

# Building Geotourism Planning for Madagascar

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## ABSTRACT

*If Geotourism contributes to the construction of territories, its integration in tourism planning policies still seems limited in Madagascar. The variations linked to Geotourism activities lead to reflections and positions concerning the accessibility of the offer, the modalities of visitors' movements, the dimensioning of networks, equipment and reception infrastructures, or the complementarity of sites and resource spaces. This article is not intended to revisit these fundamental questions, but rather to follow up on research focused on the analysis of tourism development policies. It is a question of apprehending the stakes of tourist development under the prism of geotourism planning.*

**Keyword:** Madagascar, planing, tourism, Géotourism.

## 1. INTRODUCTION

At the end of a review of both national and regional research of the tourism sector of Madagascar conducted since 2014. Processes on several sources and various important elements, have been carried out on: the study of tourism patterns and market trends, both national and regional; the study and evaluation of tourist attractions, facilities and services; the objectives of tourism development as well as accessibility to the country from target regions. It also includes evaluations of the number and category of tourists targeted. This allowed for the specification of several data such as: the number and type of accommodations, facilities and services required. To determine the economic effects of tourism (including the number and type of jobs that will be required); as well as the transportation, infrastructure and services that will be required by the projected tourism facilities and services and the patterns of tourist movements. But also to prepare the synthesis of physical, economic and social factors for the carrying capacity. However, the following question must be asked: How do we go about preparing a strategic plan for Geotourism development?

Geotourism planning is comprehensive, i.e. it takes into account all relevant components of tourism and is part of the overall development of the territory. It is based on community consensus, that is to say: to achieve the maximum participation of the community in the decision making process of planning, development and implementation. The objectives of planning are to balance economic, environmental and social issues. However, the local authorities and their leaders and the public authorities must work together in the development and management of Geotourism

## 2. TO PROVIDE A BASIC GEOTOURISM PLANNING

Tourism has a direct and very close relationship with space, which is at the same time the support, the component and the result. Space provides the basis for tourism (relief, climate, landscapes, local society), at the same time as it is structured by tourism, its flows, its influence on the environment and the various perceptions of which it is the object. In this sense, tourism contributes to the construction of places, infrastructure networks or even flows that in turn produce the creation of images. This research is thus a way of shedding light on this lack of knowledge through the prism of the tourism dimension. It questions the place of Geotourism in the contemporary approach to planning

Thus, the first step is the elaboration and organization of the project: It consists in carrying out the preliminary work that will guide the development planning activities. It includes, among other things, various activities that are crucial to the success of the development process, such as: the creation of a steering committee;

the definition of the terms of reference for the planning study; the selection or constitution of the teams responsible for the various studies; and finally, the definition of the study logistics. The terms of reference for the planning study must be clearly identified to ensure that the information gathered at the end of the work is accurate and useful. Such as tourism development choices that may be embodied in the treatment of natural and public spaces, in the management of mobility, or in the preservation of landscapes.

Let's take the example of Madagascar's tourism infrastructures. The country has infrastructures which, in some cases, are poorly developed. It is also noted that because of COVID-19 the destination is in a phase of decline (relative to the life cycle normally associated with a product) and that the tourism infrastructure in place is producing benefits below estimates. In such cases, the terms of reference selected could focus on the issue of rejuvenation and improvement of existing infrastructure, without neglecting the need to define the elements that guide future geotourism development. And although the tourism technicians have already identified potential tourism development projects. In such a case, the study team could evaluate all projects at all levels (local, regional and national). At the conclusion of the studies, a hierarchy should be established for the development and implementation of those projects deemed viable. This output should also be clearly identified in the terms of reference.

The main benefits associated with comprehensive (multi-level) planning are the continuity and consistency of development that results. The overall effect that results from the complementarity of various projects can be highly beneficial. It is desirable that only those projects that can be implemented in the near future are detailed in the comprehensive study. On the other hand, Geotourism projects that are to be developed in the medium and long term can be detailed at a later stage based on the data and context that will prevail at the time of implementation. Finally, the terms of reference should specify the time horizon on which the objectives will be achieved and the implementation schedule of the various Geotourism projects selected, in accordance with the recommendations of the study report.

