

**Biodiversity Conservation & Economic Growth
(BCEG) Project**

**A Guidebook for
Monitoring Ecotourism Impacts
on Protected Areas and Surrounding
Communities**

Guidebook and Data Collection Tools

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Preface

The Biodiversity Conservation and Economic Growth (BCEG) Project is funded by the United States Agency for International Development, (USAID), as part of its strategic support to the Republic of Bulgaria. The Project is sponsored by USAID in conjunction with the Government of Bulgaria – the Ministry of Environment and Waters (MOEW). The Project is governed by a Memorandum of Understanding (MOU) between the two governments, and its implementation covers the period: May 2000 – March 2003.

This Project is a logical evolution of earlier USAID assistance to biodiversity conservation in the country. It follows some 10 years of assessment, technical assistance and financing of Bulgaria's biodiversity conservation strategic development, new protected areas legislation, and new national park institutions. The Project is designed to capitalize on the achievements of the Bulgaria Global Environmental Facility (GEF) Biodiversity Project (implemented during the period June 1995-April 2000), and builds on lessons learned.

The BCEG Project addresses six specific contract themes known as tasks or “contract result packages”. The BCEG Project includes the finalization and implementation of two national park management plans, the development of a new management plan for Rila Monastery Nature Park. It assists in the development of financial mechanisms and strategies to ensure the solvency of national parks. The Project pilots economic growth activities with select target groups around two Bulgarian national parks. And it continues to build on the principles of strong public information and awareness as stepping stones for informed public engagement and promotion of biodiversity conservation and protected area management activities.

This Project is issued as a Task Order (Contract Number LAG-I-00-99-00013-00) under the USAID Global Biodiversity and Forestry Indefinite Quantities Contract (IQC); and is implemented on behalf of USAID by Associates in Rural Development, (ARD) Inc., of Burlington, Vermont, USA.

The Project is implemented through a Project Management Unit (PMU) based in Sofia, and includes a Team Leader, three Bulgarian technical specialists, and support staff. Project activities are coordinated through two mechanisms –

- a) Project Coordination Group – serves as a steering committee for Project planning and monitors implementation. This consists of the National Nature Protection Service of the MOEW, and national park directors, the PMU and USAID;
- b) Project Counterpart Team – PMU staff working with MOEW/NNPS counterparts.

The Project is largely implemented through the Directorates for Rila and Central Balkan National Parks. Additional technical assistance is provided by Bulgarian and international consultants, and is based on specific terms of reference.

1.0 Executive Summary

This Guidebook provides a framework for those people in communities and municipalities who wish to monitor the impacts of tourism development, particularly ecotourism development in their communities. This is a Guidebook for small communities located near protected areas. It is intended to guide community thinking and action in the selection of “indicators” that they can track and measure to determine if impacts to their community and the surrounding environment are positive or negative.

The Guidebook was developed as part of program of support to rural ecotourism development in association with two of the country’s largest national parks – Rila and Central Balkan. Two pilot areas have developed models of community ecotourism as a result of projects undertaken by these two national parks in the implementation of their management plans. The community ecotourism models developed with the assistance of national parks have demonstrated successful examples of *public-private enterprise* and coalitions with protected areas, as well as a viable tool for community development. This Guidebook was used by community ecotourism initiative groups to collect the baseline data for monitoring ecotourism impacts in the two pilot areas. The results of their work can be found in another publication entitled: Baseline data on ecotourism development in two pilot areas of Rila and Central Balkan National Parks

This Guidebook is offered as a tool for replication and use in other rural communities undertaking ecotourism development. It is best used by:

- Community members who have been designated as responsible for monitoring ecotourism change in the community;
- Local government officials with the same task;
- Protected area ecotourism staff who are dedicated monitoring and mitigating negative changes in the protected area;
- University students and practitioners in the field of tourism development, and;
- External monitors and evaluators.

This Guidebook is dedicated to the belief that communities who set their own targets for ecotourism development are also in the best position to chose and monitor their success or failure. Self- selected community indicators in which all community ecotourism developers are engaged in identifying and monitoring works much better than those imposed from outside the community.

The guidebook necessarily focuses on communities that are visited by relatively small numbers of tourists - up to 10 – 15 000. It suggests the identification of impacts that can happen to communities before they happen. It then goes on to suggest the selection of indicators that will be measured and monitored to determine if these impacts are positive or negative for the community. The idea is to help small ecotourism communities reinforce actions that are going well, and to mitigate those that are have a negative impact on the community.

This Guidebook is closely linked to the strategic planning effort of each ecotourism community. It is linked to community ecotourism goals, objectives, and your vision for the community. It is part of the strategic planning exercise, and it's part of any community ecotourism action plan – for one year, or multiple years.

Finally, an important part of monitoring community ecotourism impacts is to link these with the impacts that occur from ecotourism inside the protected area. That is why we encourage the monitoring of community ecotourism impacts with ecotourism impacts monitored in protected areas. Such integrated monitoring allows us to establish the cause and effects of community ecotourism within the protected area.

2.0 Definition of Key Terms

Biodiversity. Biological diversity is the variety of life in all its forms, levels and combinations. Includes ecosystem diversity, species diversity, and genetic diversity.

Conservation. The management of human use of organisms or ecosystems to ensure such use is sustainable. In addition to sustainable use, conservation includes protection, maintenance, rehabilitation, restoration, and enhancement of populations and ecosystems.

Protected Area. An area dedicated primarily to protection and enjoyment of natural or cultural heritage, to maintenance of biodiversity, and/or to maintenance of life-support services.

Sustainable Tourism. An umbrella concept, embracing all types of tourism that maintains in perpetuity the environmental, social and economical integrity and well being of natural and cultural resources. It is any kind of tourism development that contributes to sustainable development.

Ecotourism. A subset of sustainable tourism, referring to tourism that is carried out in relatively undisturbed natural areas (a concept that covers a wide spectrum, from pristine nature to more or less degraded habitats) and that serves as a tool for the conservation and sustainable development of local communities. The World Conservation Union (IUCN) definition is: “Ecotourism is 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 negative visitor impact, and provides for beneficially active socio-economic involvement of local populations”. Broadly speaking, nature, local community, economics, conservation, culture, and interpretation are the main components and issues of ecotourism activities

Tourism Impacts. Tourism impacts are effects that various types of tourism development and activities practiced in a certain territory exert voluntarily or involuntarily on the physical (natural), social and economic environment. Tourism is a product of this environment but in the process of development it inevitably exerts certain pressure and causes some environmental impacts. The greatest concern for sustainable ecotourism development is negative physical impacts. Where there is insufficient knowledge and management of these impacts, the very existence of the natural resources that are the basic tourist attractions are threatened.

