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Ecotourism Destinations Evaluation Based on Developmental Indicators: Computational Model

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M.Sc. Thesis

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Thesis Approval

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Dedication

I arise today

Inspired by the land of beauty, Palestine

With its flowers blooming in small children’s smiles

With sun shining from its people’s heart

With its soil delighting, the deepest roots of the surviving olive trees

Today I arise and pray, for the wind of change.

My heartfelt gratefulness to my beloved

Parents, husband and friends.

Ikram Zuhair Najm Eddin Quttaineh

Declaration

I certify that this thesis submitted for the degree of Master is the result of my own research, except where otherwise acknowledged, and that this thesis (or any part of the same) has not been submitted for a higher degree to any other university or institution.

Signature: …….

Ikram Zuhair Najm Eddin Quttaineh

Date:……...

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Ikram Zuhair Najm Eddin Quttaineh

Abstract

The purpose of study is to determine developmental indicators with which natural locations can be identified and evaluated for ecotourism. It also aimed at delivering a computational model that facilitates the indicators development and the evaluation of the destinations. The study took place in Palestine specifically the West Bank. It started in January 2014 and finished in June 2015. It adopted the descriptive method and was conducted through two rounds of the Delphi technique on a multidisciplinary panel team who formed the snowball and purposive samples. In both rounds, a high level of consensus existed among the respondents. At the end of the first round, the study attained a consensus on 5 fields and 11 criteria. At the second round, the study attained a consensus on 76 indicators, which include 34 indicators related to the environmental field, 6 to economical field, 22 to social field, 6 to managerial field and 8 to political field. The study concluded that the results are reliable to base on the ecotourism destinations evaluation, the feedback was one of the challenges of Delphi technique as many respondents abstain from assessing the experts proposed indicators, the detailed knowledge and experience of the experts were insufficient for assessing the indicators from the community perspective and there was deficiency in the holistic view of ecotourism as the experts came from different specializations. The study recommended to assess the indicators performance and feasibility by evaluating destinations already used for ecotourism, to spread ecotourism knowledge, unify its concepts and present its developmental feasibility, to develop web-based application according to the proposed computational model and to utilize the indicators in its current form as guidelines to evaluate destinations and develop tourism programs. For future work the study recommended to conduct a study for developing a unified scale measurement to manipulate the indicators parameters from the experts' expertise in each field, to conduct a study that takes into consideration the perspective of tourists and the local communities for ecotourism and to update the results of this study by repeating it to adapt the changes due to the instability of the social, economical and political Palestinian situation. Moreover, as experience develops and accumulates by time, it is anticipated that the experts will have broader and more profound knowledge about the ecotourism in Palestine

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Theoretical and Procedural Definitions

Concept		Definition
Carrying Capacity	:	The maximum number of tourists allowed visiting the destination without disturbing the integrity of the ecosystem. (Bhattacharya & Kumari, 2004)
Delphi Technique	:	A unique method of eliciting and refining group judgment based on the rationale that a group of experts is better than one expert when exact knowledge is not available. (Kaynak and Macauley 1984 as cited in Miller, 2001)
Destination	:	A local geographical natural location that consists of key assets, sites and attractions. It can be an existing or a potential ecotourism destination. Its area is one of three forms: 1- it includes 3-5 Km from the outer border of the destination in the case of nature reserves 2- it extends to 3-5 Km from point represented destinations such as caves and geographical features 3- it is confined within the border of the sub catchment in the cases like springs.
Developmental Indicators	:	An easily presented index that represents data on a multi-dimensional concept that is being measured. In initial phases it serves as guidance measures for ecotourism planning as it responds to environmental, social, economical, managerial and political issues in destinations. In proceeding phases it signals upcoming situations, measures risks and potential need for action, and are means to identify and measure the results of our actions.
Ecotourism	:	Travelling to destinations of balanced natural environment for studying, enjoying and appreciating nature and any accompanied cultural and historical features, resulting in economical, social and political empowerment for the communities, towards sustaining and conserving these destinations through viable partnerships with the government, private sector, NGOs and local communities.

Acronyms and Abbreviations

AECHF	:	Hebron France Association for Cultural Exchange
AHP	:	Analytic Hierarchy Process
ARIJ	:	Applied Research Institute Jerusalem
ATG	:	Alternative Tourism Group
EEC	:	Environmental Education Center
EQA	:	Environmental Quality Authority
GDP	:	Gross Domestic Product
HLT	:	Holy Land Trust
IT	:	Information Technology
IUCN	:	International Union for Conservation of Nature
MOA	:	Ministry of Agriculture
MOTA	:	Ministry of Tourism and Antiquities
NARC	:	National Agriculture Research Center
NEPTO	:	Network for experiential Palestinian Tourism Organization
NGO	:	Non-Governmental Organization
PRA	:	Participatory Rural Appraisal
PWLS	:	Palestine Wildlife Society
UNESCO	:	United Nations Educational, Scientific and Cultural Organization
UNWTO	:	United Nation World Tourism Organization
WTO	:	World Tourism Organization

Chapter One
Background

This chapter presents the introduction, study problem, justification, importance, objectives, questions and structure.

1.1 Introduction

"The tourism sector is the largest common area of export income and foreign direct investment across the world's poorest countries. Tourism to these countries is growing at twice the rate of industrialized markets. No sector spreads wealth and jobs across poor economies in the same way as tourism." UNWTO Secretary General Francesco Frangialli in a statement on the group's goals for 2007 (CREST, 2010).

The Middle-East region, including Palestine, is recognized as an attractive tourism destination consisting of religious, historical, cultural and natural heritage wealth. The Levant countries exploit these attractions to receive vital tourist traffic. While the Gulf countries invest heavily in its ancient and modern attractions to become global drivers of change in tourism and strengthen its economy.

Statistically, tourism contribution to Palestine's GDP is somehow steady since 2005 and is currently contributing around 3%. This percentage shows that Palestine is lagging behind other countries in the region (6% in Israel, 20% in Jordan, 13% in Egypt and 37% in Lebanon). Its contribution to employment is around 2% (an estimated 15,000 direct jobs). International tourists are around 1.8M/year made up from Palestinians living in Israel, Russian Federation, United States of America, Italy, Poland, Germany and other countries. Tourism in Palestine is highly seasonal with a very low occupancy rate of around 30% vital in the religious feasts and pilgrimage days. The reasons affect the numbers of inbound visitors are difficulties in acquiring visas for Arab and Muslim countries and the perception that Palestine is not a safe place to visit. Although these are impediments to the development of this sector yet it can be leveraged with proper exploitation of Palestine's historical and ecological potentials, global awareness-raising, technological communications use and attracting new segments of tourists (Quartet, 2014; Paltrade, 2012; AlFalah, 2012).

Ecotourism is not common in Palestine, though it has roots back to 90s where few people made efforts to introduce this concept to the country. Palestine's distinct and complex reality is always the main challenge; at that time Palestine was going through the initial phases of constructing the country and developing strategies. Moreover, it is continuously facing environmental challenges that are caused in the first place by the Israeli actions. Yet efforts did not stop; recently in December 2014, a national forum led by the Birdlife International and its local partner PWLS was held to discuss the opportunities and potentials Palestine has for ecotourism. The forum emphasized on introducing ecotourism

businesses both as an economic development option and conservation strategy through viable partnerships with the government, private sector, NGOs and local community. Confirming the recommendations of this meeting is a number of local studies reflecting the reality and importance of ecotourism in Palestine. As in the study of Bashiti, 2012 emphasized on developing tourism destinations and conserving the environmental locations for activating ecotourism as a proposed mechanism for the development of domestic tourism in the southern West Bank. While AlGhrouf, 2010 reflected some of the promotion mechanisms for ecotourism like setting up a strategic plan that focuses on ecotourism and, encouraging the ecotourist investment. He also reflected some of the ecotourism destinations deficiencies in Palestine such as tourist services in the location and shortage of sanitation utilities. Jadalla, 2009, revealed that the technology used in the tourism sector in Palestine was not developed and stated the importance of exploiting technology in the tourism sector.

On a wider perspective, there are a number of valuable international studies and books that present ecotourism. In their point of view Ross & Wall, 1999 stated that ecotourism should be regarded as being more than tourism to natural areas and should be viewed as means of combining the goals of resource conservation and local development through tourism in a synergistic fashion. Moreover, Angelis & Katarelos, 2000 see that ecotourism is one form of alternative tourism in which the process of selecting its destinations presupposes the strategy of "low volume – high profit", which effectively means that the first selection criterion should be the absence of mass tourism. Furthermore, Mihalič, 2013 stated that the extent to which environmental recourses can be effective attractors depends on its coexistence with tourism created resources.

In the Palestinian case, unfortunately, due to the absence of destinations evaluation, many natural locations tend to be neglected, over exploited or polluted. Indicators are an important tool to provide means towards sustainability and it is the first step for developing a formal plan for ecotourism. Indicators involve the identification of the key assets and potentials associated in different developmental fields. It also involve assessing and identifying actual problems, risks or impacts as well as documenting current or expected trends which may affect these (WTO, 2004).

For assisting in effective planning of ecotourism in Palestine, this study aims at delivering a set of developmental indicators for evaluating destinations. The evaluation will have the greatest impact on decisions and actions such as nominating or declaring natural locations as potential ecotourism destinations. Moreover, it can be used as benchmarks for comparisons over time and with other destinations. Accordingly, with such accurate information, investments and ecotourists of special interests can be directed to specific destinations.

1.2 Problem Statement

The problem of the study occurs in developing appropriate and acceptable developmental indicators with which natural locations in Palestine could be identified and determined for ecotourism, using a computerized model designed for this purpose.

1.3 Study Justification

The justifications of the study are derived from:

- The growing interest in activating alternative types of tourism in Palestine in general, and especially in ecotourism; Palestine witnesses a growing number in NGOs promoting alternative types of tourism, projects and workshops which are ecotourism oriented.
- The necessity stated in the recommendations of the national forum led by the Birdlife and PWLS in December 2014 and the recommendations stated in local studies to exploit ecotourism as an economic development option and conservation strategy.
- The necessity to provide accurate destination's information in the initial phases of formal planning of ecotourism based on indicators as recommended by WTO and employ information technology to facilitate and ensure proper tourism decision-making.
- The desire of the researcher to link between her academic specialization in sustainable development and her practical experience in the field of information technology.

1.4 Study Importance

The importance of the study presents in the following:

- This study is a scientific foundation to base on formal planning of ecotourism. Therefore, it will assist in decision-making, managing and monitoring of the natural locations by the accurate information the study will provide.
- This study is complementary to what preceded in studies reflecting the Palestinian reality in ecotourism. However, it is dealing with a new dimension that has not been previously dealt with, which is employing information technology in ecotourism.
- This study will provide a computational model to be developed as a tool to enable parties involved in tourism to direct the tourists, investments, and developments towards environmentally distinctive locations.
- This study opens the horizon for programmers to develop the model into an application to test its functionality in achieving the desired benefits.

1.4 Study Objectives

The study aims at achieving the following objectives:

- To determine developmental indicators with which natural locations can be identified and evaluated for ecotourism.
- To deliver a computational model that facilitates the assessment of the developmental indicators and the evaluation of natural locations for ecotourism.

1.5 Study Questions

The questions of the study that have emerged from the objectives are as follows:

- What are the appropriate developmental indicators to evaluate the Palestinian natural locations for ecotourism?
- What does the computational model do and how it facilitates the assessment of indicators and the evaluation of natural locations for ecotourism?

1.6 Study structure

The study was segmented according to the following chapters:

- Chapter I: Introduction, the problem of the study, justification, the importance, objectives, questions, and the structure.
- Chapter II: Theoretical framework which includes the definition of ecotourism, developmental dimensions of ecotourism, ecotourism VS other trends, ecotourism destination, developmental indicators. It also includes previous studies analysis and comparisons between them.
- Chapter III: Tourism in Palestine, and sections reflecting the reality of ecotourism in Palestine including its potentials, benefits of ecotourism, government strategy and main institutions efforts and ecotourism SWOT analysis.
- Chapter IV: Research methodology and tools, the research population and samples.
- Chapter V: Study analysis, presentation and discussion of the results.
- Chapter VI: Conclusions, recommendations and future work.

Chapter Two:
Theoretical Framework & Previous Studies

This chapter presents the definition of ecotourism, developmental dimensions of ecotourism, ecotourism VS other trends, ecotourism destination, developmental indicators and previous studies.

2.1 Definition of ecotourism

Ecotourism is a relatively new term acts as a subset of tourism industry and a sub-component of the field of sustainable tourism. It was formally introduced in 1980s by Ceballos Lascurain where he first emphasized on education in its definition: "Travelling to relatively undisturbed natural areas with specific objective of studying, admiring and enjoying scenery and its wild animals and plants as well as existing". As awareness and experience continued for this activity more detailed and comprehensive versions were introduced. Ceballos Lascurain had modified his definition to a new version which was adopted by IUCN in 1993: "Environmentally responsible travel and visitation to natural areas, in order to enjoy and appreciate nature (and any accompanying cultural features, both past and present) that promote conservation, have a low visitor impact and provide for beneficially active socio-economic involvement of local peoples" (Ceballos-Lascuráin, as cited in Joshi, 2011). In 1999 Martha Honey had provided another ecotourism definition when she described it as: "Travel to fragile, pristine, and usually protected areas that strive to be low impact and (usually) small scale. It helps educate the traveler; provides funds for conservation; directly benefits the economic development and political empowerment of local communities; and fosters respect for different cultures and for human rights" (Honey, 1999). A more recent definition by Fennell in 2008 included identification of the control, benefits and scale of ecotourism: "Sustainable, non-invasive form of nature-based tourism that focuses primarily on learning about nature first-hand, and which is ethically managed to be low-impact, non-consumptive, and locally oriented" (Fennell, 2008). Eventually, the broadly accepted definition is introduced by The International Ecotourism Society in 2015: "Responsible travel to natural areas that conserves the environment, sustains the well-being of the local people, and involves interpretation and education", where education is meant to be inclusive of both staff and guests (TIES, 2015).

