is a village located 55 kilometres from the Salvador, in the state of Bahia, Brazil (Figure 4.2).

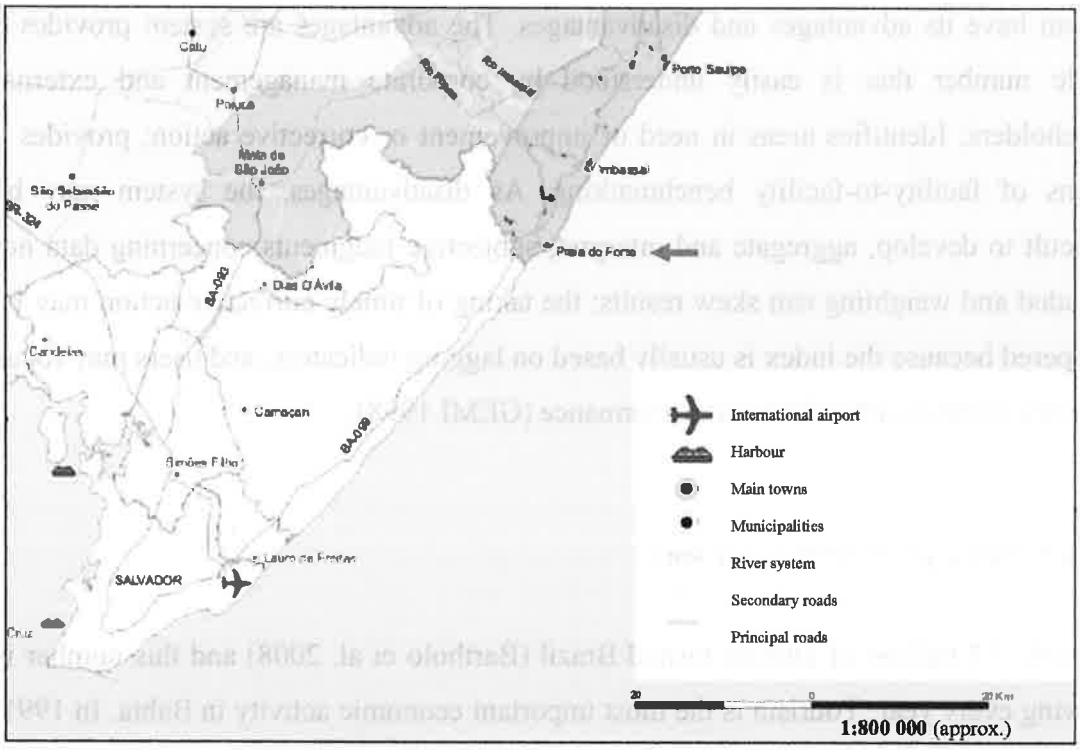


Figure 4.2 - Location of the case study. Adapted from SEBRAE (2004).

Praia do Forte is known as an important ecotouristic destination in Brazil (SEBRAE 2004). The natural resources of the Praia do Forte are its main highlight for tourism. Since 1975, the natural heritage of Praia do Forte is subject to Environmental Protection Law and nowadays, the majority of the area of Praia do Forte is regulated by APA – North Cost (Área de Proteção Ambiental do Litoral Norte) (SEBRAE 2004). Tourism is the main of business at the Praia do Forte. There are 107 retail businesses (45% handicrafts, 30% clothes shops, 7% street market, 5% jewellery and others), 76 services businesses (37% food, 26% accommodation, 8% beach bars, 5% transportation, 4% tourism operators etc.) and 31 industrial businesses (67% handicraft, 22% traditional food, etc). In 2004, the tourism capacity of the village was 3.052 beds and 709 habitation units (UH's) (SEBRAE, 2004).

Tourism starts in Praia do Forte in the 80's. At that time, it was a fishing village composed by 1278 houses and 3000 inhabitants (NUMMA 2008). In 1980, the first lodge was built by the owner of the lands where is the village of Praia do Forte (Cardoso 2005). In 1981, Klaus Peters, who was the proprietary of the lands as well as the lodge, founded the Garcia D'Ávila Foundation (GDF) to guarantee the sustainable development of the village. GDF carried out several measures to preserve the natural and cultural resources (Cardoso 2005). One of the most popular measure undertaken by GDF was the Law of the Land Use which was the first regulatory planning instrument in private lands (Lima 2006). The Law of the Land Use defined a number of rules: infrastructures could not exceed 10 meters height or two floors which is the size of a adult coconut palm; roofs had to be build with colonial tile of clay or straw and the walls had to be built in brick or wood; exterior walls of pottery was not allowed, and if a coconut palm tree was removed, then four coconuts palm trees had to be planted (Cardoso 2005). In addition, traffic was forbid in the main street, the stores' frontage had to be turned to the main street, and the power lines had to be built in the ground. Some mandatory conditions of hygiene were also implemented and the prohibition of tents and walking sellers was established (Lima 2006). At that time, land which were private propriety of GDF were donated to the local community under a condition that the residents could not sell them, to guarantee that local community would be living in the village generation by generation (Cardoso 2005).

In 1985, the ecolodge of Praia do Forte inaugurated by same old owner of the first lodge and GDF. In 1993, ecolodge has started to promote ecotourism activities for the guests. At that time, ecolodge was known as the first Brazilian ecotouristic hotel (Lima 2006). Since the earlier times the philosophy of the ecolodge is "enjoy without destroy", and nature protection is the prime focus of the management of the ecolodge. The ecolodge aspires "to be recognized as a hotel that promotes the nature conservation, spreading these thoughts inside and outside of the organization" by "improving continuously the processes and services, looking for the improvement of the measures for pollution prevention, reduction of residues and rational use of the natural resources" and "always working in accordance to laws and environmental regulations" (Praia do Forte EcoResort 2006). The ecolodge is composed by 293 apartments and an environmental centre, nautical centre; a shopping area (jewellery store, clothes store, mini shop, and tourism operator); a leisure area (lounge, snack bar and amphitheatre), nine swimming

pools, four tennis courts, a football court and a beach volleyball court, a fitness centre, a beauty salon, three restaurants, a beach bar and children's facilities (playroom, kitchen for infants, Carata Careta club), a health centre and a business centre (Tivoli Ecoresort Praia do Forte 2008). In July of 2006, the ecolodge was bought by a Portuguese company (Tivoli Ecoresort Praia do Forte 2008). During the last thirty years two other conservation organizations established in Praia do Forte with support of the GDF. In 1982, GDF donate the lands for TAMAR project. In 1999, Garcia D'Ávila Castle was rebuilt by financial support of GDF and government entities (Cardoso 2005). In 2001, Jubarte Whale Institute (JWI) was installed in Praia do Forte with support of GDF which donates the use of the lands.

4.4. Methodology

4.4.1. Methods for data collection

Usually empirical studies apply primary (empirical) data which is obtained by the researcher in order to answer the research questions. Primary data can be achieved by using participant observations and interviews.

Participant Observation consists of direct observation of events, processes, relationships and behaviours (Shapiro s/d). Data obtained through participant observation serve as a check against participants' subjective reporting of what they believe and do. Participant observation is also useful for gaining an understanding of the physical, social, cultural, and economic contexts. In addition, participant observation can help to understand data collected through other methods (such as interviews, focus groups, and quantitative research methods) (Mack 2005), or it can be a useful way of confirming information provided in other ways (Shapiro s/d). The main disadvantage of participant observation is that it is time-consuming, is difficult of documenting the data and it is an inherently subjective exercise. It is therefore important to understand the difference between reporting and describing what it is observed (more objective) versus interpreting what it is seen (less objective). Documentation of participant observation data consists of field notes recorded in field notebooks (Mack 2005).

Interviews can be structured, semi-structured or unstructured. Structured interviews follow a fixed set of questions; unstructured interviews do not have any pre-prepared questions and semi-structured combine structured and unstructured, with the interviewer asking some set questions but adding others in order to follow a line of inquiry that comes up. Interviews involve asking specific questions aimed at getting information that will enable indicators to be measured. Questions can be open-ended or closed (yes/no answers) (Shapiro s/d). The administration of the interviews should be done as follows: researcher has a series of questions guides, relatively open, which will be put to the interviewee. The interviewer should not ask the questions in the order they are in the interview, but should put the questions at the most appropriate and natural way (Campenhoudt et al. 1998). Interviews are source of qualitative and quantitative information (Shapiro s/d).

Secondary data consists in data collected by a person or organization other than the users of the data. Source of secondary data is the literature (i.e. scientific journals, articles, books, newspapers, census data, maps, etc). Secondary data analysis is often a starting point for other social and science research methods. This source provides factual data (Mack 2005).

Triangulation of data sources is widely used. Triangulation is a way of confirming data by using several sources to measure the same thing (Shapiro s/d).

4.4.2. Methods for data analysis

Content Analysis is used to analyse information provided in interviews. The aim of the content analysis is systematize the contents of an interview. Content Analysis allows the description of objective, systematic and quantitative content of the communication (Silva et al. 1986). Bardin (1988) presents the categorical analysis as one of the techniques to perform Content Analysis. Categorical analysis can be performed by following several steps according to Silva (1986): Firstly, the objective of the analysis is defined. Secondly, a corpus of analysis is formed. Thirdly, categories of analysis and units of analysis are defined. The unit of analysis/register can be a theme, word or

phrase (Bardin 1988). Subsequently this information can be turned in quantitative information and can be analysed by descriptive statistical analysis.

Descriptive Statistics are used to present quantitative descriptions in a manageable form. Descriptive statistics simplify large amounts of data into a simpler summary. However, every time a large set of observations is described with a single indicator there is the risk of distorting the original data or losing important detail (Trochim 2006). Measures of Central Tendency are frequently used to describe samples. The central tendency of a distribution is an estimate of the "centre" of a distribution of values. There are three major types of estimates of central tendency: mean, median and mode (Marocco 2003). The mean or average is probably the most commonly used method of describing central tendency (Trochim 2006). The mean is used in this study.

4.4.3. Research design

A particular methodology was created for the development and tests of the M&E tool. The methodology was carried out in three phases (Figure 4.3):

- First phase – bibliography review and development of the conceptual tool;
- Second phase – development of the draft tool;
- Third phase – test of the draft and final tool/ monitoring and evaluation of the ecotourism project performance.

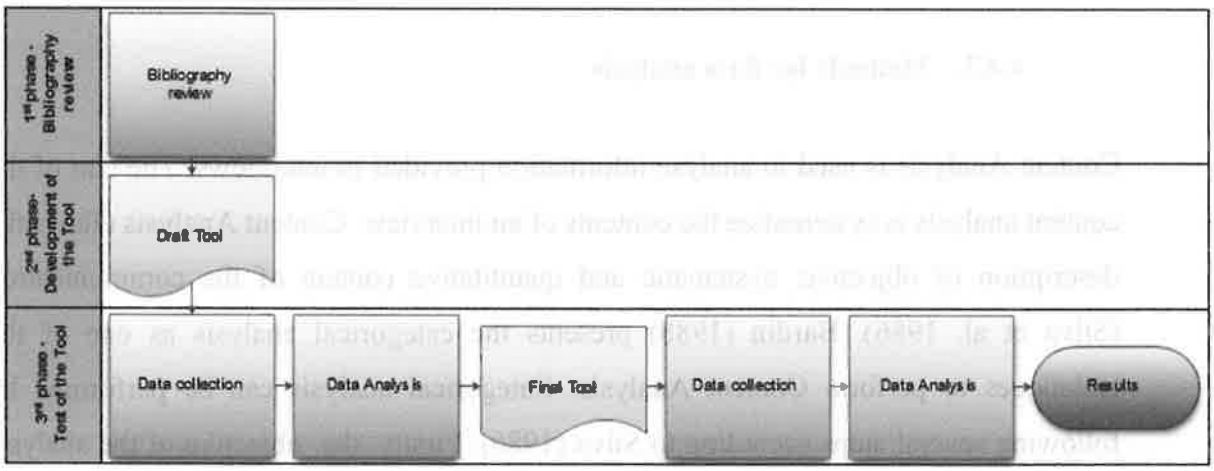


Figure 4.3 – Research design.

First phase - bibliography review and development of the conceptual tool

The study starts with the collection of secondary data, mainly from scientific journals, articles, and books. The literature review was focused but not limited, to the following areas: concepts and principles of ecotourism, voluntary approaches for measuring quality in ecotourism, tools for monitoring and evaluate ecotourism and value chain approach. Online sources have also been used to provide secondary data to produce a prior description of the case study. The data obtained during the literature review was used to develop the conceptual and draft tool.

The conceptual tool consisted in the theoretical framework that was elaborated to develop the tool. The conceptual tool consisted in the decision about which indicators would be used to monitor and evaluate the ecotour value chain of the ecotourism project. A definition of ecotourism value chain was adapted from the generic value chain approach (described by Springer-Heinze (2007)) which can be described as follows: for each ecotourism activity provided by the ecolodge a sequence of consecutive services is required. Guests moves from the first supplier (i.e. the ecolodge), go through a series of interlinked services delivered by individual providers, which can be primary, secondary or thirdly (or more), to achieve the last service which is the natural attraction. In addition, a couple of other suppliers (i.e. input providers) support the ecotouristic service creating physical capacity. Figure 4.4 illustrates the ecotourism value chain.

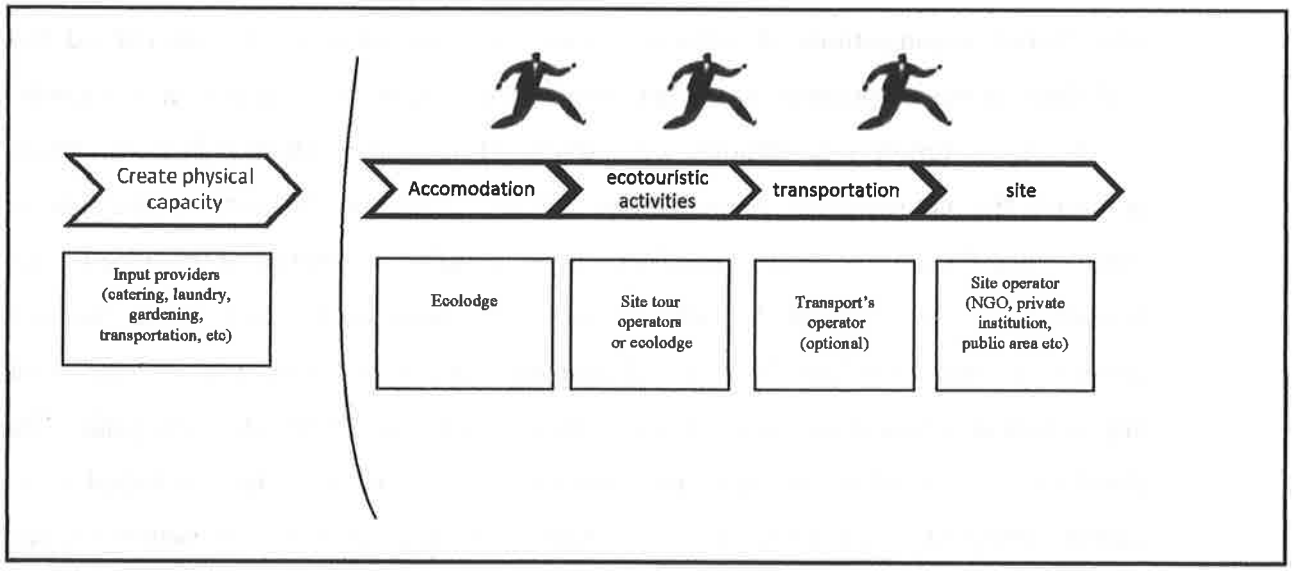


Figure 4.4 – Ecotourism project value chain.

Second phase – development of the draft tool

In the second phase, a draft tool (Annex D) was composed by a description of the field work tasks (i.e. data collection and mapping value chain) and a list of 31 performance indicators. Indicators were selected from the studies of The Nature Conservancy (s/d), Sweeting (s/d), The Nature Conservancy (2006), WWF International (2001), TIES (2004), SNV (2007) and Li (2004).

Third phase – test of the draft and final tool / monitoring and evaluation of the ecotourism project performance.

The draft tool was took to the field work to test if the tool was practical and efficient and appropriately constructed to exploit the objective of the research, what indicators were missing and which adaptations were need.

One semi-structured interview (Annex E1) was undertaken with the environmental manager to collect information for mapping the ecotourism value chain. Information was recorded and used for mapping the value chain. In addition, several meetings were appointed with the environmental manager for collecting background information of the case study, to clarify aspects of the ecolodge management and to collect secondary data.

Semi-structured interviews were carried out with supplies: ecotour operators and conservation organizations. A semi-structured interview (Annex E2) was carried out with three ecotour operators to collect primary and secondary data (i.e. tour records, flyers, activity reports). In addition semi-structured interview (Annex E3) were carried out with the conservation organizations: Whale Watching Institute, Tamar-Ibama Project and Garcia D' Avila Foundation (two members). Interviews occurred after appointment, were recorded with interviewees' permission after being assured anonymity and confidentiality of information. Questions were put at the most appropriate and natural way and not ask in the order they are in the interview guide. The duration of each interview was approximately thirty minutes. Data collected were content analysed and used in the description and mapping of the ecotourism value chain.

Informal interviews were conducted with local stakeholders to explore the background of the case study. Stakeholders included member of the local municipality (tourism and environmental committees), members of local associations (fishing association, surfing association, handicraft association, entrepreneurs association, and residents' association) and residents. The interviews were recorded with permission of the interviewees after being assured anonymity. Documentation to characterize the case study was also requested to the municipality.

Due to the lack of primary data from the ecolodge and ecotour operators the following changes were introduced in the draft tool: performance indicators and benchmarks were adapted from the EcoCertification programme (or NEAP - third edition) (Ecotourism Australia 2003). Two different set of indicators were elaborated. One to assess the ecolodge performance and another to assess the suppliers' performance. A simplification of the indicators formats were made to assess suppliers performance as the interviews to the suppliers were undertaken before the introduction of modifications in the final M&E tool. Reference targets were suggested by the author for indicators 5.1.1; 5.1.2; 5.1.3 and 5.1.4 to assess ecolodge performance and for indicators 1.1 and 5.1 to assess suppliers due to certification program has not provided these benchmarks. In addition, changes were introduced in the tool: an objectives-output-outcome framework (Table 4.1) was elaborated to assists the evaluation process and reporting. Outputs were expressed based on the primary source of information (research observation and stakeholder perceived situation) and secondary source of information (factual data). The principles of ecotourism defined by TIES (2006) were used to drive the selection of the indicators, and indicators were presented per principles of ecotourism, facilitating reporting of results in terms of which principles need more assistance. M&E tool were divided in two sections: ecolodge performance and supplier's performance.

Table 4.1 – Framework for objectives-output-outcomes.

	OBJECTIVE 1: MINIMIZES IMPACT	OUTPUT	OUTCOME		
			Performance score	Performance	Performance symbol
1.1	**Operational environmental management**				
1.1.1	a) Environmental management procedures are documented and address issues as Biodiversity conservation, Water conservation, Treatment of waste water and effluent, Noise, Air quality, Waste minimization, Energy efficiency, Minimum disturbance to wildlife, Lighting and Visual impacts.				
1.1.2	b) The environmental management procedures are approved, implemented and reviewed annually by senior management				
1.2	**Location**				
1.2.1	a) Operations in protected areas are undertaken in locations specifically recognized as appropriate by the area's management plan, or are otherwise condoned by the protected area manager.				
1.2.2	b) The use of the area for ecotourism is identified in land use plans, strategic plans, zoning plans etc. as being a preferred or permitted use.				

Semi-structured interviews were used to obtain Stakeholder Perceived Situation. A semi-structured interview (Annex E4) was carried out with ecolodge managers. Managers for the following departments were interviewed: Administration, Human Resources, Maintenance, Marketing, Food & Beverage, Environmental and Leisure departments. Different questions were asked according to the job responsibilities of each interviewee. Meetings were appointed also with members of the financial department to collect primary data (e.g. donations, incomes from the preservation tax and ecotouristic tax). Interviews were content analysed and transcribed to the framework of objectives-output-outcomes followed by a letter S – stakeholder perceived situation that indicates the origin of the statement. In addition, factual data (identified by letter F) and researcher direct observation (identified by letter O) were also transcribed to the framework. After the field work, ecotour operators were contacted by email to clarify some aspects of the company's management. However information was not provided.

The evaluation process started after the field work. A score table (Table 4.2.) was elaborated to assist the evaluation of each indicator. The evaluation process was made by comparing the outputs (achievements of the project) with the objectives (benchmark provided by indicators). A performance score was attributed to each indicator from 1 to 4 points, according to whether the output was "far below the target value"; "below the target value", "similar the target value" or "above the target value". A score of zero was attributed when information was not provided. A compliance with principles of ecotourism is achieved when outputs are similar or above the target value. Contrary,

non compliance with the principles of ecotourism is achieved when outputs are below the target value. Performance is then defined as satisfactory or good if compliance of the principles of ecotourism is achieved and poor or unsatisfactory if non compliance of the principles of ecotourism is achieved. Based on the evaluation, scores also indicate priority areas for improvement of performance, where 1 means high priority and 4 means low priority.

Table 4.2 - Score table for assess indicator performance.

Performance symbol	**n/a**	?	☹	😐	☺	☺☺
Performance description	not applicable	There is no information	Far below the target value	Below the target value. Some achievements but not enough.	Target value	Above the target value
Performance score	n/a	0	1	2	3	4
Compliance with the ecotourism principles	not applicable	no information	non compliance	non compliance	compliance	compliance
Performance	not applicable	no information	Poor	Unsatisfactory	Satisfactory	Good
Priority areas for improvement of performance	n/a	1	2	3	4	0

Therefore indicators performances were aggregate in indexes. Indicators which performance score were zero (no information) were not considered for the analysis of indexes. Indicators scores were calculated at three levels of aggregation: categories, objectives and index (Figure 4.5). The aggregation process proceeded in the following steps:

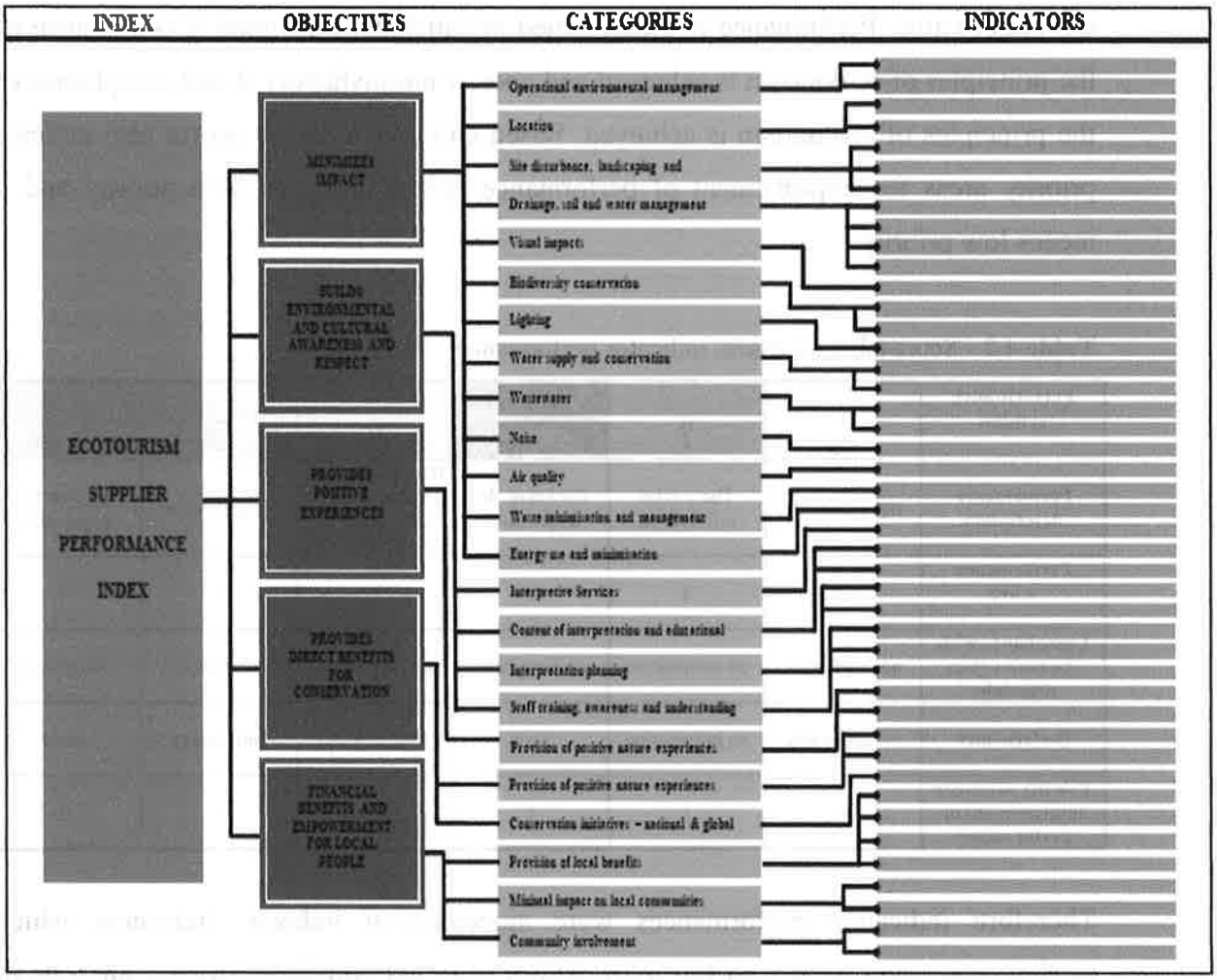
1. Scores for each category were calculated based on the scores of indicators. Mean was used to calculate the score of categories.

2. Scores of the objectives of ecotourism were calculated based on the scores of the categories. Scores were calculated based on the mean scores of categories.

3. The Ecotourism Supplier Performance Index (ESPI) was calculated based on the mean of the five objective scores for each supplier.

4. The overall Ecotourism Project Performance Index (EPPI) was then calculated which resulted from the mean of the scores of the ESPI for each supplier.

Figure 4.5 – Construction of the ESPI



4.5. Results and Discussion

This section starts by presenting the results of the developing and testing phase of the M&E tool, as well as discussing the suitability of the tool for monitoring and evaluation ecotourism projects. Subsequently, ecotourism project performance is presented as result from the application of the M&E tool in the ecotourism project.