Monitoring. Monitoring is a continuous process of observing and recording of various processes and phenomena with a view to their prediction, planning and management. Successful monitoring requires the use of key variables or indicators that can be measured over a certain period of time and provide a clear and verifiable picture of the state and the future development of the process or phenomenon.

Indicators. Indicators are values of certain variables used to describe the state of a particular phenomenon. Sometimes these are variables that can be measured directly, e.g. number of beds in accommodation establishments or number of tourists. In most cases though the indicators used to measure impacts from ecotourism are not directly measurable but are those that illustrate the character of the phenomenon, e.g. number of tourists per 1000 persons of the local population or per square unit of area. Most often these measures are presented as correlations or percentages of two directly measurable variables.

3.0 Limitations of This Guidebook

The guidebook does not address in any detail how to set up a monitoring program or the technical aspects of using indicators.

It is intended to serve only as a guideline and explains some of the problems or issues that may arise as a result of ecotourism. The guidebook outlines ways to measure these changes.

The guidebook includes a suggested process that may be used in developing indicators for use at the community level.

Final decisions regarding indicator selection and their measurement are ultimately the responsibility of the community, whether they entrust someone else with the actual task of collecting and analyzing data or whether they conduct the monitoring themselves.

4.0 Why is Monitoring Needed?

Over a period of years, tourists will eventually bring different changes to your community. Changes resulting from ecotourism could have a negative impact on the social, cultural and economic life of your community and its surrounding physical and ecological environment.

These changes may not be immediately detectable, especially if you have small numbers of tourists, or if they engage in certain types of ecotourism activities that have low impacts. However, impacts can build slowly over a period of weeks, months or years and eventually have a larger impact on community life. For this reason it is important to keep track of, or monitor, these changes on a regular basis.

Whether change is positive or negative, it is important to keep track of how your community is affected by ecotourism so that you can tell if you are meeting your ecotourism goals. Indicators detect trends in ecotourism development in your community. Tracking these indicators, measuring change, and providing information on these changes to your community decision-makers, especially those involved in managing ecotourism, will help your community decide how best to manage ecotourism. The extent of the changes and the types of change may require you to consider altering your community ecotourism plan.

5.0 What are Indicators and Why Use Them?

Put simply, indicators help measure how our communities are changing in response to new development. Indicators can help you detect where you are right now in your ecotourism plan, whether or not you are going in the direction you planned, and where you are in relation to your long-term ecotourism goals.

An indicator is something that enables you to tell where you are at the moment, the direction you are going and where you are in relation to where you want to be

Indicators are a way of measuring change in your community resulting from ecotourism growth. Examples of indicators are given in the following section.

6.0 Relationship between the Ecotourism Plan and Monitoring

What does monitoring ecotourism mean? In general, when a community is planning for ecotourism development, it develops an ecotourism plan that includes the community's goals, objectives and vision for ecotourism. The plan is typically meant to cover the long-term development of ecotourism and the things your community will need to do to create the type of ecotourism it wants. The plan should also include ways to implement your ideas- the 'how to' part of ecotourism development. It should have plans for evaluating the success of your plan and your ecotourism product. Lastly, it should include a monitoring program so that you can, as mentioned above, detect any trends or changes over time

**A monitoring plan should be created as part of the
ecotourism plan**

You will want to know what changes are happening before it is too late to control or manage them. Data collection should start before your community begins to implement its ecotourism plan, so you have a base of information on the conditions in your community. Otherwise you will have no way of knowing the full extent of the changes.

7.0 Indicator Development and Selection Process

Developing and selecting indicators can be a complicated process. This section outlines the steps involved in determining appropriate indicators. It also gives examples of indicators and how they may be developed and selected.

The steps in the indicator development and selection process are:

1. Determine the strategic and operational goals of the ecotourism development project
2. Develop monitoring goals and objectives
3. Decide on the boundary of the area to be monitored
4. Identify the attributes of your community that you would like to conserve or protect
5. Compile a list of potential impacts
6. Prioritize impacts
7. Create a list of potential indicators and develop criteria for selecting indicators
8. Determine persons and organizations to conduct the monitoring, to generalize and analyze the information
9. Collect the data
10. Evaluation of data collected
11. Respond to monitoring and evaluation

These are the basic steps in developing and selecting indicators. There are a number of other factors to consider in completing the process, such as deciding what data needs to be collected, what the most appropriate data collection methods are, who will collect and analyze the data and report the findings to the community, and how frequently data collection should occur.

7.1 Determine the Strategic and Operational Goals of the Ecotourism Development Project

Before any monitoring or indicator development process can begin, each community must clearly define what type of ecotourism it wants to develop, in what territories, in which season (all-year round, seasonally or sporadically), and for what type of tourists. If ecotourism is somewhat developed, the community must decide what its future goals are: expansion of ecotourism that might include more area, attracting larger number of tourists, and/or creating more tourist facilities. A community might also consider keeping development at the existing level or reducing tourist activities.

Monitoring objectives identify specific things you want to achieve through your monitoring program. They help you to achieve the goals outlined in your ecotourism plan. They will help to alert you to any changes resulting from ecotourism. A monitoring objective could be to conduct monitoring every 2 years. Some examples of monitoring objectives that could be used at the community level are listed below.

Once the community has determined its strategic goals, it has to identify the operational objectives that will lead to the final goal of ecotourism development. Operational objectives are related to the organization and undertaking of various actual activities a community wants

to develop e.g. making historic or archaeological sites accessible to tourists. The environmental impact caused by these activities are the ecotourism impacts that need to be monitored. First you need to have a clear idea of what activities you plan to provide to tourists. For example you might take tourists on a tour a natural site or an historic or archaeological site. Or you may have tourists going to artists' workshops to observe their work and to buy local arts and crafts. Perhaps tourists will take part in a local festival or stay with families and learn about local culture. Whatever the type of ecotourism activities, you should have a clear plan that encompasses all the activities you would like to develop and promote over a span of at least 10 years. The provisional determination of future activities helps a community determine what changes are to be expected as a result of their implementation and correspondingly which variables or indicators should be monitored.