Locally, an excellently proposed definition was introduced by AlGhrouf in 2010 as he detailed the ecotourism act and dimensions: "The act of travelling to natural locations that are featured with a kind of natural balance for the purpose of contemplating nature and enjoying the beauty of its elements (plants, animals, birds, water, forests, and mountains), or for the purpose of performing studies and scientific researches, resulting in economical and social benefits for the community, under the cooperation of all parties (visitors, community, local authorities and other stakeholders) towards maintaining conservation and sustainability of these locations and their components (AlGhrouf, 2010).

Along time, it has been realized that the growing concept of ecotourism included more

descriptions about the impacts of tourism on nature and communities. From the definitions, we can conclude the fundamentals of ecotourism:

- Occurs in balanced natural environment.
- Offers niche market-linked solutions for tourism demand.
- Promotes conservation, protection and enhancement of biodiversity.
- Promotes stewardship of the natural and cultural heritage.
- Stresses local participation thus generates direct economic and social benefits for them.
- Ecotourism supports environmental and cultural education.
- Ecotourism should be effectively managed to have minimal negative impacts on the environment.
- Enriches personal experiences through offering quality tourism supported in first place by interpretations that gives understanding and appreciation for nature, local society, and culture.

Depending on what preceded the author developed an ecotourism definition "travelling to destinations of balanced natural environment for studying, enjoying and appreciating nature and any accompanied cultural and historical features, resulting in economical, social and political empowerment for the communities, towards sustaining and conserving these destinations through viable partnerships with the government, private sector, NGOs and local communities ".

2.2 Developmental dimensions of ecotourism

Sustainable development is not restricted to tourism yet it fits perfectly in this industry. Sustainability concerns emerged from both the modern thinking of environmentalists who protest against the environmental destructions and from the tourist choices which are increasingly influenced by sustainability considerations (Obenaus, 2005). Moreover (Bhuiyan *et al.*, 2012) has stated that tourism can be sustainable if development meets the needs of tourists and local residents while protecting future opportunities.
Sustainability is the key element in ecotourism. Examining its fundamentals, we notice that ecotourism is successful through achieving ecological, social, cultural and economic sustainability. Thus it is widely believed that ecotourism is one of the best practices to promote both sustainability and development.

2.2.1. Economic benefits:

Based on the references: Buckley, 2009; Jiang, 2008; Weaver, 2001; Kiper, 2013, the economic benefits came as follows:

- Although ecotourism supports a number of economic activities, yet it takes into consideration environmental costs and values. Ecotourism both protects economies and avoids environmental damage:

    - First, it may reduce traditional resource use of the ecotourism area for conservation purposes.
    - Second, the ecotourists –as consumers- are always happy to benefit local residents when understanding the importance of an area ecologically.

- Third, it is always important to involve local residents in ecotourism industry as when they receive benefits they are more likely to support tourism and conservation and their extractive pressure on natural resources is lessened. Conversely, if they don't receive benefits they may turn against tourism and conservation thus causing huge negative impacts on the site.

- Measuring the economic scale depends on what is included. Governments, private and nongovernmental entrepreneurs and local communities can alike reap the benefits of ecotourism in economical format. Local residents can benefit from funds from projects such as establishing wells, awareness programs at schools, capacity building trainings of handcrafts, foreign languages, and agriculture. There is a diversity of things that provides money flow:

  - Food and residence.
  - Fees to some parks.
  - Travel cost includes tour package, plane, bus and private vehicles.
  - Outdoor activities -like biking and bird watching-. Such charges include the usage of specialist equipment like binoculars, telescopes, tents and sleeping bags.
  - Outbound operators that sell tours to international tourists.
  - Inbound operator that actually organizes and leads the trip in the destination country.
  - Donations for the ecotourism site and local residents.

- The socio-economic advantage mainly benefits the people in terms of the rising the life standards and upgrading of infrastructure. As ecotourism aims at conserving the natural resources of an ecotourism site it has to reduce local access to resources. It means there will be desirable and undesirable tourism jobs for the locals in the site. For example selling woods, medical plants and hunting wildlife animals and birds are undesirable jobs. On the same time it can provide them with variety of other jobs, including tour guides, craft and food productions.
- The eco-economic advantage originates when ecotourism utilizes various resources as inputs into the products and services provided to visitors. One of these products is nature which is in a preserved state. Preservation of natural areas often reduces local access to resources, such as wood or medicinal plants. Ecotourism makes limits for acceptable change in the natural area through managing the carrying capacity. Thus we expect short comings as it doesn't rely on mass tourism. Ecotourism has the potential to financially contribute to the creation and maintenance of protected areas. This is mostly done through getting funds, donations or from the fees charged at these locations. Fees mostly differ for local residents and visitors.

2.2.2. Socio-cultural benefits:

Based on the references: Buckley, 2009; Jiang, 2008; Weaver, 2001; Kiper, 2013, the socio-cultural benefits came as follows:

- Ecotourism industry depends on the support of the host community. Therefore, it is essential to ensure the sustainability of both the natural and cultural environments of the destination. Socio-cultural benefits are directly related to the economic benefits in terms of improving the well being of the society and it terms of upgrading the

infrastructure. Moreover, socio-cultural benefits imply in educational dimensions; community involvement in tourism means re-educate (such as foreign languages, wildlife skills) and revive the knowledge of traditional skills and values amongst their new generations.

- Confidence and appreciation is another benefit. Instead of plans being only designed and implemented in a political context where the local residents have no voice, ecotourism incorporate them in the planning and management processes of the ecotourism destination. This means local residents get access to information and have a greater role in decision making. Moreover, local community enriches visitor's experiences with interpretations and greater understanding of their traditions thus encouraging intercultural appreciation and understanding between locals and visitors. The local community can ensure that tourists treat them with respect by developing and imposing social guidelines such as permission for photographs, acceptable dress and behavior, invasion of privacy and bargaining.
- Ecotourism also implies equilibrium in local communities thus impacting the occupation distribution. Ecotourism depends on women in many dimensions like food production and preparation, management of the residence and handcrafts designing and making.
- Ecotourism acquire some traditions and values to be changed. As local communities are responsible of the environment protection and maintenance they are supposed to modify their consumption patterns to the environment resources and energies. For example they should replace some traditional industries such as hunting and forestry with more eco-friendly industries. Moreover local communities tend to increase their sanitation standards and health care as visitors seek to have a healthy place to stay at.

2.2.3. Environmental benefits:

Tourists seek out relatively undisturbed natural areas to visit for different purposes. They expect to see spectacular scenery and unique plants and animals in their native habitats. They also expect to enrich their personal experiences and understanding of the cultural and historical features found in these areas. Environmental benefits as shown below (Cadmus, 2009).

- The quality of the environment is both natural and manmade (visitors, locals). However, tourism's relationship with the environment can be negative or positive according to its type. For example mass tourism is often considered to be destructive to natural areas. Also local residents can have negative impacts on the environment. Stating the impacts, they include soil erosion from poorly designed or managed roads and trails , water quality deterioration, deforestation, loss of unique flora, loss of wildlife animals, changes in animal behavior and increased pollution.
- Ecotourism should be used as a way to promote community-based natural resources management. If local communities benefit from their resources such as land, water, plants they are more likely participate in sustaining them. Also well designed plans should be developed for the protection and conservation of the natural areas and their elements. Plans should be based on ecological and social field assessments. It should include the maximum acceptable carrying capacity, visitor's facilities, type and amount of potential infrastructure e.g., lodges camps, visitor centers and roads.
- Thus ecotourism projects should aim to provide environmental education through raising awareness, promote environmental protection and conservation, sustainably

manage the environment, encourage donations for conservation and increase social, cultural and economic benefits to communities.

A conceptual model summarizing the development dimensions of ecotourism and the main benefits:

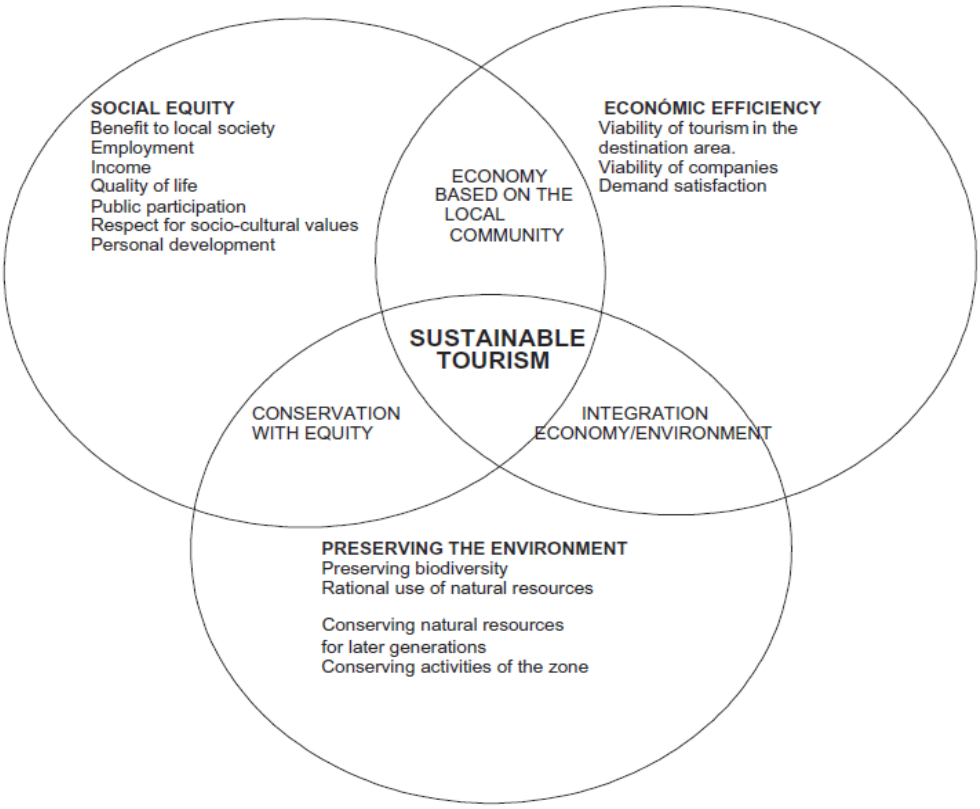

Fig. 2.1: Conceptual model for the developmental dimensions of ecotourism and its benefits (Hall 1998, as cited in Fons et al., 2011)

2.3 Ecotourism VS other tourism trends

Undeniably, tourism has brought with it benefits and blessings satisfying the curiosity and desires of people. However, this didn't end up with entire satisfaction from planners, social and environmental critics who seek new forms of tourism correcting the mistakes of "traditional tourism" or "mass tourism". These new forms must be "alternative" to mass tourism and should carefully weigh the environmental, social, economical and political impacts. The term "alternative tourism" evolved to operate as advocacy, cautionary, adaptancy and knowledge based platform. As mass tourism is considered to be the bad option and the alternative tourism to be the good option, it is logically to subsume ecotourism under the alternative tourism.

The concept ecotourism has emerged in the 1980s as part of the global environmental movement. During that time it has co-evolved with other related terms such as "sustainable tourism", "nature-based-tourism", "responsible tourism" and "adventure tourism". The terms were often used synonymously and interchangeably leading to confusion in the development of tourism industry. Therefore, studies and efforts were made to give these terms more distinctive and mutual descriptions. Unlike the earlier tourism definitions,

ecotourism has value-component and impact description on nature and communities. Table 2.1 shows some terms which describe travel activities VS terms describing impacts.

Table 2.1: Tourism related definitions describing activities VS impacts (CREST, 2010)

Definitions describing activities		**Definitions describing impacts**	
Tourism	The practice of traveling for recreation.	Ecotourism	Responsible travel to natural areas that conserves the environment and improves the welfare of local people.
Nature Tourism	Travel to unspoiled places to experience and enjoy nature.	Responsible Tourism	Tourism that maximizes the benefits to local communities, minimizes negative social or environmental impacts, and helps local people conserve fragile cultures and habitats or species.
Mass Tourism	Large-scale tourism – typically associated with 'sea, sand, sun' resorts and characteristics such as transnational ownership, minimal direct economic benefit to destination communities, seasonality, and package tours.	Sustainable Tourism	Tourism that meets the needs of present tourist and host regions while protecting and enhancing opportunities for the future.
Adventure Tourism	Nature travel which involves physical skills, endurance & degree of risk-taking.		
Cultural Tourism	The movement of persons for essentially cultural motivations.		

Ecotourism operates as one of the eco-friendly tourism alternatives and at the same time it is subset of sustainable tourism.

Figure 2.2 depicts the actual position of ecotourism with its relation to alternative and sustainable tourism. The figure shows that mass tourism is unsustainable form of tourism. This is due to a number of characteristics that specializes it such as it targets large groups of visitors, it works in urban areas, it has impact on the environment, it has anonymous relationship between visitors and locals and it requires intensive development of tourism facilities.

On the contrary, we see that the alternative tourism which includes ecotourism is a sustainable form of tourism. It targets small groups of visitors, it works in rural areas, it has little impact on the environment, its management is based on local economic principle and it reduces development of tourism facilities.