Secondly, geotourism development planning is generally done on a ten, fifteen or twenty year horizon. The different phases (stages) of the development plan, generally five years in duration, should be specified in the study report. The time frame can be a valuable aid in defining projections, setting goals, and developing and implementing according to a well-defined timeline. For example, if the Malagasy government wished to develop a national tourism policy with a master plan, the steering committee could use the following terms of reference: the outputs of the various studies to be carried out and the activities to be implemented to achieve them. In terms of national planning, the key aspects that are desirable to know in order to proceed with a Geotourism development are the aspects that affect the economic, physical and social environments as well as the identification of the critical elements. It is also at this stage that the policy that will guide the planning of Geotourism development should be defined.

This article reviews the evolution of the links between planning and tourism in development policies and the questions raised by their current articulation in planning. The first part is devoted to a longitudinal study of the place of tourism in Geotourism planning by consensus. We highlight in a second time the perspectives opened by the operational and research field linking the formulations of tourism planning.

## **2.1 Planning by consensus**

Tourism is a cross-cutting activity that is part of a territory and has an impact on it, but it is rarely considered as a sector in its own right and is relatively dispersed in the different themes of territorial planning, notably landscape and environmental protection, economic activities, mobility and travel, protection of the built heritage, etc. Although it can be considered a privileged tool for articulating tourism and planning, planning is done in the interest of the people. This is why people should be involved in the planning and development process of tourism in their region. In this way, the development of Geotourism will reflect a consensus of the common will, and the population will easily give its support if it has participated in the decision making regarding the planning and development of Geotourism and if it has understood the benefits that come from it.

In order to get the community involved in the Geotourism planning process, an organizing committee is usually created. It is this committee that guides the planning team and reviews its work (draft reports and planning

recommendations). An organizing and planning committee usually consists of representatives from various tourism organizations: government, tourism operators, community organizations, religious organizations, etc.

In addition, public hearings may be held to provide an opportunity for anyone who wishes to learn about the development plan and express their opinion. Once the plan has been finalized, a Geotourism Seminar is often held, giving participants and the public the opportunity to learn about the importance of Geotourism development and the recommendations of the development plan. Such seminars are often widely publicized..

Components	Factors
The characteristics of existing tourist sites and locations that offer similar products or attract the same clientele.	Economic and employment, and economic, physical, social and workforce development plans.
Tourist trends of visitors in the country.	Environmental characteristics and quality (climate, topography, air and water quality, crowding, architecture).
Existing and planned tourism activities, attractions, services and infrastructures: facilities, accommodation, transportation.	Existing organizations (private and public sector), their staff and organizational structure.
Socio-cultural patterns, especially the effects of tourism development on local associations and culture.	Tourism education and training programs (existing and planned)
The current investment policy and the availability of capital to invest in tourism facilities, services and infrastructure.	Laws and regulations in force in the field of tourism.

**Table 1:** Consensus Planning for Tourism Assets

Publications dealing with the relationship between tourism and planning in Madagascar are still rare and remain the work of professional organizations. Moreover, the responsibility for the tourism development plan usually lies with the public authorities. This approach is referred to as "top-down"; the opposite approach, known as "bottom-up" or pyramidal, is sometimes used. The latter requires meetings with communities or localities to determine the preferred type of development. The goals and ideas raised are then incorporated into a national or regional plan. This approach allows for greater local participation in the planning process. However, it can be very time-consuming and raise conflicting development objectives, policies or recommendations between different regions.

It is then up to the Malagasy state to find common ground to arrive at a coherent plan. It is important that regional development plans not only complement and build on each other, but also reflect the needs and desires of communities. Often, the best approach is a compromise between top-down and bottom-up approaches. And, in the interest of socio-spatial equity and considering the influx of tourism demand, the state will conduct a comprehensive review of tourism facilities in terms of land use planning. The tourist development is considered by the public actors as an engine of development likely to contribute to the rebalancing of the territory and to revive certain places in prey to the desertification. The State intervenes decisively in the tourism sector through several key actions: the voluntary creation of tourism facilities and infrastructures, the support granted to tourism enterprises (public or private), the implementation of social policies aimed at supporting the tourism consumption of individuals, etc.