7.2 Develop Monitoring Goals and Objectives

Before developing indicators, the monitoring goals and objectives should be precisely defined. The main goal of monitoring is to plan properly. Monitoring will allow you to keep track of changes in your community as a result of ecotourism activities. A monitoring program with the appropriate indicators will give you information you can use to respond to changes before any negative or harmful things happen to your community, or before the changes cause lasting damage. Clear monitoring goals and objectives will help support ecotourism management and reveal the dynamics of various ecotourism development- related processes. Tourism, including ecotourism, causes various changes (positive and negative) in the social, economic and physical environment.

Monitoring objectives include:

- **Determination of a baseline level of the state of the natural environment before the beginning of ecotourism development;**
- **Comparison to all known previous changes in the environment caused by ecotourism development and establishment of possible trends in them;**
- **Prediction of future and expected changes;**
- **Operative and strategic decision-making concerning change and impact management;**
- **Determination of the actual state of ecotourism development in the community at each monitoring stage.**

Monitoring objectives determine the specific monitoring program aims. If the objectives are clear and measurable, they are tools that can help you achieve the goals of your ecotourism plan. Monitoring objectives will help you consider any change that is likely to occur as a result of ecotourism development. The formulation of final objectives will depend on your community ecotourism vision and your final ecotourism plan.

7.3 Setting the Boundaries of the Area to be Monitored

Once you decide what it is you wish to achieve through your monitoring program, the boundaries of the area to be monitored need to be defined. This might include specific ecosystems or special areas, community administrative limits, and other factors that determine the physical boundaries of your community. You will need to determine whether you will monitor the entire physical area of your community, only the areas visited by tourists, or a larger area depending on the type of ecotourism activities taking place in and adjacent to your community.

It may be that tourists will arrive at one location and be taken only to specific places within your community, thus having little or no effect on most of the physical areas of your community. Or, tourists might stay in your community for one or many days, moving around freely in contact with local people. In this case, tourist activity could potentially affect a larger area. Factors such as the nature of tourist activities and the duration of visits will affect your decision on the size of the area you monitor.

It is important to consider the natural resources that could be affected by ecotourism activities. Are restaurants adjacent to a pond, a river or an agricultural area? Are tourists walking through a natural area or are they walking on roads? These areas may need to be included in the area to be monitored.

Your definition of the size of the area to be monitored may be affected by a limitation on available funds or a lack of people to do larger-scale monitoring. It is likely you will experience both of these limitations and will have to scale your plans accordingly. Regardless, you need to determine the boundaries of the area so you can focus monitoring in this area.

7.4 Community Attributes to be Conserved or Protected

After the decision is made about the boundary, you will next need to consider those attributes or assets within your community that you want to conserve or protect. What are those things about your community that make it special, or that you value and would not want to have harmed? This is potentially a large list as there are many things you would not want changed in your community. It may help to make a large list and then narrow it down to those having the greatest priority, as agreed upon by members of your community.

For example, do you have public areas that are particularly important to you? Do you have any special buildings, such as temples, or archaeological artifacts that are valued for religious or heritage reasons? Will tourists visit any of these and will they be sensitive to the value the community places on them? Are any of these areas fragile?

You will also want to identify community attributes that tourists might view as attractions. For example, many tourists will be interested in visiting natural attractions like bird sanctuaries, fishponds, and waterfalls. Perhaps you have an historical or religious site that the community values. If you have such attractions you may decide to conserve them for the benefit of future tourists. Other community attributes you might identify as being important to preserve are special festivals, religious ceremonies or specific unique local customs. These may become priorities when you are deciding what attributes are most valuable to you and also to tourists, and therefore, the one(s) you will conserve or protect. You may want to consider issues that could affect any of the attributes, such as erosion at a natural or heritage/religious site. Factors such as this one should be reflected in your indicators.

7.5 Predicting Impacts

Once you have made a decision about the attributes you want to conserve and protect and the boundary of the area in which these activities will take place or might impact, the next step is predicting the types of impacts ecotourism may have on them. Again, a list of all the potential impacts would be helpful and can be narrowed down at a later time. While it is generally easier to see impacts after they have occurred, it is important to anticipate impacts before they have potentially negative consequences. Impacts won't always be negative, but you still need to monitor them to determine what changes are occurring. The most difficult task is predicting what those impacts might be. These impacts are predictive of future changes in your community.

Before describing the types of impacts that can occur, we should be clear about what, exactly, is meant by ecotourism impacts. As mentioned earlier, when tourists visit a community they can affect the community in a number of ways. In general, these impacts fall into three categories:

- socio-cultural - those things that would impact the social or cultural life of your community
- economic - those things that would impact the economic life of your community
- ecological or physical - those things that would impact the ecology or the physical structures in or near your community.

For the most part, ecotourism in small communities or villages will be based on natural or cultural attractions. However, your community could experience impacts in one or more of these categories. The following is a list of the types of impacts that could occur in a small community. The list of potential impacts is large and these have been selected based on their relevance to natural and cultural ecotourism in small communities. All potential impacts may or may not occur in all communities, and some of them definitely will not occur in yours. You have to decide which ones you think your community might experience.

Socio-Cultural

- Changes in local behavior, dress, customs
- Changes to local arts, crafts, ceremonies, productions
- Changes in amount of interaction between local people and tourists
- Changes in use of local language or adoption of new languages

Economic

- Changes in local employment
- Changes in amount of goods and services used and sold
- Changes in standard of living

Physical-ecological

- Changes in amount of solid waste, liquid waste
- Changes to local archaeological or religious sites
- Changes to publicly used areas, agricultural lands
- Changes to infrastructure (roads, docking areas, layout and development of community) or to availability of electricity, garbage disposal

There are positive and negative impacts from ecotourism. A community can experience elements of both.

Ecotourism can impact positively by:

- helping to conserve important natural areas, such as parks, bird sanctuaries, aquatic ecosystems
- assisting in the conservation and/or protection of valued historic sites or artifacts
- improving environmental quality through the construction of better sewage disposal systems and drinking water purification, or by providing access to drinking water
- infrastructure improvement, such as improved roads, the installation of and access to electricity lines and improved garbage disposal
- helping to conserve cultural heritage through a resurgence in traditional arts and crafts, music, drama, customs and ceremonies and dress
- increasing employment opportunities
- increasing personal and family incomes
- improving local standards of living

Ecotourism can impact negatively by:

- causing air, noise, water and soil pollution
- causing waste disposal problems
- creating traffic and transportation problems
- damaging fragile environments, such as aquatic ecosystems
- causing erosion, landslides and flooding
- causing damage to archaeological and historical sites
- creating overcrowding and loss of access to amenities for local people
- creating conflicts between hosts and guests
- causing social breakdown, such as increased crime, sale and use of drugs, and family problems
- loss of economic benefits to local people due to lack of ownership in local businesses
- unequal distribution of money and employment within the community.