4.5.1. Monitoring and Evaluation Tool

The draft tool was applied on the Praia do Forte in July, 2008. Interviews were content analysed. Result of the semi-structured interview undertaken with the environmental manager was used to define the ecotourism value chain (section 4.5.2.2.1), to describe

the ecolodge service, and to collect information for the ecolodge performance evaluation. Seven semi-structured interviews were carried out with suppliers to describe the service provided by them, as well as evaluate suppliers' performance (section 4.5.2.1). Thirteen informal interviews were conducted with local stakeholders. Primary data was used to describe the case study, as the requested secondary data was not provided by the tourism committee of the municipality and other sources were scarce.

Difficulties encountered in the collection of the primary data, during the early stages of the testing phase of the draft tool, revealed that the draft tool was not efficient and appropriately constructed to exploit the objective of the research. Indicators were too hard to assess when secondary data was not available or inaccessible. In addition, the draft tool also showed that it was inappropriately constructed for monitoring and evaluating due to missing benchmark data, which in the absence of ecotourism project objectives; the evaluation process could not be done.

After modifications, the M&E tool (Annex. F) was composed by an instructions section and the formats sections:

- Five frameworks for monitoring and evaluating the performance of ecolodge composed by 44 indicators, 23 categories and 5 principles. Example of the formats for assess ecolodge can be seen in the Tables 4.3;
- One framework for monitoring and evaluating the performance of suppliers composed by 7 indicators, 5 categories and 5 principles. Example of the format for assess suppliers can be seen in the Table 4.4.

Seven interviews were undertaken with ecolodge managers (section 4.5.2.2.1) after the modifications on the M&E tool.

Table 4.3 – Example of the framework for evaluating ecolodge performance.

	OBJECTIVE 1: MINIMIZES IMPACT	OUTPUT	OUTCOME		
			Performance score	Performance	Performance symbol
1.1	**Operational environmental management**				
1.1.1	a) Environmental management procedures are documented and address issues as (...)				
1.1.2	b) The environmental management procedures are approved, implemented and reviewed annually (...)				
1.2	**Location**				
1.2.1	a) Operations in protected areas are undertaken in locations specifically recognized as appropriate by the area's management plan (...)				
1.2.2	...				

Table 4.4 – Example of the framework for evaluating suppliers' performance.

	OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE	OUTPUT	OUTCOME		
			Performance score	Performance	Performance symbol
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:				
	· environmental management system;				
	· certifications;				
	· codes of conduct or guidelines;				
	· other.				
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by: ...				
3	**Objective 3: provides positive experiences**				
3.1	.....				

Results of the application of the final M&E tool demonstrated efficiency as the tool was easily applied without require a lot of baseline data, expertise, economic and technical

resources. The selected indicators were able to demonstrate results on project performance at the level of the ecolodge as well as the suppliers. However, the M&E tool still reveals some weaknesses: the indicators were not weighted therefore all indicators have the same importance for the analysis; targets values were proposed for six indicators which may be not a truthfully point of reference; and indicator 1.11.1 (air quality) may be somewhat technical.

4.5.2. Ecotourism Project – Case study

4.5.2.1. Ecotourism Value Chain

The information collected in the semi-directive interviews and factual data were used to map the ecotourism value chain map (Figure 4.6). First, supplier is the ecolodge; second-suppliers are ecotour operators (Operator A, Operator B, Operator C); third-suppliers are conservation organizations which are responsible for provide the tour at the site or manage the attraction. Third-suppliers are at the end of the chain. Transport service was excluded from the value chain analysis for not being an outsourced service.

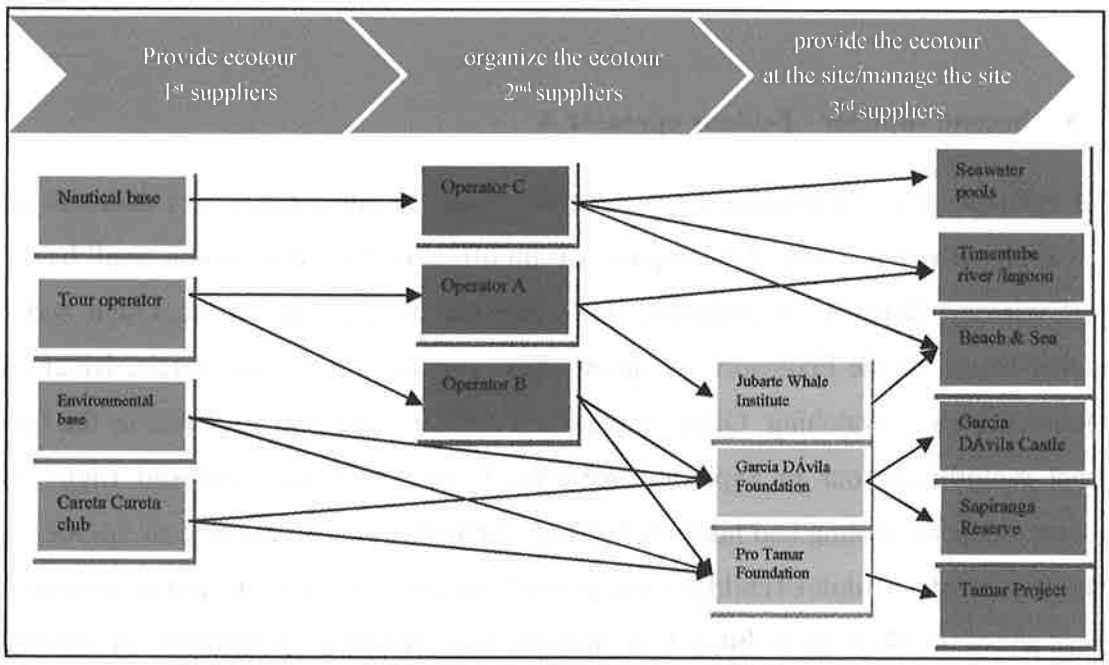


Figure 4.6 - Value chain map for the ecotourism project.

- **First supplier – ecolodge**

Ecolodge offers a wide variety of ecotourism activities to the guests. Ecolodge has four main places where guests can request ecotourism activities: the Nautical Base, Environmental Base, Careta Careta Club and tour operator. The Nautical Base is rented to the operator C and provides the ecotours directly to guest. Environmental Base and Careta Careta Club are departments of the ecolodge that offer ecotours directly to guest. The ecolodge tour operator subcontract services to the operator A and B. In the Environmental Base, guests can request ecotourism activities for adults and families and Careta Careta Club provide ecotourism and leisure activities for kids. The following ecotours are provided by the Environmental base and Careta Careta club: tour to the Garcia D'Avila Castle, tour in the Sapiranga Reserve and to Tamar project. In addition, Careta Careta club also offers canoeing in the Timentube River and mangrove trip, and Environmental base offers bird watching activities. A preservation tax (€4 adult/ €2,35 child) is charged per ecotour. Leisure activities are free of charged. The Ecoresort charged an ecotouristic tax (€1) per room and per day, which is voluntary, to the guests. Preservation taxes and ecotouristic taxes are donated to Garcia D'Ávila Foundation.
In 2007, Environmental base[3] and Careta Careta Club provided 6414 ecotours which provided financial contributions to GDF and 2150 ecotours to the Tamar project.

- **Second supplier - Ecotour operator A**

The company was established in 2001 in the Praia do Forte and offers ecotours and recreation activities. Today the company has an office in the village and a small base in the Sapiranga Reserve. In addition, staffs sell the ecotours at the ecolodge and in another resort. In the Ecoresort, company offers canoeing in the Timentube River and lagoon and whale watching. Other recreational activities are also available as the four-wheel motorbikes tour in Sapiranga Reserve, banana boat tour, parasail flight, sea scooter, deep sea fishing and horseback riding. Activities cost an average of 30-50€. An entrance fee of €2 adult/€1child is paid to GDF for canoeing activity in the Timentube River and four-wheel motorbikes tour in Sapiranga' Reserve. In addition, an entrance fee of €2 adult/€1child is paid to JWI per whale watching activity.

3 Estimated values based on the records from 2007

The operator[4] has provided 985 activities with a financial benefit for conservation, and 1562 that did not provide any financial benefit for conservation.

- **Second supplier - Ecotour operator B**

The company begins its activity in 1991 in the ecolodge. The company provides ecotours and team-building activities to customers of hotels, travel agencies, local, national and foreign operators. Recently, a "theme park" of 300.000 m^2 is being constructed. This infrastructure is aimed to promote activities related to the ancient culture of the region. In the ecolodge, company offers canoeing in the Timentube river, tour in Sapiranga' Reserve, tours to Tamar and GD Castle, ecotours to Camurugipe Forest. Activities cost from 30-40€. An entrance fee of €2 adult/€1child is paid to GDF per trip in GD Castle and Sapiranga' Reserve. The operator[5] provided 124 ecotours which provided financial benefit for conservation and 412 that did not provide any financial benefit for conservation.

- **Second supplier - Ecotour operator C**

The company was established in 2003 in Praia do Forte. The company collaborates with the ecolodge since 2005. It is settled in nautical base of the ecolodge since early 2008. The company also collaborates with other local resorts. In the ecolodge it offers diving, snorkelling, canoeing in the mangrove and nautical activities (surf, windsurf, sailing, kayak, banana boat). Activities cost 8-20€. The operator[6] provided 4447 (paid) activities that did not provided any financial benefit for conservation and 4824 (free) activities which also did not provided any financial benefit for conservation.

- **Third supplier - Garcia D'Àvila Foundation**

Garcia D' Ávila Foundation (GDF) is a civil organization of public interest (OSCIP) since 2005. Before that, GDF was a private organization supported by the ecolodge by 2006. GDF was created to guarantee the sustainable development of the Praia do Forte. Its main

4 Estimated values based on the records from September 2007 to June 2008

5 Estimated values based on records from February to June 2008

6 Estimated values based on the records from January to July 2008

responsibilities were the preservation of the Brazilian culture; monitor the urban planning of the village and the promotion of social and environmental education of the local community. Nowadays, its main responsibilities are activities related to education, conservation, cultural, historical and social issues. It main activities are the restoration of the Garcia D'Ávila Castle, conservation work in the Sapiranga, Camurugipe and Passagem Grande Reserve and Timentube river (Paiva s/d). GDF promotes ecotourism activities in the Garcia D'Avila Castle and Sapiranga Reserve. Garcia d' Ávila Castle is an archaeological site composed by ruins of the Tower house and a visitor centre. An entrance fee is charged (€4,4 per adult and €2,1 per child). The Sapirangas' Reserve is an area of 600 hectares of Atlantic forest (SEBRAE 2004). In this area, there are some education facilities: the Centre for Sapiranga Rain Forest's studies, a mini-museum, several informative panels and seven trails. Tours are led by local guides or tour operators. An entrance fee is charged (€2,6 per adult and €1,3 per child). An additional tax is charged for the guide (€1,3 per 1-2 visitors group; €4,4 per 3-10 visitors group; €6,5 per 11-20 visitors group). In addition, GDF promotes educational programs for kids from the local community of the Sapiranga Reserve and guides training courses for natives of the Sapiranga Reserve (Paiva s/d). Other educational programs carried out by GDF are the "Semente project" which aimes to provide education for 7-12 year old kids from the local community and "Pre-vestibular" which is intended to promote graduate studies of the local community. GDF and ecolodge promoted several social initiatives together. One of the most important initiatives was the PROES which was carried out from 1999 to 2009. The PROES was firstly created to eradicate the illiteracy of the employees of the ecolodge, becoming few months later an education program for the local community, which received students from the nearby communities. The program received more than 2500 students (Paiva s/d).

- **Third supplier - TAMAR Project**

TAMAR project was settled down in Praia do Forte in 1982. Praia do Forte station is the national headquarters and there are 21 more stations in nine Brazilian states. TAMAR Project is a collaboration between Brazilian government's Institute of Renewable Resources and Chico Mendes Institute for the Conservation of Biodiversity (IBAMA-ICMBio) and Pró-TAMAR Foundation which is a non-profit organization (Marcovaldi et al., 1998). TAMAR is supported by 40 percent of government founds and 60 percent of founds from Pró-TAMAR Foundation. Pró-TAMAR Foundation founds came from national private and public organizations, international donors and own revenue (e.g. merchandising, turtle

adoption campaigns and ecotourism activities) (Marcovaldi 1999). The aim of Tamar Project is the conservation of sea turtles in Brazil. TAMAR Project seems to have positive outcomes for sea turtle conservation at Praia do Forte (Stronza et al. 2008). More than 8 million cubs were protected up to 2007 (Projeto TAMAR). Additionally to the conservation activities, Tamar project promote ecotourism activities. Ecotourism is seen as a way to generate economic incentives and employment opportunities for local communities to care about and to protect sea turtles (Stronza et al. 2008). The visitor centre is the most popular attraction in Praia do Forte. It receives approximately 600,000 visitors per year (Stronza et al. 2008). In the visitor centre there is souvenir shop and several education facilities (e.g. tanks, videos, etc). As result of the conservation works TAMAR project employs approximately 1,300 workers from local communities and 400 fishermen (Marcovaldi 1999). In additional, Tamar employs more than 70 workers in Regência and Pirambu who work in the production of the Tamar merchandising. (Rostan 2008b). TAMAR project are involved in environmental awareness and education. TAMAR Project supports campaigns as the Cleanup day and World Environment Day (Rostan 2008a). One of the most important environmental education programs is the "Tamarzinhos". "Tamarzinhos" runs from 12 years by now and consists of a summer training course for 8-13 years old kids to learn about marine ecosystems and sea turtles. The project aims to enhance trainees environmental awareness and extend those conservation concerns to their families and to the local community (Vieitas 1999). In addition, a training program for academic students and recent graduates is run in Praia do Forte, which involves around 200 students each year. Other education initiatives have been undertaken as school presentations, hatchling release ceremonies and festivals (Marcovaldi 1999). TAMAR also contributes to social initiative as the financial support for the local kindergarten (Stronza et al. 2008), promotion of the "waves of surf" program and provision of financial support for the graduate studies of two older trainees (Rostan 2008a).

- **Third supplier - Jubarte Whale Institute**

Jubarte Whale Institute (JWI) is a nongovernmental organization that was implemented in Praia do Forte in 2001. The headquarters is settled in Caravelas and there is another centre in Itacaré (Instituto Baleia Jubarte 2007). The aim of JWI is the conservation of the Jubarte whales and other cetaceans in Brazil. JWI main activity is monitoring the Jubarte whales by photo-identification, genetic analysis and acoustic studies. JWI is the only institute that monitor Jubarte Whale in Brazil (Cipolotti 2008). The JWI has the third biggest catalogue

of photo-identification of Jubarte whales of south hemisphere. More than two thousand and five hundred Jubarte whales were photo-identified between 1988 and 2005 (Instituto Baleia Jubarte 2007). In addition to the research and conservation tasks, JWI is also involved in environmental awareness and promotion of ecotourism. Ecotourism is seen as a tool to raise public opinion against whale hunting. JWI promotes whale watching activities as this activity helps to demonstrate that whales worth much more alive than dead by providing economic benefits for local communities. At the same time, whale watching increases awareness of communities and tourists about the conservation importance of the whales. In addition, whale watching support scientific research by contributing to the monitoring of the whales (Cipolotti 2008). JWI collaborates with IBAMA in the licensing of the whale watching activity. JWI is the entity that attributes the licenses for whale watching activity and controls the fulfilment of the norms for whale watching in Brazil. JWI is also responsible for training the guides of whale watching operator's and to assist the whale watching tours by carry out mandatory education's session before boarding; delivering informative flyers about safety on board; and providing technical assistance on-board. At the moment, Praia do Forte has four whale watching tour operators (Cipolotti 2008). JWI also promotes environmental education at the Centre for Research and Environmental Education (CENTROPEA). Since 1994, JWI organizes the eco-volunteer programme which counts more than 185 international volunteers; and the "ecological guardian" which is an education programme for the kids of the local community. The "ecological guardian" programme aims to increase the environmental awareness of the kids and expand the awareness to their families and local community. Besides, JWI supports environmental awareness initiatives as the Cleaning World Day, and promotes lectures at the local schools and seminars at CENTROPEA. JWI also promotes social activities for the local community as the "Saturday of culture" (e.g. movies sessions, theatre performances and concerts) in CENTROPEA (Cipolotti 2008).

4.5.2.2. Ecotourism project performance

A synthesis of the main results achieved by the monitoring and evaluation of the case study is here presented. More detailed information about is available in Annex G. Firstly, an overall project performance is discussed and more detailed results concerning the performance of the ecolodge and suppliers are shown later.

Results of the ecotourism project performance (Table 4.5) shows an Ecotourism Project Performance Index (EPPI = 2.9) which mean that ecotourism project is performing unsatisfactory due to non compliance with the principles of ecotourism. The ecotourism project is performing satisfactory in terms of contribution for building environmental and cultural awareness and respect, provision of positive experiences for host, providing direct benefits for conservation and benefits and empowerment for local people. Ecotourism project is performing unsatisfactory in terms of minimization of the impact on the environment.

Table 4.5 – Results of the EPPI.

ECOTOURISM PRINCIPLES	Performance	Performance
Objective 1: Ecotourism project minimizes impact on the environment	2.1	😐
Objective 2: Ecotourism project builds environmental and cultural awareness and respect	3.0	☺
Objective 3: Ecotourism project provides positive experiences for hosts	3.0	☺
Objective 4: Ecotourism project provides direct benefits for conservation	3.1	☺
Objective 5: Ecotourism project provides benefits and empowerment for local people	3.4	☺
EPPI	**2.9**	😐

It is important to note that indicators assessment can be overestimated as some information was reported without reference to a precise year. Evaluation can also be underestimated due to indicators with zero score were excluded to the analysis and the interpretation of performance indicators was made by considering the lower performance (e.g. performance between 2.0 and 2.9 was aggregated such as 2). In addition, comparing the performance of ecolodge to the performance of suppliers may be unfair due to the evaluation of the ecolodge was more extensive due to much more indicators were used to evaluate the ecolodge than to evaluate the suppliers.

4.5.2.2.1. Ecolodge Performance

Results showed that ecolodge performance is unsatisfactory (ESPI=2.9) The principle one (minimization of the impact on the environment) and two (building environmental and cultural awareness and respect) is performing unsatisfactory. Principles three, four and five (provision of positive experiences for host, providing direct benefits for conservation and benefits and empowerment for local people) perform satisfactory. Table 4.6 shows the performance of ecolodge for each indicator. Detailed information

concerning each indicator is presented in Annex G1 and calculations are presented in Annex G3.

Table 4.6 – Results of the ESPI for ecolodge.

ECOTOURISM PRINCIPLES		
Objective 1: Ecolodge minimizes impact on the environment	2.4	😐
Objective 2: Ecolodge builds environmental and cultural awareness and respect	2.7	😐
Objective 3: Ecolodge provides positive experiences for hosts	3.0	🙂
Objective 4: Ecolodge provides direct benefits for conservation	3.3	🙂
Objective 5: Ecolodge provides financial benefits and empowerment for local people	3.0	🙂
ESPI	2.9	😐

Objective 1: Ecolodge minimizes the impact on the environment

The performance of the objective one is unsatisfactory.

The operational environmental management performance is poor due to the inexistence of documented environmental management procedures. Environmental management procedures are not approved, implemented and reviewed annually.

In relation to the location of the ecolodge, there is performing satisfactory. The operation is being undertaken in locations recognized as appropriate for touristic purposes. Ecoresort area is situated in Touristic Zone (ZT) and Zone of Rigorous Protection (ZPR) in accordance to APA Cost North zoning plan. ZT is target for traditional activity of tourism and low density touristic projects and ZPR is an area where is only allowed visitation, science inquiry and guided ecotouristic tours (CEPRAM 1995).

In the site disturbance, landscaping and rehabilitation, the performance is satisfactory. The development and ongoing use of the site has involved minimal clearing which can be seen in the form of the buildings which were drawn in three curved wings to follow the original arrangement of the coconut's palms. Landscaping of the site reflects the character of the surrounding natural environment and apparently, all disturbed areas

have been rehabilitated with native species reflecting the surrounding ecology; and landscaping is undertaken using native locally occurring species as fruits trees and coconut palms. However, there is an extend area of lawns.

In what concerns drainage, soil and water management, some aspects are positive, however the performance still remains unsatisfactory. Development has avoided extreme land shaping and surface modifications. Drainage follows essentially natural paths and concentration of surface runoff is avoided which can be seen by aerial photograph monitoring by comparing ecolodge area with surrounding areas. Erosion on site is evident; there are signs of trampling in few sites in the buffer zone of the Timentube lagoon and beach. Measures are not being taken to stabilize and rehabilitate existing eroded areas. In addition, there is no fencing, shrubs or barriers to restrict pedestrian walking into the sensitive area (e.g. the boarders of Timentube lagoon and river; access to the beach). Erosion and sediment control measures are undertaken (e.g. cleaning works in the Timentube lagoon and river; buffer strips/soakage strips; impervious surfaces to allow infiltration as gardens in parking areas). The storm water runoff from the site does not contain pollutant levels above the legal requirements (CONAMA 1986) which can be verified in the regular water quality analysis (2/hour by staff; 2/month by independent company) of the Timentube lagoon (Casales 2008).

The visual impact is performing satisfactory due to the design and construction of ecolodge following all of the considerations proposed. Building forms are compatible with the physical and cultural landscape. Buildings fit in the scenery, there is no perceived significant visual impact when compared with the surrounding environment. "When hotel is seen from the sea, it is hard to realize that there is a hotel behind" (Cardoso 2005). In addition, the height of buildings and structures are below the tree line and screened by topographical features. The elevation of the buildings does not exceed two floors, not exceeding the height of an adult coconut palm or 3 meters (Paiva 2008). Buildings are screened by topographical features (e.g. coconut tree). In addition, buildings and other structures are painted in colours that do not sharply contrast or conflict with the landscape. Local materials (e.g. piassava palm and white tiles) are used and there are no walls or gates to delimit the area. The visual impact has been taken into account in the planning and re-building of the infrastructure (e.g. construction of the

spa) (FGD, 2008). Native vegetation is included in landscaping to screen facilities and roads, track and car parks are screened by topographical features and native vegetation.

The biodiversity conservation is performing poor due to the inexistence of a program of work prepared and implemented to protect endangered species, biodiversity, native vegetation, natural water flows, landscape and cultural heritage of the site. However, there are few measures such as cleaning works in Timentube River, protecting endangered species (feeding and remove animals for safety places). In addition, there is no recommendation for avoiding the pesticides and herbicides use. However, more detailed information should be obtained near the gardening company.

The lighting has shown satisfactory performance as the ecolodge undertake the following measures to minimise illumination around the site: the external lighting is limited to that necessary for orientation, security, and safety; the compact fluorescent bulbs are being adopted in majority of the public areas. Illuminated signage is only used for emergency exits and outside spotlights do not point above the horizontal. Rigid measures are undertaken to minimize illumination around the site due to fulfilment of the Portaria nº11 of 30 January of 1995 (IBAMA 1995).

Some achievements were found on water supply and conservation measures; however the performance is unsatisfactory. Some measures are being implemented: use of tap aerators, rainwater/storm water collection, encouragement of the guests to reuse (towels and bed sheets), a written advice to minimize water consume fixed in some of the public toilets. In addition water-use limiting measures are undertaken in the control of the aspersers. Other good practices are being undertaken but need improvement (i.e. standard rooms are provided with showers and bath is provided in master rooms; grey water reuse system was constructed (in a rebuilt area) but it is disconnected.

The wastewater performance is satisfactory. The wastewater management is responsibility of the EMBASA (local sanitary authority). The monitoring of wastewater leaks to soil is made once per semester. Results show that there is no contamination of the soil.

The noise indicator is performing satisfactory. The usual noise levels from all activities at the site were perceived as not significantly more than the background noise in nearby

natural areas or adjacent residences. However, rebuilding works in the conference room has originated unusual noise. There is no information about complaint.

In relation to the air quality, there is no information about air emissions management in order to ensure statutory air quality requirements, heat and/or steam emissions are minimised or offensive odours are avoided.

In the field of waste minimization and management, some achievements were found but performance is still unsatisfactory. There is a recycling centre to separate solid waste from the grey solid waste. In addition, staffs are encouraged to participate in recycling programs in administrative areas, canteens and environmental office. There are no containers in other sectors. "Manual of the employee" gives tips to encourage employees for recycling practices. There is already the intention to adopt toilet products (e.g. soap, shampoo, etc) in big portion packaging. The promotional material is not printed on recycled paper and/or unbleached paper, exception to the "Turma do Jornaleco" magazine. Besides of the use of the green waste to fertilize, composting of the organic waste from kitchen is not carried out since 2007.

Energy use and minimisation has been evaluated as satisfactory performance. Energy use in buildings is minimised by implementing of the following measures: Over 90% of fluorescent rather than incandescent lights is used in rooms. Lamps are also being substituted in the public areas. Buildings were designed to take into account climatic conditions using tropical open ventilation techniques to minimise heating (i.e. infrastructures are not entirely covered by walls in almost all leisure areas e.g. reception, lounge, restaurants and bars, amphitheatre, etc). Refrigeration on the rooms was designed to give maximum efficiency for the business (i.e. refrigeration's central was substituted by splits. Splits are efficiently programmed to work 6 hours per night and key-tag switches are used. A trained employee has the responsibility to coordinate the operation tasks. In the past, Ecoresort had an internal commission for energy savings (CICE) which had the responsibility to minimise energy used and costs. However, CICE is not working anymore. However, some initiatives for saving energy have been undertaken. For instance, last year during the low season, all the guest were accommodated only in the central sector to disconnect the exterior lights of other three sectors and to save energy from the water boilers which was also partly disconnected.

Objective 2: Ecolodge builds environmental and cultural awareness and respect

The interpretative service has good performance, and the content of interpretation and educational information has satisfactory performance. In opposition, the interpretation planning and staff training awareness and understanding are unsatisfactory. At the level of interpretative services, customers have available a range of interpretive opportunities: personal interpretation (i.e. transport-based tours to the Garcia D'Avila Castle, TAMAR project, Sapiranga Reserve; non-vehicle based tours as snorkelling, diving, canoeing and guided walking, etc; informative interactions with guides; theatre performances, workshops, games, role plays and craft activities at the Careta Careta Club) and non-personal interpretation service (i.e. interpretive signs; web-based information (e.g. web site and Turma do Jornaleco web site); and interpretive opportunities provided by outside contractors (e.g. agents representation in situ, in-room booking line and a daily flyer). In addition, the content of interpretation and educational information is verified at least by two biologists who guarantee the accuracy of natural and cultural information provided to customers. The content of interpretation (e.g. ecotouristic and recreation activities, web site and publications) communicates the conservation significance of the area, need for conservation, and how to interact with and care for the environment. However, there is not a formal interpretation plan, and documentation to support ecotourism activities is not updated and accessible to guides. Also, the interpretation program has not been monitored: there is no customer participation rates for all activities, and data collected is not easily workable; customer feedback related to the interpretation program is not registered and analyzed. Furthermore, although all customer service staff attends one day training (the Ecojornada), there is no ongoing in-house training. Skills-based competencies of guides and all staff delivering interpretation are demonstrated since team is composed by two biologist and trained monitors. In addition guides attend a conference in 2007 (communication at the II Encontro Interdisciplinar de Ecoturismo em Unidades de Conservação & VI Congresso Nacional de Ecoturismo, 08-11 de 2007 em ITATIAIA- RJ). There is no information about the skills-based competencies of the lead guides (i.e. the two biologists) in interpretation or communication skills.