## 2.2 A formulation of planning objectives

Planning objectives should be formulated at the very beginning of the planning process as they accurately specify the expected outcomes of geotourism development. The objectives should address the desired outcomes (economic, socio-cultural and environmental) for each of the environments, as well as specific considerations for negative impacts on each of the environments. It is essential that the objectives be discussed with the government representatives responsible for the file as well as with the steering committee, as the objectives that are agreed upon will become the basis for the policies and the geotourism development plan that will be developed at the end of the planning process.

The formulation of the objectives does not have to be final. A first version can be produced prior to the studies, which will be adjusted according to the results obtained. Occasionally, some objectives may appear to conflict. For example, one of the objectives of the development may be to maximize economic impacts without prioritizing the minimization of negative socio-cultural and environmental impacts. It is surely desirable, from the perspective of integrated and sustainable development, to establish a tourism policy and plan that will allow these objectives to be achieved simultaneously.

Furthermore, any objectives defined for the geotourism policy and development plan should necessarily reinforce and not interfere with existing national policy and development objectives (national and sectoral policies). This is important for the tourism sector to be able to integrate into the national economic system and for other economic sectors to benefit from Geotourism. Some of the national objectives may need to be reviewed in order to achieve the tourism development objectives.

From these facts, it is appropriate to place the research phase. It consists of collecting qualitative and quantitative data relevant to all aspects of Geotourism. The data refer to the components of the tourism system and other related factors. The analysis and synthesis of the qualitative and quantitative data collected in the research phase is one of the key phases of the Geotourism planning process.

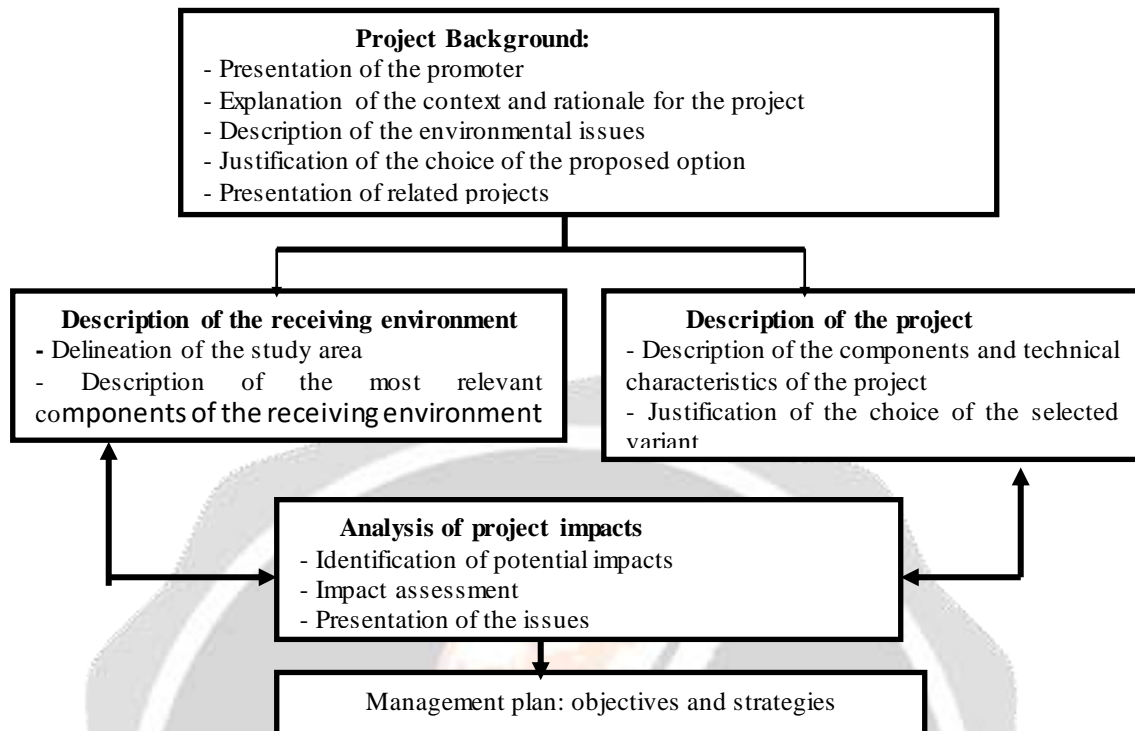
In the case of Geotourism, it is important to analyze the tourism offer with the identified development opportunities. There may be sufficient growth in demand (national or international) for this type of product, justifying a new tourism development that would be competitive. On the other hand, if the results of the planning study show a situation of comparative advantage for the development of attractions, activities and services, but in a competitive context with other tourist locations, it is desirable in this case to opt for a selective market strategy by focusing on the number and quality of tourists that one wishes to have as customers.