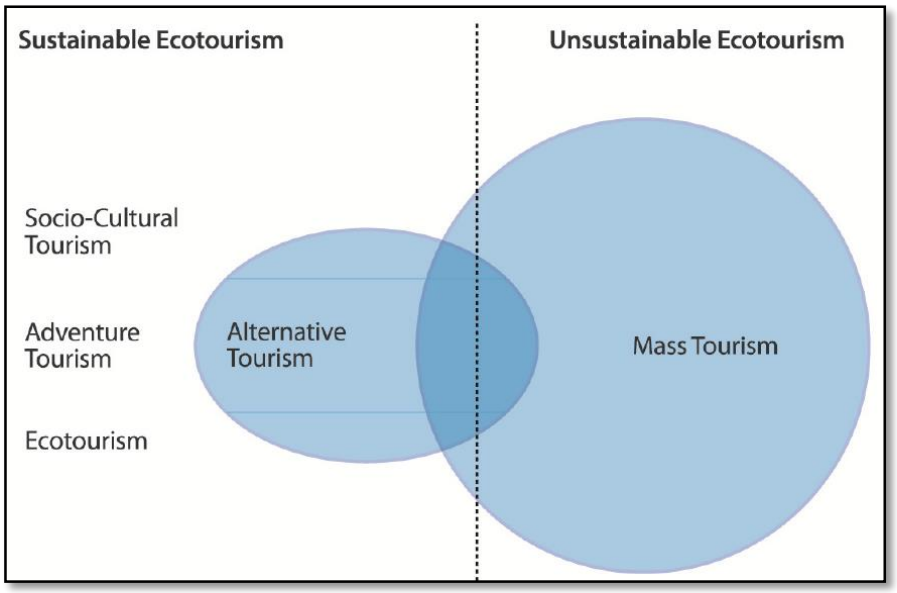

Fig. 2.2: Ecotourism relation to alternative, sustainable and mass tourism (Eriksson 2003, as cited in Kiper, 2013)

Ecotourism is a very specific form of nature-based tourism which embraces other forms of tourism as well. Figure 2.3 depicts forms of natural-based tourism such as "adventure tourism" and "wildlife tourism".

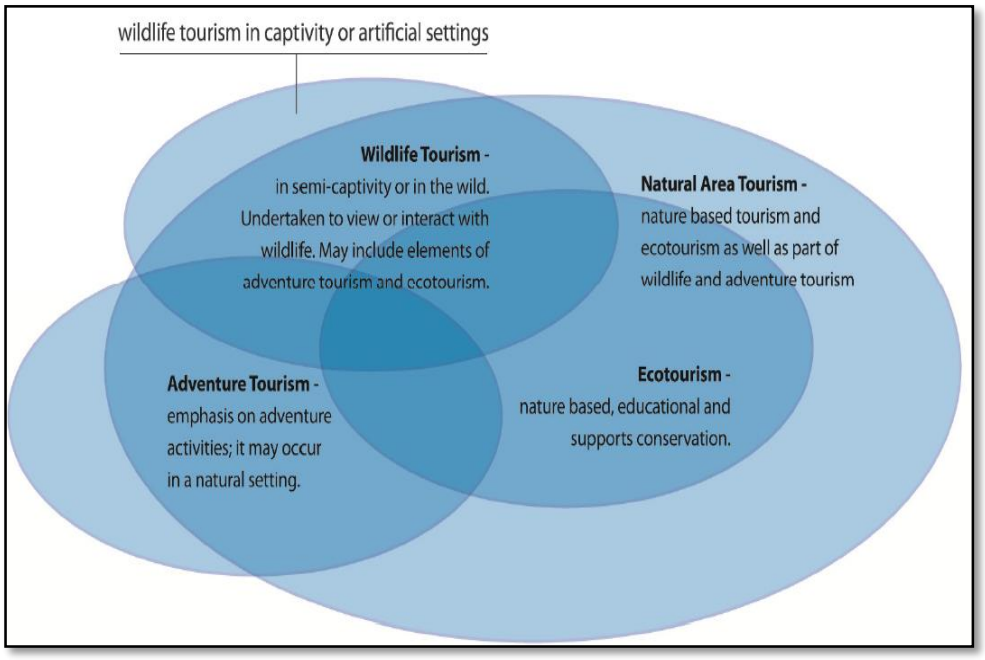

Fig. 2.3 : Ecotourism relation to other forms of nature-based tourism (Hill & Gale 2009, as cited in Kiper, 2013)

The difference between ecotourism and the other forms of nature-based tourism is sustainability. It is not necessary that nature-based tourism is sustainable and the fact that ecotourism is not entirely subsumed under it is that it can compose secondary components as cultural attractions, see figure 2.4. For example, adventure tourism does not compose

culture component that is why it is entirely considered a nature-based tourism but lacks sustainability. On the other hand, ecotourism is composed of cultural component that is why it is not entirely considered nature-based yet it is considered to be sustainable. (CREST, 2010; Smith & Eadington, 1992; Weaver, 2001).

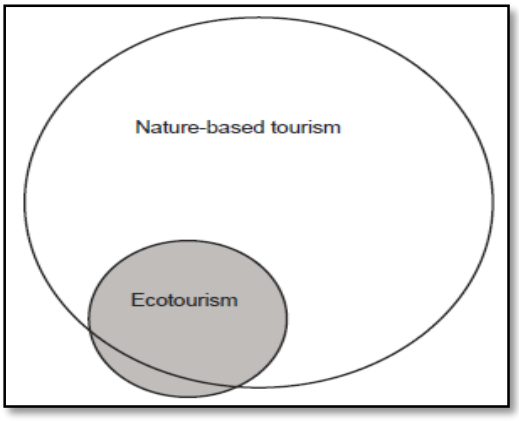

Fig. 2.4: Ecotourism relation to nature-based tourism (Weaver, 2001)

2.4 Ecotourism destination

Indicators should be applied to defined destinations. According to the WTO (2004), a destination is "local tourism destination which is a physical space in which a visitor spends at least one overnight. It includes tourism products such as support services and attractions, and tourism resources within one day's return travel time. It has physical and administrative boundaries defining its management, and images and perceptions defining its market competitiveness. Local destinations incorporate various stakeholders often including a host community, and can nest and network to form larger destinations."

A destination should offer a range of attractions and activities, and is related to variety of stakeholders from public, private and civil sectors, affecting the environmental and socio-economic resources of the tourism and affecting the adjacent communities. Thus what decides the boundaries of a destination is influenced by many aspects. The solution for this is making a compromise where the main assets, activities, political, ecological and any other boundaries should be included. In practice a point for starting the establishment of the boundaries is the existing political boundaries. The following are rules that assist in establishing the boundaries of a destination (WTO,2004):

- It should include key sites and assets.
- It should match existing boundaries such as political boundaries
- It should be a natural or ecological area.
- It should be subdivided in some cases where the most activities occur in core areas and the peripheral areas is also impacted or involved. It should have different separate analysis.
- It should consider specific sub-areas for special consideration. Some destinations have a concentrated activity or a hot spot such a specific ecological asset. Such areas should receive special treatment as a subset of the overall destination.

Upon what have preceded in the WTO definition and boundaries rules and taking into consideration the Palestinian reality this study developed and adopted a definition for a

destination which is "A local geographical natural location that consists of key assets, sites and attractions. It can be an existing or a potential ecotourism destination. Its area is one of three forms: 1- it includes 3-5 Km from the outer border of the destination in the case of nature reserves 2- it extends to 3-5 Km from point represented destinations such as caves and geographical features 3- it is confined within the border of the sub catchment in the cases like springs."

2.5 Developmental indicators

There are range of guidelines and manuals for the indicators of sustainable development for tourism destinations which provide guidance for the production of effective and meaningful indicators which we referred to in this section -including all the subtitles- (Tanguay *et al.*, 2013; White V., 2006; WTO, 2004)

One of the presented efforts on indicators has been developed by WTO in 2004 as a guidebook. They defined indicators as "measures of the existence or severity of current issues, signals of upcoming situations or problems, measures of risk and potential need for action, and means to identify and measure the results of our actions". While the Eurostat defines it as "an easily presented index that represents data on a multi-dimensional concept that is being measured" (Eurostat, 2014). The definitions imply that indicators first act as a checklist in order to determine whether a destination is appropriate for ecotourism development or not. Second it responds to issues concerning the environment of the destination, economic sustainability, cultural assets, social values, management issues and political scope that restrain the area. These two points mean that developmental indicators should integrally indicate about development and sustainability of ecotourism in destinations.

According to what preceded in literature this study defines indicators as "an easily presented index that represents data on a multi-dimensional concept that is being measured. In initial phases it serves as guidance measures for ecotourism planning as it responds to environmental, social, economical, managerial and political issues in destinations. In proceeding phases it signals upcoming situations, measures risks and potential need for action, and are means to identify and measure the results of our actions."

2.5.1. Types of indicators:

Not all indicators are numeric. Indicators will not always be fully quantitative; they can be any of:

- Quantitative: (e.g., liters of water consumed per tourist – allowing actual calculation of changes in volume consumed – 2litres per tourist more this year than last);
- Qualitative: (e.g.: percentage of tourists who agree that the destination is clean – but which can also yield the ability to show change numerically – six percent increase in the percentage who consider the destination clean relative to five years ago);
- Normative: (e.g.: Number of beaches meeting Blue Flag Standard – allowing measurement of change in % which meet the standard);
- Descriptive: (e.g.: Site has environmental plan – Yes/No. (This answer can change over time and can also allow aggregation to show % of sites with such plans)

2.5.2. Number of indicators:

There is no ideal number for indicators they can be few as ten and to one hundred and more. However, there should be a compromise between maintaining a sufficient level of detail whilst achieving simplification for manageability. Table 2.2 shows how the indicators numbers vary according to the case study. (Tanguay, *et al.*, 2013)

Table 2.2 : Case studies reflecting descriptions of indicators (Tanguay, *et al.*, 2013)

Destination	**Number of indicators**	**Comments**
International (WTO, 2004)	768 indicators, 29 of which are basic	29 basic indicators ranked by main issues in sustainable tourism and applicable to all types of destinations
International (Vellas, 2000)	10 indicators	10 indicators compatible with all types of destinations, divided into several measures to encompass quantitative and qualitative aspects
European cities (European Environmental Agency,2004)	11 indicators	11 key indicators compatible with destinations in European countries and West in general
Albufera de Valencia (WTO,2004)	141 indicators	141 indicators of pressure, state and response to measure the capacity of an ecosystem of attractive but vulnerable natural landscapes
Balearic Islan (WTO, 2004)	50 indicators	50 indicators for a destination where tourism is the main sector
Canary Island (WTO, 2004)	9 indicators	9 indicators that serve as a guide in the sustainable tourism planning process for a coastal destination
Cape Breton Island, Canada (WTO, 2004)	30 indicators	30 indicators resulting from a participating approach compatible with all types of destinations

2.5.3. Criteria for selecting indicators:

The selection of indicators depends on the following criteria:

- Relevance of the indicator to the selected issue; the indicator should respond to the specific issue and provide information that will aid in its management.
- Feasibility of obtaining and analyzing the needed information; the identification of potential data sources is essential especially in the initial phases of developing indicators. Potential data can help in refining the list of suggested indicators as they support the desired indicators. For destinations where there may not be an existing data and monitoring program it may be most effective to use the collective knowledge of the participants and suspend the identification of data sources until the identification of key issues are defined and a wish list of potential indicators has been created.

- Clarity and understandability of indicators to users; users should be able to understand it or act on it. A technical indicator should be rephrased in a more simple form. For example (parts per million of a toxic substance) can be put as (pollution exceeds tolerable standards)
- Comparability over time and across jurisdictions or regions; indicator should be used reliably to show changes over time, relative to standards or benchmarks at the same destination, or relative to other destinations.

2.5.4. Frameworks to gain consensus on indicators:

To select the most important issues to the destinations it is essential to have all stakeholders' perspectives. While destinations have stakeholders from different fields and as each destination has a unique mix of environmental, social, cultural, economical, political and administrative conditions, it is essential to determine a framework on how to obtain a consensus between stakeholders. Having an explicit framework allows a more transparent, responsive and robust process for indicator selection.

A framework is for organizing the development and selection process of indicators into a series of easily communicable steps. Many indicator sets frameworks consist of indicators that are selected in an ad-hoc manner or as brainstorm and 'cherry-pick' manner. However, a conceptual framework allows for the coherent and consistent selection of indicators where stakeholder's opinion may differ over the weight –their importance.

A possible framework is a participatory workshop for stakeholders to gain consensus. Alternatively, a series of interviews with key players can help. These frameworks normally involves the generation of a wish list of possible or candidate indicators. At the initial stage the suggested indicators are so long and may not be practical but it should be noted. Subsequent steps should be designed to help the indicators developers and the stakeholders sort or prioritize them through discussion. The main disadvantages with each of these frameworks is their risk of taking account only of the perceptions of the most outspoken or opinionated members of that group or of only focusing on interesting or controversial elements

The Analytic Hierarchy Process (AHP), Participatory Rural Appraisal (PRA) techniques and Delphi are three different techniques to prioritize criteria. AHP is a multi-criteria quantitative evaluation method that could be used for solving social and economic problems. However, AHP has weak points. It is a complex method which makes its implementation quite inconvenient. Moreover, if more than one expert is working on the weight of each criterion things get complicated. Furthermore, it is inflexible as a numerical weight is derived for each element of the hierarchy; any change in its weight will need a whole new calculation for the hierarchy (Deng *et al.*, 2002).

The Participatory Rural Appraisal (PRA) techniques are used as qualitative methods to explore complex livelihoods of communities and the influence of the diverse environments of them. The human factor is the great strength and the fundamental weakness of this method as it depends on the style and character of the analyst. He should have the capacity to listen, to stay in the background and to allow local people to dominate discussion. Such research consumes a lot of time and is difficult to implement especially when there is a need to large number of field trips that should be like inspection tours (Baromey, 2008).

However, a survey with series of round questionnaires where information and results are fed back to panel members between each round can also prioritize issues. This framework is called Delphi technique where existing indicators lists can be used as a guide and stakeholders input to refine the list of indicators.

Delphi as a research methodology has been variously presented as a survey, procedure, method and technique. In this thesis, we refer to Delphi as a 'technique' because this appears to be the most commonly used terminology in the research literature. The Delphi technique is an iterative process which is designed to achieve a consensus among a group of experts on specific topic. It produces creative solutions by combining individual responses in order to produce a pooled group response. Related Delphi surveys adopt the value of a mean score to measure the control tendency and the value of standard deviation to measure the degree of convergence (Miller, 2001). The Delphi technique increases the relevance of the outcomes to stakeholders and results in the participation of a diverse range of stakeholders in a time- and cost-efficient manner. However, some limitations are noted in terms of the provision of adequate feedback and direction (Northcote *et al.*, 2008).