The list of potential impacts is extensive. It may be difficult to predict possible impacts if you have never had ecotourism in your community and cannot imagine the extent and types of harm or benefits that may occur. You may need help in identifying potential impacts, either through a workshop, asking a local government ecotourism official for assistance, or accessing available videos or books on ecotourism in communities.

It is vitally important to prepare for ecotourism in your community through proper and careful planning. It is important to monitor impacts so that changes, whether positive or negative, can be controlled and/or dealt with by your community before they reach unmanageable proportions.

7.6 Prioritizing Predictive Impacts

Once you have determined some of the potential impacts, you can begin to think about narrowing down your list to those you think are most likely to affect your chosen attributes. Ranking the impacts can help establish priorities. You need to come up with criteria to help you judge the potential impact. Some criteria that may be used are listed below along with an explanation of each one. Each criteria can be applied to the potential impact and help you rank them.

A. Criteria

Three examples of potential criteria that could apply at the community level are given as a way of explaining how to use criteria. They are then applied to anticipated impacts to help you develop a set of prioritized impacts.

Likelihood of Occurrence

You need to determine the likelihood or possibility that an impact will occur as a result of ecotourism. For example, if tourists stay overnight in your community, there may be a high or moderate likelihood that they will put pressure on local water and sewage disposal systems. But if they only spend a few hours in your community, the likelihood of increased pressure on local water and sewage systems may be low.

Potential degree or frequency of impact

If there is a possibility that an impact will occur, you must decide the degree of impact. You have predicted that your community is likely to experience an increase in footpaths, or wear to existing ones, as more tourists come to the area. Is it likely that there will be a lot of new paths created in previously untouched areas, or will only the existing ones be used, thereby causing a lesser degree of impact? The answer to this will affect your ranking of the degree of impact.

Ease of monitoring

Considering the footpath and water and sewage impacts examples, which of these would be easiest to measure? Ideally you want to be able to measure impacts easily. Measuring footpaths may be done by a local person, who would require a limited amount of training.

Measuring impacts to the sewage system may require a more technical approach and someone with more advanced training. This may not be a problem if someone in your community has the necessary skills or if you have easy access to someone who can do this for you. You will have to decide which impacts you think can be monitored most easily and, hopefully, with the least amount of cost involved.

You are using the indicators to protect or conserve the attributes of your community. If the attributes you decide on are physical or ecological then you will need indicators that focus on the appropriate types of impacts that could occur. If you choose economic attributes, you will need to focus on economic impacts, and the same applies to socio-cultural attributes.

B. Ranking Process

The ranking process begins with an examination of those impacts that are likely to occur. As an example, you have decided it is important to keep your community in its currently clean state and are concerned that ecotourism may cause changes to the physical appearance of your community. You may expect tourists to spend time in a public area of your community, eating, drinking or buying various items. This could cause wear and tear on those areas or it could cause an increase in garbage in the area. To help you decide which impact is more likely to occur- degradation of the physical condition of public places or an increase in garbage in the area - you can use criteria to rank the impacts in order of importance. The examples below illustrate how to apply numerical ranking to the three criteria described previously.

The simplest ranking system is to determine three (e.g. high, moderate and low) or five (very high, high, moderate, low and very low) categories in combination with numerical ranking - 1 to 3 or 1 to 5 (with first or last number having the greatest weight). The simple summing of the numerical ranks for the chosen criteria will give the total or final significance of the impacts.

An example of how to do this is provided below.

Criteria	Ranking		
	high	moderate	low
Likelihood of Occurrence	3	2	1
Potential degree or frequency of activity	3	2	1
Ease of monitoring	3	2	1
	Total 3+3+3=9		

This received a high ranking of 9 because there is a strong chance that the impact will occur (3), that it will occur frequently (3) and that it will be relatively easy to monitor (3). It might be worth your while to think about monitoring this impact. But first you need to compare it to other possible impacts.

1. Socio-Cultural - Change in amount of local crafts being sold or produced for tourists (providing crafts are sold locally)

Criteria	Ranking		
	high	moderate	low
Likelihood of Occurrence	Ā	2	1
Potential degree or frequency of activity	3	Ā	1
Ease of monitoring	3	Ā	1
	Total 3+2+2=7		

Given that your community produces crafts locally, there is a high chance these could be sold to tourists (3). The sale of crafts may only be moderately high (2) as is the ease in monitoring the sales (2), therefore it receives a 7.

2. Economic - Changes in local employment

Criteria	Ranking		
	high	moderate	low
Likelihood of Occurrence	3	Ā	1
Potential degree or frequency of activity	3	2	Ā
Ease of monitoring	Ā	2	1
	Total 2+1+3=6		

This usually is a problem in areas where ecotourism occurs on a large scale, such as in resort areas, where there are many tourists staying for longer periods of time and more likelihood of occurrences of migration or labor force import. This probably won't be a problem in your community unless ecotourism grows on a larger scale. It would, however, be quite easy to measure the increase in the number of jobs (3), assuming a moderate likelihood of occurrence (2) and a relatively low frequency (1).

3. Physical-Ecological - Changes to drinking water supply

Criteria	Ranking		
	high	moderate	low
Likelihood of Occurrence	3	2	Ā
Potential degree or frequency of activity	3	2	Ā
Ease of monitoring	Ā	2	1
	Total 1+1+3= 5		

This would only be a problem if there are many tourists visiting and/or staying overnight - likelihood of occurrence (1) and potential frequency (1). Impacts could include a change in the amount available to local people or to the quality of drinking water which is relatively easy to monitor (3).

By listing the above impacts and comparing the totals of each after ranking, it is easier to see which impacts take priority.

Impact	Ranking Total
1. Sale and production of local crafts for tourists	7
2. Employment	6
3. Water quality	5

Although the ranking process is intended to provide a method to assist in prioritizing potential impacts, there may be other factors that will affect your decisions regarding which impacts to monitor. You may not be able to monitor all of these impacts, due to constraints such as lack of funding and people who are knowledgeable in data collection methods. Ideally, your monitoring program should be as simple as possible, but effective, and you may decide that monitoring one or two key impacts can provide you with valuable information on the overall impacts of ecotourism on your community's attributes. The final decision regarding the criteria you use and how the predicted impacts are ranked will be made by you with help from those from whom you've requested assistance.