Objective 3: Ecolodge provides positive experiences for hosts

The provision of positive nature experiences for hosts is evaluated as satisfactory due to the prime focus of the service is the presentation of the natural values of the local area according to the environmental and quality policy. The objective of the Ecoresort management is to rise for attention to its narrow relationship with nature (Lima 2006). "Ecoresort offers to its guests a wide variety of eco-tours, which, in addition to educating, provide a unique experience of contact with nature" (Praia do Forte EcoResort 2006). Lima (2008) has analyzed the customer's feedback of ecolodge and point out that "natural charms of the Ecoresort are its highest point, so much that the hotel is realized as an ecotouristic destination, where it is possible to be in communion with the nature." In addition, the majority of customers' time is spent within a natural area or with natural area.

Objective 4: Ecolodge provides direct benefits for conservation

The provision of conservation initiatives at the local level has been evaluated as satisfactory. At the local level, the following actions have been undertaken in the region in the past years: Removal of litter or rubbish regularly in the Timentube river and during the festivities (Clean up the World Day) (5,826 kilogram since 2002). Physical, financial or in-kind assistance has been provided for ecological research since two articles were presented in national conferences (in 2005 and 2007). Promotion of conservation has been done in the following annually environmental awareness initiatives: commemoration of "World-Wide Day of the Environment" and "Clean up the World Day". Monthly donations were made to GDF to support conservation projects. In 2007: €40.388,67[7] (from eco-tax to GDF) and €15.996 (preservation taxes/entrance fees); Donation 2008/1° semester: €22.519 (eco-tax) and €5.314 (preservation taxes). In addition, €5.577 was paid to Tamar as result of entrance fees. Occasional extra donations were made to GDF by 2006. The promotion of conservation groups (GDF, Jubarte Whale Institute and TAMAR Project) and its initiatives are made in the promotional material (i.e. web site, Turma do Jornaleco web site and magazine,

[7] Rates: 1 Brazilian Real = 0.33442 Euro in November 20, 2008. Updated rates at http://www.oanda.com/

and daily activities flyer), an academic study has received tangible support from the ecolodge, and donation of informative panels to GDF has been made as requirements for the renovation of the operation's license. However, input to the development of relevant planning and policy initiatives for managing the natural area used by the operator, is only done in an informal manner during the meetings in GDF and municipality, and assistance with monitoring of water quality of the Timentube River and Lagoon was done. At local, national and global level, ecolodge contributes to conservation outcomes beyond the immediate area of operation, by being involved in the initiatives for greenhouse gas abatement, which consists in financial contribution for two projects of carbon's capture in Portugal and Brazil; and by being involved in regional/nationwide recycling scheme. Paper, cardboard, plastic, metal, glass are sold to local businesses, oil is donated to the State University of Bahia. Bulbs, batteries and printer's cartridges are inserted in the state recycling program. The glass is stored in the centre, awaiting a solution to be sent to an appropriate destination. The grey solid waste is sent to the landfill.

Objective 5: Ecolodge provides benefits and empowerment for local people

The provision of local benefits for community is performing unsatisfactory. Sixty-one percent of the employees are residents in the county (19% in the Praia do Forte).The provision of local benefits by services and products purchased locally are unsatisfactory. The main products and services are not regularly purchased locally. According to managers, there aren't local products in quality and quantity to supply the Ecolodge requests, and it is quite hard to find the desired products in the local community market. However, more information is needed to evaluate local purchasing. Concerning to the minimal impact on local communities, there is no information. At the level of community involvement, a good performance was achieved as the tangible support has been offered to a not-for-profit organization (GDF), financial support was also provided to the local kindergarten to build two classrooms and support in transportation to local school (in 2007). In addition, the coordinator of the Environmental Base used to attend meetings in local authority and GDF, however on an informal basis.

4.5.2.2.2. Suppliers Performance

Results of the Ecotourism Supplier Performance Index (ESPI) are shown in the Table 4.7. Results showed that the three ecotour operators perform unsatisfactory ($ESPI_A$=2.8; $ESPI_B$=2.2; $ESPI_C$=2.5). Contrary, the three conservation organizations perform satisfactory ($ESPI_1$=3.2; $ESPI_2$=3.4; $ESPI_3$=3.2). In general, ecotour operators and conservation organizations perform unsatisfactory on the principle one (minimization of the impact on the environment), and ecotour operators perform unsatisfactory on the principle four (providing direct benefits for conservation). Detailed information concerning each indicator is presented in Annex G2 and calculations are presented in Annex G4.

Table 4.7 – Results of the ESPI for ecotour suppliers.

ECOTOURISM PRINCIPLES	OPERATOR A		OPERATOR B		OPERATOR C		ORG 1 - TAMAR PROJECT		ORG 2 - JWI		ORG 3 - GDF	
Objective 1: Supplier minimizes impact on the environment	3.0	☺	1.0	☹	1.0	☹	2.0	😐	3.0	☺	2.0	😐
Objective 2: Supplier builds environmental and cultural awareness and respect	3.0	☺	3.0	☺	3.0	☺	3.0	☺	3.0	☺	3.0	☺
Objective 3: Supplier provides positive experiences for hosts	3.0	☺	3.0	☺	3.0	☺	3.0	☺	3.0	☺	3.0	☺
Objective 4: Supplier provides direct benefits for conservation	2.0	😐	1.0	☹	0.0	?	4.0	☺☺	4.0	☺☺	4.0	☺☺
Objective 5: Supplier provides benefits and empowerment for local people	3.0	☺	3.0	☺	3.0	☺	4.0	☺☺	4.0	☺☺	4.0	☺☺
ESPI	**2.8**	😐	**2.2**	😐	**2.5**	😐	**3.2**	☺	**3.4**	☺	**3.2**	☺

Objective 1: Supplier minimize of impact on the environment

Suppliers perform unsatisfactory in relation to the minimization of impact. The Operator B and C do not embrace in any procedure to monitor and minimize their impact in the natural resource. However, Operator B shows willingness to adopt the Brazilian norms for adventure tourism. Only the Operator A and JWI which provide

whale watching activities apply codes of conduct relating to whale watching. The other two conservation organizations follow good environmental practices such as recycling, minimizations of water use, biodiversity conservation, etc. Even doing so, it is not clear if they follow informal practices, rather than regular measures and how they address issues as water conservation, treatment of waste water and effluent, noise, air quality, waste minimization, energy efficiency, minimum disturbance to wildlife, lighting and visual impacts.

Objective 2: Supplier builds environmental and cultural awareness and respect

The performance of the objective 2 is satisfactory. Companies communicate the conservation significance of the area, the need for conservation and how to interact with and care for the environment. Conservation organizations demonstrate an effort in providing learning opportunities since all of the conservation organizations are equipped with environmental centres, interpretive signage and other educative resources.

Objective 3: Supplier provides positive experiences

The performance of the objective 3 is satisfactory. The prime focus of all suppliers is the presentation of the natural values of the local area, which can be seen during the tours by the communication with tourists, in the flyers, and website.

Objective 4: Supplier provides direct benefits for conservation

The provision of direct benefits for conservation varies significantly from the ecotour operators to the conservation organizations. The performance of ecotour operator is not conforming to the principles of ecotourism due to the lack of information. Contrarily, the performance of conservation organizations is good. The direct economic contributions[8] of ecotour operators by the provision of ecotours to the Operator A and Operator B contributed to 3211 Euros for conservation organizations (Table 4.8). There is no contribution for conservation by entrance fees or donations by the Operator C due to all the tours are undertaken in public areas.

8 Estimated values for one year from September 2007 to June 2008

Table 4.8 – Economic contribution of ecotour suppliers for conservation.

	FGD	JWI	Tamar Project
Operator A	2341€	408€	0
Operator B	333€	0	129€
Operator C	0	0	0

Conservation organizations have contributed to the conservation by providing assistance on the ecological research. Conservation organizations have provided ecological research in their field of activity. JWI provides ecological research field by monitoring Jubarte whale and cetaceans of Brazil by photo-identification, genetic analysis and acoustic studies. Tamar project promotes conservation research in the field of marine turtles. GDF promotes conservation research in the field of aerial monitoring tasks as well as studies of preservation of historical and cultural issues of Praia do Forte. In addition, GDF undertake regular restoration activities in the area of Timentube area which is an area subject to visitor impacts, as well as maintenance of the trails in the Sapiranga Reserve. All of the three conservation organizations promote conservation which is their main purposes. Besides of the conservation tasks that they undertake year round JWI, GDF and Tamar Project together with the ecolodge and public organization promote two environmental awareness campaigns in the local community: the World Environmental Commemoration Day (138 participants in 2008) and the Clean Up the World Day (228 participants in 2007). In addition, they have a proposal to create the Centre of Professional Excellence to qualify professionals in tourism and environmental areas together with local NGOs and other local entities. Also, the three organizations provide discount rates to schools. In additional, JWI has provided tangible support for a academic students through the eco-volunteer program which is targeted to international students; and the local guardian which is targeted to the kids of local community. The Tamar Project has provided scholarships for two academic students from the local community to undertake studies in the field of biology, and provides also a training program for 200 graduate and recent graduated students every year. On the other hand, GDF has been involved in the visual impact of Praia do Forte, and in the conservation of areas not directly used in the ecotours such as the Passagem Grande Reserve.

Objective 5: Supplier provided benefits and empowerment for local people

The provision of benefits and empowerment for local people varies from the ecotour operators to the conservation organizations. The ecotour operators have satisfactory performance and conservation organizations have good performance. The Ecotourism project provides financial benefits and empowerment for local people by creating employment opportunities. Around 200 people are involved in providing ecotourism activities. Local community is employed in the operation of the suppliers. Tangible support, participation to a not-for-profit organization or event that contributes to the welfare of the local community, has been offered by conservation organizations. Tamar project has been undertaken the following education programs for local community: Tamarzinhos and waves of surf program and school presentations, hatchling release ceremonies and festivals, financial support for the local kindergarten. JWI has promotes seminars for students at CENTROPEA; lectures at the schools; and cultural activities for community ("Saturday of Culture" at the CENTROPEA). GDF has undertaken educational programs for children and training courses for guides from the local community of Sapiranga Forest.

4.6. Conclusions and Recommendations

4.6.1. Case study

The ecotourism project performance demonstrated non compliance of the project with the principles of ecotourism. The ecolodge and the ecotour suppliers demonstrate non compliance with the principles of ecotourism. Contrarily conservation organizations demonstrate compliance with the principles of ecotourism. In general, concerning to the:

- principle one (minimize of environmental impacts): ecolodge, ecotour operators and conservation organizations perform unsatisfactory;
- principle two (building environmental and cultural awareness and respect): ecolodge perform unsatisfactory;
- principle three (provision of positive experiences for host): all achieve satisfactory performance;

- principle four (provision of direct benefits for conservation): ecotour suppliers perform unsatisfactory; ecolodge perform satisfactory and conservation organizations perform good;
- principle five: provision of benefits and empowerment for local people: ecolodge and ecotour supplier perform satisfactory and conservation organization perform good.

As recommendation, to improve ecotourism project, ecolodge and supplier should improve performance of the indicators that show poor or unsatisfactory performance as well as indicators for which information was not obtained.

Therefore, ecolodge should improve nine indicators concerning the minimization of the environmental impact; four indicators concerning the building of environmental and cultural awareness and respect; one indicator concerning the provision of direct contribution for conservation and five indicators concerning the benefits and empowerment for local people.

To increase performance of the principle 1 - minimize impact on the environment, managers should approve and implement environmental management procedures and review it annually by senior management. In addition, measures should be taken to stabilize and rehabilitate existing eroded areas and fencing, shrubs or barriers should be implemented in sensitive areas (e.g. the boarders of Timentube lagoon and river) in order to restrict pedestrians access. A program of work should be prepared and implemented to protected endangered species, biodiversity, native vegetation, natural water flows, landscape and cultural heritage of the site. Recommendations about pesticides and herbicides use should be made to the gardening company. Improvements should be made in water conservation measures. The following measures are recommended: small sinks (less than five litres), low flow showerheads; grey water reuse systems, reuse of treated sewage effluent, dual/low flush toilets, automatic turn-off taps (e.g. spring loaded), practices for minimize de consume of water (e.g. adequate vegetal species large areas, water-use limiting measures, or guests water budget for personal use). Furthermore, improvements should also be made in waste minimisation and management which can be done by: avoiding over packaged goods and not use of disposable items; food and materials should be purchased in bulk; small portion

packaging should be minimised (e.g. soaps, jams, margarine etc.). Both staff and customers should be encouraged to participate in recycling programs, and all promotional material should be printed on recycled and/or unbleached paper, customers should be actively encouraged to pass publications to others for reuse, composting of organic kitchen waste should be made, and policy to purchase recycled or reused products should be documented and implemented.

To increase performance of the principle 2 - builds environmental and cultural awareness and respect, improvements should be made in the interpretation planning. An interpretation plan should be prepared for all activities and accessible to the guides. The plan should include: a summary of interpretive resources and materials; details of interpretive content; relevant themes/messages that address the natural, cultural and social values of the site/ local area; information concerning the main audience and their needs; goals and objectives in terms of educational and/or conservation outcomes; suitable interpretive methods; and contingency planning. In addition, the interpretation program should be monitored with records kept that include customer participation rates and customer feedback from participation. In relation to staff training, awareness and understanding, all customer service staff should attend ongoing in-house training besides the introductory training, and guides and all staff delivering interpretation must be encouraged to undertake regular relevant professional development as in-house training courses, or paid leave to attend courses/conferences, or access to seminars/materials provided by specialists.

In order to increase performance of the principle 4 – provide direct benefits for conservation, input to the development of relevant planning and policy initiatives for managing the natural area used by the operator should be made regularly rather than in an informal basis. Assistance with research on visitor impacts on sites being visited or provision of training programs on conservation practices for internal staff should be done.

For increase the performance of the principle 5 – financial benefits and empowerment for local community, efforts should be made to purchase services and products locally. Managers should work on the integration of local supplier in the service. Suggestions have resulted from talks carried out during the field work with several stakeholders. For

instance, the integration of local food supplier can be made initially by supplying food for one of the restaurants (e.g. "O Sombra do Coqueiral" which provides only approximately fifteen to twenty meals per day). This initiative will create direct economic impact on local suppliers and food market and may push the local market to improve products quality standards and even increase the food market dimension. From the point of view of the ecolodge, this initiative represents a low investment and the creation of a new attraction for the guests, recognition from the sector and community as well. In the field of services, Ecolodge could promote the local transportation by tuck-tuck in more formal way. This initiative would improve the transport market and increase local business.

In order to improve supplier performance, operator A should improve three indicators, Operator B should improve four indicators, operator C should improve 4 indicators, Tamar project should improve 2 indicators, JWI should improve 2 indicators and CDF should improve 2 indicators. Improvements should be made mostly in improving measures to minimize the environmental impact, increasing direct contribution for conservation and increasing the benefits and empowerment for local community.

Besides the improvements of each supplier individually, ecolodge' managers should push suppliers to monitor and evaluate their practices, and all suppliers in the VC should understand the importance of individual participation. It is important improve monitoring practices of the ecotourism project by keeping and analyzing records of eco-tour and assess tourist satisfaction. In addition, during the field work suppliers revealed desire of improve the service performance, and also to create new products. Some recommendations are given to improve the eco-tour VC performance mainly for the principles 1- minimize of impact on the environment, principle 4 – provision of direct benefit for conservation and principle 5 - provision of financial benefits and empowerment for local people.

Concerning principle 1, suppliers should implement environmental management system, certifications, standards, codes of conduct, guidelines or other procedures that aim to reduce their impacts on the environment.

In relation to the principle 4, suppliers should improve physical or in-kind assistance to benefit local conservation. For instance by removal of solid waste; the rehabilitation of areas subject to visitor impacts; reduction of weed infestations, the development of facilities that reduce visitor impact; ecological research; promotion of conservation; provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research; involvement in a regional tourism impact monitoring or research program; donation of equipment that contributes to conservation projects or other. They also can increase the economic profit for conservation by increasing returns to tours via upgrading (e.g. increase profitability of existing tours), increasing the ratio participation of eco-tours (by evaluating the client satisfaction and creating more appealing activities/tours, reporting the importance of the ecotouristic activities for the local development) but keeping in mind a sustainable use; and analysis opportunities to provide income for those eco-tours that do not provide any financial contribution to conservation.

Concerning principle 5, increase the economic profit for local community can be achieved by introducing new suppliers in the eco-tour value chain (e.g. local restaurants, local transport, handicrafts, etc) in order to increase the income for local community.

4.6.2. Monitoring and Evaluation Tool

Results of the application of the M&E tool in the case study shows that the tool is suitable for monitoring and evaluation of projects when low technical and/or economic resources are available, which makes the M&E tool very useful for small-scale ecotourism projects. In addition, the M&E tool provides useful benchmark data for future monitoring in the case study as well as in another similar project. The M&E tool enables managers to have an overview of the compliance of the overall project as well as each supplier individually with the ecotourism principles. M&E tool is able to report the current project performance, what was achieved (achievements and miss achievements), what is supposed to achieved, help managers to identify areas for improvement and their priorities, suggest measures to address those priorities, and communicates results in a simply manner. Therefore, this tool can give a contribution to the management of the ecotourism value chain as well as each supplier individually for

a successful transition towards more sustainable practices, as monitoring and evaluation of the ecotourism value chain can be useful to push suppliers to improve their performances of suppliers, which will result in the improvement of the ecotourism project, and finally the increase of positive impacts for local community and nature conservation. M&E tool is also useful in the promotion of the reflection about the ecotourism principles, and it has stimulated ecolodge managers and suppliers to discuss about own performance (self-reflection) and project performance (e.g. how do they perform as individually organization? What targets did they realize? What targets can they set next year? How do they contribute to the ecotourism principles as a whole? And what could be made?). In addition, M&E tool has also stimulated ecolodge managers and suppliers to understand the concept of the value chain, and reflect about it to increase internal benefits for suppliers and external benefits (i.e. benefits for conservation and local community). Financial and non-financial benefits for local community and conservation as well as opportunities to increase those benefits were discussed during the application of the tool.

Although the benchmark originated by the ecotourism certification gives a truly point of reference, the M&E tool does not guarantee that ecotourism principles are fulfilled in a complete manner. Firstly because of the sixth ecotourism principles (i.e. raise sensitivity to host countries' political, environmental, and social climate) was not analysed because it was felts that it was not easily measure at the level of the project. Secondly, the number of indicators can always be increased to evaluate other topics and indicators improved to be more adequate. Even considering these limitations of the tool, the tool is suitable because as long as the indicators remains constant over time, changes in the evaluation scores in the future monitoring years, would alert that the performance of the project is suffering an upgrade or a downgrade. For these reasons, the tool should be used as a guideline, not as blueprint. In addition, the M&E tool does not intend to substitute any management system (e.g. environmental management system or social responsibility system) or another tool to measure success (e.g. social accounting, environmental audits, etc), but aims to be one of the first tools to be implemented, mainly in contexts where those tools are too expensive or too technical to be used. It is important to realize that evaluation is not a result itself but a way to guide the results and to orientate the coming targets.

As recommendation, managers should review and adequate the M&E tool, if any indicator seems somewhat fuzzy or inadequate to be applied in the coming years. M&E tool should be implemented every year. Also, it should be applied in other case studies by different managers. Lessons learned attained from the case study can open new insight at the project level and reflection on the ecotourism sector.

CHAPTER 5 – GENERAL CONCLUSION

5.1. General Conclusion

This study has shown monitoring and evaluation of nature-based tourism at two different scales, at the project and destination levels. At the same time, it has addressed two types of nature-based tourism – mountain tourism and ecotourism. The study has explored the impacts of those types of tourism at these two dimensions, and has provided two approaches for M&E tourism, that may be implemented even with low economic and technical resources. Thus, this study may contribute to inspire all who seek to improve the performance of a project or a destination to turn tourism more sustainable. The development of practical and simple tools for monitoring and evaluation of nature-based tourism projects and destinations is the most relevant contribution given by this dissertation. This dissertation contributes to increase the body of knowledge in methodologies for monitoring and evaluate tourism sector. However, much more remains to be explored to guarantee the efficiency of the tools. This dissertation gives also a contribution to the body of knowledge of the performances of the case studies, and aspires to encourage managers to apply monitoring and evaluation practices in both case studies as well as elsewhere. This study has simply touched the surface of monitoring and evaluation in sustainable tourism, but small steps when joined by others and maintained over time can slowly help to move forward. Both M&E tools are in progress tools and are far to be complete. More research on the methodologies and indicators should be done. In additional, tools should be applied in other cases studies to improve both tools.

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ANNEX A – SURVEY INSTRUMENTS - CASE STUDY FROM UKRAINE

ANNEX A1 - FIRST DELPHI QUESTIONNAIRE

Львівський національний університет імені Івана Франка
ДЕКАН ГЕОГРАФІЧНОГО ФАКУЛЬТЕТУ

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(+380322) 96-41-62

1st Round Questionnaire

Please describe the following relationships considering your knowledge of Polyanytsya village, Tourism sector and Carpathian Natural National Park.

Please take a look of the following examples:

- the influence of the tourism on the natural resources: *Overloading capacity in peak periods destroying environmental quality*
- Influence of the natural resources on the tourism: *Overloading capacity in peak periods destroying environment*
- Influence of the tourism on the communities: *Tourism promotes income to communities*

1. Relationship between Tourism and Natural Resources *(Please consider the social, environmental and economical dimensions)*
    a. influence of the tourism on the natural resources
    b. Influence of the natural resources on the tourism
2. Relationship between Tourism and Community *(Please consider the social, environmental and economical dimensions)*
    a. Influence of the tourism on the community
    b. Influence of the community on the tourism
3. Relationship between Community and Natural Resources *(Please consider the social, environmental and economical dimensions)*
    a. Influence of the community on the natural resources
    b. Influence of the natural resource on the community

Thank you for your collaboration!

ANNEX A2 – COVER LETTER

Львівський національний університет імені Івана Франка
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тел. (+380322) 72-26-44
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Dear Respondent

My name is Dora Rio and I am a MSc student in Environmental Engineering. The present research is conducting under the supervision of Professor Iryna Vanda. I am contacting you to invite to participate in research in the form of a questionnaire.

The aim of this investigation is to develop a system of indicators of sustainability specifically it is focussing in the environmental issues. For the characteristics of the villa of Polyanesa (Yaremcha), area subject to strong tourist activity and with elevated natural inheritance, this place was chosen as a case study.

This system of indicator for sustainable development can be used to measure progress toward building a sustainable ecotourism region. Sustainable Measures could be useful to communities and organizations working on sustainability. Through your participation I hope to understand the relationship between tourism, natural resources and communities in this area. Sustainability should not be developed and imposed on a community by someone outside that community. It needs to be developed and implemented by the community and with support of outside experts that can provide assistance at crucial points, but ultimately people in the community are the experts on their community. Community members need to be the driving force behind their own sustainable development, now and for future generations.

I hope that the results of the survey will be useful for the sustainable development of the council, support this area with an improvement of knowledge and give some directions for further planning management and I hope to share my results by publishing them in a scientific journal.

All information that you provide through your participation in this study will be kept confidential. Furthermore, you will not be identified in the thesis or in any report or publication based on this research. There is no known or anticipated risk to participation in this study.

There are four phases to this project. Each one consists in one questionnaire and have the same proposed. Each survey should take you about 10 minutes to complete. I hope you will take the time to complete this questionnaire and return it in 1 week. All questionnaires will be sending to you on Monday and should be returned until next Friday. Your participation is voluntary. If you decide that you no longer want to be involved in this study you are free to withdraw at any time without adverse consequences. If you would like to obtain a summary of the results of this research, I am happy to send you copies of future publications.

If you have any questions or concerns about completing the questionnaire or about being in this study, you may contact me at dorario@gmail.com or my supervisor, Iryna Vanda (call to 097 330 94 52).

Thank you in advance for your collaboration in my research.

Sincerely.
Dora Rio

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Шановний респонденте!

Запрошуємо Вас як експерта взяти участь у дослідженні – опитуванні, результати якого будуть використані у наукових цілях, при написанні магістерської роботи «Екотуризм як впроваджував сталого розвитку».

Метою дослідження є розробка системи індикаторів сталості. Зважаючи на такі ознаки села Паляниця як туристично-рекреаційна спеціалізація та збережене природне середовище, ця місцевість обрана ключовою для дослідження.

Сподіваюся, що результати опитування будуть корисними для розвитку територіальної громади паляниці, підвищать обізнаність, і будуть отримані рекомендації для подальшого менеджмент-планування. Ми поділимося отриманими висновками, опублікувавши їх у наукових виданнях.

Вся інформація, яку Ви надаєте при заповнення питальників, є конфіденційною. Також Ваші імені не будуть згадані у магістерській роботі чи публікаціях, тому немає ризику Вашої участі у дослідженні.

Наше дослідження складається із трьох етапів, кожен з яких триватиме до п'яти днів. Ви отримуватиме питальники на початку робочого тижня, і ми очікуємо Ваші відповіді до п'ятниці. Заповнення питальника займе близько 20 хвилин Вашого часу. Ваша участь є добровільною. Якщо Ви вирішите припинити свою участь у дослідженні, Ви можете зробити це на будь-якому етапі, не пояснюючи причини. Якщо Ви зацікавлені у ознайомленні із результатами осілдення, буду раді надіслати Вам копії наукових публікацій.

Якщо у Вас виникла якісь запитання чи труднощі з заповненням питальника, чи в цілому щодо дослідження, будь-ласка, контактуйте зі мною : dorario@gmail.com (Дора Ріо) чи моїм науковим керівником: 097 330 94 52 (Ірина Ванда).

Заздалегідь вдячна за співпрацю у проведенні дослідження.