2.5.5. Indicators as a tool for ecotourism planning:

Ecotourism cannot be planned or managed in isolation from the communities that are part of the destination and from the different environments and economics related to it. Indicators are accepted as tools for planning that can be shared among the stakeholders of these destinations. Ecotourism can occur in destinations having already an existing plan or do not have a plan. Indicators can serve both types of these destinations. In a destination where a plan already exists, indicators can support and strengthen the plan and can respond to the goals of the plan. Indicators can improve the way data resources are used, identify new ones and improve the reporting among stakeholders. They can improve the decisions and make the results more accountable.

Indicators can also be used to reexamine the plans and the performance measures. For destinations outside the planning process indicators can be used as a catalyst to initiate the process. In the initial phase they can analyze environmental, social and economical conditions, identify assets and key values in the destination and assess risks. In the implementation phase they can act as performance indicators and achievement measures to goals.

2.5.6. Reasons for developing indicators:

The WTO provided lists of proposed indicators which can serve as core indicators which have proven its usefulness in many destinations. However, as the geographic, cultural and environmental aspects differ from place to place, it is important that stakeholders of destinations develop their own priority indicators. Once the indicators become destination specific they will be more feasible to implement.

The table below is a summary of some case studies showing that indicators number differ, they are destination specific, are goal oriented and the framework for developing them differ as well. For example we can see that some indicators are coastal destination specific or applicable to all types of destinations, can be developed with a participatory approach or any other framework and their numbers can vary from ten to hundreds.

2.5.7. Key steps for developing indicators:

Developing indicators requires going through eleven steps of which six are main.
However, developing indicators are not meant to be one time exercise. In this thesis the first 6 steps were implemented while the others were left as future work.

- Step 1: Identifying community sustainability goals: Wide consultation and community participation through surveys, focus groups or meetings to establish broad-based stakeholder defined sustainability goals. Recently in December 2014, a national forum led by the Birdlife International and its local partner PWLS was held to discuss the opportunities, needs and potentials Palestine has for ecotourism. The forum emphasized on introducing ecotourism businesses both as an economic development option and conservation strategy through viable partnerships with the government, private sector, NGOs and local community.
- Step 2: Scoping: It includes identifying stakeholders, assets and risks. The participation of the key stakeholders plays a significant role in the participatory process of developing the indicators. The most important issues that should be well understood about identifying stakeholders is that at the beginning of the indicators development a much broader group could be involved but for more appropriate indicators, a more smaller and specialized group is required. This depends on the degree to which ecotourism affects their professional and personal lives, their interests or those of their organization, their understanding of monitoring and their available time to participate. Secondly, as we have a wide range of stakeholder we expect that their interests vary and upon it they emphasis on indicators addressing their needs. However, throughout a participatory process indicators are refined and it may happen that their favorite indicators do not appear at the end in the short list. The following are possible local destination stakeholders for the indicators development:

    - Communities: Local authorities, native and local community groups, leaders, private sector employees and property owners
    - Public sector: Municipal authorities, regional and national authorities, institutions who will help define issues and sources of information for indicators, other ministries and agencies in areas affecting tourism (e.g. transport, culture, infrastructure, planning, heath, etc), agencies with an interest in the planning or maintenance of specific attractions (e.g., parks, protected areas, cultural sites and events), academic institutions.
    - Private sector: Tour operators and travel agents, accommodation, restaurants, transportation, guides, interpreters and outfitters, suppliers to the industry, tourism and trade organizations, business development organizations.
    - NGOs: Environmental and conservation groups (e.g., wetlands, native species, parks, cultural heritage), other interest groups (e.g., hunters, fishers, sports and adventure associations).
    - Tourists: Organizations representing tourists' interests and international tourism bodies.

It should be noted that in this step other assets, potentials and risks for destinations should be revealed thus it is essential to involve all stakeholders in the initial stages of developing the indicators especially when there is no plan existing. Also we should emphasize on the participation of the communities who are best to know about their locations and can help to

give broader understanding for the key assets and risks. Overall, this step can assist in identifying priority tourist areas, potentials and attractions such as landscapes, wildlife, festivals and cultural experience. In this study the population was identified through multi-incremental steps which resulted in three samples: accidental sample, snow-ball and purposive sample.

- Step 3: Choose indicator framework: This study adopts the Delphi technique to facilitate the development of indicators as it has been found to be particularly useful in the following situations which meet our case (Hanafin, 2004):

  - Where a problem does not permit the application of precise analytical techniques but can benefit from subjective judgments on a collective basis.
  - Where the relevant specialists are in different fields and occupations and not in direct communication.
  - Where the number of specialists is too large to effectively interact in a face-to-face exchange and too little time and/or funds are available to organize group meetings.
  - Where ethical or social dilemmas dominate economic or technical ones.

- Step 4: Define selection criteria: Indicator selection criteria should be based on community values and sustainability goals determined through stakeholder involvement. The criteria for selecting indicators include: relevance of the indicator to the selected issue, feasibility of obtaining and analyzing the needed information, clarity and understandability of indicators to users and comparability over time and across jurisdictions or regions.
- Step 5: Identify potential indicators : The study used existing indicators lists as a guide and stakeholder input to refine listings to what is potentially viable. This study depended on the studies, guidebooks, manuals, local and international indicators. Naming them, they are ordered according to their level of usability in the study to develop fields, criteria and indicators: (Barzekar, Aziz, Mariapan, & Ismail, 2011) (Bhattacharya & Kumari, 2004) (PCBS, 2014) (UNESCO-WHC, 2014a) (Farsari & Prastacos, 2001) (Zhang, 2010) (WTO, 2004).

The Table 2.3 shows examples of fields and criteria from the mentioned resources on which the study tool was developed. Whereas, the indicators were of huge number and were developed from the resources and from the first round results.

Table 2.3-A: Examples of fields and criteria on which the study tool was developed:

Fields		**Criteria**	
	Environmental		1. Conservation of natural resources and Biodiversity.
	Social		2. Climate.
	Cultural		3. Market maturity of the destination
	Economical		4. Educational affairs and public awareness.
	Institutional		5. Maintenance of soil and water resources.
	Managerial		6. Carrying capacity.
			7. Tourists and local people satisfaction.
			8. Promoting economic benefits and poverty alleviation.

Table 2.3-B: Examples of fields and criteria on which the study tool was developed:

Fields		Criteria	9. Status of public service and infrastructure.
			10. Maintenance of heritage and cultural diversity.
			11. Maintenance of scenery, natural and physical features.
			12. Public facilities in the destination
			13. Management and service
			14. Mixed and dense forests.
			15. Maintenance of hygiene and tourist safety.
			16. Existence of legal, institutional, legislation and policy frameworks.
			17. Local people participation, awareness & involvement.

- Step 6: Select final indicators: This step is to apply the framework and selection criteria to select final set.

The following Table 2.4 shows a summary for the key steps for the indicator development process. This study has gone through the steps one to six. The other steps may include monitoring and evaluation over time. Indicators are not meant to be one time exercise. With Periodic review it will become clear which indicators are serving the purpose well, and which will need to be updated or even replaced.

Table 2.4-A: Key steps for the indicator development process. (Waldron and Williams, 2002 as cited in White V., 2006).

Key steps for developing indicators	Comments
1-Identify of community sustainability goals	Wide consultation and community participation (e.g. surveys, focus groups, meetings) to establish broad-based stakeholder defined sustainability goals
2-Scoping	Determine target audience; Consider spatial and temporal bounds; Include institutional partners; Establish relevant number of indicators
3-Choose indicator framework	Select a framework that maximizes ability of indicators to assess progress towards sustainability
4-Define selection criteria	Indicator selection criteria should be based on community values and sustainability goals determined through stakeholder involvement
5-Identify potential indicators	Use existing indicators lists as a guide and stakeholder input to refine listings to what is potentially viable
6-Select final indicators	Apply framework and selection criteria to select final set
7-Collect necessary information	Collect data on each indicator- this may involve both quantitative and qualitative techniques

Table 2.4-B: Key steps for the indicator development process. (Waldron and Williams, 2002 as cited in White V., 2006).

Key steps for developing indicators	Comments
8-Analyze indicator results	Compare indicator values and trends to specific target levels based on community sustainability goals
10-Assess indicator performance	Identify progress towards established sustainability goals
11-Review indicators	Over time, indicators may need to be adapted to any system change, abandoned altogether and new ones adopted.

2.6 Information Technology for Tourism

According to (Çetinkaya, 2009) and (Buhalis, 1998) Information Technologies (IT) prevail all functions of strategic and operational management. As information is the lifeblood of tourism, IT provides both opportunities and challenges for the tourism industry. Destinations all around the world competes with each other for attracting more tourists to get benefits of tourism. Technology can be a strategic tool in this competition as it can enhance the appeal of the core resources and attractors strengthen the quality and effectiveness of the supporting factors and resources and best adapt to the constraints imposed by the situational conditions.

Various types of technologies are available for tourists in comparing and selecting a destination like recommender systems, Web technologies, dynamic packaging, destination management systems, and mobile technologies.

The rapid development of both supply and demand makes IT an imperative partner and thus they increasingly play a more critical role in tourism marketing, distribution, promotion and coordination. However, ignoring and under-utilizing IT could be disastrous as it would create strategic vulnerability and competitive disadvantage. Thus, no action is not an option. IT can be fruitful, only if certain prerequisites are satisfied, namely: long term planning and strategy, top management commitment; and training throughout the hierarchy.

Perhaps the greatest challenge is to identify and train managers who will be effective and innovative users of IT and would lead technology-based decision making towards quantifiable gains and advantages. Intellect, therefore, becomes one of the major assets of organizations, while continuous education and training are the only methods to develop and maintain this asset.

Technology needs to be updated. The development of new and more powerful IT applications empowers both suppliers and destinations to enhance their efficiency and to re-engineer their communications strategies as they effectively provide the info-structure at destination level.

In this study a computational model is used. Computation is the procedure of calculating, i.e. determining something by mathematical or logical methods. Chapter four presents the

developed formulas (4.1.. 4.6) on which the proposed model was based. (Terzidis, 2003)

In the Palestinian context, the modern technology and concepts of nature conservation were linked through utilizing an international web portal called "observado.org" and a Mobile App called "AbsMapp". This linkage holds many benefits and meanings to the country, including the political concepts of the world, because it carries the name of Palestine worldwide and highlights and protects the national identity '.

The idea stemmed from the need to have unified biodiversity database for Palestine were all the documentation of species is to be electronically saved. Most of the institutions in Palestine document and archive their observations on paper leading to different numbers of flora, fauna, and birds species for Palestine. Through the web portal, institutions can document their observations on one database, make statistics, track locations and changes , and make studies from the numbers they get. Action plans and interventions from the authorities and NGOs could be based on these numbers too. Furthermore, through utilizing the web portal Palestine's species is presented worldwide and documented to the Palestinian lands. Another benefit for IT utilization is making easy documentation of observations. Through the Mobile App, observations can be uploaded to web portal through smartphones while being in the field. This kind of documentation has concrete contribution to the biodiversity of Palestine as it can be documented by the name, common name, exact location of observation, photo for the observation, voice and video recordings. Consequently, such documentation promotes students, tourists and ecotourists, researchers , ecologists and many interested people from local people or even visitors to Palestine to get involved in the documentation and get lists of their own observations. (Wafa, 2015, Observado, 2015)

2.7 Previous Studies

The researcher selected the following previous studies according to these points: relativity to ecotourism, evaluation of the touristic destinations and indicators development.

El-Harami, 2014: The Diversity of Ecology and Nature Reserves as an Ecotourism Attraction in Jordan. The study aimed at examining the importance of natural reserves in Jordan and the effects of ecotourism on the local community economically and socially. The study included three reserves: Ajloun Reserve, Dana Biosphere Reserve and Wadi Rum Reserve. The study reflected the potentials and readiness of these sites for receiving ecotourists. The methodology of this study is descriptive and supported by field trips and meetings with members of local communities. The author recommended of making use of modern technology in marketing, explaining the benefits of eco-tourism to the local residents living around the nature reserve and to students through in all educational levels.

Mihalič, 2013: Performance of Environmental Resources of a Tourist Destination: Concept and Application. The study aimed at addressing the gap in the literature that appears in stating the importance of destinations' environmental resources theoretically, and of applying researches explicitly to focus on destination environmental supply. To achieve the study goal, first the author reviewed and evaluated the body of research in tourism environmental resources and then proposed a conceptual model to test their performance. The model combined tourism supply–demand view with importance–performance gaps and was used to survey tourism in Slovenia. The survey was carried out and data were collected from 1,054 tourists by means of questionnaire on four Slovenian

destinations: a city, a seaside resort, a recreational resort and a spa resort. The results showed that the studied destination uses its environmental resources too extensively and that Slovenian environmental tourism experience does not meet visitors' expectations. The author stated that this finding challenges Slovenian policy makers and that the proposed model can form the basis for further conceptual and empirical research into the tourism contributions of environmental resources. He also claimed that the model, in its present form, can be used to examine environmental performance and to suggest policy implications for any destination.

Attieh, 2011: A Quest for Authenticity: Ecotourism Potential in Kafarhamam. The study aimed at documenting the environmental richness of Lebanon by developing an inventory of wild edible plants which are traditionally consumed in the southern regions, Kafarhamam. The methodology of the study used included open interviews with villagers who have the knowledge of edible and medicinal plants. The study resulted in the documentation of a total of 46 wild edible vascular plants and 30 species of local medicinal uses. The study emphasized on the integral role that ecotourism plays as an advocate of nature. It has concluded that ecotourism is seen as a valued partner in the conservation and sustainable use of Lebanon's unique environmental, botanical and cultural heritage.