7.7 Impact Measurement Indicators

Once you have a priority list of potential impacts, the next step is determining how to measure them. Some of the indicators that could be used to measure the impacts ranked in the previous section are listed below. They are intended as examples of ways to monitor changes in your community that may result from ecotourism development. You may propose other indicators that would be more appropriate to your circumstances.

Impact	Indicators
1. Sale and production of local arts and crafts	- increase/decrease in sales at local outlets - increase in types of new crafts being developed and sold
2. Local employment	- increase in number of local jobs that have a local person in the position
3. Drinking water supply	- increase in amount of fecal coliform or other pollutants in local drinking water - decrease in amount of water available for use by local people

Devising ways to measure impacts is a challenge

There are no set rules or method to follow. You can develop many indicators. It might be best if a group from the community working together, with or without the help of an ecotourism expert or official, identify possible indicators to measure expected changes. The list can then be narrowed down by another ranking process if need be.

It might be useful to ask yourselves some questions to guide the process:

- How will you be able to tell if ecotourism is having the impacts you expected?
- Do you think you will be able to measure the impact?
- What would indicate change in your community?

For example, if you think ecotourism activities will affect your drinking water, what sorts of changes would indicate that the drinking water is different? Would it be a different color? Would it taste funny? Are people getting sick? If any of these indications of change happen to your water supply, you may want to measure things in the water that can harm people. Government health officials would be able to tell you what to look for.

It is helpful to come up with a list of many possible indicators and then prioritize them. The following is a list of indicators that can be used as baseline measures and for periodic monitoring:

- NGOs involved in tourism
- Number of tourism-related small and medium enterprises (SMEs)
- Tax revenues or fees — municipalities, national government
- Number and type of business licenses issued at local/regional level
- Investments in specialized tourist infrastructure (ski-lifts etc.)
- # facilities for local use (total) [compare to population and tourism growth] - (road reconstruction and new construction, sewage treatment systems, water supply systems etc.)
- # facilities developed for joint visitor-resident use (restaurants, parks etc.)
- Overcrowding of facilities and services used by locals
- Noise and litter pollution
- Traffic congestion (peak season; annual)
- Destination growth rate (residential population, second homes, new homes)
- Changes in land ownership (non-resident/resident, etc.)
- Change in family structure
- Increase/decrease in cultural festivals (and authenticity of these)
- Level of use of local knowledge and skills (e.g. in interpretation) - demonstration of local crafts, local folklore etc.
- Governmental contributions (facilities, donations, etc.)
- Availability of tourism training and education (# of facilities/programs) - training for local community in servicing tourists
- Distribution of responsibility between private sector, government and NGOs
- Appropriateness of design (infrastructure) with local culture
- Demographic profile of the population
- Education profile
- Employment versus unemployment
- Migration patterns
- Change in land use
- Change in economic structure (% of service sector)
- Average wages in area

Most of this information may be obtained in the administration office of your community. When such information or statistics is not centrally available and you consider it very important, you can ask someone else to keep track of and monitor one or more of these indicators.

Tourist establishments can be a source of valuable data for a number of indicators. These data may duplicate those given by local authorities; however sometimes this is done purposely and helps to determine the validity of the data.

For example, tourist establishments can provide information on employment, such as number and type of jobs, seasonality, local versus imported labor, and salaries; numbers of rooms and occupancy rates; tax revenues generated, and whether the business is locally owned. It would be valuable to both the community, in monitoring the success of its ecotourism plan, and each business, in evaluating its success, if businesses developed a database and tracked some of these indicators.

After preparing a comprehensive list of indicators, you need to select the most appropriate ones. You may decide that one or two key indicators will provide you with sufficient information to monitor the impacts of ecotourism in your community. You can always add more indicators in the future, if you think you need more information. Some things to consider when choosing your monitoring indicators are:

- Availability of existing data
- Ease of training local persons in data collection methods
- Reliability of data
- Relationship to community ecotourism vision/plans
- Ease of data collection
- Ease of analyzing data collected
- Ease of understanding collected and analyzed
- Cost of collecting and analyzing data

The development of every tourism type and particularly of ecotourism depends very strongly on local residents' support. The best tourist project will fail if the local population is against its implementation.

It would be important to monitor local residents' attitudes towards tourism development as well as the impacts ecotourism exerts on the social and cultural environment of the community. Some indicators to monitor are:

- Noise and litter pollution
- Overcrowding of facilities and services used by locals
- Traffic congestion (peak season; annual)
- 'Irritation index' to measure quality of host-guest relationships
- Destination growth rate (residential population, second homes, new homes)
- Changes in land ownership (non-resident/resident, etc.)
- Change in family structure
- Change in local values, dress, customs
- Appropriateness of design (infrastructure) with local culture

- Level of use of local knowledge and skills (e.g. in interpretation, demonstration of local arts and cuisine)
- Local values, customs – how much they are part of the services offered

It is also important to know to what extent your visitors' expectations and needs are met by the community's attributes and services for ecotourism.

Tourists' satisfaction is also a guarantee for successful ecotourism development in the community.

One useful tool for monitoring tourist satisfaction is a short questionnaire. The questionnaire could be most easily provided at tourist establishments. The responses will help direct future efforts of the community and local businesses in improving the quality of their ecotourism product. Some examples of data that could be obtained from a questionnaire are:

- Needs, preferences and interests
- Satisfaction with facilities and services
- Income and other demographic data
- Visitation patterns (time, return, length of stay, spending, etc.)
- Modes of transportation
- Perception of destination image
- Parking at attractions and services
- Local tourism revenues
- Tourist expenditures
- Number of visitor days
- Average expenditure per day/per visitor

8.0 Implementation of Monitoring Plan

8.1 Determining Who will Conduct the Monitoring and Analyze the Information

You need someone to collect the monitoring data. Will it be someone from the community? Or should you ask for the assistance of a government official, perhaps from a health or environmental office or nearby university or college? Are there others who could help? This person or persons will probably also have to analyze the data and report the findings to the community. It is important that the selection of indicators and the conduct of the monitoring program are done by individuals who are perceived to be legitimate, unbiased and experienced. The reliability of the data collected will depend in part on whom, and how the data is collected. It's recommended that a community engage the services of skilled and experienced professionals in determining the indicators with a view towards ensuring a realistic assessment of the ecotourism impacts on the environment. The same applies to gathering the monitoring data. Specialists should be involved in it at least the beginning of the process and, if possible, in training of the people who will conduct the monitoring.