З повагою

магістрант, слухач
Львівського національного університету
імені Івана Франка
Дора Ріо

ANNEX A3 – CONSENT FORM

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CONSENT FORM

I,

Hereby consent to be a subject of survey research study to be undertaken

By Dora Rio

and I understand that the purpose of the research is to develop a system of indicators of sustainability, specifically it is focussing in the environmental issues as part of research study to Msc project.

I acknowledge that

1. Upon receipt my questionnaire will be coded my name and address kept separately from it.
2. Any information that I provide will no be made public in any form that could reveal my identity to an outside party. I will remain fully anonymous.
3. Aggregated results will be used for research proposes and may be reported in scientific and academic journals.
4. Individual results will not be released to any person except at my request and on my authorisation.
5. That I am free to withdraw my consent at any time during the study in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

Signature: Data:

PERSONAL INFORMATION

Name:

Institution:

Background:

Level of Education:

Position:

E-mail: Fax: Phone:

Львівський національний університет імені Івана Франка
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Погодження

Я, _____ *(прізвище, імя)*

засвідчую свою згоду бути субєктом досілдження у формі опитування, що проводиться Дорою Ріо, і я знаю, що метою досілдження є розробити систему індикаторів сталості, особливо екологічних аспектів як частини магістерського дослідження «Екотуризм як впроваджувач сталого розвитку».

Я ознайомлений, що:

1. Моє імя та адреса будуть заодовані окремо від заповненого питальника;
2. жодна інформація, надана мною, не буде опублікована так, що це дозволить ідентифікувати мене стороннім особам, я буду анонімним респондентом;
3. узагальнені результати будуть використані для дослідницької мети і можуть бути опубліковані у накових виданнях;
4. індивідуальні результати опитування не будуть оприлюднені;
5. можу відмовитися від участі у досілдженні в будь який час, і моя участь негайно припиниться, і жодна інформація, надана мною, не буде використана.

Підпис: Дата:

ПЕРСОНАЛЬНА ІНФОРМАЦІЯ

Прізвище, ім'я: _____
Місце праці: _____
Посада: _____
Рівень освіти: _____
Спеціальність: _____
Контактна інформація: e-mail:
факс:
тел:

ANNEX A4 - SECOND DELPHI QUESTIONNAIRE

Львівський національний університет імені Івана Франка
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Львів, вул. П. Дорошенка, 41 **(+380322) 96-41-62**

2nd Round Questionnaire

Please describe the following relationships considering your knowledge related to the Polyanytsya village, tourism companies and Carpathian Natural National Park.

*Please fill with <u>one</u> cross in **importance**; fill with <u>one</u> cross in **suitability** and also fill with <u>one</u> cross in **comprehensibility**.*

*"**importance**" indicates whether such indicators were deemed important for the destination's sustainable development;*
*"**suitability**" indicates whether such indicators were suitable to evaluate the sustainable development conditions of the destination;*
*"**comprehensibility**" indicates whether such indicators could be easily to understand.*

Indicators		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Incorrect practices of solid waste (garbage) disposal by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Incorrect practices of wastewater disposal by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Soil erosion is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Increase of constructed area is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Reduction of the forestry area is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Noise pollution (i.e. traffic, construction, etc) is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
High level of poaching is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Residents participate on resource management and planning	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP provides economical benefits (e.g. compensation) for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP contributes to conservation	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5

CNNP provides environmental education opportunities for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Community provides cultural experiences for tourist	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry creates acceptable incomes for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry creates employment opportunities for residents	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Residents' environmental awareness is increasing due to tourism	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism causes public insecurity	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
The increase of the energy supply system is due to tourism	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism causes traffic congestion in peak periods	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism promotes social welfare (e.g. health and education)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Improvements of roads and accessibilities is promoted by tourism	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
The daily lives of residents is disturbed by tourists	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Residents are satisfied for tourism development	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism causes loss of traditional culture	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry makes indirect economic contribution for conservation	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourists make direct economic contribution for conservation (e.g. entry fees, donations)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Increase of constructed area is caused by tourism	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism in peak periods destroy natural resources	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry causes pollution of rivers and groundwater	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism industry causes air pollution (due to transportation)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Incorrect practices of wastewater disposal by tourism industry	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Incorrect practices of solid waste disposal by tourism industry	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Reduction of the forestry area is caused by tourism industry	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourism causes visual impact (due to winter sports)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Noise pollution (i.e. traffic, construction, etc) is caused by tourism	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5

Tourism causes environmental impacts	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Tourists participate in conservation activities	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP attracts tourists (which causes tourism development)	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
CNNP increases tourists' environmental awareness	Importance	1	2	3	4	5
	Suitability	1	2	3	4	5
	Comprehensibility	1	2	3	4	5
Comments:						

Please send this questionnaire back no later than April, 4th by e-mail to dorario@gmail.com or fax 0322 722644.

If you have any questions or concerns about completing the questionnaire or about being in this study, you may contact me at dorario@gmail.com or my supervisor, Iryna Vanda (call to 097 330 94 52).

Thank you for your collaboration!

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Другий раунд

Будь-ласка, опишіть наступні зв'язки, зважаючи на Вашу обізнаність, між селом Паляниця та сусідніми поселенями, туристичним комплексом і приватними туристичними садибами та Карпатським національним природним парком.

Позначте, будь-ласка, один із варіантів оцінки індикатора за 5-бальною шкалою за аспектами: важливість; придатність; зрозумілість. Прошу бути уважними щодо цих аспектів:
«важливість» показує, чи цей індикатор вважається важливим для досягнення сталого розвитку;
«придатність» показує, чи цей індикатор придатний для оцінки умов сталого розвитку місцевості дослідження;
«зрозумілість» показує, чи суть цього індикатора Ви легко можете зрозуміти.

Індикатори		Повністю непогоджуюся	Не погоджуюся	Ані погоджуюся, ані не погоджуюся	Погоджуюся	Повністю погоджуюся
Неправильна практика твердих побутових відходів (сміття) розпорядження жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Неправильна практика водовідведення резидентами	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Ерозія грунтів викликано жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Підвищення Житлова площа викликано жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Скорочення лісового господарства області викликано жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Шумове забруднення (тобто руху, будівництва і т.д.) обумовлено жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Високий рівень браконьєрства викликано жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Високий тиск на сільське господарство ресурсів (наприклад, інтенсивне сільське господарство) обумовлено жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Жителі підтримку охорони природи (тобто бере участь у заходах, екологічні проекти і т.д.)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Жителі брати участь в управлінні ресурсами і планування	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
CNNP забезпечує економічні переваги (наприклад,	Важливість	1	2	3	4	5

компенсації) для мешканців	Придатність	1	2	3	4	5
	Зрозумілі	1	2	3	4	5
CNNP сприяє збереженню	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
CNNP реалізує заходи щодо забезпечення сталого врожаю (сільське господарство, рибальство, мисливство)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
CNNP забезпечує екологічних можливостей для отримання освіти для жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Спільнота забезпечує культурного досвіду для туристичних	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Індустрія туризму створює прийнятні доходи для резидентів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Індустрія туризму створює можливості для працевлаштування жителів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
екологічної свідомості жителів "зростає за рахунок туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	
Туризм причин громадської безпеки Збільшення системи	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
енергопостачання за рахунок туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм причини заторів у пікові періоди	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм сприяє соціального забезпечення (наприклад, охорона здоров'я та освіта)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Поліпшення автомобільних доріг і accessibilities сприяє туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Повсякденне життя мешканців турбують туристів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Жителі виконані для розвитку туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм призводить до втрати традиційної культури	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Індустрія туризму робить непрямий економічний внесок для збереження	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туристи зробити прямий економічний внесок для збереження (наприклад, плата за вхід, пожертвування)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Підвищення Житлова площа викликано туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм в пікові періоди знищувати природні	Важливість	1	2	3	4	5

ресурси	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Індустрія туризму причини забруднення річок та грунтових вод	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Індустрія туризму причин забруднення повітря (через транспортування)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Неправильна практика стічних вод від індустрії туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Неправильна практика видалення твердих відходів індустрії туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Скорочення лісового господарства області викликано індустрії туризму	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм причин візуального впливу (у зв'язку із зимовими видами спорту)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Шумове забруднення (тобто руху, будівництва і т.д.) пов'язане з туризмом	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туризм причин впливу на навколишнє середовище	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Туристи брати участь у природоохоронній діяльності	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
CNNP приваблює туристів (що призводить до розвитку туризму)	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
CNNP збільшується екологічної інформованості туристів	Важливість	1	2	3	4	5
	Придатність	1	2	3	4	5
	Зрозумілість	1	2	3	4	5
Ваші індикатори та коментарі:						

Будь-ласка, надішліть заповнений питальник не пізніше 4 квітня електронною поштою dorario@gmail.com чи факсом 0322 722644.

Якщо у вас виникнуть якість питання чи нерозуміння з заповненням питальника чи мого дослідження, контактуйте зі мною, Дора Pio: dorario@gmail.com, чи моїм науковим керівником, Ірина Ванда:097 330 94 52. Заздалегідь вдячна за співпрацю.

ANNEX A5 - EVALUATION QUESTIONNAIRE

Львівський національний університет імені Івана Франка
ДЕКАН ГЕОГРАФІЧНОГО ФАКУЛЬТЕТУ

79000
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(+380322) 96-41-62

3rd questionnaire

Please express your opinion, selecting assessment from 1 (strongly disagree) to 5 (strongly agree) that best describes the current situation of the local community of Palyanytsya, tourism companies (consider Bukovel and the touristic companies) and the Carpathian National Natural Park.

Indicators	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Incorrect practices of solid waste (garbage) disposal by residents	1	2	3	4	5
Incorrect practices of wastewater disposal by residents	1	2	3	4	5
Soil erosion is caused by residents	1	2	3	4	5
Increase of constructed area is caused by residents	1	2	3	4	5
Reduction of the forestry area is caused by residents	1	2	3	4	5
Noise pollution (i.e. traffic, construction, etc) is caused by residents	1	2	3	4	5
High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	1	2	3	4	5
Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	1	2	3	4	5
Residents participate on resource management and planning	1	2	3	4	5
CNNP provides economical benefits (e.g. compensation) for residents	1	2	3	4	5
CNNP implements conservation measures (i.e.to conserve mineral, water, and soil resources, animals, forestry).	1	2	3	4	5
CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	1	2	3	4	5
CNNP provides environmental education opportunities for residents	1	2	3	4	5
Community provides cultural experiences for tourist	1	2	3	4	5
Tourism industry creates acceptable incomes for residents	1	2	3	4	5
Tourism industry creates employment opportunities for residents	1	2	3	4	5
Residents' environmental awareness is increasing due to tourism	1	2	3	4	5
Tourism causes public insecurity	1	2	3	4	5
Tourism causes traffic congestion in peak periods	1	2	3	4	5
Tourism promotes social welfare (e.g. health and education)	1	2	3	4	5
Improvements of roads and accessibilities is promoted by tourism	1	2	3	4	5
The daily lives of residents is disturbed by tourists	1	2	3	4	5
Residents are satisfied for tourism development	1	2	3	4	5
Tourism causes loss of traditional culture	1	2	3	4	5

Tourists make direct economic contribution for conservation (e.g. entry fees in CNNP, tours, donations)	1	2	3	4	5
Increase of constructed area is caused by tourism	1	2	3	4	5
Tourism in peak periods destroy natural resources	1	2	3	4	5
Tourism industry causes pollution of rivers and groundwater	1	2	3	4	5
Tourism industry causes air pollution (due to transportation)	1	2	3	4	5
Incorrect practices of wastewater disposal by tourism industry	1	2	3	4	5
Incorrect practices of solid waste disposal by tourism industry	1	2	3	4	5
Reduction of the forestry area is caused by tourism industry	1	2	3	4	5
Tourism causes visual impact (due to winter sports)	1	2	3	4	5
Tourism causes environmental impacts	1	2	3	4	5
CNNP attracts tourists (which causes tourism development)	1	2	3	4	5
CNNP increases tourists' environmental awareness	1	2	3	4	5
Other indicators or comments:					

Please send your completed questionnaire no later than April 23 by e-mail dorario@gmail.com or fax 0322 722 644.

If you have any questions or concerns about completing the questionnaire or about being in this study, you may contact me at dorario@gmail.com or my supervisor, Iryna Vanda (call to 097 330 94 52).

Thank you for your collaboration!

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Питальник №3

Будь-ласка, висловіть свою думку, **обравши оцінку від 1 до 5**, яка найкраще **описує сучасний стан** взаємозв'язків між селом Паляниця та сусідніми поселенями (зокрема, Яремча), туристичним комплексом «Буковель» і приватними туристичними садибами та Карпатським національним природним парком.

Індикатори	Повністю непогоджуюся	Не погоджуюся	Ані погоджуюся, ані не погоджуюся	Погоджуюся	Повністю погоджуюся
Неправильна практика твердих побутових відходів (сміття) розпорядження жителів	1	2	3	4	5
Неправильна практика водовідведення резидентами	1	2	3	4	5
Ерозія грунтів викликано жителів	1	2	3	4	5
Підвищення Житлова площа викликано жителів	1	2	3	4	5
Скорочення лісового господарства області викликано жителів	1	2	3	4	5
Шумове забруднення (тобто руху, будівництва і т.д.) обумовлено жителів	1	2	3	4	5
Високий тиск на сільське господарство ресурсів (наприклад, інтенсивне сільське господарство) обумовлено жителів	1	2	3	4	5
Жителі підтримку охорони природи (тобто бере участь у заходах, екологічні проекти і т.д.)	1	2	3	4	5
Жителі брати участь в управлінні ресурсами і планування	1	2	3	4	5
CNNP забезпечує економічні переваги (наприклад, компенсації) для мешканців	1	2	3	4	5
CNNP реалізує заходи щодо збереження (ieto збереження корисних копалин, водних і грунтових ресурсів, тварини, лісове господарство).	1	2	3	4	5
CNNP реалізує заходи щодо забезпечення сталого врожаю (сільське господарство, рибальство, мисливство)	1	2	3	4	5
CNNP забезпечує екологічних можливостей для отримання освіти для жителів	1	2	3	4	5
Спільнота забезпечує культурного досвіду для туристичних	1	2	3	4	5
Індустрія туризму створює прийнятні доходи для резидентів	1	2	3	4	5
Індустрія туризму створює можливості для працевлаштування жителів	1	2	3	4	5
екологічної свідомості жителів "зростає за рахунок туризму	1	2	3	4	5
Туризм причин громадської безпеки	1	2	3	4	5
Туризм причини заторів у пікові періоди	1	2	3	4	5
Туризм сприяє соціального забезпечення (наприклад,	1	2	3	4	5

охорона здоров'я та освіта)					
Поліпшення автомобільних доріг і accessibilities сприяє туризму	1	2	3	4	5
Повсякденне життя мешканців турбують туристів	1	2	3	4	5
Жителі виконані для розвитку туризму	1	2	3	4	5
Туризм призводить до втрати традиційної культури	1	2	3	4	5
Туристи зробити прямий економічний внесок для збереження (наприклад, плата за вхід в CNNP, тури, пожертвування)	1	2	3	4	5
Підвищення Житлова площа викликано туризму	1	2	3	4	5
Туризм в пікові періоди знищувати природні ресурси	1	2	3	4	5
Індустрія туризму причини забруднення річок та грунтових вод	1	2	3	4	5
Індустрія туризму причин забруднення повітря (через транспортування)	1	2	3	4	5
Неправильна практика стічних вод від індустрії туризму	1	2	3	4	5
Неправильна практика видалення твердих відходів індустрії туризму	1	2	3	4	5
Скорочення лісового господарства області викликано індустрії туризму	1	2	3	4	5
Туризм причин візуального впливу (у зв'язку із зимовими видами спорту)	1	2	3	4	5
Туризм причин впливу на навколишнє середовище	1	2	3	4	5
CNNP приваблює туристів (що призводить до розвитку туризму)	1	2	3	4	5
CNNP збільшується екологічної інформованості туристів	1	2	3	4	5
Ваші індикатори та коментарі:					

Будь-ласка, надішліть заповнений питальник не пізніше 23 квітня електронною поштою dorario@gmail.com чи факсом 0322 722644.

Якщо у вас виникнуть якість питання чи нерозуміння з заповненням питальника чи мого дослідження, контактуйте зі мною, Дора Pio: dorario@gmail.com, чи моїм науковим керівником, Ірина Ванда: 097 330 94 52. Заздалегідь вдячна за співпрацю.

Дякую за співпрацю у цьому третьому раунді опитування!

ANNEX B – DATA COLLECTED - CASE STUDY FROM UKRAINE

ANNEX B1 - DATA COLLECTED IN THE SECOND DELPHI QUESTIONNAIRE – SUITABILITY

Variable number	Variable designation	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	Mean
V01	Incorrect practices of solid waste (garbage) disposal by residents	5	4	3	5	4	5	4	4	4	5	5	4	4	4	3	4	**4,2**
V02	Incorrect practices of wastewater disposal by residents	4	4	3	4	4	4	4	4	4	4	5	4	5	4	3	3	**3,9**
V03	Soil erosion is caused by residents	5	5	4	5	4	4	4	4	4	4	4	4	4	4	4	4	**4,2**
V04	Increase of constructed area is caused by residents	5	4	4	4	5	4	5	4	4	4	4	4	4	4	4	4	**4,2**
V05	Reduction of the forestry area is caused by residents	5	5	5	5	5	5	5	4	4	4	4	4	5	4	5	5	**4,6**
V06	Noise pollution (i.e. traffic, construction, etc) is caused by residents	4	4	5	4	5	4	4	4	4	4	4	4	4	4	4	4	**4,1**
V07	High level of poaching is caused by residents	2	2	2	3	2	2	3	2	3	2	2	2	2	3	2	2	**2,3**
V08	High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	3	3	2	2	2	3	3	3	3	3	4	3	3	3	3	3	**2,9**
V09	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3	3	3	3	3	3	3	3	3	4	3	4	3	3	3	3	**3,1**
V10	Residents participate on resource management and planning	3	4	4	5	4	5	4	3	4	3	4	4	4	3	4	4	**3,9**
V11	CNNP provides economical benefits (e.g. compensation) for residents	4	3	4	4	4	4	3	4	3	3	3	3	3	4	3	3	**3,4**
V12	CNNP contributes to conservation	3	3	4	5	5	5	4	4	4	4	3	4	3	4	3	4	**3,9**

V13	CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	4	3	4	5	5	4	4	3	4	4	4	4	3	3	3	3	**3,8**
V14	CNNP provides environmental education opportunities for residents	4	4	3	5	4	5	4	4	4	5	4	5	4	4	4	4	**4,2**
V15	Community provides cultural experiences for tourist	4	5	5	5	5	5	4	4	4	5	4	4	5	4	5	4	**4,5**
V16	Tourism industry creates acceptable incomes for residents	5	4	4	4	4	4	4	4	4	4	4	4	4	5	4	5	**4,2**
V17	Tourism industry creates employment opportunities for residents	4	5	5	4	5	4	4	5	4	4	4	4	4	4	5	4	**4,3**
V18	Residents 'environmental awareness is increasing due to tourism	4	3	3	5	5	3	4	4	4	4	4	4	4	4	4	4	**3,9**
V19	Tourism causes public insecurity	4	5	4	4	4	4	4	4	4	4	4	4	4	5	4	4	**4,1**
V20	The increase of the energy supply system is due to tourism	2	2	2	2	2	2	3	2	2	2	3	2	2	3	2	2	**2,2**
V21	Tourism causes traffic congestion in peak periods	3	3	3	3	3	3	3	3	4	3	4	3	3	3	4	3	**3,2**
V22	Tourism promotes social welfare (e.g. health and education)	3	4	4	4	3	4	3	3	4	4	4	5	5	5	4	3	**3,9**
V23	Improvements of roads and accessibilities is promoted by tourism	4	5	4	4	3	4	5	4	4	5	5	5	4	3	3	4	**4,1**
V24	The daily lives of residents is disturbed by tourists	3	4	4	4	4	4	3	4	4	4	4	5	4	3	4	4	**3,9**
V25	Residents are satisfied for tourism development	4	4	4	4	4	5	4	4	4	4	4	4	5	4	4	4	**4,1**

V26	Tourism causes loss of traditional culture	3	4	3	4	4	3	3	3	4	5	4	4	5	4	5	4	**3,9**
V27	Tourism industry makes indirect economic contribution for conservation	2	2	3	2	2	2	3	2	2	3	3	2	3	2	2	2	**2,3**
V28	Tourists make direct economic contribution for conservation (e.g. entry fees, donations)	3	3	4	4	4	4	4	4	4	4	4	3	3	4	4	4	**3,8**
V29	Increase of constructed area is caused by tourism	4	4	5	5	4	4	4	4	4	4	3	4	4	4	4	4	**4,1**
V30	Tourism in peak periods destroy natural resources	4	4	3	5	5	5	3	4	3	5	4	3	5	4	4	3	**4,0**
V31	Tourism industry causes pollution of rivers and groundwater	4	4	5	5	4	5	5	4	4	4	4	4	4	5	4	4	**4,3**
V32	Tourism industry causes air pollution (due to transportation)	4	4	5	5	4	3	3	4	5	5	4	5	4	3	4	3	**4,1**
V33	Incorrect practices of wastewater disposal by tourism industry	3	3	4	5	4	5	5	4	4	5	5	4	4	4	4	4	**4,2**
V34	Incorrect practices of solid waste disposal by tourism industry	4	4	4	5	4	5	4	4	4	4	5	5	4	4	4	3	**4,2**
V35	Reduction of the forestry area is caused by tourism industry	4	3	4	5	4	3	4	4	4	4	3	4	4	4	4	4	**3,9**
V36	Tourism causes visual impact (due to winter sports)	2	2	1	5	4	3	4	3	3	4	4	4	4	3	3	3	**3,3**
V37	Noise pollution (i.e. traffic, construction, etc) is caused by tourism	2	2	1	2	3	2	1	1	2	4	3	3	3	2	2	2	**2,2**
V38	Tourism causes environmental impacts	1	3	2	5	4	4	4	4	4	5	5	4	4	4	3	3	**3,7**

V39	Tourists participate in conservation activities	2	3	2	1	2	1	3	4	2	3	4	3	3	1	3	2	**2,4**
V40	CNNP attracts tourists (which causes tourism development)	4	4	3	4	5	4	4	4	4	3	4	4	3	4	3	4	**3,8**
V41	CNNP increases tourists' environmental awareness	3	3	4	4	5	4	5	4	4	4	4	4	4	4	3	3	**3,9**

ANNEX B2 - DATA COLLECTED IN THE SECOND DELPHI QUESTIONNAIRE – COMPREHENSIBILITY

Variable number	Variable designation	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	Mean
V01	Incorrect practices of solid waste (garbage) disposal by residents	5	4	4	4	5	5	4	4	4	5	5	4	4	4	3	4	**4,3**
V02	Incorrect practices of wastewater disposal by residents	4	4	4	4	4	4	4	4	4	4	5	4	5	4	4	4	**4,1**
V03	Soil erosion is caused by residents	4	3	3	5	4	4	4	4	4	4	4	4	4	3	4	3	**3,8**
V04	Increase of constructed area is caused by residents	3	3	3	3	3	4	4	4	3	4	4	3	3	4	4	4	**3,5**
V05	Reduction of the forestry area is caused by residents	4	4	3	5	5	5	4	4	4	4	4	4	4	4	4	4	**4,1**
V06	Noise pollution (i.e. traffic, construction, etc) is caused by residents	4	4	4	4	5	4	4	4	4	5	5	4	5	4	4	4	**4,3**
V07	High level of poaching is caused by residents	4	5	4	4	4	3	4	4	5	4	4	4	4	4	5	5	**4,2**
V08	High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	3	3	3	4	4	3	3	3	4	4	4	4	3	3	3	3	**3,4**
V09	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3	3	3	4	4	3	4	4	4	5	4	4	4	4	4	3	**3,8**
V10	Residents participate on resource management and planning	2	3	3	4	4	4	3	3	3	3	4	3	3	3	3	3	**3,2**
V11	CNNP provides economical benefits (e.g. compensation) for residents	4	4	4	4	4	4	3	4	3	4	4	3	4	4	4	4	**3,8**

V12	CNNP contributes to conservation	1	2	2	4	4	3	3	2	1	3	2	3	2	2	3	1	**2,4**
V13	CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	4	3	4	5	4	4	4	4	4	4	4	4	4	4	3	3	**3,9**
V14	CNNP provides environmental education opportunities for residents	3	4	3	4	4	4	4	3	4	4	4	3	4	3	4	4	**3,7**
V15	Community provides cultural experiences for tourist	4	4	4	5	3	2	4	4	4	5	4	4	5	4	5	4	**4,1**
V16	Tourism industry creates acceptable incomes for residents	5	4	4	4	4	4	4	4	4	3	5	3	4	3	4	4	**3,9**
V17	Tourism industry creates employment opportunities for residents	4	4	3	4	3	4	3	4	4	4	4	4	4	4	4	4	**3,8**
V18	Residents 'environmental awareness is increasing due to tourism	4	3	3	4	4	3	4	4	3	4	4	3	4	3	4	4	**3,6**
V19	Tourism causes public insecurity	4	4	4	3	3	4	4	4	4	4	5	4	4	4	4	4	**3,9**
V20	The increase of the energy supply system is due to tourism	3	4	4	5	4	4	4	4	4	4	5	4	4	3	4	4	**4,0**
V21	Tourism causes traffic congestion in peak periods	4	3	4	4	4	4	4	3	4	4	5	4	4	3	4	3	**3,8**
V22	Tourism promotes social welfare (e.g. health and education)	3	4	4	4	3	4	3	3	4	4	4	5	5	5	4	3	**3,9**
V23	Improvements of roads and accessibilities is promoted by tourism	4	3	3	4	3	4	4	4	3	4	4	3	3	3	3	4	**3,5**
V24	The daily lives of residents is disturbed by tourists	3	4	4	3	4	4	3	3	4	3	4	4	4	3	4	4	**3,6**