Barzekar, Aziz, Mariapan, Ismail, *et al.*, 2011: Using Analytical Hierarchy Process (AHP) for Prioritizing and Ranking of Ecological Indicators for Monitoring Sustainability of Ecotourism in Northern Forest, Iran. The study aimed at prioritizing and ranking ecological indicators for monitoring sustainability of ecotourism in Northern forest of Iran. The study was carried out in 2011 in western part of Mazandaran province in Northern of Iran. To achieve the study goal the authors used criteria and indicators previously identified in his previous study "Delphi technique for generating criteria and indicators in monitoring ecotourism sustainability in Northern forests of Iran: Case study on Dohezar and Sehezar Watersheds" which included 9 criteria. The criteria and indicators were prepared into Tables and were distributed among panel members who were requested to rank it based on the degree of importance of each criterion or indicator with respect to each other. Lastly the data gathered were entered to Expert Choice Software to have the criteria and indicators ranked. The results showed that, out of the 9 criteria, the first three, which are labeled as Ecological criteria and comprised 21 indicators, stood as the top highest priority. The study concluded that the ecological resources are the basic resources for attaining sustainable development in economical, social and cultural dimensions; it is essential and vital to attain precise and effective indicators for monitoring of sustainable management of ecotourism. Ranking and prioritizing provides opportunities to monitor ecotourism sustainability, trend of tourists' activities and sustainable management and prevent damage and irreversible alteration to ecotourism resources.

Ramchurjee, 2011: The impact of Ecotourism on the livelihood of the community and biodiversity in Shimoga, Karnataka. The study was carried out in a non-peaked season at the tourism sites in Karnataka South West India by field exploration, observation, data collection and interaction with the local communities to evaluate the environmental and social impacts of ecotourism and to assess their awareness regarding conservation of biodiversity during the period May to June 2011. The data were collected through cross section interaction through discussion and interviews with forest officials, ecotourism authorities, domestic tourists, foreign tourists and local residents of the study area. Information was also collected through questionnaires from two sections, data through questionnaires have been collected from N=73 local residents and N=50 tourists. The

secondary data have been collected from the tourism officer, department of tourism, published news items and articles in newspaper, magazine, internet etc. The study concluded that the awareness of the local community accord with the principles of ecotourism. There is an improved perception of community participation in environmental management through ecotourism among the local residents and tourists. Ecotourism is a source of income and employment for these local communities. Increased ecotourism has a profound effect on the habitat destruction, waste generation and noise pollution threatening the biodiversity of the area.

Barzekar, *et al.*, 2011: Delphi technique for generating criteria and indicators in monitoring ecotourism sustainability in Northern forests of Iran: Case study on Dohezar and Sehezar Watersheds. The study aimed at identifying all relevant criteria and indicators which are effective for monitoring ecotourism sustainability in the Northern forests of Iran using the Delphi method. The study was carried out in 2011 on two areas, Dohezar and Sehezar Watersheds, and had a principle goal which was to ensure the objectives of forest management and at the same time- maintain processes in a sustainable manner. To achieve the study goal, data were collected from 10 local experts from different fields by means of questionnaires covering all aspects of social, ecological, cultural, economic and institutional factors affecting sustainability of ecotourism. Initially, the experts provided a large number of criteria which was to be grouped, merged and omitted redundancy to be ready for the second round. In the second round the experts were asked to indicate a degree to which they agreed with particular criteria and indicators on the scale of 1 to 5 . At the end of the second round the consensus of 9 criteria and 61 indicators was reached which include 21 indicators related to ecological aspects, 8 to economic aspects, 21 to social aspects, 6 to cultural aspects and 5 to institutional aspects. The study recommended that the selected indicators would be applied by the Iranian Cultural, Heritage, Handicrafts and Tourism Organization for monitoring ecotourism sustainability in the Northern forest of Iran.

AlGhrouf, 2010: Proposed mechanisms for the development of Ecotourism in the Jordan Valley and the promotion of its expected role in achieving sustainable development. This study was conducted in the period between months of May and December 2009. The targeted group were concerned personnel in the international organizations, the official institutions and those non-governmental foundations (developmental and researches) in the West Bank, as well as leaders of the local community in southern part of the Jordan Valley. The author used a questionnaire as a tool for collecting data for the purpose of identifying the reality of the southern part of the Jordan Valley in terms of: the most important eco-tourist sites, the incentives of eco-tourism, the hindrances of eco-tourism, the promotion mechanisms of eco-tourism and the expected role of eco-tourism in developing the local community. The findings of the study showed that the most significant promotion mechanisms of eco-tourism according to the respondents at the fundamental level are arranged in the following descending order: setting up a strategic plan that focuses on ecotourism, encouraging the eco-tourist investment and disseminating generally the culture of ecotourism. On the other hand, the most significant obstacles at the natural sources level were: the weakness of flowage of many springs and the over-exploitation of natural resources. Furthermore, at the level of infrastructure and superstructure the obstacles were arranged in the following descending order: shortage of sanitation utilities in the tourist places, and the deficiency of tourist services. The study recommended that it is necessary to invest in tourism in general and

particularly in ecotourism in the Jordan Valley, since it has the inducements of ecotourism, this can be done by the coordination between the public sector and the private sector.

Zhang, 2010: Evaluation System of Leisure Tourism Destination Development Conditions. The study aimed at identifying and evaluating leisure tourism destination development conditions. The study took place in 2010 in China. To achieve the study goal the author had adopted Delphi method to establish indexes after a literature review and expert interviewing. The indexes were screened and modified to 6 first-level indexes and 26 second-level indexes. The author then selected 5 experts and asked them to weigh the two level indexes according to their importance. Lastly the weights were calculated through Analytic Hierarchy Process (AHP). The result showed that the 4 most-influential first-level indexes to the development condition of leisure tourism destination are management & service, industrial elements, resource & environment, and public facilities. The study also found that resource and environment are very important to the improvement of a destination, especially a leisure tourism destination as it includes nature and humanity resource, leisure tourism product, ecological quality and environment integration. On the other hand, the 5 least-influential second-level indexes are security management, mark & signage, employees, market acceptance, and public toilet. The study concluded with the necessity to pay more attention to the construction of casual atmosphere and basic Infrastructure.

Fan *et al.*, 2010: Research on Tourism Destination Evaluation Mechanism Construction from the Perspective of Tourists. The study took place in china in 2010 with the aim of constructing an evaluation mechanism for tourism destination from the perspective of tourists. The study pointed out the importance of tourists as a major source of profit throughout the tourism industry. To achieve the study aim, firstly the authors designed an evaluation index based on the content of tourism destination's tourism activities: transport, sightseeing, lodging, restaurant, shopping and entertainment, combined with tourism motivation and demand. Secondly, they collected assessment data of the index with the method of spot investigation and questionnaire investigation. Lastly the data were analyzed using the method of Analytic Hierarchy Process (AHP). The study concluded that tourists to the destination image, feeling and experience are intuitive and real. Tourists tour operators assessment of quality and service quality is objective and fair. Tourists' satisfaction is the evaluation of the most important tourist destination, the most authoritative standards.

Eraqi, 2007: Ecotourism Resources Management as a Way for Sustainable Tourism Development in Egypt. The study aimed at presenting a general picture for ecotourism resources management to understand how sustainability can be applied to different tourism sites and how ecotourism resources can be managed and marketed effectively and efficiently in Egypt. The author disseminated about 150 questionnaires on two focus groups of total 17 experts and managers working in the field of tourism. The research findings explained that there are positive attitudes of locals towards sustainability requirements and there is a degree of misunderstanding to the concept of ecotourism for many tourism companies and agencies in Egypt. He also recommended developing a new marketing strategy for ecotourism in Egypt using suiTable tourism marketing strategies and policies.

Bhattacharya & Kumari, 2004 : Application of Criteria and Indicator for Sustainable Ecotourism: Scenario under Globalization. The study aimed at developing

destination level criteria and indicators for sustainable ecotourism and developing guidelines for measuring the indicators with respect to the study area. To achieve the study goal the criteria and indicators had been developed with participation of different stakeholders to ecotourism and local people by using PRA techniques and organizing field level workshops. The results were used to test the ecotourism performance at two study areas in India: Yuskam and Peiling. Various findings have been achieved under this study in social, economic and ecological dimensions. In one of the study area the environmental and cultural values are intact because the indigenous people have developed a sense of belongingness, environmental awareness and worked collectively to maintain nature. While in the other site, the local community involvement was negligible and could be linked with globalization. The findings shows that due to economic motive and less involvement of local community in the process of Ecotourism, the area was leading towards environmental degradation and erosion of cultural values and is further prone to serious threat of migration of the local community. The study recommended that the civil societies needs to be more responsible for sustainable ecotourism to safeguard public lands, protected forests, water bodies, violation of local and indigenous customary rights.

Table 2.5: Summary of previous studies:

#	Study	Location	Variables	Period	Target	Method.	Tool	Results and Recommendations
1	El-Harami	Jordan: Ajloun Reserve, Dana Biosphere Reserve, Wadi Rum Reserve	Ecology and nature reserves, local communities	2014	Communities beside 3 nature reserves	Descriptive	Meetings with locals, field trips	Making use of modern technology in marketing, explaining the benefits of ecotourism to the local residents living around the nature reserve and to students through in all educational levels
2	Mihalič	Slovenia: a city, a seaside resort, a recreational resort, a spa resort	Performance of environmental resources, tourist destinations	2013	1,054 tourists	Descriptive	Questionnaire, Conceptual model : evaluation of previous researches	The studied destination uses its environmental resources too extensively and that Slovenian environmental tourism experience does not meet visitors' expectations. This challenges Slovenian policy makers and that the proposed model can form the basis for further conceptual and empirical research into the tourism contributions of environmental resources. He also claimed that the model, in its present form, can be used to examine environmental performance and to suggest policy implications for any destination
3	Attieh	Lebanon: Kafarhamam	Ecotourism destination potentials	2011	Villagers who have the knowledge of edible and medicinal plants	Descriptive	Interviews	The documentation of a total of 46 wild edible vascular plants and 30 species of local medicinal uses. The study emphasized on the integral role that ecotourism plays as an advocate of nature. It has concluded that ecotourism is seen as a valued partner in the conservation and sustainable use of Lebanon's unique environmental, botanical and cultural heritage

#	Study	Location	Variables	Period	Target	Method.	Tool	Results and Recommendations
4	Barzekar	Iran: Mazandaran province	Ecological indicators, ecotourism	2011	Panel members	Descriptive	Questionnaire, AHP approach, Expert choice software	The results showed that, out of the 9 criteria, the first three, which are labeled as Ecological criteria and comprised 21 indicators, stood as the top highest priority. The study concluded that the ecological resources are the basic resources for attaining sustainable development in economical, social and cultural dimensions; it is essential and vital to attain precise and effective indicators for monitoring of sustainable management of ecotourism. Ranking and prioritizing provides opportunities to monitor ecotourism sustainability, trend of tourists' activities and sustainable management and prevent damage and irreversible alteration to ecotourism resources.
5	Ramchurjee	India: Katrantaka	Ecotourism, livelihood of communities and biodiversity	2011	Forest officials, ecotourism authorities, domestic tourists, foreign tourists and local residents	Descriptive	Questionnaire, exploration, observation, interviews	The study concluded that the awareness of the local community accord with the principles of ecotourism. There is an improved perception of community participation in environmental management through ecotourism among the local residents and tourists. Ecotourism is a source of income and employment for these local communities. Increased ecotourism has a profound effect on the habitat destruction, waste generation and noise pollution threatening the biodiversity of the area.

#	Study	Location	Variables	Period	Target	Method.	Tool	Results and Recommendations
6	Barzekar	Iran: Dohezar and Sehezar Watersheds	Criteria and indicators, ecotourism sustainability	2011	10 local experts	Descriptive	Questionnaire, Delphi	At the end of the second round the consensus of 9 criteria and 61 indicators was reached which include 21 indicators related to ecological aspects, 8 to economic aspects, 21 to social aspects, 6 to cultural aspects and 5 to institutional aspects. The study recommended that the selected indicators would be applied by the Iranian Cultural, Heritage, Handicrafts and Tourism Organization for monitoring ecotourism sustainability in the Northern forest of Iran.
7	AlGhrouf	Palestine: Jordan Valley	Ecotourism, sustainable development	2010	personnel in the international organizations, the official institutions and those non-governmental foundations, leaders of the local community	Descriptive	Questionnaire	The findings of the study showed that the most significant promotion mechanisms of ecotourism according to the respondents at the fundamental level are: setting up a strategic plan that focuses on ecotourism, encouraging the eco-tourist investment and disseminating generally the knowledge of ecotourism. The most significant obstacles at the natural sources level were: the weakness of flowage of many springs and the over-exploitation of natural resources. Furthermore, at the level of infrastructure and superstructure the obstacles are: shortage of sanitation utilities in the tourist places, and the deficiency of tourist services. The study recommended that it is necessary to invest in general in tourism and in particular in ecotourism in the Jordan Valley, since it has the inducements of eco-tourism, this can be done by the coordination between the public sector and the private sector.

#	Study	Location	Variables	Period	Target	Method.	Tool	Results and Recommendations
8	Zhang	China	Leisure tourism destination, development conditions.	2010	Experts of which 5 chosen for AHP	Descriptive	Literature review and expert interviewing, Delphi, AHP	The result showed that the 4 most-influential first-level indexes to the development condition of leisure tourism destination are management & service, industrial elements, resource & environment, and public facilities. The study also found that resource and environment are very important to the improvement of a destination, especially a leisure tourism destination as it includes nature and humanity resource, leisure tourism product, ecological quality and environment integration. On the other hand, the 5 least-influential second-level indexes are security management, mark & signage, employees, market acceptance, and public toilet. The study concluded with the necessity to pay more attention to the construction of casual atmosphere and basic Infrastructure.
9	Fan	China	Tourism destination evaluation	2010	Tourists	Descriptive	Spot investigation and questionnaire investigation, AHP	The study concluded that tourists to the destination image, feeling and experience are intuitive and real. Tourists tour operator's assessment of quality and service quality is objective and fair. Tourists' satisfaction is the evaluation of the most important tourist destination, the most authoritative standards.
10	Eraqi	Egypt	Ecotourism resources management, sustainable tourism development	2007	experts and managers working in the field of tourism	Descriptive	Questionnaire through focus groups	The research findings explained that there are positive attitudes of locals towards sustainability requirements and there is a degree of misunderstanding to the concept of ecotourism for many tourism companies and agencies in Egypt. He also recommended developing a new marketing strategy for ecotourism in Egypt using suitable tourism marketing strategies and policies.