8.2 Collecting Data

Once the most suitable indicators are selected, there are several more things to do before the actual monitoring plan is conducted. You need to decide on the most appropriate methods of collecting data. Having access to existing data and determining if it is reliable and useful is a good first step. For example, if you've chosen the quality of your drinking water as an indicator to be monitored, there may be information on its current quality at a local government health or environmental department. This data could be used to define baseline conditions. The methods used to collect this data may also be used in the monitoring plan if the community determines it needs additional water quality data.

One of the most frequently used and reliable tools for collecting various types of data is the survey method. Questionnaires are distributed and collected among various representatives of the community's population and/or its visitors (tourists). This can be done regularly or sporadically depending on the nature of selected indicators and the type of ecotourism development in the community. Results are processed, analyzed, generalized and corresponding conclusions and recommendations made.

If questionnaires are used, you'll need to develop a reliable system for their distribution and collection. There are a number of ways this can be done. The questionnaire for local authorities could be completed on one copy and most of the necessary information can be obtained in the local administration office. It may be possible for tourist establishments to complete only one copy of the questionnaire. (It's assumed that there are only a few in small communities and they can be organized to take part in the survey). Distributing questionnaires among local residents and visitors is more complicated – how many questionnaires are needed, when should the survey be conducted, and how should it be organized? Appendix I provides more detail on how to use questionnaires to collect data within your community.

When and how often do you need to collect data? Sometimes it takes a long time before one or another impact manifests itself and is noticed, evaluated, measured and managed. Practice shows that the economic impacts of tourism are the first ones to be noticed. More time is needed for ecological or physical impacts to appear, and sociological and cultural impacts may not be seen for some five to ten years after the beginning of tourism development. Data gathered over a long time is essential for evaluating certain impacts. The lack of noticeable impacts in one year does not necessarily mean there has been no change or there won't be any impacts. A community-level database of monitoring results can be useful for long-term monitoring and detection of change. How often data will need to be collected depends on the indicator (it may be seasonal, annual or more often) as well as on the community's resources.

8.3 Evaluation of Results

Evaluation of the monitoring data should help in assessing whether the community's ecotourism goals and objectives are being met. The results of the monitoring data should also help in assessing the impacts of tourism activities on the environment as a whole and on particular resources identified by the community as being important for conservation and preservation.

In evaluating the results of the monitoring plan, close attention should be paid to the interdependence among the resources, the community's citizenry, and activities of the many stakeholders in the community's tourism industry. For example, the issue of a migrant labor force should be evaluated in relation to local employment figures – a large migrant labor force may be acceptable to the community if local unemployment rates are low, but unacceptable if there is high unemployment among the local workforce. Similarly, assessing the issue of crowding in the community should be looked at with other factors such as transportation and the amenities that draw tourists to the area.

Indicators should also be evaluated to determine how well the community is following the principles of sustainable tourism development. If, for example, tourism expenditures are high, but 93% of workers have poorly paid jobs in the tourism sector, it can be concluded that the benefits of tourism are not being equitably distributed. This is inconsistent with the principles of sustainable tourism development.

The process of assessing the impacts created by tourism in the community may produce conflicting results. For example economic results may be positive, while cultural impact indicators may show negative results. If the values of spiritual happiness or satisfaction of a population are being threatened through tourism development, despite higher local incomes from tourism, the destination may have to consider alternative management strategies, such as limiting visitors or using zoning mechanisms to separate the visitor and host populations.

The assessment process should recognize the need to consider and balance these conflicts.

Upon completion of the technical process of collecting and analyzing the data, it should be distributed widely to everyone involved in and affected by tourism in the community. This will make the process of making decisions about balancing and managing the impacts on the community easier. Most importantly, it will help develop support for these decisions from within the community.

8.4 Response to Monitoring and Evaluation

The community, the public and the private sectors, from government and tourism managers should develop and implement mitigation actions that best address the issues highlighted in the analysis of monitoring data. The results of the monitoring plan

may reveal additional actions a community could take to improve conditions. For example, the community may determine that much of the local labor force is not qualified for jobs in the tourism sector. If one of the goals of its ecotourism plan to increase local employment, one response may be the development of training programs.

If the community and others fail to respond to the monitoring program, it becomes an ineffective tool for implementation of the ecotourism plan. Inaction could also result in degradation of the attributes the community has identified as being important. This could lead to a reduction in ecotourists over time. However, if the monitoring program is used well, it will show the effectiveness of the community's actions and how they have influenced ecotourism development.

**Monitoring can be a valuable tool for managing community tourism.
There must, however, be a way for the community to effectively manage
any problems that the monitoring process exposes.**

Appendix 1

Use of Questionnaires in a Monitoring Plan

One of the most frequently used and reliable tools for collecting various types of data is the survey method. This method includes the development of one or more questionnaires depending on the type of data you need to collect and the type of people or institutions you want to include in your survey. In this type of activity - monitoring tourism impacts questionnaires are distributed and collected among various representatives of the community's population and/or its visitors (tourists). This can be done regularly or sporadically depending on the nature of selected indicators and the type of ecotourism development in the community. Results are processed, analyzed, generalized and corresponding conclusions and recommendations made.

There are three possible approaches:

- A one-time survey aimed at capturing the community's pulse and inclinations at a particular moment. Using this approach the number of questionnaires distributed and collected is not so important, but the rule always is – the more, the better;
- A survey using some basic principles of sociological survey, e.g. surveying a certain percentage or a certain quota of the local population or the visitors, and surveying at a peak time for tourist activities;
- A full-scale survey that applies various statistical methods and sample techniques. In cases where this type of survey is chosen, it is imperative to include or to consult a social survey specialist (a sociologist).

Whichever approach you choose, the results can provide you with helpful information to establish and monitor the impacts caused by ecotourism development in your community. It will be better than doing nothing.

Answers obtained from questionnaires can be used to identify and measure certain indicators. To track the responses from individual audiences, it is helpful to number the specific questionnaires and continue using this numbering system in summarizing the results. For example:

- I – tourist sector
- II – visitors
- III – local residents
- IV – local authorities

Indicators' values are ambiguous.
Every community should interpret survey results by itself and make
decisions concerning their management.

Communities will establish their own rating system for indicators, and a given indicator value may be very good for one community and for another one it may be disastrous. For example, one community may determine that a high number of second homes is a positive indicator of economic development, while another community may determine that it is deleterious to its economic development. One community may seek to increase the activity related to a particular indicator while another community may try to decrease or at least to sustain its growth.