V25	Residents are satisfied for tourism development	4	4	4	5	4	4	4	4	4	3	4	4	4	4	4	4	**4,0**
V26	Tourism causes loss of traditional culture	3	4	3	4	4	3	3	3	4	5	4	4	5	4	5	4	**3,9**
V27	Tourism industry makes indirect economic contribution for conservation	4	3	2	4	3	4	3	3	4	5	4	4	4	4	3	3	**3,6**
V28	Tourists make direct economic contribution for conservation (e.g. entry fees, donations)	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	**3,9**
V29	Increase of constructed area is caused by tourism	4	4	4	5	4	4	4	4	4	4	3	4	4	4	4	4	**4,0**
V30	Tourism in peak periods destroy natural resources	3	3	2	3	3	4	3	4	3	2	4	3	4	2	3	3	**3,1**
V31	Tourism industry causes pollution of rivers and groundwater	4	4	4	4	4	5	4	4	4	4	4	3	4	4	4	4	**4,0**
V32	Tourism industry causes air pollution (due to transportation)	4	4	4	4	4	3	3	4	4	4	4	5	4	3	4	3	**3,8**
V33	Incorrect practices of wastewater disposal by tourism industry	3	3	4	5	4	4	4	4	4	4	5	4	4	4	4	4	**4,0**
V34	Incorrect practices of solid waste disposal by tourism industry	4	4	3	4	4	5	4	4	4	4	4	4	4	4	4	3	**3,9**
V35	Reduction of the forestry area is caused by tourism industry	4	4	4	5	5	3	4	4	4	4	3	4	4	4	4	4	**4,0**
V36	Tourism causes visual impact (due to winter sports)	3	3	3	4	4	3	4	3	3	4	4	3	4	3	3	3	**3,4**
V37	Noise pollution (i.e. traffic, construction, etc) is caused by tourism	3	3	3	4	3	4	4	4	3	4	3	3	3	4	4	4	**3,5**

V38	Tourism causes environmental impacts	1	3	2	4	4	4	4	4	4	4	4	4	4	4	3	3	**3,5**
V39	Tourists participate in conservation activities	3	3	3	5	5	4	3	4	4	5	4	4	3	4	4	4	**3,9**
V40	CNNP attracts tourists (which causes tourism development)	4	4	4	5	4	4	4	4	4	4	4	4	4	4	3	4	**4,0**
V41	CNNP increases tourists' environmental awareness	3	3	4	5	4	4	4	4	4	4	4	4	4	4	4	4	**3,9**

ANNEX B3- DATA COLLECTED IN THE SECOND DELPHI QUESTIONNAIRE – IMPORTANCE

Variable number	Variable designation	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	C13	C14	C15	C16	Mean
V01	Incorrect practices of solid waste (garbage) disposal by residents	4	4	5	5	5	4	4	4	4	4	4	4	4	4	4	4	**4,2**
V02	Incorrect practices of wastewater disposal by residents	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	3	**4,1**
V03	Soil erosion is caused by residents	3	3	4	4	3	4	3	3	4	3	3	3	3	4	3	3	**3,3**
V04	Increase of constructed area is caused by residents	2	3	4	4	3	4	3	2	3	3	3	4	3	3	3	4	**3,2**
V05	Reduction of the forestry area is caused by residents	3	4	4	4	4	3	3	4	4	4	4	4	4	3	4	4	**3,8**
V06	Noise pollution (i.e. traffic, construction, etc) is caused by residents	5	4	4	5	4	5	5	5	4	3	3	4	4	4	4	4	**4,2**
V07	High level of poaching is caused by residents	3	3	3	4	4	3	4	3	3	3	4	3	4	3	3	3	**3,3**
V08	High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	3	4	3	4	4	4	4	4	3	4	4	3	4	4	4	4	**3,8**
V09	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3	4	4	3	4	4	4	3	3	4	3	3	4	3	4	3	**3,5**
V10	Residents participate on resource management and planning	4	4	5	5	5	5	4	3	5	5	5	5	4	5	4	4	**4,5**
V11	CNNP provides economical benefits (e.g. compensation) for residents	3	4	4	4	4	4	3	3	4	4	3	3	3	4	3	3	**3,5**

V12	CNNP contributes to conservation	4	3	3	4	4	5	4	4	5	4	4	4	4	4	4	4	**4,0**
V13	CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	3	3	3	3	3	3	3	4	4	4	4	4	3	3	3	3	**3,3**
V14	CNNP provides environmental education opportunities for residents	3	4	3	5	4	5	4	4	4	3	4	4	4	5	4	4	**4,0**
V15	Community provides cultural experiences for tourist	4	4	5	4	4	3	4	5	5	5	5	4	4	4	3	4	**4,2**
V16	Tourism industry creates acceptable incomes for residents	5	5	4	5	5	4	5	5	4	4	4	4	5	5	5	4	**4,6**
V17	Tourism industry creates employment opportunities for residents	5	5	4	5	4	4	5	5	5	4	5	4	5	5	5	5	**4,7**
V18	Residents 'environmental awareness is increasing due to tourism	3	4	3	4	5	4	4	4	3	4	4	4	4	3	4	4	**3,8**
V19	Tourism causes public insecurity	4	4	3	3	3	3	3	3	3	3	4	3	3	3	3	3	**3,2**
V20	The increase of the energy supply system is due to tourism	2	3	3	3	2	3	2	3	3	3	3	4	3	3	3	4	**2,9**
V21	Tourism causes traffic congestion in peak periods	5	4	4	4	4	4	4	3	4	5	4	3	4	4	4	4	**4,0**
V22	Tourism promotes social welfare (e.g. health and education)	4	4	3	5	4	4	5	5	4	4	4	4	4	5	4	4	**4,2**
V23	Improvements of roads and accessibilities is promoted by tourism	4	4	5	4	4	4	4	4	4	4	4	5	4	4	4	5	**4,2**
V24	The daily lives of residents is disturbed by tourists	3	3	4	5	4	4	4	4	3	4	4	4	4	4	3	3	**3,8**

V25	Residents are satisfied for tourism development	5	5	5	5	4	5	5	4	4	4	3	4	3	4	4	4	**4,3**
V26	Tourism causes loss of traditional culture	3	4	4	5	4	5	5	4	3	4	4	4	4	4	4	3	**4,0**
V27	Tourism industry makes indirect economic contribution for conservation	3	3	2	4	3	3	2	3	3	4	3	2	2	3	2	2	**2,8**
V28	Tourists make direct economic contribution for conservation (e.g. entry fees, donations)	3	4	4	4	4	5	4	4	5	4	4	5	4	5	4	4	**4,2**
V29	Increase of constructed area is caused by tourism	4	4	4	5	5	4	4	4	4	4	4	4	4	4	4	4	**4,1**
V30	Tourism in peak periods destroy natural resources	4	3	3	5	4	5	4	5	4	5	5	4	4	4	3	4	**4,1**
V31	Tourism industry causes pollution of rivers and groundwater	4	4	4	4	4	5	4	4	5	5	4	4	4	4	4	4	**4,2**
V32	Tourism industry causes air pollution (due to transportation)	4	3	4	5	5	5	4	4	5	5	5	4	4	4	4	4	**4,3**
V33	Incorrect practices of wastewater disposal by tourism industry	4	4	3	4	4	4	5	5	4	4	4	5	4	4	5	4	**4,2**
V34	Incorrect practices of solid waste disposal by tourism industry	4	3	4	3	3	3	4	4	4	4	4	4	4	4	4	4	**3,8**
V35	Reduction of the forestry area is caused by tourism industry	5	4	4	5	5	5	5	5	4	5	5	5	5	5	5	4	**4,8**
V36	Tourism causes visual impact (due to winter sports)	3	4	3	4	3	4	5	5	5	4	5	4	4	4	3	3	**3,9**
V37	Noise pollution (i.e. traffic, construction, etc) is caused by tourism	3	3	4	3	3	4	3	3	3	3	3	3	3	3	3	3	**3,1**

V38	Tourism causes environmental impacts	3	3	3	5	4	4	3	4	4	5	4	4	4	4	3	3	**3,8**
V39	Tourists participate in conservation activities	3	3	3	4	3	2	4	3	4	4	4	3	4	3	3	3	**3,3**
V40	CNNP attracts tourists (which causes tourism development)	4	4	5	5	5	4	4	4	4	5	4	3	4	5	4	4	**4,3**
V41	CNNP increases tourists' environmental awareness	4	5	5	4	4	5	5	5	5	4	4	4	5	3	4	4	**4,4**

ANNEX B4 - DATA COLLECTED IN THE EVALUATION QUESTIONNAIRE

Variable number	Variable designation	C01	C02	C03	C04	C05	C06	C07	C08	C09	C10	C11	C12	Mean
V01	Incorrect practices of solid waste (garbage) disposal by residents	5	5	4	4	4	2	4	4	5	4	3	3	**3,9**
V02	Incorrect practices of wastewater disposal by residents	5	4	4	4	3	3	3	4	5	3	1	2	**3,4**
V03	Soil erosion is caused by residents	5	2	3	3	4	2	2	3	4	3	2	2	**2,9**
V04	Increase of constructed area is caused by residents	5	2	3	2	2	3	3	4	5	2	3	3	**3,1**
V05	Reduction of the forestry area is caused by residents	5	2	2	2	2	4	3	3	3	2	2	3	**2,8**
V06	Noise pollution (i.e. traffic, construction, etc) is caused by residents	4	3	2	3	2	4	3	2	3	2	2	2	**2,7**
V07	High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents	3	2	3	3	2	3	3	3	3	2	2	2	**2,6**
V08	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)	3	4	3	3	3	4	3	3	3	5	5	4	**3,6**
V09	Residents participate on resource management and planning	2	3	3	3	3	3	2	2	1	5	5	4	**3,0**
V10	CNNP provides economical benefits (e.g. compensation) for residents	2	2	5	3	2	3	2	2	1	5	5	4	**3,0**
V11	CNNP implements conservation measures (i.e.to conserve mineral, water, and soil resources, animals, forestry).	4	5	5	4	4	5	3	4	2	5	5	4	**4,2**

V12	CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)	4	4	4	4	4	4	3	3	2	4	5	4	**3,8**
V13	CNNP provides environmental education opportunities for residents	2	5	5	5	5	4	4	3	3	5	5	3	**4,1**
V14	Community provides cultural experiences for tourist	3	4	4	3	3	5	3	3	4	5	5	4	**3,8**
V15	Tourism industry creates acceptable incomes for residents	4	4	4	4	4	5	5	4	4	5	5	5	**4,4**
V16	Tourism industry creates employment opportunities for residents	4	4	4	4	4	5	5	4	4	5	5	5	**4,4**
V17	Residents 'environmental awareness is increasing due to tourism	2	5	3	3	3	1	3	4	4	5	5	5	**3,6**
V18	Tourism causes public insecurity	4	3	3	4	3	4	3	4	3	4	3	3	**3,4**
V19	Tourism causes traffic congestion in peak periods	5	3	4	4	4	4	4	4	5	2	2	3	**3,7**
V20	Tourism promotes social welfare (e.g. health and education)	4	4	4	4	4	5	3	4	3	5	5	5	**4,2**
V21	Improvements of roads and accessibilities is promoted by tourism	5	4	4	4	4	5	4	4	4	5	5	5	**4,4**
V22	The daily lives of residents is disturbed by tourists	4	3	3	4	3	4	3	4	4	3	4	4	**3,6**
V23	Residents are satisfied for tourism development	3	4	4	4	4	4	5	4	3	5	5	5	**4,2**
V24	Tourism causes loss of traditional culture	3	3	2	2	1	3	2	2	5	2	1	2	**2,3**

V25	Tourists make direct economic contribution for conservation (e.g. entry fees in CNNP, tours, donations)	2	4	3	4	4	5	2	4	4	5	5	5	**3,9**
V26	Increase of constructed area is caused by tourism	5	5	4	4	4	5	4	4	5	4	5	5	**4,5**
V27	Overloading capacity of tourism in peak periods destroy natural resources	5	4	4	4	4	4	5	4	5	4	3	2	**4,0**
V28	Tourism industry causes pollution of rivers and groundwater	5	5	5	3	5	5	3	3	5	4	2	2	**3,9**
V29	Tourism industry causes air pollution (due to transportation)	4	4	3	4	4	5	4	2	5	3	1	2	**3,4**
V30	Incorrect practices of wastewater disposal by tourism industry	5	5	4	4	3	2	2	4	5	3	2	2	**3,4**
V31	Incorrect practices of solid waste disposal by tourism industry	3	4	4	4	4	4	4	5	4	3	4	4	**3,9**
V32	Reduction of the forestry area is caused by tourism industry	5	4	2	2	2	4	3	3	5	2	2	2	**3,0**
V33	Tourism causes visual impact (due to winter sports)	5	3	3	3	3	1	2	3	4	1	1	2	**2,6**
V34	Tourism causes environmental impacts	4	5	3	4	4	3	4	3	5	3	1	2	**3,4**
V35	CNNP attracts tourists (which causes tourism development)	3	4	4	4	4	5	4	4	4	5	5	5	**4,3**
V36	CNNP increases tourists' environmental awareness	3	5	4	4	4	5	4	4	4	5	5	5	**4,3**

ANNEX C - MONITORING AND EVALUATION TOOL FOR TOURISM DESTINATIONS - CASE STUDY FROM UKRAINE

INSTRUCTIONS

PERFORMANCE EVALUATION FRAMEWORK

These are brief guidelines on how to fill the Performance Evaluation Framework template.

SECTION	BOX	EXPLANATION
A	**Data on periods covered**	This section is filled in by the manager that undertakes the monitoring and evaluation program at the beginning of the monitoring program.
B	**Respondents**	In this column specify each respondent's answers from the Evaluation questionnaire.
	Evaluation Year 1	This column provides targets achieved in the year 1 of monitoring and evaluation
	Evaluation Label 1	This column provides a label in accordance to the evaluation results of the year 1
	Evaluation Year 2	This column provides an average of respondents answers
	Evaluation Label 2	In this column specify an outcome symbol using the following table:
		Symbol: ☹☹ / ☹ / 😐 / ☺ / ☺☺ Outcome: completely disagree / disagree / neither agree nor disagree / agree / completely agree Score: 1.0-1.9 / 2.0-2.9 / 3.0-3.9 / 4.0-4.9 / 5.0-5.9
	Importance	This column specifies each indicators importance for assure a sustainable tourism development. Very important and important indicators should be firstly improved.
		Symbol: 😐 / ☺ / ☺☺ Meaning: Neutral / Important / Very important
C	**Goal(s) for year 3**	Goal(s) are broad and overarching statements of a desired, medium to long-term outcome. Example: Reduce stakeholders' agreement (i.e. disagree) related to the "Incorrect practices of solid waste (garbage) disposal by residents".
	Objectives	Each goal should have a set of related, more specific objectives that will permit to reach the stated goal(s). Establish a deadline for each goal.

EVALUATION FRAMEWORK

A. MONITORING DETAILS

	Year 1	Year 2
Period Covered: from		
Period Covered: to		

B. EVALUATION FRAMEWORK

Relationship aspect	Dimension	Indicator number	Relationship Indicator designation	Respondent 1	Respondent 2	Respondent 3	Evaluation- Year 2	Evaluation label - Year 2	Evaluation - Year 1	Evaluation label - year 1	Indicator's Importance	Goal for the year 3
Influence of Local community on Natural resources	**Environment**	1	Incorrect practices of solid waste (garbage) disposal by residents						4,1	☺	☺	
		2	Incorrect practices of wastewater disposal by residents						3,8	☺	☺	
		3	Soil erosion is caused by residents						3,1	😐	😐	
		4	Increase of constructed area is caused by residents						3,1	😐	😐	
		5	Reduction of the forestry area is caused by residents						2,9	😐	☺	
		6	Noise pollution (i.e. traffic, construction, etc) is caused by residents						2,8	😐	☺	
		7	High pressure on agriculture resources (e.g. intensive agriculture) is caused by residents						2,7	😐	☺	
	Society	8	Residents support nature conservation (i.e. taking part in activities, environmental projects, etc.)						3,5	☺	☺	
		9	Residents participate on resource management and planning						2,7	😐	☺ ☺	
Influence of Natural resource on Local community	**Economy**	10	CNNP provides economical benefits (e.g. compensation) for residents						2,7	😐	☺	
	Environment	11	CNNP implements conservation measures (i.e.to conserve mineral, water, and soil resources, animals, forestry).						4,1	☺	☺	
		12	CNNP implements measures to guarantee the sustainable harvest (farming, fishing, hunting)						3,6	☺	😐	
	Society	13	CNNP provides environmental education opportunities for residents						4,1	☺	☺	

Influence of Local community on Tourism	**Society**	14	Community provides cultural experiences for tourist						3,8	☺	☺	
Influence of Tourism on Local community	**Economy**	15	Tourism industry creates acceptable incomes for residents						4,3	☺	☺ ☺	
		16	Tourism industry creates employment opportunities for residents						4,3	☺	☺ ☺	
	Society	17	Residents' environmental awareness is increasing due to tourism						3,3	😐	☺	
		18	Tourism causes public insecurity						3,4	😐	😐	
		19	Tourism causes traffic congestion in peak periods						3,9	☺	☺	
		20	Tourism promotes social welfare (e.g. health and education)						4	☺	☺	
		21	Improvements of roads and accessibilities is promoted by tourism						4,3	☺	☺	
		22	The daily lives of residents is disturbed by tourists						3,6	☺	☺	
		23	Residents are satisfied for tourism development						4,3	☺	☺	
		24	Tourism causes loss of traditional culture						2,6	😐	☺	
Influence of Tourism on Natural resources	**Economy**	25	Tourists make direct economic contribution for conservation (e.g. entry fees in CNNP, tours, donations)						3,7	☺	☺	
	Environment	26	Increase of constructed area is caused by tourism						4,5	☺	☺	
		27	Tourism in peak periods destroy natural resources						4,3	☺	☺	
		28	Tourism industry causes pollution of rivers and groundwater						4,3	☺	☺	
		29	Tourism industry causes air pollution (due to transportation)						3,8	☺	☺	
		30	Incorrect practices of wastewater disposal by tourism industry						3,7	☺	☺	
		31	Incorrect practices of solid waste disposal by tourism industry						3,9	☺	☺	
		32	Reduction of the forestry area is caused by tourism industry						3,2	😐	☺ ☺	
		33	Tourism causes visual impact (due to winter sports)						2,8	😐	☺	
		34	Tourism causes environmental impacts						3,8	☺	☺	
Influence of Natural resources on Tourism	**Economy**	35	CNNP attracts tourists (which causes tourism development)						4,1	☺	☺	
	Society	36	CNNP increases tourists' environmental awareness						4,2	☺	☺	

C. GOALS AND OBJECTIVES

Indicator number	Goal	Objectives	Deadlines

ANNEX D – DRAFT TOOL - CASE STUDY FROM BRAZIL

MONITORING & EVALUATION DRAFT TOOL

The monitoring and evaluation (M&E) tool aims to support ecolodges managers and its suppliers to identify how ecotourism projects perform, what contributions they bring to the environmental and local communities, and communicate results.

FIELD WORK TASKS

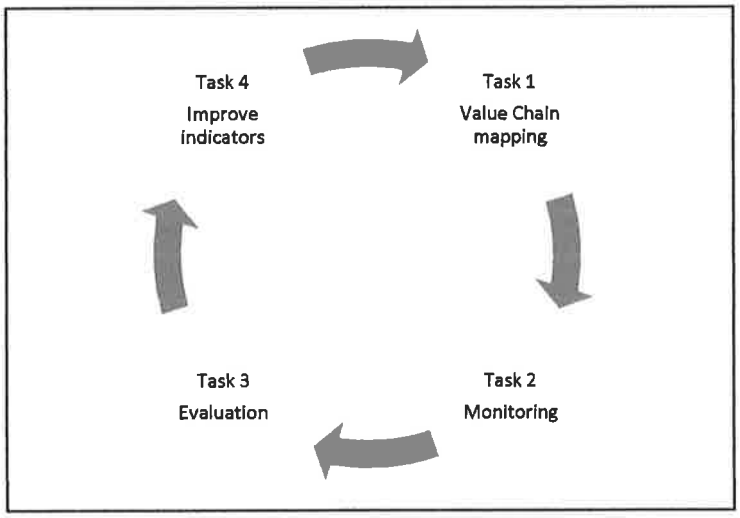

Figure D1 - Steps for implement the M&E Tool

- **TASK 1. VALUE CHAIN MAP**

The value chain is a way to representing the series of transactions involved in providing the services of the Ecolodge. To elaborate value chain, an in-depth review of the ecolodge activities and services is needed. Interviews can be arranged with general director, operational director, human resources director or other manager able to inform about the service.

- **TASK 2. MONITORING**

Contact suppliers and invite them to an interview.

Data should be collected near the ecolodge managers and suppliers.

- **TASK 3. EVALUATION**

The evaluation should be done by comparing the data achieved in this monitoring with the target or objectives settled in the preview monitoring year.

- **TASK 4. COMMUNICATE THE RESULTS**

Results should be communicate to the ecolodge managers and suppliers as well as third parties..

Table D1 – Indicators for monitoring and evaluate the ecotourism project.

QUESTIONS	*Classes*	*Indicators*	*Units*	*Interpretation*
R1a: Does the ecolodge produce a minimal negative impact on the host environment?	Natural environment pressure	1. Daily visitors/tourism area (Annual average and peak period average)	Persons/km2	Visitor number in unit area can reflect the pressures on natural environment caused by tourism
		2. Accidents that destroying environment caused by tourists (all-year)	Accidents (number)	This indicator can reflect the direct negative environmental impacts resulting from tourism
		3. Number of days tourists spend on nature tourism activities out of total number of days	%	Visitor number in unit area can reflect the pressures on natural environment caused by tourism
		4. Number of tourists visiting designated sites per month	number	Visitor number in unit area can reflect the pressures on natural environment caused by tourism
		5. Amount of garbage/visitors (Annual average and peak period average)	tons/person	Indicates the pressure on landscape caused by garbage
		6. Daily water consumption/ visitors (annual average and peak period average)	m3/person	indicates the pressures on water supply
		7. Daily electricity consumption/visitors (Annual average and peak period average)	kw h/person	Indicates the pressures on electricity facilities
R1b: Does the ecolodge produce an evolving commitment to environmental protection and conservation of resources?	Ecoresort measures	8. Existence of integrated tourism and environment plan	Yes/No	The integrated tourism and environment plan is the basis of tourism development and management.
		9. Existence of environment impact assessment (EIA) procedure for every new tour/activity/infrastructure project	Yes/No	EIA is advanced responding measures for tourist pressure on environment
		10. Existence of regular environmental monitoring	Yes/No	Indicates the management responding on environmental pollution caused by tourism
		11. Existence of environmental education to visitors	Yes/No	Include ecological environmental guides, signs, interpretations, etc.

R1c: Does the ecolodge produce a generation of financial resources to support and sustain ecological and socio-cultural resources?		12. Measures taken for environmental protection (all-year)	Measures	Include the construction of waste treatment facilities, trails, paling, etc.
		13. Existence of compensatory environmental plan	Yes/No	
		14. Existence of environmental impact reduce measures	Measures	
	Ecoresort responses	15. Daily wastewater treatment capacity	ton/day	Indicates the response on water environmental pollution
		16. Daily waste solid treatment capacity	ton/day	Indicates the response on garbage problems
	Natural resources Income	17. Annual income from tourism/total income to environmental organizations	%	Indicate the contribution of tourism to the nature resources.
		18. Annual income from entrance fees[1]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.
		19. Annual income from user fees[2]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.
		20. Annual income from concessions and leases[3]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.
		21. Annual income from direct operation of commercial activities[4]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.
		22. Annual income from taxes[5]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.

[1] fees charged per person or per vehicle, or a combination of both, for entrance and access to nature areas;
[2] fees charged to visitors for undertaking specific recreational activities or for the use of specialised facilities within nature areas, subject to compliance with the area's regulations (e.g. for parking, camping, fishing, hunting, boating, diving, sports, photography etc.);
[3] contracts between managers of nature areas and business or individuals under which the businesses or individuals are permitted to operate within the nature area;
[4] provision of commercial goods and services (such as guiding, specialised rental equipment, food sales or merchandising of clothing, crafts and souvenirs, for example);
[5] financial charge on certain goods, services or transactions that provide funds for national or local governments, and that, in this case, are used to support the conservation;

R1d: Does the ecolodge produce an active involvement and cooperation of local residents as well as tourists in enhancing the environment?		23. Annual donations[6]	Monetary unit (real)	Indicate the contribution of tourism to the nature resources.
	Volunteering [7]	24. Number of volunteers	number of volunteers	Indicate an active involvement and cooperation of local residents and tourist in enhancing the environment.
	Ecoresort environmental education activities	25. Number of participants per environmental education activity	Number	Indicate an active involvement and cooperation of local residents and tourist in enhancing the environment.
		26. Number of tourist sites which have been targeted by environmental awareness campaigns	Number	
		27. Number of environmental awareness campaigns destined to community	Number	
R2: Does the ecolodge produce economic and social benefits to the host community?	Ecoresort social responsibility	28. Direct contribution to health and sanitation, education, infrastructure etc.	Measure	Indicate the social benefits to the host community
		29. Local community's annual income from ecolodge/total income	Monetary unit (real)	Indicates tourism's economic benefits to locals
		30. Direct and indirect economic impacts (handicrafts, provision of food and services etc.)	Monetary unit (real)	
		31. Direct and indirect economic impacts: jobs	Number	

[6] donations are gifts or money, or in some cases goods and services, that are donated to support the conservation of nature areas

[7] services offer by volunteers to a nature conservation area of their own free will and without payment (except, in some cases, to cover their basic living expenses);

ANNEX E – SURVEY INSTRUMENTS - CASE STUDY FROM BRAZIL

ANNEX E1 – INTERVIEW GUIDE – DESIGN VALUE CHAIN MAP

PROTOCOLO DA ENTREVISTA

- Apresentação do objecto de estudo.
- Solicitar autorização para gravar a entrevista.
- Garantir o anonimato do entrevistado.
- Comunicar a duração da entrevista (cerca 30 minutos).
- Fornecer dados para futuros contactos.

GUIÃO DA ENTREVISTA

1. Quais são os serviços prestados pelo hotel ao hóspede? (refeições, passeios turísticos, ginásio, lavandaria, etc.)

2. Em relação aos serviços oferecidos ao hóspede, detalhe?
   2.1. Os serviços são fornecidos pelo hotel ou subcontratados?
   2.2. Quem são os fornecedores?
   2.3. Em que se baseiam os contratos?
   2.4. Os fornecedores são locais?
      2.4.1. Se não são, explique a razão?

3. Em relação aos serviços de ecoturismo, detalhe:
   3.1. Quais os serviços disponíveis?
   3.2. Quem são os fornecedores?
   3.3. Os fornecedores são locais?
      3.3.1. Se não são, explique a razão?
   3.4. Em que se baseiam os contratos entre os fornecedores e o hotel?
   3.5. Quais os valores cobrados pelas actividades?
   3.6. Como se distribuem as receitas entre fornecedores?
   3.7. Qual o destino das receitas cobradas?
   3.8. Existem serviços sub-contratados (transporte, refeições, etc.)?