This formality consists of integrating and combining the various components of the analyses in order to produce a complete and explicit picture of the situation being analyzed. It provides the basis for the structural plan, which includes the carrying capacity (the carrying capacity is the maximum level of development or use of an area that will provide a satisfactory tourism experience without causing serious environmental damage or socio-economic problems). It will allow for the evaluation and analysis of all institutional elements to form the basis for the formulation of recommendations. In addition, it can be aimed at identifying the opportunities and constraints (problems) of geotourism development. This activity should allow the formulation of recommendations as to the best actions to be taken.

Although not always feasible, the planning process should proceed sequentially from the general to the specific, as the general levels provide the framework and guidelines for the specific plans (Inskeep, 1991). Tourism should be planned first at the national and regional levels. At these levels, planning concerns tourism development policies, infrastructure and service requirements, land-use patterns, institutional aspects, and any other elements necessary to develop and manage tourism. Then, more detailed plans can be developed for tourist attractions, resorts, urban, rural and other forms of tourism development. Undertaking tourism planning at the national and regional level has multiple and extremely beneficial effects. However, the best approach to formulating a structured plan is to prepare and evaluate different possible development scenarios. It is rare that only one development option is considered in the studies. Therefore, the different development scenarios must be evaluated against certain key variables:

- the adequacy with the previously identified tourism development objectives;
- the optimization of economic spin-offs;
- the reinforcement of socio-cultural and environmental impacts;
- minimizing negative impacts;
- competitive advantages over other destinations with similar offerings

Once the comparative analysis is complete, the development plan can be finalized and refined for implementation. However, it is important that the formulation of the geotourism development plans be sufficiently discussed with all the representatives of the steering committee as well as with all the other representatives involved, in order to reach a consensus on the most relevant actions to be implemented to facilitate the development. The purpose of this information is to present the elements behind the project. It includes a presentation of the promoter as well as the context explaining, among other things, the rationale and justification for the project..



**Figure 1:** Project Description

Once the objectives and strategies have been established, it is necessary to formulate recommendations concerning: Specific promotion programs (including costing and possible sources of funding). The respective and combined roles of the private and public sectors. And, the promotion abroad of the country's Geotourism. Hence, the final stage of the Geotourism planning process is precisely the implementation of the policies and the development plan.

It is important that the final draft of the proposed development is accompanied by the recommendations made in the previous stage to facilitate its implementation.

While this lack of leverage directly dedicated to tourism is not in itself exceptional, since it is the same in other fields of economic development, it does raise questions about the reasons, difficulties and obstacles that hinder the articulation of planning and Geotourism.

### 3. THE RANDOM EVENT BY GEOTOURISM PLANNING MONITORING

Monitoring allows for the detection of any anomaly that may arise along the way and the identification of corrective measures to prevent the anomaly from taking on significant proportions and risking compromising the implementation stage. In addition, monitoring must be done before and after the implementation of the elements of the geotourism development plan to ensure that the objectives set are achieved and that the proposed policies are implemented.