Evaluation of some indicators is done using the principle of “the more-the better”. It is assumed that the indicator value increase is caused by production capacity and market share increase. For example, the greater number of tourist establishments will mean a better economic growth.

The tables included in this appendix provide detailed examples of how the results of a questionnaire can be summarized and ranked to provide a community with useful information on the impacts of ecotourism. The indicator to be measured is in the left hand column; the questions related to the indicator are presented in the second column; the method used to summarize the responses is presented in the third column, and the indicator value is in the last column.

The indicator values are:

I – Increase. This value identifies indicators whose status should be increased or expanded.

S – Sustainability. This value identifies indicators whose status should be sustained and not increased or decreased. This is particularly important for the ecological impacts of tourism.

D – Decrease. This value identified those indicators whose status needs to be decreased by the community – an example is a high unemployment rate.

Q – Quality. This value identified indicators whose status requires quality improvement, for example air quality requiring a change from wood heat to an electrical source of heating.

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
TOURISM SECTOR			
Number of employed in the tourism sector	?-How many people work in the tourism establishment ?V-Number or % of workers employed (from the local population)		I
Type of employment (part-time, full-time, seasonal, all-year round, local, migrant)	?- The employed are – owners, family members (paid, unpaid), hired (from the community, from other communities), full-time or part-time, seasonal, permanent, male, female	% of the total number of employed Index – ratios full to part-time, all-year round to seasonal employment etc.	Higher % of full-time and local employment, lower % of part-time, seasonal and non-local employment. Recommended indices value - more than 1 I
Wages	?- How many workers receive the a) minimum b) average c) higher than average wages ?V-What is the community's average wage?	% from the total number of tourism employed	Higher % of those getting higher than average I
Tourism related non-government organizations	?V- Number of tourism related non-government organizations		Higher values I
Government contribution (buildings, subsidies etc.)	?V- Number of buildings, subsidies (sums) etc.		Higher values I
Amenities	?- What is the establishment's category? ?- Was it duly categorized according to the Tourism Law? ?- What is the establishment's capacity? ?- What type of heating source is used in the establishment? ?- What fire precautions are there? ?- Is there a parking lot? ?- Is there a restaurant, a café, a bar, a disco etc. in the establishment? ?- Are there separate bathrooms? ?- Is there telephone, TV set, radio, mini-bar, air conditioner etc. in the rooms? ?- What additional services are offered? How many and which of them are related to local folklore, culture and traditions? ?- How many of the employed have the necessary education and qualification in the field of tourism?	Range	I – accommodation, S – catering establ. I Q Q, I I, Q I, Q Q Q I I, Q I, Q

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
	?- Does your establishment have a business-plan? ?- How are new investments distributed? ?- How do you attract clients? How do you advertise? ?- Are you a member of a professional organization?		Q Q Q Q
Service quality	?- What additional services are offered? ??- What is the aim of your visit here? ??- What recreational activities did you engage in during your stay here? ??- Are you satisfied in general with your stay here? ??- Please, evaluate the tourism supply in the community. ??- Would you visit this place again? ??- Would you recommend this place to your friends and relatives? ??- What is your general impression from your holiday?	Identification of problem areas Word evaluation	Q, I Q Q, I Q Q I, Q I Q
Availability of local tourism training programs	?- How many of the employed have the necessary education and qualification in the field of tourism? ?- How many of the employed have worked in the tourism sector before? ?- According to you what are the training needs in your establishment? ?- What additional qualification program would you personally like to enroll? ???- According to you what are the training needs in your community? ???- What additional tourism qualification program would you personally like to enroll? ?V- Number of local tourism programs/schools etc.	Ratios to the total number of tourism employed; Comparison and analysis of tourism establishments' and local residents' answers.	Values close to 1.0 Q
Distribution of responsibilities among private sector, state, NGOs	?V- Number of tourism related establishments (private, public etc.) ?V- Number of tourism related NGOs. ?V- Number and type of tourist licenses issued by the community. ?V- Distribution of tourism related responsibilities.	%	Higher % of private sector and NGOs Q
VISITORS			
Needs, preferences and interests	??- What is the aim of your visit here? ??- What recreational activities did you engage in during your stay here? ?- What additional services does the establishment offer? ?- Do you offer any services or attractions related to old local customs and traditions, culture and folklore?	Identification of problem areas	Q - according to regional and local strategy

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
Satisfaction with tourist services and facilities	??- Are you satisfied in general by your vacation? ??- Evaluate various tourism supply components. ??- Evaluate various aspects of your stay here?	Ratios among variables and components	I, Q
Incomes, demographic data and other market information	??- How did you learn about this tourist place? ??- How is your vacation organized? ??- What is your gender? ??- What is your age group, your family status? ??- What education do you have, what is your profession, permanent address? ??- How do you rate your living standard compared to most people in your country of origin?	Description and analysis	Q Q (product appropriateness)
Visit models	??- How many times have you visited this place, for how long and at which time of the year? ??- How long will you stay here? ??- With whom are you here? ??- How much are your approximate expenditures during your stay here? ??- What did you spend money? ??- What places, other than this one, have you visited and intend to visit during your stay here?	Description, % Analysis Ratios of additional to main services	I, Q
Transportation	??- What means of transportation did you use to get here? ??- Evaluate the geographic situation, transport accessibility, transportation facilities (moving and stationary), route, transportation and tourist information available, parking possibilities of the community and in the tourist place ??- Evaluate the available taxi, public transport and rent a car services.	Description, analysis, % ratios	I,Q
Destination image	?? – Why did you choose this particular place? ??- Where did you get information about this place? How did you learn about it? ??- Would you visit this place again? ??- Would you recommend this place to your friends and relatives? ??- What is your general impression from your holiday?	Description, analysis, % ratios	I,Q
Parking facilities	?- Is there a parking-lot? How many places are there? ??- Evaluate parking availability – near accommodation establishments and near visitor attractions.		I, Q