ANNEX E2 – INTERVIEW GUIDE– ECOTOUR COMPANIES

PROTOCOLO DA ENTREVISTA

- Apresentação do objecto de estudo.
- Solicitar autorização para gravar a entrevista.
- Garantir o anonimato do entrevistado.
- Comunicar a duração da entrevista (cerca 30 minutos).
- Fornecer dados para futuros contactos.

GUIÃO DA ENTREVISTA

1. Quando é que a empresa foi criada?

2. Desde quando opera no ecolodge?

3. A empresa é constituída por quantos funcionários?
   3.1. Os funcionários são naturais de Praia do Forte?

4. Que serviços são prestados pela empresa no ecolodge?

5. Opera noutros locais?

6. A empresa adopta alguma medida com vista a minimizar o seu impacto (por exemplo: plano de gestão ambiental, código de boas praticas, etc.)?

7. Durante as actividades de ecoturismo existe a preocupação de sensibilizar os turistas para a importância da conservação da natureza e do património cultural? São feitas recomendação de como actuar durante a visita e fora dela de forma a evitar causar impacto nos recursos naturais?

ANNEX E3 – INTERVIEW GUIDE– CONSERVATION ORGANIZATIONS

PROTOCOLO DA ENTREVISTA

- Apresentação do objecto de estudo.
- Solicitar autorização para gravar a entrevista.
- Garantir o anonimato do entrevistado.
- Comunicar a duração da entrevista (cerca 30 minutos).
- Fornecer dados para futuros contactos.

GUIÃO DA ENTREVISTA

1. Quando é que a associação foi criada?

2. Quais são os objectivos da associação?

3. Como se relacionam os objectivos da associação com o ecoturismo?

4. A empresa adopta alguma medida com vista a minimizar o seu impacto (por exemplo: plano de gestão ambiental, código de boas praticas, etc.)?

5. Quais são os contributos directos que a associação dá para a conservação da natureza?

6. Qual é o impacto da associação no bem-estar da comunidade local?

7. A associação tem como preocupação sensibilizar os turistas para a importância da conservação da natureza, do património cultural, e para os comportamentos "ecologicamente correctos"?

8. A associação (base da Praia do Forte) é constituída por quantos funcionários?
   8.1. Os funcionários são naturais de Praia do Forte?

ANNEX E4 – INTERVIEW GUIDE – ECOLODGE MANAGERS

PROTOCOLO DA ENTREVISTA

- Apresentação do objecto de estudo.
- Solicitar autorização para gravar a entrevista.
- Garantir o anonimato do entrevistado.
- Comunicar a duração da entrevista (cerca 30 minutos).
- Fornecer dados para futuros contactos.

GUIÃO DA ENTREVISTA

OBJECTIVE 1: ECOLODGE MINIMIZES IMPACT

Operational environmental management

- Environmental management procedures are documented.
- The environmental management procedures are approved, implemented and reviewed annually by senior management.

Location

- Operations in protected areas are undertaken in locations specifically recognized as appropriate by the area's management plan, or are otherwise condoned by the protected area manager.
- The use of the area for ecotourism is identified in land use plans, strategic plans, zoning plans etc. as being a preferred or permitted use.

Site disturbance, landscaping and rehabilitation

- Development and ongoing use of the site(s) has involved minimal clearing of natural areas, has avoided disruption to wildlife movement and breeding patterns, and has not affected the viability of local populations of rare or threatened species of flora and fauna.
- Landscaping of the site reflects the character of the surrounding natural environment.
- All disturbed areas have subsequently been rehabilitated with naturally occurring native species reflecting the surrounding ecology; and landscaping is undertaken using native locally occurring species.

Drainage, soil and water management

- Development has avoided extreme land shaping and surface modifications.
- Erosion on site is not evident or measures are being taken to stabilize and rehabilitate existing eroded areas.
- Appropriate fencing, shrubs or barriers are used to restrict pedestrian and vehicular traffic to defined and stabilized areas.
- Erosion and sediment control measures are undertaken (e.g. buffer strips/soakage strips around high use areas; impervious surfaces to allow infiltration (i.e. gardens in parking areas) and the stormwater runoff from the site does not contain pollutant (suspended solids, nutrients and oxygen demanding material (i.e. decomposing debris)) levels above that occurring prior to development.

Visual impacts

- In the design and construction of ecolodge visual impact has been considerate.

Biodiversity conservation

- A program of work is prepared and implemented which has the goal of protecting endangered species, biodiversity, native vegetation, natural water flows, landscape and cultural heritage of the site.

- The use of pesticides and herbicides that cause residual pollution are avoided.

Lighting

- There have been undertaken measures to minimise illumination around the site.

Water supply and conservation

- Where water is drawn from natural sources other than rainwater storage tanks (i.e. a local river or stream, a water storage constructed on a local river or stream, or a local bore), the take of water is ecological, and can be sustained, and not significantly impact the water available to local communities and ecosystems.
- Water conservation measures have been implemented.

Wastewater

- In onsite treatment wastewater receives at least secondary treatment or is composted. Where this is not practical the method of wastewater treatment (direct disposal of sewage or septic system) is justifiable and the ongoing impacts on ground and surface waters have been assessed and are judged to be sustainable and treated effluent discharged to land or water meets or exceeds statutory requirements;

- All onsite wastewater treatment has breakdown alarms, approved emergency bypass facilities and an ongoing water operations manual that is administered by a trained operator.

Noise

- Usual noise levels from all activities at the site are not significantly more than the background noise in nearby natural areas or adjacent residences (e.g. see number of complains)

Air quality

- Ecolodges' air emissions are managed to ensure statutory air quality requirements are met or exceeded, heat and/or steam emissions are minimised and offensive odours are avoided.

Waste minimisation and management

- Waste minimisation measures have been undertaken (over packaged goods, recycling programs, re-use of publications, etc)

Energy use and minimisation

- Energy use in buildings is minimised (e.g. use of fluorescent lights, key-tag switches, etc.)

OBJEC TIVE 2: ECOLODGE BUILDS ENVIRONMENTAL AND CULTURAL AWARENESS AND RESPECT

Interpretive Services

- The ecolodge provide interpretive opportunities (e.g. tours, excursions, brochures, interpretative signage, etc.)

Content of interpretation and educational information

- The content of interpretation communicates the conservation significance of the area and also communicates the need for conservation and how to interact with and care for the environment.

Interpretation planning

- An interpretation plan has been prepared for all activities and accessible to the guides.

- The interpretation program is monitored with records kept that include customer participation rates and customer feedback from participation.

Staff training, awareness and understanding

a) Customer service staff have attended introduction training and participated in ongoing in-house training that includes information about:

- the natural and cultural values of the area;
- the environmental management issues in the area;
- the principles of ecotourism and how they are adopted by the product;

• practices that staff are to follow as part of their duties to minimize adverse impacts; and
• appropriate customer communications and behaviour.

b) Guides and all staff delivering interpretation demonstrate skills-based competencies and are encouraged to undertake regular relevant professional development as in-house training courses, or paid leave to attend courses/conferences or access to seminars/materials provided by specialists or appropriate.

OBJECTIVE 3: ECOLODGE PROVIDES POSITIVE EXPERIENCES

Provision of positive nature experiences

- The prime focus of the lodge is presentation of the natural values of the local area.
- The majority of customers time is spent within a natural area or with natural area focus.

OBJECTIVE 4: ECOLODGE PROVIDES DIRECT BENEFITS FOR CONSERVATION

Conservation initiatives - local

- Measures has been undertaken by the ecolodge in the region to provide direct benefits for conservation

Conservation initiatives – national & global

- Measures has been undertaken by the ecolodge outside the region to provide direct benefits for conservation

OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE

Provision of local benefits

- Products (e.g. food) are purchased locally.
- Services (e.g. repairs and maintenance) are purchased locally.

Community involvement

- Tangible support or participation has been offered to a not-for-profit organization or event that contributes to the welfare of the local community.
- A representative of the operation has undertaken initiatives for benefit the local community (e.g. meeting, workshop or seminar)

ANNEX F – MONITORING AND EVALUATION TOOL FOR ECOTOURISM PROJECTS - CASE STUDY FROM BRAZIL

MONITORING AND EVALUATION TOOL FOR ECOTOURISM PROJECTS

INFORMATION FOR MANAGERS

PURPOSE AND CORE OBJECTIVES OF THE M&E TOOL

The Monitoring and Evaluation (M&E) tool has been performed to assists in monitoring and evaluation the performance of ecolodges and the ecotour services. M&E tool is designed to provide managers with the know-how to set up and run a monitoring and evaluation. It has been attempted to make the process as simple as possible for being applied for managers with few knowledge in monitoring. It may be and applied when low technical and/or economic resources are available.

REASONS FOR M&E TOOL APPLICATION

Sustainability practices can lead to increased revenue by attracting guests that value good environmental and social performance. A strong positive reputation as a company that cares about sustainability issues, coupled with improvements to the quality of the tourism experience provided to clients, can result in increased customer satisfaction and loyalty, strengthened brand value, enhanced publicity and marketing opportunities, and better acceptance by local communities in destinations (TOI and CELB 2003). Implementing a monitoring framework can take some time, but is likely to result in a more responsive and successful ecotourism project.

The main benefits of M&E are the follows (Hainsworth, Jamieson et al. 2007):

- To evaluate project performance over time;
- To adapt project in light of the lessons learned from monitoring;
- To prioritise future actions based on areas of greatest need;
- To improve project planning, development, and management;
- To ensure that all key areas (e.g. minimize the impact, contribution to conservation, etc) can benefit from ecotourism;
- To increase understanding of ecotourism/sustainable tourism amongst stakeholders.

WHO MUST BE INVOLVED IN M&E?

- Manager nominated as responsible for the monitoring and evaluate process;
- Managers from different departments to support M&E;

- Suppliers to support value chain analysis.

WHO MAY BE INTERESTED IN M&E?

- Head company with a financial stake in the project will want to know how the ecolodge is performing and what can be done to improve operations;
- Non-profit organisations may be interested in the impact of the ecolodge on its particular area of concern (e.g. nature conservation, local community wellbeing, etc);
- Local/National government may be interested in highlighting case studies of successful ecotourism, through international awards and recognition;
- Scientific community will be interested in what might be done to reproduce successes or avoid failures elsewhere;
- Local community.

HOW TO USE M&E TOOL

The M&E tool should be applied at the end of each operation year. The application of this tool requires a couple of days which depend of the availability of data and stakeholders. M&E tool should be adapted to each project because there are local circumstances as well as specification of the business which make each case a single case. Changes should be introduced year by year to adapt indicators to new targets.

KEY CONCEPTS

Some of the key concepts of M&E tool are explained below in non-technical terms.

Value chain– is a relation of business established between ecolodge and suppliers in order to provide a service or product to the final consumer (tourist).

Value chain map – is a way to represent the series of transactions and suppliers involved in providing the touristic service to the guest.

Indicator – is a tool used in monitoring and evaluation. Indicators help simplify complex information by selecting and measuring one element as an "indication" of the state of a particular issue (Hainsworth, Jamieson et al. 2007).

Monitoring – the process of taking regular measures of something in order to provide a better understanding of the current situation as well as an idea of the trends in performance (Hainsworth, Jamieson et al. 2007).

Evaluation – is the process of assessing what has happened in a specific place or project, in a detailed time and which lessons can be learned from this to the future activities.

INSTRUCTIONS FOR IMPLEMENTATION OF THE TOOL

The monitoring and evaluation process is shown in Figure F1.

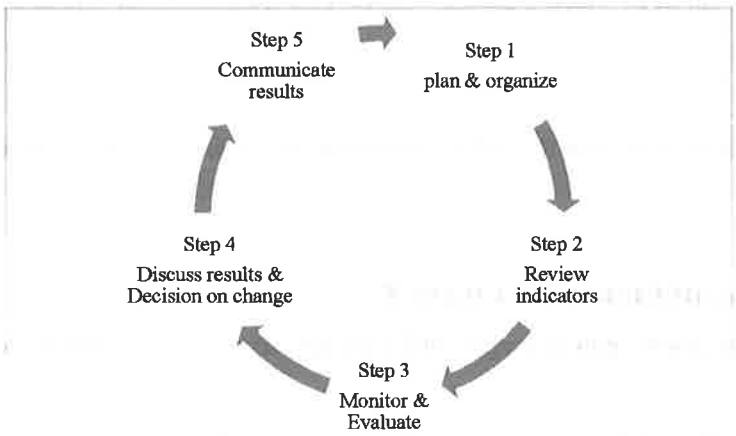

Figure F1 - Monitoring and Evaluation process

STEP 1. PLAN & ORGANISE

Several topics should be discussed before stard the monitoring and evaluating process:

1. Examining the rationale for monitoring and evaluation of project (in the first year of M&E);
2. Review the human and financial resources available for M&E;
3. Compose M&E team (M&E manager, managers from departments, suppliers);
4. Research feedback of stakeholders concerning the M&E. Following topics should be discussed: The purpose of the M&E, "What to monitor", "For what reasons" and Available resources (time/money/ place/material).
5. Elaborate the Value Chain map.

STEP 2 - REVIEW INDICATORS

M&E team should review indicators in order to adapt to specific project's objectives and local circumstances *(in the first year of monitoring); or* M&E team should adapt indicators to new circumstances of the business and new monitoring objectives *(in the coming years).*

STEP 3 - MONITOR & EVALUATE

This step involves assessing each indicators result and decides whether it represents satisfactory or unsatisfactory performance. M&E managers should discuss one by one indicator; write down in the forms (form 1 to 6) information concerning each indicator:

- The forms 1-5 should be filled in by M&E manager with support from managers (e.g. head manager, operation manager, HR manager, F&B manager, etc.)
- The form 6 should be filled in by M&E manager with support from suppliers.
- The forms 7-9 should be fill in by M&E manager with support from ecolodge managers and suppliers.

After completing monitoring process, manager should evaluate each indicator by comparing the output with the standard.

STEP 4-DISCUSS RESULTS & DECISION ON CHANGE

M&E manager should discuss the results with managers and suppliers separately and announce decisions on change.

1. Identify low scores (☹, 😐) and discusse what assistance is need, who and when should be taken the action and desire outcomes – Complete format 7.
2. Identify high scores (☺, ☺☺) and discussed achievements/success factors and outcomes – Complete format 8.
3. Review the M&E goals and establish some clear monitoring objectives. Investigate problems and opportunities for the improvement of ecolodge and value chain performance. The following question helps to conduct the discussion: What do all stakeholders desire to achieve? What can be done to enlarge the contributions for community and conservation? What is the next target/priority/necessity to implement? Are there sufficient resources (time/money/place/materials) to perform those new interventions? Set new target for coming year – Complete format 9.
4. Reflecte on what should be done to improve M&E tool (e.g. review of indicators, time, financial constrains and information limitation)

STEP 5 - COMMUNICATE THE RESULTS

The M&E manager should carry out a final report based on the results. The report should described achievements, performances to improve, new targets and lessons learned from the previous year. Results should be communicated to ecolodge head managers, suppliers and to interested parties. Communicate the results is important to increase the understanding of how much the ecolodge contributes directly and indirectly to community and local nature conservation; increase the understanding to find solutions to improve the service performance; and to report with transparency the ecolodge responsibility among stakeholders and other interested parties.

Performance Evaluation Framework

These are brief guidelines on how to fill out the Performance Evaluation Framework template.

Section	Box	Explanation
A - Monitoring details	**Data on periods covered**	This section is filled in by the manager that undertake the monitoring and evaluation program at the beginning of the monitoring program.
	Suppliers identification	In this column specify each respondents anwers identificatioon.
B - Evaluation Framework	**Output**	In this column specify data collected and source (F-factual data, S-stakeholder perception, R- Manager Observation)
	Outcome	This column provides the evaluation of the year 1.
	Performance score	In this column specify an evaluation score from 1 to 4 to each indicator according to the performance description (following table). Examples: compare the output of each indicator with the standard and attribute: 1- if the output is far below the targer value; 2- if the output us below the target value, however some achievments were shown; 3-if the output is in acoordance to the target value; 5-if the output is above the target value.
	Performance	This column provides the level of performance: very unsatisfactory, satisfactory, satisfactory and good, according to the performance scores
	Performance symbol	In this column specify an outcome symbol based on the performance score.

Performance symbol	**n/a**	?	☹	😐	☺	☺☺
Performance description	not applicable	no information	Far below the target value	Below the target value. Some achievements but not enough.	Target value	Above the target value
Performance score	n/a	0	1	2	3	4
Compliance with the ecotourism principles	not applicable	no information	non compliance	non compliance	compliance	compliance
Performance	not applicable	no information	Very unsatisfactor y	Unsatisfactory	Satisfactory	Good
Priority areas for improvement of performance	n/a	1	2	3	4	0

C - Goals and Objectives	Principles reached	In this column specify the output and outcome for each principles reached.
	Principles not reached	In this column specify: why target could not be reached; what assistance is need; who should take the action; when act/deadlines; desired outcomes.
	Target for the coming year	In this column specify: tagets for the coming year; what assistance is need; who should take the action; when act/deadlines; desired outcomes. Each goal should have a set of related more specific objectives that will permit to reach the stated objective(s). Priority areas for improvement should be define according to the performance (table)

SECTION A - Monitoring details

	Year 1	Year 2
Period Covered: from		
Period Covered: to		

Supplier indentification	
Supplier 1	
Supplier 2	
Supplier 3	
Supplier 4	
Supplier 5	

SECTION B - Evaluation Frameworks

Framework 1. Objective 1

COMPLIANCE OF ECOTOURISM PRINCIPLES					
	OBJECTIVE 1: MINIMIZES IMPACT	**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1.1	**Operational environmental management**				
1.1.1	a) Environmental management procedures are documented and address issues as Biodiversity conservation, Water conservation, Treatment of waste water and effluent, Noise, Air quality, Waste minimization, Energy efficiency, Minimum disturbance to wildlife, Lighting and Visual impacts.				
1.1.2	b) The environmental management procedures are approved, implemented and reviewed annually by senior management				
1.2	**Location**				
1.2.1	a) Operations in protected areas are undertaken in locations specifically recognized as appropriate by the area's management plan, or are otherwise condoned by the protected area manager.				
1.2.2	b) The use of the area for ecotourism is identified in land use plans, strategic plans, zoning plans etc. as being a preferred or permitted use.				
1.3	**Site disturbance, landscaping and rehabilitation**				

1.3.1	a) Development and ongoing use of the site(s) has involved minimal clearing of natural areas, has avoided disruption to wildlife movement and breeding patterns, and has not affected the viability of local populations of rare or threatened species of flora and fauna.				
1.3.2	b) Landscaping of the site reflects the character of the surrounding natural environment.				
1.3.3	c) After site development, all disturbed areas have subsequently been rehabilitated with naturally occurring native species reflecting the surrounding ecology; and landscaping is undertaken using native locally occurring species				
1.4	**Drainage, soil and water management**				
1.4.1	a) Development has avoided extreme land shaping and surface modifications. Drainage follows essentially natural paths and concentration of overland flow is avoided.				
1.4.2	b) Erosion on site is not evident or measures are being taken to stabilize and rehabilitate existing eroded areas.				
1.4.3	c) Appropriate fencing, shrubs or barriers are used to restrict pedestrian and vehicular traffic to defined and stabilized areas.				
1.4.4	d) Erosion and sediment control measures are undertaken (e.g. buffer strips/soakage strips around high use areas; impervious surfaces to allow infiltration (i.e. gardens in parking areas), and the storm water runoff from the site does not contain pollutant (suspended solids, nutrients and oxygen demanding material (i.e. decomposing debris)) levels above that occurring prior to development.				
1.5	**Visual impacts**				
1.5.1	In the design and construction of ecolodge at least **three** of the following considerations are applied:				
	· building forms are compatible with the physical and cultural landscape;				
	· the height of buildings and structures are below the tree line or screened by topographical features;				
	· buildings and other structures are painted in colors that do not sharply contrast or conflict with the landscape;				
	· native vegetation is retained or included in landscaping to screen facilities;				
	· roads, track and car parks are screened by topographical features, or are otherwise designed to minimize visual impacts.				
1.6	**Biodiversity conservation**				
1.6.1	a) A program of work is prepared and implemented which has the goal of protecting endangered species, biodiversity, native vegetation, natural water flows, landscape and cultural heritage of the site.				
1.6.2	b) The use of pesticides and herbicides that cause residual pollution are avoided.				
1.7	**Lighting**				
1.7.1	At least **four** of the following measures have been undertaken to minimize illumination around the site:				
	· natural light provides all necessary illumination to all living areas of buildings during daylight hours;				
	· external lighting is limited to that necessary for orientation, security, and safety;				
	· compact fluorescent bulbs are used wherever possible;				
	· pathways, corridors and external areas are illuminated by lights governed with movement sensors where practicable;				

	· illuminated signage is only used for emergency exits;				
	· outside spotlights do not point above the horizontal;				
	· incandescent floodlights are not used outside public areas;				
	· customers are provided with portable lights to avoid fixed outside lighting.				
1.8	**Water supply and conservation**				
1.8.1	**a) Where water is drawn from natural sources other than** rainwater storage tanks (i.e. a local river or stream, a water storage constructed on a local river or stream, or a local bore), the take of water is ecological, and can be sustained, and not significantly impact the water available to local communities and ecosystems.				
1.8.2	b) At **least *five* of the following** water conservation measures have been implemented:				
	· small sinks (less than five liters);				
	· tap aerators;				
	· low flow showerheads;				
	· grey water reuse;				
	· reuse of treated sewage effluent;				
	· rainwater/storm water collection;				
	· dual/low flush toilets;				
	· composting toilets or carry out/removal of waste;				
	· showers only (not baths) provided in all ensuites;				
	· automatic turn-off taps (e.g. spring loaded);				
	· low water gardens (e.g. locally occurring native plants, drip water systems);				
	· no wash down of large areas				
	· water-use limiting measures				
	· guests given a water budget for personal use				
	· guests are encouraged to reuse cloth towels and sheets before laundering;				
	· written advice provided to customers to minimise water usage				
1.9	**Wastewater**				
1.9.1	**a) In onsite treatment wastewater receives at least secondary** treatment or is composted.				
	Where this is not practical the method of wastewater treatment (direct disposal of sewage or septic system) is justifiable and the ongoing impacts on ground and surface waters have been assessed and are judged to be sustainable and treated effluent discharged to land or water meets or exceeds statutory requirements;				
1.9.2	b) All onsite wastewater treatment has breakdown alarms, approved emergency bypass facilities and an ongoing water operations manual that is administered by a trained operator.				
1.10	**Noise**				
1.10.1	Usual noise levels from all activities at the site are not significantly more than the background noise in nearby natural areas or adjacent residences (e.g. number of complains)				
1.11	**Air quality**				

1.11.1	Ecolodge's air emissions are managed to ensure statutory air quality requirements are met or exceeded, heat and/or steam emissions are minimized and offensive odors are avoided.				
1.12	**Waste minimisation and management**				
1.12.1	At least *five* of the following measures have been undertaken:				
	· avoid over packaged goods;				
	· disposable items (e.g. utensils and containers etc) are not used;				
	· food and materials are purchased in bulk;				
	· small portion packaging is minimized and justified (e.g. soaps, jams, margarine etc.);				
	· staff is encouraged to participate in recycling programs;				
	· customers are encouraged to participate in recycling programs;				
	· all promotional material is printed on recycled and/or unbleached paper;				
	· existing and potential customers are actively encouraged to pass publications to others for reuse;				
	· composting of organic kitchen waste;				
	· assistance has been provided in the establishment of local recycling infrastructure;				
	· a policy to purchase recycled or reused products has been documented and is being implemented.				
1.13	**Energy use and minimization**				
1.13.1	Energy use in buildings is minimized by implementing at least *five* of the following measures:				
	· over 90% fluorescent rather than incandescent lights;				
	· minimal use of air conditioning with natural ventilation provided as an alternative;				
	· only natural lighting is used during daylight hours;				
	· roofs and walls are insulated;				
	· in hot climates roofs with low heat absorption are used;				
	· buildings are designed to take into account climatic conditions (i.e. use of passive solar heating and/or tropical open ventilation techniques to minimize heating, ventilation and air conditioning requirements);				
	· cool rooms/refrigeration are designed to give maximum efficiency for the business;				
	· heating in cooler climates is restricted to living and sleeping areas with utility rooms etc.				
	· peak electrical loads are actively managed (e.g. compressors);				
	· use of movement detectors to control lighting and/or air-conditioning;				
	· use of key-tag switches and automatic controls to ensure that air conditioners and other energy consuming appliances are used only when required;				
	· energy efficient equipment has been selected (e.g. five-star fridges etc);				
	· in cold climates heat-flow through windows is minimized by using double-glazed windows as well as curtains and blinds;				
	· a trained staff member is given responsibility to minimize energy use and costs;				

	• heat is recovered from equipment;				
	• energy use for individual guest rooms is metered.				

Framework 2. Objective 2

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 2: BUILDS ENVIRONMENTAL AND CULTURAL AWARENESS AND RESPECT		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
2.1.	**Interpretive Services**				
2.1.1.	Customers have the opportunity to learn about the natural and cultural heritage. The ecolodge provide at least ***three*** interpretive opportunities:				
	Personal interpretation				
	• transport-based tour (no more than 50 customers per guide);				
	• non-vehicle based tour e.g. guided walking, horse riding, snorkelling (no more than 20 customers per guide);				
	• Informative interaction with a guide				
	• Talks or lectures by specialists;				
	• Theatre performances;				
	• Other interpretive activities (games, treasure hunts, puppet shows, quizzes, role plays, craft activities)				
	Non-personal interpretation				
	• Pre-tour materials (e.g. briefing sheets, brochures, reading lists);				
	• Displays/interpretive signage;				
	• Interpretive brochures;				
	• Audio-visuals (e.g. video, slide shows, CD-ROM, DVD and web-based information);				
	• Reference materials (e.g. library of books, newsletters and other publications);				
	• Self-guiding trails (e.g. with interpretive signage and/or specialist self-guiding interpretive brochure); or				
	• facilitation of access to interpretive opportunities provided by outside contractors (e.g. through discounted prices for commercial interpretive activities, an in-room booking line).				
2.2	**Content of interpretation and educational information**				
2.2.1	a)The accuracy of natural and cultural information provided to customers is verified by (at least one):				

	· reference of reference books, scientific journals etc,				
	· or professional persons (scientists, academics, anthropologists, environmental managers);				
	· or knowledgeable local people (specifically Indigenous people where relevant) who have a high level of recognition;				
	· or scholarly film and television documentaries.				
2.2.2	b) The content of interpretation communicates the conservation significance of the area and also communicates the need for conservation and how to interact with and care for the environment.				
2.3	**Interpretation planning**				
2.3.1	a) An interpretation plan has been prepared for all activities and accessible to the guides and includes:				
	• a summary of interpretive resources and materials;				
	• details of interpretive content;				
	• relevant themes/messages that address the natural, cultural and social values of the site/ local area;				
	• the main audience and their needs;				
	• goals and objectives in terms of educational and/or conservation outcomes;				
	• suitable interpretive methods;				
	• contingency planning.				
2.3.2	b) The interpretation program is monitored with records kept that include:				
	• customer participation rates; and				
	• customer feedback from participation				
2.4	**Staff training, awareness and understanding**				
2.4.1	All customer service staff have attended training (that includes information about the natural and cultural values of the area; the environmental management issues in the area; the principles of ecotourism and how they are adopted by the product; practices that staff are to follow as part of their duties to minimize adverse impacts; and appropriate customer communications and behavior)				
	. introduction training				
	. ongoing in-house training				
2.4.2	c) Guides and all staff delivering interpretation must be able:				
	· demonstrate skills-based competencies and are encouraged to:				
	- undertake regular relevant professional development as in-house training courses, - paid leave to attend courses/conferences or - access to seminars/materials provided by specialists or appropriate.				
2.4.3	c) Lead or Head Guides have significant experience, or have undertaken formal training in interpretation or communication skills.				