In the broadest sense, planning is a highly structured and disciplined activity by which a society drives change within itself. It is a goal-oriented decision-making process. It requires the ability to anticipate future events, the ability to analyze and evaluate situations, and the ability to innovate to find satisfactory solutions. Tourism planning applies the same basic concepts and approaches as planning in general, but in a way that is adapted to the particularities of the tourism field

Tourism is growing for many reasons. First and foremost, of course, is the economic benefit derived, which generates wealth and creates jobs, leading to population development, the development of arts and crafts in the

destination, the preservation of natural and historical sites, and so on. In its best form, tourism provides recreational, cultural and commercial facilities and services that serve both residents and tourists, and that might not have been developed without it. It also creates opportunities to educate people about other cultures and environments. Thus, the following studies can be conducted:

- Review and assessment of tourism organizational structures (public and private); recommendations to modify or improve these structures for better management of geotourism and close collaboration between public agencies, and the public and private sectors.
- Review and assessment of existing laws and regulations in the field of tourism, and recommendations for changes and new regulations required.
- Review and assessment of financial resources available for investment in Geotourism and recommendations on how to obtain additional financial resources (including development incentives).
- Analysis of Geotourism workforce planning and recommendations for required education and training programs in the public and private sectors.
- Evaluation of existing procedures to facilitate travel and recommendations for needed improvements.

Geotourism planning must be recognized as a continuous, flexible, scalable and transparent process. Within the framework given by policy and plan recommendations, sufficient flexibility must be left to adapt to changing circumstances. Geotourism planning must provide imaginative and innovative, yet feasible, recommendations. Various implementation techniques will be considered during the analysis of the planning process.

### 3.1 Analysis of the supply

Geotourism development objectives are of three kinds: economic, environmental, socio-cultural, etc. And for the approach, it is necessary to analyze the historical context of the country or region, the climate, the geology, the morphology, the hydrography (rivers, lakes, coastal areas) and the identification of the most suitable regions for Geotourism development. It is necessary to identify all the risks of natural disasters (volcanic eruption, earthquake, erosion, storm, flood, etc.). And also an identification of natural resources, current land use, current leases, areas not suitable for development.

CATEGORY	ACTIVITIES IN PROJECTS
<b>TOURISM PROJECTS WITH INFRASTRUCTURE AND RELATED ACTIVITIES</b>	<ul style="list-style-type: none"> <li>- Creation of accommodation: ecolodge, bungalows, camping, hotel, etc.</li> <li>- Construction of catering: restaurants, cafeterias, bars, snack bars, etc.</li> <li>- Construction of reception centers: information center, interpretation center, discovery center, shopping center,...</li> <li>- Construction of leisure and health centers: games room, leisure park, discotheque, swimming pool, health center, etc.</li> <li>- Development of facilities: access roads, gardens, technical premises, airports and airfields, harbor, etc.</li> <li>- Development of water and energy supply networks and management of wastewater and domestic waste</li> </ul>
<b>TOURIST PROJECTS WITHOUT INFRASTRUCTURE</b>	<ul style="list-style-type: none"> <li>- Creation of leisure centers: water sports, fishing, golf course, sports activities in nature such as hunting</li> <li>- Development of discovery centers: hiking and excursion, diving and underwater fishing, observation of fauna and flora,...</li> <li>- Development of cultural centers: heritage, history, religion, geography, etc.</li> <li>- Creation of ecotourism: protected areas, natural sites, guided tours, theme villages, etc.</li> <li>- Creation of guidance centers: guiding, vehicle rental, etc.</li> <li>- Creation of transportation activities: 4 x 4 track, bicycle track, motorcycle track, train, vehicles, etc.</li> </ul>
<b>PROJECTS FOR THE DEVELOPMENT OF TOURIST AREAS</b>	Projects that include one or more elements of the above categories, which will be the subject of a tourism development plan

**Table 2:** Geotourism project categories

The quality of the environment in general and in particular in existing and planned geotourism areas should not be minimized and possible problems (pollution, etc.) should be identified. Assessments of the influence of policies, projects and programs (national and regional) on Geotourism development will also be necessary, such as demographic patterns (population, growth, trends, immigration...) on the one hand, and economic patterns and trends (Gross National Product, Gross Domestic Product, per capita income, employment, unemployment, etc.) and identification of particular problems (e.g., declining areas), or cultural patterns (traditional, religious and social values) and the consequences of development on these patterns, on the other. Geotourism projects are classified here into three categories: Geotourism projects with infrastructure and related activities, Geotourism activity projects without infrastructure and Geotourism area development projects.