#	Study	Location	Variables	Period	Target	Method.	Tool	Results and Recommendations
11	Bhattacharya	India: Yuskam and Peiling	Criteria and indicators, sustainable ecotourism	2004	stakeholders to ecotourism and local people	Descriptive	Organizing field level workshops, PRA techniques	The findings shows that due to economic motive and less involvement of local community in the process of Ecotourism, the area was leading towards environmental degradation and erosion of cultural values and is further prone to serious threat of migration of the local community. The study recommended that the civil societies needs to be more responsible for sustainable ecotourism to safeguard public lands, protected forests, water bodies, violation of local and indigenous customary rights.

Table 2.6 presents an analysis for the 11 previous studies. The Table presents that this is the second study conducted about ecotourism in Palestine, yet it is the first to cover ecotourism in the whole West Bank. Thus it was conducted on a larger and different population compared to AlGhrouf's study: academics, governmental and public-private sectors working in ecotourism, alternative types of tourism and nature conservation. Obviously, there is insufficient number in the local studies concerned with ecotourism, for there is one and only study implemented back in 2010. This means the study's subject is relatively new to Palestine. On the one hand, knowledge about the subject is not mature enough locally to fully benefit from previous studies. On the other hand, international studies have different study variables and population that reflect their tools choice.

Table 2.6: Analysis of previous studies

Studies	**Main goal**	**Target**	**Tools**
Barzekar, Zhang and Bhattacharya	Developing indicators for the application of sustainable ecotourism in destinations	Experts from different fields and stakeholders to ecotourism and local people	Questionnaires with AHP or Delphi approach, organizing field level workshops with PRA techniques.
El-Harami and Ramchurjee	Evaluating the impact of ecotourism on nature and livelihood of communities,	local communities , ecotourism authorities, domestic and foreign tourists	Questionnaire, exploration, observation, interviews, field trips.
Mihalič and Fan	Evaluating destinations and its environmental performance for providing quality services and experiences to tourists	Tourists	Questionnaire, spot investigation, AHP.
Attieh, AlGhrouf and Eraqi	Addressing the potentials of destinations for the application ecotourism	Villagers, leaders of the local community, the official institutions and those non-governmental foundations, experts and managers working in the field of tourism.	Interviews, questionnaire, questionnaire through focus groups.

This study is congruous with the studies aimed at developing indicators for the application of sustainable ecotourism in destinations. It also accords with the tools provided for this purpose as it was conducted using Delphi technique which targets a panel of experts of different specializations.

Chapter Three:
Ecotourism in Palestine

This chapter presents tourism reality in Palestine, Palestine potentials for ecotourism, ecotourism benefits, institutional efforts in ecotourism development and ecotourism SWOT analysis.

3.1 Tourism reality in Palestine

Beyond the wall and behind barriers, a tiny piece of land called Palestine envelops remarkable range of religious, cultural, historical and natural heritage wealth. This combined variety of attractions formulates an exceptional package for tourists.

Tourism sector in Palestine generates a significant economic impact, contributing to the GDP and employment (MOTA, 2009b). Statistically, tourism contribution to Palestine's GDP is somehow steady since 2005 and is currently contributing around 3%. Its contribution to employment is around 2% (an estimated 15,000 direct jobs). Tourist activities are diversified with the diversification of the tourist's objectives and needs. Though the majority comes for performing religious duties, others come for solidarity and business purposes. Their influx to Palestine is around 1.8M/year made up from Palestinians living in Israel, Russian Federation, United States of America, Italy and other countries. Tourism in Palestine is highly seasonal with a very low occupancy rate of around 30% vital in the religious feasts and pilgrimage days. The reasons affect the numbers of inbound visitors are difficulties reaching the Arab tourists and Palestine's image in foreign propaganda that gives the perception that it is not a safe place to visit. Although these are impediments to the development of this sector yet it can be leveraged with proper exploitation of Palestine's historical and ecological potentials, global awareness-raising, technological communications use and attracting new segments of tourists (Quartet, 2014; Paltrade, 2012; AlFalah, 2012).

Ecotourism is not common in Palestine yet it is currently receiving great deal of interest from many Palestinian institutions. It is gaining its popularity due to two of its main advantages: economic incentives and conservation benefits, both to the locals and the destination. Ecotourism greatly depends on the country's potentials to lure in tourists. The following sections will give an overview of Palestine's potentials for ecotourism and the institutional efforts in developing the ecotourism industry. We should note that the information presented is related to the West Bank which is part of the historical Palestine.

3.2 Palestine's potentials for ecotourism

The Palestine possess great potentials for ecotourism development. The rich biodiversity of flora and fauna and the unique culture of local people living in the area are among the most

important potentials. This section will give an overview of these potentials sequentially as depicted in figure 3.1.

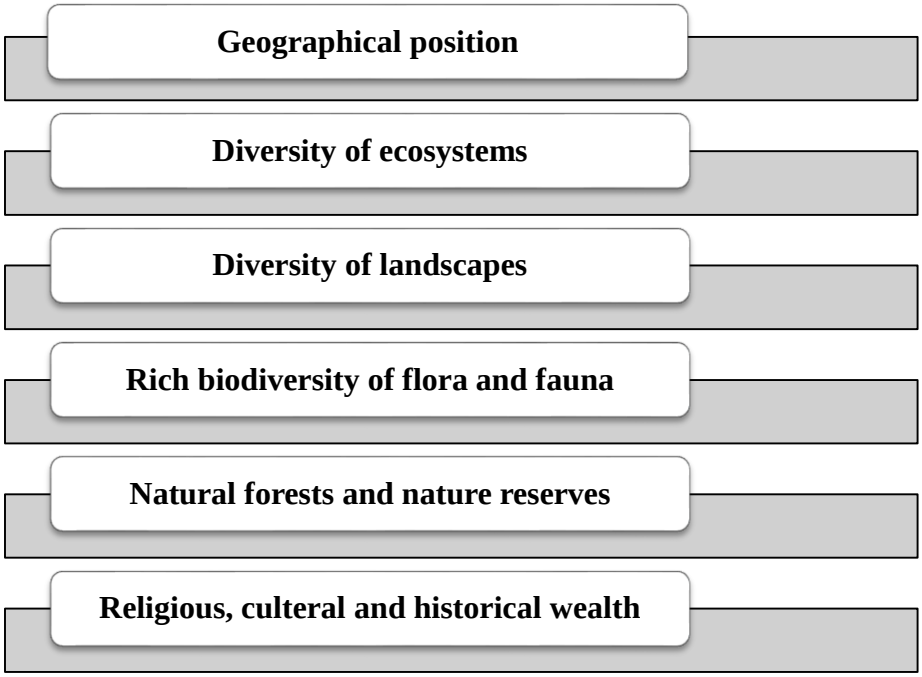

Fig. 3.1: Palestine's potentials for ecotourism

Palestine's geographical position has given it a blessing making it highly applicable for the ecotourism industry. Being located at the terrestrial meeting point between Eurasia and Africa, made it rich with a variety of plants and animals from the three continents. This contributed to the uniquely rich diversity of Palestinian flora and fauna which has captured the interests of ecologists, taxnonomitsts and researchers (Alon,1969 as cited in Isaac & Gasteyer, 1995).

The diversity is nurtured also by the most fascinating ecosystsms which are divided into four longitudianal belts: Semi Coast, Central Highlands, Eastern Slopes, and the Jordan Valley (PWLS, 2009b). These local climatic variations are largely due to the extensive differential in heights from the lowest point at the Dead Sea, 400m below sea level, to the mountain tops at close to 1000m. Other contributory factors include the different soil types (rich agricultural soil to desert sand) and the varying rainfall levels – from a mean annual rainfall of 50mm in the Jordan Rift Valley to nearer 800mm in the north and west.

The variations in rainfall levels make the mountains highly dense with vegetation than the valley, see figure 3.2. Consequently, multiple wildlife habitats are created hosting over 2,500 species of wild plants with approximately 800 of these plants are considered rare, and around 140 are endemic. Palestine has particular delight for hikers in spring when the fields and hills are dotted with flowering poppies, mountain tulips, iris and daisies.

They can enjoy scenery of carpets of scented herbs such as sage, thyme and chamomile while the oak, carob and olive trees shades welcome them. At least 70 of wild mammalian species are found which include red fox, hyiena, rocky hyrax, wolves, rabbits, ibex, porcupines and scattered herds of gazelles. Less obvious are the insects and noctural species such as bats, gerbils, sand flies and desert rodents. The most notorious for its fatal

sting is the Palestinian Viper snake which preys on them (PWLS, 2009a; Taylor & Howard, 2001).

Fig. 3.2: Diversification of landscapes in Palestine .

Many native species of Palestine has been vulnerable to heritage theft by Israel, see figure 3.3 for examples. The Palestine Sunbird is exclusively native to Palestine and is the one and only bird that carries the name of Palestine internationally. It was declared as the national bird in 2015 after Israeli efforts came to rename it as the "Orange Sunbird" (Maan, 2015; Palwatch, 2013). Not only was this species vulnerable to heritage theft but also the Palestine Mountain Gazelle which they changed its name to "Israel mountain Gazelle" (ARN, 2014). While the beautiful Iris Palestina also carries the name of Palestine, it was necessary to document its name and existence to this land as was done by PWLS on an international portal on the internet (Wafa, 2015).

Fig. 3.3: Native species in Palestine. Pictures resource (PWLS).

Palestine is one of the best locations in the whole world for bird watching as it is located at the juction of three continents. This made the region a "bottleneck" and a crossroad for

automn and spring migrations. Around 520 species are recorded with about 500 million migratory birds fly over its narrow airspace annualy. These birds could be breeding, wintering or migrating such as vultures, ibis, egrets, white stork, kestrel, hawks and owls. While the resident birds nest, breed and spend their life time in Palestine. Surprisingly, they are of large size such as the golden eagle and of a small size such as the Palestine sunbird. Many other bird species could be also found here such as chuckars, bee-eaters, larks, finches, shrikes, warblers and falcons (PWLS, 2004).

Natural forests in Palestine represent Mediterranean forests which are considered to be biologically valuable. They are essential for maintaining water and soil resources, regulate climate, combat desertification and they provide a wide range of benefits and services to the society. They are mostly found at 700 meters above sea level and are concentrated mainly in the central highlands of Palestine (PWLS, 2009b). There are 49 nature reserves in Palestine with an approximate area of 500,400 acres (making 7.7% of the West Bank area). Table 3.1 shows 48 nature reserve name, location and area, added to them one nature reserve in Wadi Gaza. These nature reserves were not declared in the Palestinian Authorities era. However, they were declared at the British mandate and Israeli occupation eras thus they are dealt with as areas nominated for reservation. The MOA is responsible to manage, conserve and make managerial plans for them. Their importance comes from their contribution in reserving every single element in their ecology which is part of the Mediterranean and Middle-East region (MOA, 2014). Recently, in 2014 the MOA along with their partner PWLS has started working on three nature reserves: Wadi Al-Quff, Um Toot and Beit Ello. Additional nature reserves nominated by PWLS are presented in Appendix 3.1.

Table 3.1-A: Nature reserves in the Palestinian lands (MOA, 2014).

#	Nature Reserve	District	Area in acres	#	Nature Reserve	District	Area in acres
1	Um Toot	Jenin	3196	25	Dair Diwan Mikhmas Dyook	Ramallah	20856
2	Fahma	Jenin	400	26	Dair Dibwan	Ramallah	20856
3	Sirees	Jenin	2630	27	Dair Abu Mish'al & Jamaleh	Ramallah	3215
4	Shobash	Jenin	55530	28	Ramon	Ramallah	13310
5	Um Rayhan	Jenin	2265	29	Dair Jreer	Ramallah	884
6	Araba	Jenin	332	30	Kofor Malek	Ramallah	11545
7	Jabal Alkbeer	Nablus	26223	31	Dura Alkar'	Ramallah	514
8	Alshaikh zaid	Nablus	52	32	Beirzait	Ramallah	117
9	Zatarah	Nablus	29	33	'Anoon	Ramallah	129
10	Boreen	Nablus	133	34	Um Safa	Ramallah	670
11	Bathan	Nablus	2222	35	Sheikh Qtrawneen	Ramallah	11
12	Madama	Nablus	43	36	Ein Dara	Ramallah	250
13	Duma Majdal Bani Fadel	Nablus	2791	37	Wadi Dalb	Ramallah	2641
14	Awarta	Nablus	136	38	Dair Ammar	Ramallah	120

Table 3.1-B: Nature reserves in the Palestinian lands (MOA, 2014).

#	Nature Reserve	District	Area in acres	#	Nature Reserve	District	Area in acres
15	Beit Amrain Burqa	Nablus	1582	39	Hashimi	Ramallah	200
16	Tayaseer	Tubas	1200	40	Wady Zarqa	Salfeet	9740
17	Jabal Tammoun	Tubas	19200	41	Balota Tafouh	Salfeet	29
18	Lahf Jader	Tubas	6996	42	Wadi Qana	Salfeet	13149
19	Arab Sawahreh	Bethlehem	3808	43	Alknoub	Hebron	48700
20	Nabi Musa	Jericho	36486	44	Arab Rashaydeh	Hebron	30380
21	Auja	Jericho	4858	45	Wadi Quff	Hebron	3477
22	Beit Iksa	Jerusalem	128	46	Suba	Hebron	6100
23	Beer Hijjeh	Tulkarem	32	47	Karza	Hebron	4000
24	Sheikh Tabban	Tulkarem	34	48	Qarn	Hebron	620

Along a walk, visitors can gain knowledge for the history traced back to Canaanites, Ancient Greeks, Romans, Arab Caliphates, Crusaders, Othmans, British mandate, Hashemites up to the Israeli occupation. They can see ancient roman water harvesting techniques (e.g. at Beit Ello Reserve), some remains of agriculture and irrigation practices back to the sixth millennium BC (e.g. at Jericho), large stalactite and stalagmite caves of eight million years old (e.g. Kalazon in Aboud and Khritoun in Bethlehem), and other remains of civilizations, wars and Israeli military practices. Furthermore, the biblical periods brought to Palestine some Abrahamic, Christian and Islamic significance (Sayej, 2010). Visitors can hear about the facts and mythologies associated to great numbers of shrines of different types: maqam (sacred place), mazar (place to be visited), wali (a friend of God) and mashhad (a place of a martyr or shahid) (Petersen, 1996). Local community's interpretation is critical to the visitors experience as they can elevate it from an average level experience to an unexpected and unforgetable experience. With well-conceived interpretation they can influence the visitors and connect them to a subject, place, culture or issue and get support of environmental conservation. Figure 3.4 shows a combination of natural, cultural, historical and religious potentials found in Palestine.