Framework 3. Objective 3

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 3: PROVIDES POSITIVE EXPERIENCES		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
3.1	**Provision of positive nature experiences**				
3.1.1	a)The prime focus of the lodge is presentation of the natural values of the local area				
3.1.2	b)The majority of customers time is spent within a natural area or with natural area focus				

Framework 4. Objective 4

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 4: PROVIDES DIRECT BENEFITS FOR CONSERVATION		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
4.1	**Provision of positive nature experiences**				
4.1.1	a) At least *five* of the following actions have been undertaken by the operator in the region during the past year:				
	✓ removal of litter or rubbish;				
	✓ physical, financial or in-kind assistance has been provided for:				
	• the rehabilitation of areas subject to visitor impacts;				
	• reduction of feral animals;				
	• reduction of weed infestations;				
	• the development of facilities that reduce visitor impact (e.g. boardwalks);				
	• the maintenance of facilities that reduce visitor impact;				
	• ecological research;				
	• promotion of conservation;				
	• support of nominated conservation project;				

	• taking up of membership of a conservation group;				
	• provision of a donation or sponsorship of a local conservation group;				
	• promotion of a conservation group or its initiatives in promotional material;				
	• entered into partnership with a conservation group that provided mutual tangible benefits;				
	• provision of concession rates to schools and other institutions studying the conservation of the environment;				
	• provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;				
	• involvement in a regional tourism impact monitoring or research program;				
	• physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;				
	• regeneration work in a degraded area not directly used by the operator for this product;				
	• donation of funds or equipment that contribute to conservation projects.				
4.1.2	b) At least *three* of the following actions have been undertaken in the past year:				
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;				
	• assistance with monitoring environmental impacts on sites being visited;				
	• assistance with research on visitor impacts on sites being visited; or				
	• provision of training programs on conservation practices for internal staff.				
4.2	**Conservation initiatives – national & global**				
	Ecolodge contributes to conservation outcomes beyond the immediate area of operation by implementing at least *one* of the following:				
	• a donation to, or support of an environmental or conservation non-government organization;				
	• a donation to or support of an environmental research project;				
	• involvement in regional or nationwide recycling scheme; or				
	• participation in greenhouse gas abatement program.				

Framework 5 - Objective 5

COMPLIANCE OF ECOTOURISM PRINCIPLES

OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		OUTPUT	OUTCOME		
			Performance score	Performance	Performance symbol
5.1	**Provision of local benefits**				
5.1.1	a) 50% of the local residents are employed in some aspect of the operation.				
5.1.2	b) At least one students at local schools are offered industry placements or work experience				
5.1.3	c) 10% of products (e.g. food) are purchased locally.				
5.1.4	d) 10% of services (e.g. repairs and maintenance) are purchased locally.				
5.2	**Minimal impact on local communities**				
5.2.1	a) Where applicable, the operator made available a customer briefing to minimize their impact on the local community and its lifestyle.				
5.2.2	b) Scarce community resources are used sparingly.				
5.3	**Community involvement**				
5.3.1	a) Tangible support or participation has been offered to at least one not-for-profit organization or event that contributes to the welfare of the local community.				
5.3.2	b) A representative of the operation has recently undertaken at least *one* of the following actions in relation to a local community issue or initiative:				
	• attended a meeting;				
	• attended a workshop or seminar; or				
	• written a letter or submission.				

Framework 6. Performance of the suppliers

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:				
	· environmental management system;				
	· certifications;				
	· codes of conduct or guidelines;				
	· other.				
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:				
	· communicates the conservation and cultural significance of the area and the need for conservation and				
	· communicates how to interact with and care for the environment				
3	**Objective 3: provides positive experiences**				
3.1	Supplier's prime focus is the presentation of the natural values of the local area				
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:				
	· removal of solid waste;				
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;				
	· reduction of feral animals,				
	· reduction of weed infestations,				
	· the maintenance of facilities that reduce visitor impact;				
	· ecological research;				
	· promotion of conservation;				
	· support of nominated conservation program;				

	· taking up of membership of a conservation group;				
	· provision of a donation or sponsorship of a local conservation group;				
	· promotion of a conservation group or its initiatives in promotional material;				
	· entered into partnership with a conservation group that provided mutual tangible benefits;				
	· provision of concession rates to schools and other institutions studying the conservation of the environment;				
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;				
	· involvement in a regional tourism impact monitoring or research program;				
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;				
	· regeneration work in a degraded area not directly used by the operator for this product;				
	· donation of equipment that contribute to conservation projects;				
	· financial contribution have been provided (entrance fees and donations) for conservation projects;				
4.2	b) At least <u>three</u> of the following actions have been undertaken in the past year:				
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;				
	• assistance with monitoring environmental impacts on sites being visited;				
	• assistance with research on visitor impacts on sites being visited; or				
	• provision of training programs on conservation practices for internal staff.				
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	**At least <u>50%</u> of the employees are local residents.**				
5.2	Tangible support or participation has been offered to at least <u>one</u> not-for-profit organization or event that contributes to the welfare of the local community in the past year.				

SECTION C - Goals and Objectives

Framework 7. Project performance - target not reached

Principles not reached	Why targets could not be reached	What assistance is need	Who should take the action	When act/deadlines	Desired Outcomes
1.					
2.					
3.					

Framework 8. Project performance - targets reached

Targets reached	Outputs	Outcomes
1.		
2.		
3.		
4.		

Framework 9. Project performance - targets for next year

Targets for the coming year	What assistance is need	Who should take the action	When act/deadlines	Desired outcomes
1.				
2.				
3.				
4.				

ANNEX G – RESULTS OF THE MONITORING AND EVALUATION – CASE STUDY FROM BRAZIL

ANNEX G1 – RESULTS OF THE ECOLODGE PERFORMANCE

COMPLIANCE OF ECOTOURISM PRINCIPLES					
			OUTCOME		
	OBJECTIVE 1: MINIMIZES IMPACT	OUTPUT	Performance score	Performance	Performance symbol
1.1	**Operational environmental management**				
1.1.1	a) Environmental management procedures are documented and address issues as Biodiversity conservation, Water conservation, Treatment of waste water and effluent, Noise, Air quality, Waste minimization, Energy efficiency, Minimum disturbance to wildlife, Lighting and Visual impacts.	No. Environmental management procedures are not documented. There is a quality and environmental policy documented and posted (S). ISO 9001:2000 was implemented from 2001 to 2005 (F).	1	non-compliance	☹
1.1.2	b) The environmental management procedures are approved, implemented and reviewed annually by senior management	No. (S)	1	non-compliance	☹
1.2	**Location**				
1.2.1	a) Operations in protected areas are undertaken in locations specifically recognized as appropriate by the area's management plan, or are otherwise condoned by the protected area manager.	Yes. The built area of the Ecoresort is settled in 150 000m2 of Touristic Zone which 75 000m2 is ZPR (Zone of Rigorous Protection) in accordance to APA Cost North zoning plan (S). Tourist Zone (ZT) is target for traditional activity of tourism and low density touristic projects (art°. 9 °of Resolution n° 1.040 of 21/02/1995). ZPR is an area where is only allowed visitation, science inquiry and guided ecotouristic tours (in art°. 1 °of Resolution n° 1.040 of 21/02/1995). (F)	3	compliance	☺
1.2.2	b) The use of the area for ecotourism is identified in land use plans, strategic plans, zoning plans etc. as being a preferred or permitted use.	Yes. (F)	3	compliance	☺
1.3	**Site disturbance, landscaping and rehabilitation**				
1.3.1	a) Development and ongoing use of the site(s) has involved minimal clearing of natural areas, has avoided disruption to wildlife movement and breeding patterns, and has not affected the viability of local populations of rare or threatened species of flora and fauna.	Yes. The development and ongoing use of the site has involved minimal clearing which can be seen in the form of the buildings which were drawn in three curved wings to follow the original arrangement of the coconut's palms (S).	3	compliance	☺
1.3.2	b) Landscaping of the site reflects the character of the surrounding natural environment.	Landscaping of the site reflects the character of the surrounding natural environment (S).	3	compliance	☺
1.3.3	c) After site development, all disturbed areas have subsequently been rehabilitated with naturally occurring native species reflecting the surrounding ecology; and landscaping is undertaken using native locally occurring species	Apparently, all disturbed areas have been rehabilitated with native species reflecting the surrounding ecology; and landscaping is undertaken using native locally occurring species as fruits trees and coconut palms. However, there is an extend area of grass (R).	3	compliance	☺
1.4	**Drainage, soil and water management**				

1.4.1	a) Development has avoided extreme land shaping and surface modifications. Drainage follows essentially natural paths and concentration of overland flow is avoided.	Yes. It can be seen by air photo monitoring by comparing ecolodge area with surrounding areas. Drainage follows essentially natural paths and concentration of overland flow is avoided (R).	3	compliance	☺
1.4.2	b) Erosion on site is not evident or measures are being taken to stabilize and rehabilitate existing eroded areas.	No, There is signs of trampling in few sites in the buffer zone of the Timentube lagoon and beach (R). Measures are not being taken to stabilize and rehabilitate existing eroded areas (R).	1	non-compliance	☹
1.4.3	c) Appropriate fencing, shrubs or barriers are used to restrict pedestrian and vehicular traffic to defined and stabilized areas.	No. there is not fencing, shrubs or barriers to restrict pedestrian mainly in the sensitive area (e.g. the boarders of Timentube lagoon and river; access to the beach) (R).	1	non-compliance	☹
1.4.4	d) Erosion and sediment control measures are undertaken (e.g. buffer strips/soakage strips around high use areas; impervious surfaces to allow infiltration (i.e. gardens in parking areas), and the storm water runoff from the site does not contain pollutant (suspended solids, nutrients and oxygen demanding material (i.e. decomposing debris)) levels above that occurring prior to development.	Yes. Erosion and sediment control measures are undertaken (e.g. cleaning works in the Timentube lagoon and river; buffer strips/soakage strips; impervious surfaces to allow infiltration as gardens in parking areas). No. The storm water runoff from the site does not contain pollutant levels above the legal requirements (CONOMA nº20/1986 for brute water) which can be verified in the regular water quality analysis (2/hour by staff; 2/month by independent company) of the Timentube lagoon (S).	3	compliance	☺
1.5	**Visual impacts**				
1.5.1	In the design and construction of ecolodge at least **three** of the following considerations are applied:				
	· building forms are compatible with the physical and cultural landscape;	Yes. It can be seen by the air photo monitoring carry out by GDF. Buildings fits in the scenery and there is not perceived significant visual impact when compared with the surrounding environment (S). The visual impact has been taken into account in the planning and re-building of the infrastructure (e.g. construction of the spa) (S).			
	· the height of buildings and structures are below the tree line or screened by topographical features;	Yes. The elevation of the buildings does not exceed two lines which is size of an adult coconut palm (3 meters). Buildings are screened by topographical features (e.g. coconut palms) (S).	3	compliance	☺
	· buildings and other structures are painted in colors that do not sharply contrast or conflict with the landscape;	Yes (S).			
	· native vegetation is retained or included in landscaping to screen facilities;	Yes. Buildings are screened by topographical features (e.g. coconut palms) (S).			
	· roads, track and car parks are screened by topographical features, or are otherwise designed to minimize visual impacts.	Yes. (S).			
1.6	**Biodiversity conservation**				
1.6.1	a) A program of work is prepared and implemented which has the goal of protecting endangered species, biodiversity, native vegetation, natural water flows, landscape and cultural heritage of the site.	No. There is not a program of work. There are few measures as cleaning works in Timentube river, protecting endangered species (feeding and remove animals for safety places (S).	2	non-compliance	😐
1.6.2	b) The use of pesticides and herbicides that cause residual pollution are avoided.	No. There is any recommendation about pesticides and herbicides use (S).	1	non-compliance	☹
1.7	**Lighting**				
1.7.1	At least **four** of the following measures have been undertaken to minimize illumination around the site:		3	compliance	☺

	· natural light provides all necessary illumination to all living areas of buildings during daylight hours;	no. (R);			
	· external lighting is limited to that necessary for orientation, security, and safety;	yes. external lighting is limited (S);			
	· compact fluorescent bulbs are used wherever possible;	yes. compact fluorescent bulbs has been adopted in public areas (S).			
	· pathways, corridors and external areas are illuminated by lights governed with movement sensors where practicable;	no. (R);			
	· illuminated signage is only used for emergency exits;	yes. (R);			
	· outside spotlights do not point above the horizontal;	yes. (R);			
	· incandescent floodlights are not used outside public areas;	no. (R);			
	· customers are provided with portable lights to avoid fixed outside lighting.	no. (R);			
1.8	**Water supply and conservation**				
1.8.1	a) Where water is drawn from natural sources other than rainwater storage tanks (i.e. a local river or stream, a water storage constructed on a local river or stream, or a local bore), the take of water is ecological, and can be sustained, and not significantly impact the water available to local communities and ecosystems.	Yes. The water is drawn from the Timentube river accordance to the license (814m3/day for drinking water and 850m3/day for irrigation purposes) (S).	3	compliance	☺
1.8.2	b) At least *five* of the following water conservation measures have been implemented:		2	non-compliance	😐
	· small sinks (less than five liters);	no (S)			
	· tap aerators;	yes (S).			
	· low flow showerheads;	no (S)			
	· grey water reuse;	No. grey water reuse system was constructed in the rebuilt area but it is disconnected (S)			
	· reuse of treated sewage effluent;	no (S)			
	· rainwater/storm water collection;	yes (S).			
	· dual/low flush toilets;	no (S)			
	· composting toilets or carry out/removal of waste;	no (S)			
	· showers only (not baths) provided in all ensuites;	no. Showers in the standard room and bath in the master rooms (S).			
	· automatic turn-off taps (e.g. spring loaded);	no (S)			
	· low water gardens (e.g. locally occurring native plants, drip water systems);	without information			
	· no wash down of large areas	without information			
	· water-use limiting measures	no regularly. (water-use limiting measures (only efficient control of the aspersers) (S).			
	· guests given a water budget for personal use	no (S)			
	· guests are encouraged to reuse cloth towels and sheets before laundering;	yes. guests are encouraged to reuse cloth towels and sheets (S).			
	· written advice provided to customers to minimise water usage	yes. a written advice to minimize water consume is provided in a flyer and in public toilets (R).			
1.9	**Wastewater**				

1.9.1	a) In onsite treatment wastewater receives at least secondary treatment or is composted. Where this is not practical the method of wastewater treatment (direct disposal of sewage or septic system) is justifiable and the ongoing impacts on ground and surface waters have been assessed and are judged to be sustainable and treated effluent discharged to land or water meets or exceeds statutory requirements;	The wastewater management is responsibility of the EMBASA (local sanitary authority) (S). The monitoring of wastewater scopes for the soil is done once per semester. Results show that there is not contamination for the soil (S).	3	compliance	☺
1.9.2	b) All onsite wastewater treatment has breakdown alarms, approved emergency bypass facilities and an ongoing water operations manual that is administered by a trained operator.	n/a		N/A	
1.10	**Noise**				
1.10.1	Usual noise levels from all activities at the site are not significantly more than the background noise in nearby natural areas or adjacent residences (e.g. number of complains)	Yes. However, rebuilding works in the conference room originated unusual noise. There is not information about complains (R).	3	compliance	☺
1.11	**Air quality**				
1.11.1	Ecolodge's air emissions are managed to ensure statutory air quality requirements are met or exceeded, heat and/or steam emissions are minimized and offensive odors are avoided.	There is no information about air emissions management in order to ensure statutory air quality requirements, heat and/or steam emissions are minimized or offensive odors are avoided (R). The energy generator was shut down in 2007. However, water boilers (two boilers of 3000 liters/day, one boiler of 5000 liters/day and two boilers of 2000 liters/day) are susceptible of contributing to the transference of heat and vapors (R).	0	non-compliance	?
1.12	**Waste minimisation and management**				
1.12.1	At least *five* of the following measures have been undertaken:		2	non-compliance	😐
	· avoid over packaged goods;	no (S)			
	· disposable items (e.g. utensils and containers etc) are not used;	no (S)			
	· food and materials are purchased in bulk;	No (there is only the intention of buying toilet products (e.g. soap, shampoo, etc) in big portion packaging (S));			
	· small portion packaging is minimized and justified (e.g. soaps, jams, margarine etc.);	no (S)			
	. staff is encouraged to participate in recycling programs;	Yes. Staff is encouraged to participate in recycling programs in administrative areas, canteens and environmental office which are the places. there is no containers in other sectors (S). "Manual of the employee" gives tips to encourage employees for recycling practices (S)			
	· customers are encouraged to participate in recycling programs;	No. Costumers are not encouraged to participate in recycling programs (S). There is not containers for separate solid waste or any advertisements about recycling (R).			
	· all promotional material is printed on recycled and/or unbleached paper;	No. Only the "Turma do Jornaleco" Magazine (S).			
	· existing and potential customers are actively encouraged to pass publications to others for reuse;	no (S)			
	· composting of organic kitchen waste;	No. composting of organic kitchen waste and green waste were done by 2007 (S).			
	· assistance has been provided in the establishment of local recycling	Yes. There is a recycling infrastructure at the site (glass, paper, card, batteries, plastic, bulbs,			

	infrastructure;	metal, oil)			
	· a policy to purchase recycled or reused products has been documented and is being implemented.	no (S)			
1.13	**Energy use and minimization**				
1.13.1	Energy use in buildings is minimized by implementing at least *five* of the following measures:				
	· over 90% fluorescent rather than incandescent lights;	Yes. Over 90% fluorescent rather than incandescent lights in the rooms. There is no information about other sectors. Gardens lamps are also being substituted (S).			
	· minimal use of air conditioning with natural ventilation provided as an alternative;	Yes (in public areas)			
	· only natural lighting is used during daylight hours;	no (S)			
	· roofs and walls are insulated;	without information			
	· in hot climates roofs with low heat absorption are used;	without information			
	· buildings are designed to take into account climatic conditions (i.e. use of passive solar heating and/or tropical open ventilation techniques to minimize heating, ventilation and air conditioning requirements);	Yes. Tropical open ventilation techniques (e.g. reception, lounge, restaurants and bars, amphitheatre, etc) (R).			
	· cool rooms/refrigeration are designed to give maximum efficiency for the business;	Yes. Splits are efficiently programmed to work only 6 hours per night (S);			
	· heating in cooler climates is restricted to living and sleeping areas with utility rooms etc.	without information			
	· peak electrical loads are actively managed (e.g. compressors);	without information	3	compliance	☺
	· use of movement detectors to control lighting and/or air-conditioning;	No. (S)			
	· use of key-tag switches and automatic controls to ensure that air conditioners and other energy consuming appliances are used only when required;	Yes. use of key-tag switches in rooms (S);			
	· energy efficient equipment has been selected (e.g. five-star fridges etc);	No. (S)			
	· in cold climates heat-flow through windows is minimized by using double-glazed windows as well as curtains and blinds;	No. (S)			
	· a trained staff member is given responsibility to minimize energy use and costs;	No. In the past, it was an internal commission for energy savings (CICE) which was responsible for minimize energy used and costs (S). However, some measures has been undertaken by the responsible (e.g. during the low season of 2007, guests were accommodate in the central sector to disconnect the exterior lights of other three sectors and partly disconnect of water boilers) (S).			
	· heat is recovered from equipment;	without information			
	· energy use for individual guest rooms is metered.	No. (S)			

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 2: BUILDS ENVIRONMENTAL AND CULTURAL AWARENESS AND RESPECT		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
2.1.	**Interpretive Services**				
2.1.1.	Customers have the opportunity to learn about the natural and cultural heritage. The ecolodge provide at least *three* interpretive opportunities:		4	compliance	☺ ☺
	Personal interpretation				
	• transport-based tour (no more than 50 customers per guide);	yes. transport-based tours (with no more than 20 customers per guide) to: Garcia D'Avila Castle, TAMAR project, Sapiranga Reserve			
	• non-vehicle based tour e.g. guided walking, horse riding, snorkelling (no more than 20 customers per guide);	yes. non-vehicle based tours (with no more than 15 customers per guide) as snorkeling, diving, canoeing, guided walking to the village			
	• Informative interaction with a guide	yes (tours are all guided)			
	• Talks or lectures by specialists;	no (S)			
	• Theatre performances;	yes (sporadically)			
	• Other interpretive activities (games, treasure hunts, puppet shows, quizzes, role plays, craft activities)	yes (ateliers, games, role plays, craft activities)			
	Non-personal interpretation				
	• Pre-tour materials (e.g. briefing sheets, brochures, reading lists);	no (S)			
	• Displays/interpretive signage;	yes. displays/interpretive signage (about native species) and signage (identify native trees)			
	• Interpretive brochures;	no (S)			
	• Audio-visuals (e.g. video, slide shows, CD-ROM, DVD and web-based information);	yes. web-based information based in the main website and Turma do Jornaleco website .(R)			
	• Reference materials (e.g. library of books, newsletters and other publications);	yes. Turma do Jornaleco magazine. (R)			
	• Self-guiding trails (e.g. with interpretive signage and/or specialist self-guiding interpretive brochure); or	no (S)			
	• facilitation of access to interpretive opportunities provided by outside contractors (e.g. through discounted prices for commercial interpretive activities, an in-room booking line).	yes. the access of interpretive opportunities provided by outside contractors is facilitate by: representation of outside contractors at the ecolodge, in-room booking line to tour operator, daily flyer, at the environmental centre. (S)			
2.2	**Content of interpretation and educational information**				
2.2.1	a)The accuracy of natural and cultural information provided to customers is verified by (at least one):		3	compliance	☺
	· reference of reference books, scientific journals etc,	no (R)			
	· or professional persons (scientists, academics, anthropologists, environmental managers);	two biologists from Environmental centre (R).			

	· or knowledgeable local people (specifically Indigenous people where relevant) who have a high level of recognition;	no (R)			
	· or scholarly film and television documentaries.	no (R)			
2.2.2	b) The content of interpretation communicates the conservation significance of the area and also communicates the need for conservation and how to interact with and care for the environment.	yes®	3	compliance	☺
2.3	**Interpretation planning**				
2.3.1	a) An interpretation plan has been prepared for all activities and accessible to the guides and includes:	No. It was prepared for some of the activities, it is not updated and not accessible to the guides and includes (S):	2	non-compliance	😐
	• a summary of interpretive resources and materials;	Yes (F)			
	• details of interpretive content;	Yes (F)			
	• relevant themes/messages that address the natural, cultural and social values of the site/ local area;	Yes (F)			
	• the main audience and their needs;	Yes (F)			
	• goals and objectives in terms of educational and/or conservation outcomes;	Yes (F)			
	• suitable interpretive methods;	no (R)			
	• contingency planning.	no (R)			
2.3.2	b) The interpretation program is monitored with records kept that include:		2	non-compliance	😐
	• customer participation rates; and	No, for all activities (when exists the quality of record is poor) (F)			
	• customer feedback from participation	No, as routine. Formal customer feedback is given only in the end of the stay for all services of ecolodge. Informal feedback (oral) is given usually at the end of the activities, however information is not register and nor analysed (S)			
2.4	**Staff training, awareness and understanding**				
2.4.1	All customer service staff have attended training (that includes information about the natural and cultural values of the area; the environmental management issues in the area; the principles of ecotourism and how they are adopted by the product; practices that staff are to follow as part of their duties to minimize adverse impacts; and appropriate customer communications and behavior)		2	non-compliance	😐
	. introduction training	Yes. All customer service staff has attended introductory training (Ecojornada) that covers all these themes. OBS: There is provided a booklet (S).			
	. ongoing in-house training	No. (S).			
2.4.2	c) Guides and all staff delivering interpretation must be able:		3	compliance	☺
	· demonstrate skills-based competencies and are encouraged to:	Yes (team is composed by two biologist and trained monitors (17 trained monitors (high season) or 5 monitors (low season) (S).			

	- undertake regular relevant professional development as in-house training courses, - paid leave to attend courses/conferences or - access to seminars/materials provided by specialists or appropriate.	Staff were encouraged to - paid leave to attend a conferences (2007): II Encontro Interdisciplinar de Ecotourism em Unidades de Conservação & VI Congresso National de Ecotourism, 08-11 de 2007 em ITATIAIA- RJ; (XI Congresso Nordestino de Ecologia, 2005, Fortaleza – CE in 2005).			
2.4.3	c) Lead or Head Guides have significant experience, or have undertaken formal training in interpretation or communication skills.	without information		no information	?