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
Relation of visitor to local resident numbers	?V- Local residents' number ?V- Tourists' number	Ratios of visitor to local resident #	Higher values of this relation (for the present)
ATTRACTIONS			
Visitors' density	?- Give the number of visitors (overnights) in the establishment ?V- Number of local residents ?V- % of the land owned by local residents; % of agricultural lands, of the forests, for habitation, for industrial needs, for tourism and recreation ?V- Number of visitors	Ratios of tourist numbers to local residents number and to community's lands # visitors per sq. km	Q
Number of visitors	?- Give the number of visitors (overnights) in the establishment ?V- Number of local residents		Q – up to the carrying capacity of the community's territory and population
Tourism revenues	?- What is the establishment's capacity ?- What is the price per bed (per place)? ?- What is the ratio revenues/costs for the establishment? ??- With whom are you here? ??- How much are your approximate expenditures during your stay here? ??- What did you make expenditures for?	Multiply the answers to the first 2 questions and compare to the answers of the last 3 questions.	Higher values, I
ECONOMIC			
Jobs	?-How many people work in the tourism establishment ?V-Number or % of tourism employed (from the local population) ?- The employed are – owners, family members (paid, unpaid), hired (from the community, from other communities), full-time or part-time, seasonal, permanent, male, female ?- How many workers receive the a) minimum b) average c) higher than average wages ?V-What is the community's average wage? ?- How many of the employed have the necessary education and qualification in the field of tourism? ?- How many of the employed have worked in the tourism sector before? ?- According to you what are the training needs in your establishment? ?- For how many of the employed tourism is a) main b) additional activity?	% of the total number of tourism employed in the community Index – ratio of full-time to part-time, of all-year round to seasonal employment etc.	Higher % of full-time and local employment I Lower % of part-time, seasonal and non-local employment D Recommended index's value – more than 1.0.

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
Tourist expenditures	?- Number of beds/places in the establishment I- Price per bed/place ?- Ratio between the establishment's revenues/costs ??- How much are your approximate expenditures during your stay here? ??- What did you make expenditures for?	Multiply the answers to the first 2 questions. Comparison and analysis	I
Accommodation establishments	?V- Number of tourism related establishments. ?- Type of the establishment, how long is it in operation, if categorized, how is it defined? ?- What is the establishments capacity? ?- What is the number of visitors (overnights)?	Description, ratio number of tourists (overnights) to number of beds	I Higher ratio values
Number of tourist establishments	?V- Number of tourism related establishments.		I
Local entrepreneurship	?- Type of the establishment (owned, leased, another arrangement) ?- Establishment's manager is the owner, hired, local or from another place? ?- Is there a business-plan? ?- Have you ever taken a bank credit? What type, how many times, under what conditions? ?- Who takes the decisions for new investments and other bigger costs in the establishment? ?- How do you attract clients? ?- Are you a member of a professional organization?	Description and analysis	I, Q Higher indicators' values
Public tourism revenues	?V- What % of the community's own revenues comes from tourism? ?V- % of tourism in the community's economic structure (% of the community's overall revenues)	Analysis	I Higher indicator values
Number of tourist licenses issued	?V- Number and type of tourist licenses issued by the community	Analysis	I Higher indicator values
Immigrant labor force/local unemployment	?- Is the establishment's manager local or from another community? ?- How many of the employed are local (%)? ?V- What is the % of tourism employed from the local population? ?V- What is the unemployment rate in the community (in % of local workforce) ?V- Number of the socially supported local people. ?V- Number of emigrants ?V- Number of immigrants	Analysis	D Ratios, percentages and numbers of local tourism employed is recommended to be higher than these of immigrant tourist employees.

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
Tourism economic costs	?- Where from does the establishment buy materials, equipment, food and beverages? Locally or from other places? ?- What are the establishment's costs? ?- Is there a business-plan? ?- Have you ever taken a bank credit? What type, how many times, under what conditions? ?- How are new investments distributed (in %)? ?V- What are the community's costs for the improvement and maintenance of the general infrastructure? ?V- What are the community's costs directly related to the tourism development?	Analysis	Q, I of the last 2 indicators
SOCIAL			
Number of facilities related to the population and visitors numbers	?V- Number of facilities servicing the local population (shops, pharmacies, cinemas etc.) ?V- Number of facilities servicing both the local population and the tourists (restaurants, cafes etc.)	Ratio of various facilities to the local population, to the visitors and to the overall number of users	I
Overcrowding of facilities and territories	?V- Degree of overcrowding of facilities and territories (high, average and low)	Analysis	D
Noise and waste materials pollution	?V- Quantities of waste generated in the community ?V- Degree of noise pollution in the community (high, average, low)	Analysis	D
Traffic jams	?V- Traffic intensity (high, average, low)	Analysis	D
Irritation index	??- What is your attitude towards various aspects (economic, physical, social, cultural, managerial and others) of tourism development in your community?	Analysis Index – ratio between the average value of answers to positive questions to the average value of answers to negative questions	Index value – over 1.0. I

Indicators	Questions from questionnaires	Calculation of the indicator values	Recommended indicator value
Destination development (population growth, second homes, new houses etc.)	?V- Number of local population. ?V- Number of second homes. ?V- Number of new houses. ???- When was your house built? ???- Do you have a second home? ???- Do you consider yourself a a) rich b) poor c) average well-off person?	Analysis Ratio of the second homes and new houses numbers to the number of local residents.	I
Change in land ownership	?V- % of the land owned by local residents	Analysis	I
Change in family structure	???- How many persons are there in your family ???- Do you have children under the age of 15? ?V- Average number of persons in one family.	Analysis	I
CULTURAL			
Ratio of visitors (domestic, regional, foreign) to local population	?V- Number of visitors (domestic, regional, foreign) ?V- Number of local residents ??- Where do you come from (country, settlement)? ?- Number of visitors (overnights) in your establishment by country and place of origin.	Ratio analysis	Q, I According to regional and local tourism strategy
Visitor density (per sq. km)	?V- Number of visitors ?V- Tourist territory (community's territory)	Density analysis	Q According to economic and local strategy
Number of local and regional cultural events	?V- Number of annual cultural events (festivals, public festivities, parades etc.)	Analysis	I
Change in local values, dress, customs	???- Do you think that tourism changes local values, dress, customs?	Average value	D Indicator's value to approach 1.0.
Compliance of tourist and infrastructure design with local and regional culture	?V- Degree of compliance of tourist and infrastructure design with local and regional culture (high, average, low) ???- Do you think that tourism preserves/complies with local architectural environment?	Average value	I Average value to be near 3.0. ** <i>where does this come from??</i>
Introduction of local knowledge and skills in tourism activities	???- Are local skills and knowledge, crafts and culture an integral part of community's tourism supply? ?- What additional services of the establishment are related to local folklore, culture, traditions and customs?	Average value	Q, I