3.3 Ecotourism benefits

According to (PWLS, 2015) ecotourism can be of great benefit if implemented wisely this could include:

- Creating jobs especially in the rural and marginalized areas where there are number of historical, religious and distinctive natural sites. Tourist influx to these places helps to find employment opportunities for these people, preserve their social and economical structure at their areas rather than migrating to urban areas. An example from the communities along the Abraham Path, women were trained with various skills such as sewing and embroidery. Moreover, the role of women was not limited with food, farming and crafts , Palestinian women achieved to be leading in scientific research and achieved to get positions in universities and other various national institutions.

Fig. 3.4: Combination of natural, cultural, historical and religious potentials. Pictures resource (PWLS).

- Diversifying the local economy sources in these areas by establishing local restaurants, eco-lodges, or touristic industries. An example from Abraham Path who set up Bedouin tent in Auja and made the women center at Rashaydeh as a station to receive local foods and buy various hand-made products.
- Improving the infrastructure in these rural areas. Tourism requires improved conditions of water, electricity and routes networks and improved conditions of old houses by restoring and developing them. Examples are from the Abraham Path who worked on furnishing home-stays, setting up Bedouin tents and restoring houses in Auja, Rashaydeh, Sabastya and other locations. Also an example from Rashaydeh who received funds for installing biogas systems and solar panels that they used to enlighten their homes and enable them to function a TV, a refrigerator and a washing machine, see figure 3.5.
- Strengthening the cultural communication and understanding among people. Examples are from the communities along the Abraham Path who are currently receiving touristic influx. On the one hand, the communities are trained on how to communicate with tourists and on the other hand the tourists are introduced to their unique cultural features.
- Finding facilities and places for recreation, luxury and learning in distinctive historical and natural environments.
- Protecting the cultural and natural heritage sites of the country. An example is getting Battir on the UNESCO world heritage list which protected it from the Israel's plan to construct part of a separation wall there.

- Increasing the environmental awareness among communities and increasing their connection to their environment. There is no doubt that when they are more connected to their environment they become more aware and more interested in preserving it as it is their source of living. An example is from PWLS who is continuously spreading environmental awareness on the university and school levels. They also make activities for students such as eco-tours for bird watching, flora and fauna identification and other cleaning activities for environmentally important locations.

Fig. 3.5: Ecotourism supporting communities and their environment. Pictures resource (PWLS)

3.4 Institutional efforts in ecotourism development

Ecotourism is not common in Palestine, though it has roots back to 90s where few people made efforts to introduce this concept to the country. Palestine's distinct and complex reality is always the main challenge; at that time Palestine was going through the initial phases of constructing the country and developing strategies, moreover, it is continuously facing environmental challenges that is caused in the first place by the Israeli actions. Yet efforts did not stop; recently in December 2014, a national forum led by the Birdlife International and its local partner PWLS and with the participation of governmental bodies, was held to discuss the opportunities and potentials Palestine has for ecotourism. The forum emphasized on introducing ecotourism businesses both as an economic development option and conservation strategy through viable partnerships with the government, private sector, NGOs and local community.

The governmental bodies have different roles in ecotourism development in Palestine. Starting with MOA who integrated the ecotourism concepts in the nature reserves and forests management plans (MOA, 2014). Furthermore, EQA has budgeted around 400 thousand dollars in their strategic plan of 2014-2016 for raising awareness about ecotourism and nature conservation concepts (EQA, 2014). While MOTA has taken actions to deliver inventory of cultural and natural heritage sites of outstanding universal

value in Palestine. Seventeen cultural and three natural sites were chosen that met the criteria and requirements for the inscription on the UNESCO World Heritage List (MOTA, 2009a). The most noTable is the acceptance of Battir village to become UNESCO World Heritage Site (UNESCO-WHC, 2014b). Moreover, non-governmental and private bodies have taken significant steps towards ecotourism and alternative tourism as a strategy for diversifying the tourism packages for tourists by exploiting Palestine's natural and cultural heritage wealth. These bodies have hands on:

- Nature conservation: Training rangers on supportive attitudes towards nature conservation such as wildlife taxonomy and nature reserves management. Also motivating funds to support ecological conservation. Next figure 3.6 shows rangers and researchers from the MOA and PWLS being trained on flora and fauna taxonomy using books and some modern technology which is mobile App called OBSMapp.
- Education: spreading cultural and nature conservation concepts to visitors especially among young aged scout boys, university and school students. See figure 3.6 for an example.
- Tourism development: diversifying the tourism trends and packages in Palestine and creating need for local tour operators who can arrange travel logistics and coordinate details.
- Trail development: marking trails for hikes and bikes, enhancing the infrastructure and restoring accommodation at some sites. Figure 3.7 shows efforts by the MOA and PWLS to mark trails in Aboud and Um Toot nature reserves.
- Job creation: training local guides on ecological, cultural and historical knowledge.
- Women empowerment: selling handicrafts, embroidery and food productions. Enhancing their skills of English language and communication with tourists.
- Political empowerment: spreading cultural and historical Palestinian narrations, putting rural communities on the map, supporting their existence in Area C and promoting advocacy to Palestinians.

Fig. 3.6: Ecotourism promoting nature conservation. Pictures resource (PWLS)

Fig. 3.7: Marking trails with simple signs upon natural environment

3.5 Ecotourism SWOT analysis

This section is basically analyzed from the resources (ICC-Palestine, 2013; AlGhrouf, 2010; Author) and other indicated in the context. Table 3.2 depicts ecotourism SWOT analysis.

Table 3.2: Ecotourism SWOT analysis

Strengths	Religious, natural and cultural heritage potentials Rapid sector recovery Sector development	**Weaknesses**	Reaching the Arab tourists Palestine image in foreign propaganda. Weakness in infrastructure and human resources.
Opportunities	Opportunity for new tourism activities to be offered Opportunities to attract new segments of tourists (domestics and networks)	**Threats**	Ensuring free movement and access to touristic areas. Israeli occupation impact on Palestinian tourism

- Strengths showing Palestine's capability for ecotourism development:
    - Religious, natural and cultural heritage potentials: Palestine should have no problem in marketing ecotourism. For long time and until now it has been sold as holy land tour packages which refers to its religious significance and historical importance. Moreover, it has exceptional local culture and breathtaking natural heritage potentials that can enrich the tourist experience.
    - Rapid sector recovery: Palestine has no political stability in its lands which affects the number of coming tourists. Yet whenever stability is reached,

Palestine witnesses a rapid recovery in the tourism sector. This indicates that Palestine's potentials are able to attract tourists shortly after stability is reached.

- Sector development: Recent years Palestine has been witnessing a growing number in private and public sector selling ecotourism and alternative tourism packages. This indicates that there is a growing interest in the tourism sector and in diversifying the tourism packages with experiential tours. This act also indicates that there is a growing perception that selling religious packages made tourism highly seasonal, focused only in the centers and major sites leaving many villages and rural area marginalized and is restricted to type of tourist (religious tourist). Recently popular NGOs: Sahari specialized in ecotourism in Jerusalem wilderness and the Abraham Path specialized in alternative tourism working from Jenin in the north to Hebron in the South of Palestine. (Khoury, 2014)

- Weaknesses influencing the ecotourism development:

  - Reaching Arab tourists: Crossing borders to Palestine in many cases needs an Israeli visa. Israel makes difficulties in acquiring visas and Arab countries either prohibit or discourage their citizens to obtain it due to the undefined borders with Israel. Even though Al-Aqsa mosque is the third holiest place for Muslims yet what stops from visiting it is the obtaining of an Israeli visa which is considered to be a form of normalization with Israel.
  - Palestine image in foreign propaganda: Media has the greatest influence on Palestine's shape and reputation. The Israeli and foreign media present a negative light about Palestine by creating false narrations and facts. They refer to Palestine as a land of terrorism giving the perception that it must be avoided. Israel profits from that by marketing Palestinian destinations as part of their lands such as the Nativity church in Bethlehem which is under the Palestinian Authority control. Consequently, the vast majority of tourist sees Palestine through a window bus as they dash in and out of Bethlehem and get saturated with Israeli narrations of the history by an Israeli guide accompanying them. The only experience they gain in the Palestinian lands is taking photos at the religious sites. They do not gain Palestinian cultural or historical knowledge, do not interact with locals or support them by spending money in hotels, souvenirs or restaurants and above all they do not see the outstanding beauty of Palestine's nature. Thus one of the slogans launched by a Palestinian tourism NGO to attract tourists, "experience the other face of Palestine" which refers to its cultural and natural heritage wealth and not what it is known for: religious sites and conflicts (ATG, 2014)
  - Weakness in infrastructure and human resources: tourism sector is far below its potentials. Ecotourism occurs in rural and pristine destinations and they lack infrastructure and human resources, to manage, develop and promote these destinations. Destinations need information and direction signs, sanitation facilities, accommodations, transportations, local guides from different communities trained on trails and ecological knowledge, local products of food and handicrafts. Public and private sectors are taking modest steps towards solving these issues. Examples: Rashaydeh in Bethlehem district has installed Bedouin tent for sleepover and public toilets, Aboud walking trail in Ramalla district was marked with soft signs on rocks, rangers and scout boys from all over Palestine are trained on nature conservation concepts.

- Opportunities could be exploited for ecotourism development:

    - Opportunity for new tourism activities to be offered: Palestine potentials enable formulation of tourism packages that include: bird watching, hiking, biking, wildlife observation, exploring diversity of landscapes and participating in cultural festivals (e.g. snake cucumber annual festival in Artas – Bethlehem district, grapes annual festival in Hebron). (Khoury, 2014). See next Fig. 3.8 for examples of activities performed in the festival.

Fig. 3.8: Fakkous festival, an attraction for tourists. Pictures resource (PWLS), design by author.

    - Opportunities to attract new segments of tourists (domestics and networks): Due to occupation Palestine attracts tourists who deliberately goes beyond the standard of pilgrimage and seeks to experience local life in Palestine. They seek to experience the Palestinian daily struggle with Israel, discover their culture and explore their natural heritage. Moreover, there is a remarkable advancement from universities and schools towards domestic trips for recreational and educational purposes. Additionally, bird watchers are relatively easy to attract as they are part of a global network. Their passion for watching birds drives them to cross continents and borders for the purpose of watching and conserving these species (White, 2009;Khoury, 2014). See next Fig. 3.9 for segments including the Birdlife council who were enjoying and learning about the Palestinian nature.

- Threats causing potential risks for ecotourism development: Israeli occupation impact on Palestinian tourism: The Israeli limitations highly restrict tourism investments in destinations located in Area C. They close roads, place random checkpoints, demolish houses, restrict water and electricity facilities and relocate communities. They explicitly target Palestinian cultural and natural heritage sites with constant military incursions to the rural areas and uproot olive trees. This creates threats to any developments or investments in the tourism sector.
- Ensuring free movement and access to touristic areas: the underperformance of domestic tourism is due to difficulties faced on the way of Palestinians when

moving across cities. They face either permanent or random checkpoints which can be closed anytime for security claims. Moreover, most of the nature reserves and forests are located in Area C where in many cases they are used for Israeli military training and are surrounded by Israeli settlements. Mentioning examples: Ein Al-Maleh in Tubas district where you can find remains of the military training, Rashaydeh in Bethlehem district where you can find a military training station and Beit-Ello which is a nature reserve surrounded by settlements and has witnessed recurrent random checkpoints placed at its entrance for the purpose of securing their citizens.

Fig. 3.9: Attracting new segments of domestic and international tourists. Pictures resource (PWLS)

Chapter Four:
Study methodology and procedure

This chapter gives a detailed description of the study methodology, procedure, tools development and design, their validity, study sample, study boundaries, data collection procedure in addition to the statistical processing methods used.

4.1 Study methodology

In order to achieve the study goal the researcher used the descriptive approach. It depended on Delphi technique, which is iterative in nature to achieve a consensus among respondents to identify the fields, criteria and indicators for ecotourism destinations in the Palestinian situation.

4.2 Study procedure:

A multi-stage incremental approach was taken to the development of the study theoretical and practical parts. Fig. 4.1 is study procedure representation. There were four main phases which were data acquisition, population identification and sampling, tools development, data collection and analysis and development of the computational model.

4.2.1 Phase one: Data acquisition:

In order to provide a rationale and context for the study objectives, the researcher prepared a theoretical part which depended on a review of relevant national and international literature and presented relevant previous studies. The resources varied from books, guidebooks, studies, journal articles, institutions reports, conference papers, government documents to electronic articles and pamphlets.

4.2.2 Phase two: Population identification and sampling:

The selection of participants is the most important step to accomplish the Delphi technique as they form the judgment element upon which the field, criteria and indicators are identified. Also they are the experts who we depend on to reflect the Palestinian situation. The study population was never identified before on the West Bank level thus the researcher had to incrementally identify them. See Table 4.1 for the distribution of panel list according to their participation in the Delphi study rounds. The study samples are:

- Accidental sample: The study population was first identified through the references of local studies, list of academics with different backgrounds from the ministry of higher

education, personal network of the author through her work in nature conservation and lastly the connection with related active players who nominated study participants. An accidental sample was selected based on their availability and readiness to participate. An exploratory interview was conducted on them, 11 participants, to do brainstorming about ecotourism in the Palestinian context and have nominations for study participants.

- Snowball sample: Its purpose is to form a panel list to undergo the ranking process of round one of Dephi technique through interviews. As a starting point they were selected from the accidental sample based on their ecotourism knowledge level and their readiness to participate in the study. The total number of this sample was 39.
- Purposive sample: Customarily panel was selected from the snowball sample to undergo the ranking process of the second round of Dephi technique using questionnaires. Those who showed weak knowledge in ecotourism -their answers were not harmonious with what the literature presented and clearly of less relevance to the Palestinian situation- were excluded. A total of 37 formed this sample and were invited to the second round. However, 26 of them participated, which means the response rate was 70%.