Also, an analysis of the capacity and accessibility of tourist transportation (air, sea and land), internal transportation networks, accommodation and tourist services. As well as the infrastructure (water, electricity, sewage, telecommunications) of the existing and projected sites for an identification of any possible constraints in the existing infrastructure and on the improvements needed to facilitate the Geotourism development. It is important to make logical studies and classifications (e.g., natural or cultural site; primary or secondary attraction) of existing and proposed activities and attractions in order to identify any possible problems, such as possible (negative) influences on tourism attractions: perception with target countries, recent natural disaster or political instability, high crime rate, travel-related elements such as duration, schedule, price; and for improvement (or preservation) of existing amenities, accommodations, and services: guided tours, restaurants, currency exchange services, handicrafts, stores and stores, medical services, postal services, public safety, tourist information.

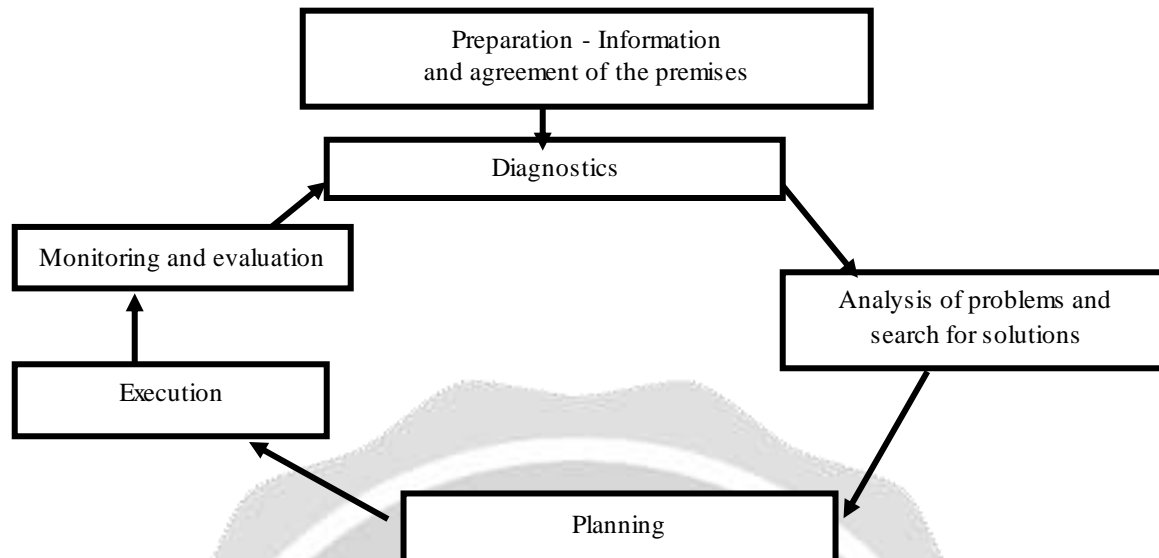
From these facts, we should not ignore the review of existing tourism patterns and trends (international, domestic and regional), as well as analysis of the country's patterns and trends. It should be noted that some surveys may be required to evaluate the impact of existing and competing destinations; as well as the determination of important influencing factors on the type and number of future tourists such as: the establishment of target markets (number, type, region or emitting country, socio-economic or tourist interest groups, length of stay, etc.). The identification of primary and secondary markets through the use of attractions, facilities and services by the local population, and the number, type and quality level of accommodation, facilities, services and infrastructure.

### **3.2 Impact analysis**

It is important to identify current and projected visitor expenditures (costs). It is an assessment of the current and projected economic impacts of tourism, based on methods of measuring contribution to GNP or GDP (or contribution to the regional economy), foreign exchange earnings (gross and net), national or regional economic leakage (magnitude and type), revenue generated, multiplier effect, direct, indirect and induced employment, contribution to government revenue. To provide recommendations on how to increase the economic benefits of tourism to the community, region and country.