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 3: PROVIDES POSITIVE EXPERIENCES		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
3.1	**Provision of positive nature experiences**				
3.1.1	a)The prime focus of the lodge is presentation of the natural values of the local area	Yes. The prime focus of the service is the presentation of the natural values of the local area according to the environmental and quality policy. The objective of the Ecoresort management is to rise for attention to its narrow relationship with nature. "Ecoresort offers to its guests a wide variety of eco-tours, which, in addition to educating, provide a unique experience of contact with nature". Lima (2008) has analyzed the customer's feedback of Ecoresort and point out that "natural charms of the Ecoresort are its highest point, so much that the hotel is realized as an ecotouristic destination, where it is possible to be in communion with the nature." In additional, the majority of customers' time is spent within a natural area or with natural area. (F)	3	compliance	☺
3.1.2	b)The majority of customers time is spent within a natural area or with natural area focus	Yes. The ecolodge and the surrounding area are included in a natural area.(R)	3	compliance	☺

COMPLIANCE OF ECOTOURISM PRINCIPLES					
OBJECTIVE 4: PROVIDES DIRECT BENEFITS FOR CONSERVATION		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
4.1	**Provision of positive nature experiences**				
4.1.1	a) At least *five* of the following actions have been undertaken by the operator in the region during the past year:		4	compliance	☺ ☺
	✓ removal of litter or rubbish;	Removal of litter or rubbish "Clean up the World Day" (5.826 kilogram since 2002 (F); Regular cleaning works in the Timentube river (S).			
	✓ physical, financial or in-kind assistance has been provided for:				
	• the rehabilitation of areas subject to visitor impacts;	no(S).			
	• reduction of feral animals;	no(S).			
	• reduction of weed infestations;	no(S).			
	• the development of facilities that reduce visitor impact (e.g. boardwalks);	no(S).			
	• the maintenance of facilities that reduce visitor impact;	no(S).			
	• ecological research;	yes. one articles was presented in national conferences in 2007 (S). Rodovalho, L.L.; Santos, P.C.; Zanette, C.R.; Soares, C.A.; Dias, T.L.; Ferreira, I.F. (2007) Programa de Educação Ambiental para crianças hospedadas no Praia Forte Ecoresort & Thalasso Spa in II Encontro Interdisciplinar de Ecotourism em Unidades de Conservação & VI Congresso National de Ecotourism, 08-11 de November of 2007 em ITATIAIA- RJ; In 2005- Santos. C. P.; Rodovalho, l.; Zanette, C.; Soares, C.; Paiva, A.; Fonseca, I. F. (2005) Ecoturismo em Praia do Forte: uma ferramenta para uma Conservação do Ambiente Natural e Cultural. In xi Congresso Nordestino de Ecologia, Fortaleza – CE);			
	• promotion of conservation;	Commemoration of "World-wide Day of the environment" for more than 10 years and "Clean up the World Day" (S).			
	• support of nominated conservation project;	no(S).			
	• taking up of membership of a conservation group;	yes. FGD (S)			
	• provision of a donation or sponsorship of a local conservation group;	yes. Donation 2007: eco-tax to GDF - €40.388,67 from; preservation taxes to GDF - €15.996 from; Donation 2008/1° semester: €22.519 from eco-tax to GDF and €5.314 from preservation taxes to GDF. Entrance fees: €5.577 for Tamar (occasional donations were also done by 2006).			

	• promotion of a conservation group or its initiatives in promotional material;	yes. promotion of GDF, Jubarte Whale Institute and TAMAR Project and its initiatives are made in the Web site, Turma do Jornaleco web site and magazine and daily flyer (R).			
	• entered into partnership with a conservation group that provided mutual tangible benefits;	no(S).			
	• provision of concession rates to schools and other institutions studying the conservation of the environment;	no(S).			
	• provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	yes. provision of tangible support for an academic study (R).			
	• involvement in a regional tourism impact monitoring or research program;	no(S).			
	• physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	yes. Regularly cleaning work in the Timentube river (S).			
	• regeneration work in a degraded area not directly used by the operator for this product;	no(S).			
	• donation of funds or equipment that contribute to conservation projects.	donation of informative panels to GDF (requirements for the renovation of the operation's license) (S).			
4.1.2	b) At least ***three*** of the following actions have been undertaken in the past year:		2	non-compliance	😐
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	Yes. Input has been done in an informal basis (S).			
	• assistance with monitoring environmental impacts on sites being visited;	Yes. Monitoring of water quality of the Timentube River and Lagoon (S).			
	• assistance with research on visitor impacts on sites being visited; or	no(S).			
	• provision of training programs on conservation practices for internal staff.	no(S).			
4.2	**Conservation initiatives – national & global**				
	Ecolodge contributes to conservation outcomes beyond the immediate area of operation by implementing at least ***one*** of the following:		4	compliance	☺ ☺
	• a donation to, or support of an environmental or conservation non-government organization;	no(S).			
	• a donation to or support of an environmental research project;	no(S).			
	• involvement in regional or nationwide recycling scheme; or	Yes. Ecolodge has a recycling centre were solid waste are separated manually by typology (paper, cardboard, plastic, metal, glass). Batteries, printer's cartridges, lamps, food oil are also collected. Paper, cardboard, plastic, metal, glass are sold to local businesses, oil is donate to the State University of Bahia. Bulbs, batteries and printer's cartridges are inserted in the state recycling program. The glass is stored in the centre, awaiting a solution to be sent to an appropriate destination. The grey solid waste is sent to the landfill(S).			
	• participation in greenhouse gas abatement program.	Greenhouse Gas Abatement Program (reforestation program in Sintra Portugal) and Rio Grande do Sul (Brazil) (F);			

COMPLIANCE OF ECOTOURISM PRINCIPLES

OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		OUTPUT	OUTCOME		
			Performance score	Performance	Performance symbol
5.1	**Provision of local benefits**				
5.1.1	a) 50% of the local residents are employed in some aspect of the operation.	61% employees from the Mata de São João county (which 19% are resident in Praia do Forte) and 39% from other regions (total of 473 employees) (F).	3	compliance	☺
5.1.2	b) At least one students at local schools are offered industry placements or work experience	no information	0	no information	?
5.1.3	c) 10% of products (e.g. food) are purchased locally.	No. Products (e.g. food) are not regularly purchased locally. There are not local products in quality and quantity to supplies the ecolodge. It is quite hard to find out the desire products in local community market (S).Single initiatives were undertaken: (in 2006) 400 Piaçava's handbags were bought to a local handicraft association (Associação de Artesãos de Porto de Sauípe) (≈€7168) (S). However, more information is needed to evaluate local purchasing.	2	non-compliance	😐
5.1.4	d) 10% of services (e.g. repairs and maintenance) are purchased locally.	No. Services are not regularly purchased locally (S). OBS: single initiatives were undertaken: Babysitters' service: 29 babysitters were trained (course of 72 days and annual recycling). The initiative turn out ≈€20.161 /year (calculation based in an average of 5000 hours/month high season and 2500-3500h/month low season) (S). However, more information is needed to evaluate local purchasing.	2	non-compliance	😐
5.2	**Minimal impact on local communities**				
5.2.1	a) Where applicable, the operator made available a customer briefing to minimize their impact on the local community and its lifestyle.	no information	0	no information	?
5.2.2	b) Scarce community resources are used sparingly.	no information	0	no information	?
5.3	**Community involvement**				
5.3.1	a) Tangible support or participation has been offered to at least one not-for-profit organization or event that contributes to the welfare of the local community.	Yes. Financial support to the construction of two classrooms in the local kindergarten (in 2007); Support of transportation to the local school for three trips (in 2007). (S)	4	compliance	☺ ☺
5.3.2	b) A representative of the operation has recently undertaken at least *one* of the following actions in relation to a local community issue or initiative:		4	compliance	☺ ☺
	• attended a meeting;	Yes. The coordinator of the environmental centre attends regularly meetings in local authority and GDF on (however on an informal basis) (S).			
	• attended a workshop or seminar; or	The coordinator of the environmental centre attends regularly workshops or seminar in local authority and NGOs on (however on an informal basis) (S).			
	• written a letter or submission.	no information			

ANNEX G2 – RESULTS OF THE ECOTOUR VALUE CHAIN PERFORMANCE

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: OPERATOR A					
	OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE	**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		3	compliance	☺
	· environmental management system;	no			
	· certifications;	no			
	· codes of conduct or guidelines;	Code of Conduct for Whale watching (S)			
	· other.	no			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. When providing the Whale watching tours the focus of the tour is alert visitors for the importance of protecting the whales. There is also other type of tours, in those the focus is environmental awareness for the richness of the local nature and culture (S).			
	· communicates how to interact with and care for the environment	yes. This is clear during the whale watching tours. The tours accompanied by members of JWI which is the local entity that verifies the compliance of whale watching. Member of JWI as well as staff explain the procedures during the tour in order to protect the whales from our impact on the sea (S).			
3	**Objective 3: provides positive experiences**				
3.1	Supplier´s prime focus is the presentation of the natural values of the local area	yes. all tours are strongly connected to nature, so there is always a presentation of the natural environment (S).	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		2	non-compliance	😐
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;	no information			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			

	· the maintenance of facilities that reduce visitor impact;	no information			
	· ecological research;	no information			
	· promotion of conservation;	no information			
	· support of nominated conservation program;	no information			
	· taking up of membership of a conservation group;	no information			
	· provision of a donation or sponsorship of a local conservation group;	no information			
	· promotion of a conservation group or its initiatives in promotional material;	no information			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	yes. There is a close relationship with the JWI due to whale watching. We are an accredited entity to make whale watching and in return we have to meet certain rules: in all whale watching tours we take the tourists to attend a lecture about whales at the JWI educational centre, and we have available at least one seat on board for the JWI's team collect data for their studies (S).			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	no information			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	Yes. By provision of seats on board for the JWI staff to monitor the whales (S).			
	· involvement in a regional tourism impact monitoring or research program;	no information			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	no information			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	Direct economic contributions[1] by ecotours: entrance fees: €408 for JWI; donations: €2.341 for FGD (F)			
4.2	b) At least three of the following actions have been undertaken in the past year:		0	no information	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least 50% of the employees are local residents.	there are 15 employees; (11 natives or long term residents in the local community) (S)	3	compliance	☺
5.2	Tangible support or participation has been offered to at least one not-for-profit organization or event that contributes to the welfare of the local community in the past year.	no information	0	no information	?

[1] Estimated values for one year based on the ecotours from August 2007-July 2008.

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: OPERATOR B					
	OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE	**OUTPUT**	**OUTCOMES**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		1	non-compliance	☹
	· environmental management system;	no (S).			
	· certifications;	no (S).			
	· codes of conduct or guidelines;	no. There is a willing to adapt the Brazilian norms for adventure tourism (S).			
	· other.	no (S).			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. We covered various ecosystems so that tourists have a rich experience in relation to local ecosystems; deals with the relationship between these ecosystems and local communities. We talk about the beaches and reefs ecosystems, coastal lagoons, mango grove, rivers, estuaries, forest, dune systems. In addition, we explain how these ecosystems are used by local communities and how they were used throughout history by people of the region. Regarding cultural issues, will be opened at the end of August the Ocoporango, which is a site that will rescue the culture of the time of the first inhabitants, where we intend to make statements of culture, typical meals that time, all in Tupi that was the language spoken at the time (S).			
	· communicates how to interact with and care for the environment	yes. There is a concern that people are aware of ecosystems so that they protect. This awareness is made during the tours (S).			
3	**Objective 3: provides positive experiences**				
3.1	Supplier's prime focus is the presentation of the natural values of the local area	yes (R).	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		1	non-compliance	☹
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				

	· the rehabilitation of areas subject to visitor impacts;	no information			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			
	· the maintenance of facilities that reduce visitor impact;	no information			
	· ecological research;	no information			
	· promotion of conservation;	no information			
	· support of nominated conservation program;	no information			
	· taking up of membership of a conservation group;	no information			
	· provision of a donation or sponsorship of a local conservation group;	no information			
	· promotion of a conservation group or its initiatives in promotional material;	no information			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	no information			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	no information			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	no information			
	· involvement in a regional tourism impact monitoring or research program;	no information			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	no information			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	Direct economic contributions[2] by ecotours: entrance fees - €129 for Tamar; donations- €333 for FGD (F)			
4.2	b) At least <u>three</u> of the following actions have been undertaken in the past year:		0	non-compliance	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least <u>50%</u> of the employees are local residents.	28 employees (65% from Mata de São João); 100% residents in Praia do Forte (S).	3	compliance	☺
5.2	Tangible support or participation has been offered to at least <u>one</u> not-for-profit organization or event that contributes to the welfare of the local community in the past year.	no information	0	non-compliance	?

[2] Estimated values for one year based on the ecotours from August 2007-July 2008.

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: OPERATOR C					
	OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE	**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		1	non-compliance	☹
	· environmental management system;	no (S)			
	· certifications;	no (S)			
	· codes of conduct or guidelines;	no information			
	· other.	no information			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. All tours are undertaken in natural area, and there is always an environmental awareness in each tour (S)			
	· communicates how to interact with and care for the environment	yes.(R)			
3	**Objective 3: provides positive experiences**				
3.1	Supplier´s prime focus is the presentation of the natural values of the local area	yes. All tours are undertaken in natural area.(R)	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		0	no information	?
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;	no information			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			
	· the maintenance of facilities that reduce visitor impact;	no information			
	· ecological research;	no information			
	· promotion of conservation;	no information			

	· support of nominated conservation program;	no information			
	· taking up of membership of a conservation group;	no information			
	· provision of a donation or sponsorship of a local conservation group;	no information			
	· promotion of a conservation group or its initiatives in promotional material;	no information			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	no information			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	no information			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	no information			
	· involvement in a regional tourism impact monitoring or research program;	no information			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	no information			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	There is no contribution for conservation by entrance fees or donations due to all the tours are undertaken in public areas (R).			
4.2	b) At least <u>three</u> of the following actions have been undertaken in the past year:		0	no information	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least <u>50%</u> of the employees are local residents.	13 employees - 10 are residents in the local community (S)	3	compliance	☺
5.2	Tangible support or participation has been offered to at least <u>one</u> not-for-profit organization or event that contributes to the welfare of the local community in the past year.	no information	0	no information	?

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: ORG#1 Tamar project					
OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		2	non-compliance	😐
	· environmental management system;	no (S)			
	· certifications;	no (S)			
	· codes of conduct or guidelines;	no information			
	· other.	good environmental practices (S). It is not clear if they follow informal practices, rather than regular measures and how they address issues as water conservation, treatment of waste water and effluent, noise, air quality, waste minimization, energy efficiency, minimum disturbance to wildlife, lighting and visual impacts (R).			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. There is a visitor centre with education facilities (e.g. tanks with turtle, videos, theatres, informative panels) which main aim is to communicate the conservation significance and the need of conservation of the marine ecosystem.(S)			
	· communicates how to interact with and care for the environment	yes. One of the aim of the NGO is promote the environmental awareness for the marine ecosystem, and alert to how interact with and care for the marine ecosystem.(S)			
3	**Objective 3: provides positive experiences**				
3.1	Supplier's prime focus is the presentation of the natural values of the local area	yes. The main objective of the Tamar Project is the presentation the sea turtles, which is a native species and the most important highlights of the Praia do Forte (S)	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		4	compliance	☺ ☺
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;	no information			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			
	· the maintenance of facilities that reduce visitor impact;	no information			
	· ecological research;	yes. In the field of marine turtles (S).			

	· promotion of conservation;	yes. One of the main aims of the project is encourage local communities and also the tourists for the conservation of marine ecosystem and in particular marine turtles (S). In additional, Tamar project has undertaken environmental awareness's initiatives: World Environmental Commemoration Day (138 participants in 2008) and the Clean Up the World Day (228 participants in 2007).			
	· support of nominated conservation program;	Yes. The aim of the institution is to protect marine turtles in Brazil (S).			
	· taking up of membership of a conservation group;	n/a			
	· provision of a donation or sponsorship of a local conservation group;	n/a			
	· promotion of a conservation group or its initiatives in promotional material;	n/a			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	Yes. There is a proposal to create the Centre of Professional Excellence to qualify professionals in tourism and environmental areas together with local NGOs and other local entities (S)			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	yes. There is concessions rates for schools and other groups (S)			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	yes. Financial support two academic student from the local community; training program for 200 graduate and recent graduated students every year (S)			
	· involvement in a regional tourism impact monitoring or research program;	no information			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	no information			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	n/a			
4.2	b) At least <u>three</u> of the following actions have been undertaken in the past year:		0	non-compliance	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least <u>50%</u> of the employees are local residents.	above 120 employees (approx. 98% natives) (S)	4		☺ ☺
5.2	Tangible support or participation has been offered to at least <u>one</u> not-for-profit organization or event that contributes to the welfare of the local community in the past year.	yes. It has been undertaken the following education programs for local community: Tamarzinhos and waves of surf program. In additional, it has been undertaken school presentations, hatchling release ceremonies and festivals, financial support for the local kindergarten.	4		☺ ☺

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: ORG#2 JUBARTE WHALE INSTITUTE					
OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		3	compliance	☺
	· environmental management system;	no			
	· certifications;	no			
	· codes of conduct or guidelines;	Code of Conduct for Whale watching (S)			
	· other.	own good practices (S).			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. One of the main activities of JWI is the promotion of the environmental awareness initiatives and the ecotourism in order to communicate the importance of the conservation of the whales for the environment and also for local communities (S). The learning opportunities are presented in the Environmental Education Research Center – the CENTROPEA.			
	· communicates how to interact with and care for the environment	yes			
3	**Objective 3: provides positive experiences**				
3.1	Supplier's prime focus is the presentation of the natural values of the local area	yes. The main focus of the JWI is the presentation of the Jubarte Whale which is a native species from the site.	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		4	compliance	☺ ☺
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;	no information			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			
	· the maintenance of facilities that reduce visitor impact;	no information			
	· ecological research;	yes. The main activity of JWI is monitoring Jubarte Whales by photo-identification, genetic analysis and acoustic studies. JWI is the only national institute that monitor de Jubarte Whales in Brazil (S).			

	· promotion of conservation;	yes. The main focus of the JWI is the promotion of the conservation, mainly the Jubarte Whale (S). In additional, it has undertaken environmental awareness's initiatives: World Environmental Commemoration Day (138 participants in 2008) and the Clean Up the World Day (228 participants in 2007).			
	· support of nominated conservation program;	Yes. The monitoring of Jubarte Whales at national level (S).			
	· taking up of membership of a conservation group;	n/a			
	· provision of a donation or sponsorship of a local conservation group;	n/a			
	· promotion of a conservation group or its initiatives in promotional material;	n/a			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	Yes. There is a proposal to create the Centre of Professional Excellence to qualify professionals in tourism and environmental areas together with local NGOs and other local entities (S).			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	yes. provision of concession rates to schools			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	yes. eco-volunteer program for international students; ecological guardian program for the local community;			
	· involvement in a regional tourism impact monitoring or research program;	no information			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	no information			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	n/a			
4.2	b) At least three of the following actions have been undertaken in the past year:		0	non-compliance	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least 50% of the employees are local residents.	9 employees - no information about natives or residents (S)	0	non-compliance	?
5.2	Tangible support or participation has been offered to at least one not-for-profit organization or event that contributes to the welfare of the local community in the past year.	yes. JWI has undertaken seminars for students at CENTROPEA; lectures at the schools; cultural activities for community ("Saturday of Culture" at the CENTROPEA).	4	compliance	☺ ☺

COMPLIANCE OF ECOTOURISM PRINCIPLES					
Supplier name: ORG#3 GARCIA D' AVILA FOUNDATION					
OBJECTIVE 5: FINANCIAL BENEFITS AND EMPOWERMENT FOR LOCAL PEOPLE		**OUTPUT**	**OUTCOME**		
			Performance score	**Performance**	**Performance symbol**
1	**Objective 1: minimizes impact**				
1.1	Supplier minimize any direct environmental impact through the implementation of at least one of the following:		2	non-compliance	😐
	· environmental management system;	no			
	· certifications;	no			
	· codes of conduct or guidelines;	no			
	· other.	good practices (S). it is not clear if they follow informal practices, rather than regular measures and how they address issues as water conservation, treatment of waste water and effluent, noise, air quality, waste minimization, energy efficiency, minimum disturbance to wildlife, lighting and visual impacts (R).			
2	**Objective 2: builds environmental and cultural awareness and respect**				
2.1	Supplier promote learning opportunities about the natural and cultural heritage by:		3	compliance	☺
	· communicates the conservation and cultural significance of the area and the need for conservation and	yes. One of the main aims of the GDF is the promotion of socio and environmental education and awareness. GDF has the following educative infrastructures: centre for Sapiranga Rain Forest's studies, a mini-museum, informative panels and seven trails in the Sapiranga reserve (S)			
	· communicates how to interact with and care for the environment	yes. There is expressed in informative panels as well as other sources of information in the Sapiranga Reserve. (R)			
3	**Objective 3: provides positive experiences**				
3.1	Supplier´s prime focus is the presentation of the natural values of the local area	yes. All of the GDF infrastructures are located in privileged areas where guest have contact to various ecosystems of the local area.(R)	3	compliance	☺
4	**Objective 4: provides direct benefits for conservation**				
4.1	a) At least five of the following actions have been undertaken by the operator in the region used for the product during the past year:		4	compliance	☺ ☺
	· removal of solid waste;	no information			
	Physical or in-kind assistance by:				
	· the rehabilitation of areas subject to visitor impacts;	Yes. Restoration of the Timentube river area (S).			
	· reduction of feral animals,	no information			
	· reduction of weed infestations,	no information			

	· the maintenance of facilities that reduce visitor impact;	Yes, the trails in the Sapiranga Reserve (S).			
	· ecological research;	yes. GDF carry out regular aerial monitoring of Praia do Forte . in additional, GDF carry out studies in the field of historical and cultural issues of Praia do Forte (S).			
	· promotion of conservation;	yes. The main tasks of the GDF are conservation programs at the Sapiranga forest, Camurugipe and Passagem Grande reserve and Timentube river (S). In additional, it has undertaken environmental awareness's initiatives: World Environmental Commemoration Day (138 participants in 2008) and the Clean Up the World Day (228 participants in 2007).			
	· support of nominated conservation program;	Yes. Conservation programs undertaken in the Sapiranga Reserve (S).			
	· taking up of membership of a conservation group;	n/a			
	· provision of a donation or sponsorship of a local conservation group;	n/a			
	· promotion of a conservation group or its initiatives in promotional material;	n/a			
	· entered into partnership with a conservation group that provided mutual tangible benefits;	Yes. There is a proposal to create the Centre of Professional Excellence to qualify professionals in tourism and environmental areas together with local NGOs and other local entities (S).			
	· provision of concession rates to schools and other institutions studying the conservation of the environment;	yes. Provision of concession rates to schools (R).			
	· provision of tangible support for a student academic or agency undertaking conservation orientated monitoring or research;	no information			
	· involvement in a regional tourism impact monitoring or research program;	yes. GDF is involved in the visual impact monitoring in the Praia do Forte (S).			
	· physical, financial or in-kind conservation work in a natural area not directly used by the operator for this product;	yes. Conservation works in Passagem Grande reserve (S).			
	· regeneration work in a degraded area not directly used by the operator for this product;	no information			
	· donation of equipment that contribute to conservation projects;	no information			
	· financial contribution have been provided (entrance fees and donations) for conservation projects;	n/a			
4.2	b) At least <u>three</u> of the following actions have been undertaken in the past year:		0	non-compliance	?
	• input to the development of relevant planning and policy initiatives for managing the natural area used by the operator;	no information			
	• assistance with monitoring environmental impacts on sites being visited;	no information			
	• assistance with research on visitor impacts on sites being visited; or	no information			
	• provision of training programs on conservation practices for internal staff.	no information			
5	**Objective 5: Financial Benefits and Empowerment for Local People**				
5.1	At least <u>50%</u> of the employees are local residents.	30 employees (30% natives from Sapiranga Reserve and approx.70% residents in Praia de Forte) (S).	4	compliance	☺ ☺

5.2	Tangible support or participation has been offered to at least one not-for-profit organization or event that contributes to the welfare of the local community in the past year.	yes. Promotion of educational programs for children and training courses for guides (for local community of Sapiranga).	4	compliance	☺ ☺

(Rates: 1 Brazilian Real = 0.33442 Euro in November 20, 2008. Updated rates at http://www.oanda.com/)

ANNEX G3 – Results of the ecolodge performance

Principle 1	Score
1.1.1	1
1.1.2	1
1.2.1	3
1.2.2	3
1.3.1	3
1.3.2	3
1.3.3	3
1.4.1	3
1.4.2	1
1.4.3	1
1.4.4	3
1.5.1	3
1.6.1	2
1.6.2	1
1.7.1	3
1.8.1	3
1.8.2	2
1.9.1	3
1.9.2	0
1.10.1	3
1.11.1	0
1.12.1	2
1.13.1	3
SUM	50
NULL	2
PERFORMANCE INDEX	**2,38**

Principle 2	Score
2.1.1.1	4
2.1.2.1	3
2.1.2.2	3
2.1.3.1	2
2.1.3.2	2
2.2.1	2
2.2.2	3
2.2.3	0
SUM	19
NULL	1
PERFORMANCE INDEX	**2,71**

Principle 3	Score
3.1.1	3
3.1.2	3
SUM	6
NULL	0
PERFORMANCE INDEX	**3,00**

Principle 4	Score
4.1.1	4
4.1.2	2
4.2.1	4
SUM	10
NULL	0
PERFORMANCE INDEX	**3,33**

Principle 5	Score
5.1.1	3
5.1.2	0
5.1.3	2
5.1.4	2
5.2.1	0
5.2.2	0
5.3.1	4
5.3.2	4
SUM	15
NULL	3
PERFORMANCE INDEX	**3,00**

ANNEX G4 – Calculations for suppliers performance

Principles	Supplier	Supplier	Supplier	TAMAR	JWI	GDF
1.1	3	1	1	2	3	2
2.1	3	3	3	3	3	3
3.1	3	3	3	3	3	3
4.1	2	1	0	4	4	4
4.2	0	0	0	0	0	0
5.1	3	3	3	4	0	4
5.2	0	0	0	4	4	4
SUM	14	11	10	20	17	20
NULL	2	2	3	1	2	1
PERFORMANCE INDEX	2,80	2,20	2,50	3,33	3,40	3,33

suppliers	Principle 1	Principle 2	Principle 3	Principle 4	Principle 5	SUM	NULL	PERFORMANCE INDEX
Ecolodge	2.4	2.7	3.0	3.3	3.0	14.4		2.9
Operator A	3.0	3.0	3.0	2.0	3.0	14.0		2.8
Operator B	1.0	3.0	3.0	1.0	3.0	11.0		2.2
Operator C	1.0	3.0	3.0	0.0	3.0	10.0	1.0	2.5
Tamar	2.0	3.0	3.0	4.0	4.0	16.0		3.2
JWI	3.0	3.0	3.0	4.0	4.0	17.0		3.4
GDF	2.0	3.0	3.0	4.0	4.0	16.0		3.2
SUM	14.4	20.7	21.0	18.3	24.0			2.9
NULL				1.0				
PERFORMANCE	2.1	3.0	3.0	3.1	3.4	2.9		