For any development stakeholder, it is important to know the environment and the concerns of the local people. When one bases oneself on a knowledge of the constraints and potentialities of the environment, taking into account the physical and socio-economic realities, one has a better chance of giving appropriate advice. The facilitator, in his role as advisor, must encourage the local people to reflect on their situation, to analyze their problems collectively, in order to define together possible solutions. On the basis of this analysis, a plan can be drawn up, providing for the execution and monitoring of the planned actions. This whole process must be carried out according to a logical approach in several stages, namely: preparation of the work, diagnosis, analysis of the problems, search for solutions, planning of the actions, execution and organization of the actions to be carried out, monitoring and evaluation

On the environmental factors, it is necessary first to identify the problems generated by Geotourism and give recommendations on how to minimize them. Secondly, on the measures to be adopted to prevent negative environmental impacts and strengthen positive ones; and on the ways to improve the environmental quality of the tourist sites. Finally, on policies and programs for environmental protection and conservation and the application of environmental impact assessment procedures to geotourism projects.



**Figure 2:** The steps of the approach

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On socio-cultural factors, it is wise to make an assessment of the existing and possible socio-cultural impacts (positive and negative) of Geotourism. And the recommendations on how to minimize the negative impacts would be to strengthen the positive impacts, and on how to get the community involved in all aspects of Geotourism. To do this, it is effective to implement Geotourism awareness programs and implement the preparation of an information brochure on local traditions and culture as well as on the expected behaviors of tourists.

### 3.3 Economic and financial analysis

Traditionally, cost-benefit analysis is a technique used to evaluate the "financial feasibility" of an investment project. In tourism in general and Geotourism in particular, this technique is used to evaluate the potential of a hotel, a tourist establishment, an airline or to determine its useful life. In short, cost-benefit analysis is used to establish the total financial benefits that come from capital invested in geotourism over a useful life.

Financial projections of certain key variables must be made at the beginning and end of the geotourism project. Initial capital investments, required infrastructure and equipment, annual operating costs, annual revenues from the sale of goods and services directly associated with the project, and finally the value of the assets at the end of the project must be evaluated. An interest rate (discount rate) is used to calculate the financial projections in order to translate future values into present values. This rate represents the minimum interest rate applied to the return on investment that investors are willing to sacrifice for other, potentially better choices. Once the costs and benefits are translated into today's values, financial feasibility is demonstrated if the benefits exceed the costs.

This type of analysis is very useful because the costs and benefits associated with a geotourism development can be evaluated against the actual benefits to the community, region or country. To calculate the benefits of Geotourism, it is necessary to account for all the benefits (direct and indirect) minus the loss of income (opportunity costs) of the activities that could not take place because of the project. To calculate the costs of the project, the socio-economic costs associated with the project (environmental damage, new infrastructure required, congestion, pollution, etc.) must be accounted for in addition to the amounts lost to competitors as a result of the project bringing in new customers. This technique can also help the Malagasy government make strategic decisions about



whether it is in the best interest of the community, region, or country to approve, publicly fund, or invest directly in geotourism.

The cost-benefit analysis can also be very useful for the elaboration of different strategic options for Geotourism development. Different types of tourists (tourism markets) may generate different revenues in different cases. For example, travellers who use hotel accommodation and travel by air generate more revenue than day-trippers who drive or camp. This allows for different revenue (profit) scenarios for different tourism markets. And, account for the costs associated with each of the segments being considered. These include: marketing and advertising expenses, security and custodial services in the parks, as well as costs to the host community such as congestion (transportation and people), deterioration of environmental quality, negative socio-cultural impacts, and price increases

#### 4. CONCLUSIONS

In summary, beyond the difficulty in defining the tourist fact, the tourist managers are thus led to apprehend it in their strategic planning in general and for the Geotourism sector in particular. Thus, this article sheds light on the evolution of the taking into account of Geotourism in the planning of tourist places, by questioning more particularly the modalities of this articulation in a contemporary strategic planning. This work, with an exploratory vocation, has made it possible to trace registers of articulation between Geotourism and planning, while revealing that the implications of Geotourism are considered in a very sectorial manner.

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