Table 4.1-A: Distribution of panel list according to their participation in the Delphi study rounds

	Institution	**Exploratory interview**	**Round 1**	**Round 2**
1	Al Quds University	1	4	3
2	Ministry Of Agriculture-MOA	2	3	3
3	Ministry Of Tourism and Antiquities-MOTA	1	5	2
4	Environment Quality Authority-EQA	1	2	1
5	Maan Environment Magazine	0	1	0
6	Al Quds Schools	0	1	0
7	International Organization (Birdlife, UNESCO, Welfare Association..)	1	3	2
8	Palestine Wildlife Society PWLS	0	3	3
9	Holy Land Trust-HLT	0	1	1
10	Abraham Path	1	2	1
11	Siraj Center for Holy Land Studies	0	1	1
12	Environmental Education Center- EEC	0	1	0
13	Rozana Association	0	1	0
14	Network for experiential Palestinian Tourism Organization-NEPTO	0	1	1
15	National Agriculture Research Center-NARC	1	1	1
16	Hebron France Association for Cultural Exchange-AECHF	0	1	0
17	Auja EcoCenter	0	1	1
18	Applied Research Institute Jerusalem-ARIJ	0	2	2
19	Visit Palestine	1	1	1

Table 4.1-A: Distribution of panel list according to their participation in the Delphi study rounds

	Institution	Exploratory interview	Round 1	Round 2
20	Alternative Tourism Group-ATG	0	1	1
21	Jerusalem Bedouin Society	0	1	1
22	Tourism Promotion Agency	0	1	1
23	Dubai University	0	1	0
24	Former Palestinian Ministers (Dr. Safa Nasser Eddin from Telecommunication and Information Technology Ministry, and Mr. Mazen Sinokrot from the National Economic Ministry)	2	0	0
		11	39	26

4.2.3 Phase three: Tools development and design:

To address the objectives of this study, tools were developed to be used in the survey of Delphi rounds. They were designed into two questionnaires and were examined for their validity.

4.2.3.1 Tools development:

Three sequential processes were conducted to deliver the first questionnaire:

- First, a systematic search for fields and criteria sets in use elsewhere in the local and international studies, guidebooks and manuals. Naming them, they are ordered according to their level of usability in forming the questionnaire: (Barzekar, et al., 2011) (Bhattacharya & Kumari, 2004) (PCBS, 2014) (UNESCO-WHC, 2014a) (Farsari & Prastacos, 2001) (Zhang, 2010) (WTO, 2004). Criteria that is clearly of less relevance to the Palestinian situation and those were almost identical to each other were excluded, about 6 fields and 17 criteria were identified. See Examples of field and criteria on which the study tool was developed page 35.
- Second, an exploratory interview on accidental sample was conducted to do brainstorming about ecotourism indicators and to examine the feasibility of the fields and criteria identified theoretically to the Palestinian situation. It resulted with 4 fields and 12 criteria which formed round 1 questionnaire.
- Third, round 1 questionnaire was then examined by experts to verify the validity of the tool and whether the questionnaire meet the academic and professional standards, the validity of the tool to collect data and to assist in proper wording. The names of experts can be found in Appendix 4.1. The questionnaire can be found in Appendix 4.2.

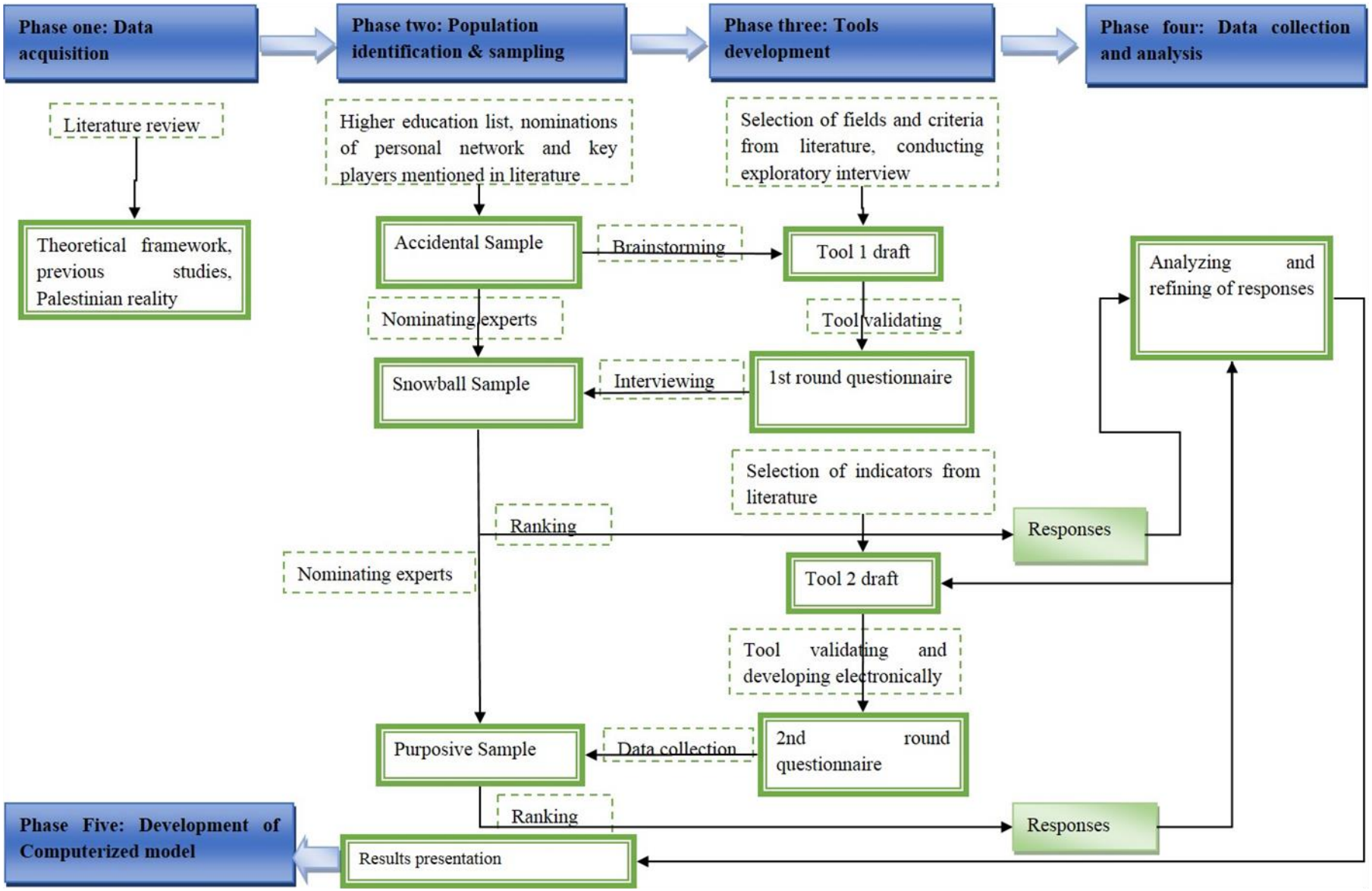

Fig.4.1: Study procedure

Four sequential processes were conducted to deliver the second questionnaire:

- First, the determined fields and criteria from the first round formed basis for the second questionnaire. Moreover, the background information about the respondents from the first round was categorized and inserted as closed questions into the second round. One should also mention that the comments and suggestions given by the respondents during the first round of the study were taken into consideration in the second round.
- Selection of indicators for the identified criteria from theoretical sets commonly in use in the resources previously mentioned. The indicators selected were the most feasible for use in the Palestinian situation and about 83 indicators were identified and ready for ranking.
- Third, the second questionnaire was examined by experts to verify the validity of the tool.
- Fourth, the questionnaire was developed electronically using Google Forms and were disseminated to the purposive sample. The questionnaire can be found in Appendix 4.3 .

4.2.3.2 Tools design:

The first round questionnaire comprised three sections. The first section was concerned with the participant's background information. It consisted of 10 questions of which 8 were opened and 2 were closed. The second section concerned with ranking 4 fields using five-point Likert scale (1 = least relevant, 5 = most relevant). The third section was concerned with ranking the relevancy of criteria to the fields. It included 5 criteria for the environmental field, 5 criteria for the social field, 2 criteria for the economical field and 2 criteria for the managerial field. The ranking was also based on five-point Likert scale. Respondents were also given an opportunity to identify additional fields and criteria if they wished to include, thus the questions were half closed. The questionnaire design of the first round is presented in the Table 4.2 below. One should mention that section two and three asked the participants to give a score out of 10, where (1= least important, 10 is most important), to reflect the relative importance of the fields and criteria. However, as they failed to give rational scores this part was excluded and was then calculated through the means as illustrated in the analysis phase.

Table 4.2: First round questionnaire design

#	Section	Statements	Question type
1	Background information	10	8 open, 2 closed
2	Fields evaluation	4	Half closed
3	Environmental criteria evaluation	5	Half closed
4	Social criteria evaluation	5	Half closed
5	Economical criteria evaluation	2	Half closed
6	Managerial criteria evaluation	2	Half closed
Total fields		4	
Total criteria		14	
Total statements		28	

The second questionnaire comprised of five sections. The first section was concerned with the participant's background information. It was closed in this round as their information was obtained previously in the first round. The other five sections provided a prioritized list of fields and criteria with a drop down list of indicators. Each of the five sections was concerned with a developmental field: the environmental field consisted of 40 indicators, the social consisted of 22 indicators, the economical field consisted of 7 indicators, the managerial field consisted of 6 indicators while the political field was added additionally according to the responses of round one and it consisted of 8 indicators. Respondents were asked to provide their ranking for the indicators using a five-point Likert scale (1 = least relevant, 5 = most relevant). The scale is used to rank the relevancy of indicators to the criteria. The questionnaire design of the second round is presented in the Table 4.3 below.

Table 4.3: Second round questionnaire design

#	Section	Statements	Question type
1	Background information	10	closed
2	Environmental indicators evaluation	40	closed
3	Social indicators evaluation	22	closed
4	Economical indicators evaluation	7	closed
5	Managerial indicators evaluation	6	closed
6	Political indicators evaluation	8	closed
Total indicators		83	
Total statements		93	

4.2.3.3. Tools validation:

The two questionnaires were examined among a specialist and expert group before they were transmitted to the study samples. The researcher considered all the adjustments made on the questionnaires. It should be mentioned that the second questionnaire was transmitted after the analysis of the first round responses. The names of experts could be found in Appendix 4.1.

4.2.4 Phase four: Data collection and analysis:

The first round was conducted through interviews which were based on the first questionnaire to collect data. The interviews were conducted on 39 of the snowball sample while only two were conducted through email and on the phone as they were geographically far and unreachable by the researcher. The researcher chose the interview as a tool to collect data for this round in order to gain profound information about the destinations potentials for ecotourism and other related information beyond the questionnaire questions. For example information about the reality of tourism in Palestine, ongoing nature conservation projects, activities of alternative tourism in practice, nominated destinations for ecotourism and obstacles that may risk the ecotourism industry development . Also the interviews gave the researcher the opportunity to get to know the respondents and their level of knowledge about ecotourism through the discussion. This helped the researcher in excluding some of the participants for the second round.

The main approach used for data collection in the second round was on-line completion of questionnaires. This was done using the Google Forms. This electronic questionnaire form was particularly appropriate for the second round of the study because it was a solution for a very long questionnaire. It enabled the researcher to have well organized questionnaire and automatic data collection from a purposive sample. On the other hand the respondents were able to rank the indicators at point of a click and this means it was possible to provide feedback relatively quickly and easily. They were given access to a read only file to view respondents' responses so that they can situate their responses within the broader context. In addition to on-line access, the Google form allowed for questionnaires to be sent through email and get their answers at their free time, unlike the interviews which restricted the time of both the researcher and the respondent. 37 were invited to the online questionnaire and 26 responded.

Delphi technique is about gaining a consensus thus the researcher gave feedback after conducting the interviews round, through email for the respondents. The feedback was a Table of means for the ranked fields and criteria from literature and proposals to allow them to revise their own judgment in light of the judgment of others. Also, it gave them the opportunity to give scores for the proposed fields and criteria given by each other. Respondents who sent back scores for the proposals were considered as given, while those who did not send any response their scores were considered to equal zero. New means were calculated, a consensus value was determined and the acceptance and rejection of the fields and criteria came to be as illustrated in Fig. 4.2.

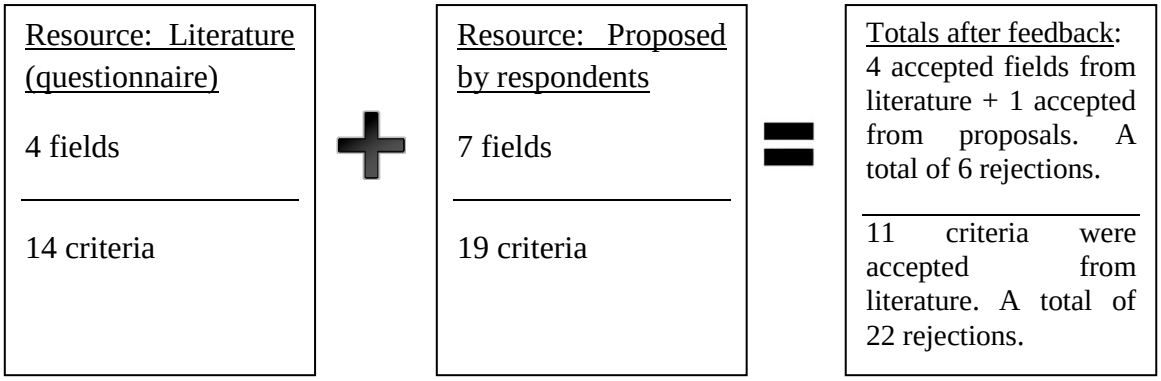

Fig. 4.2: Feedback method for round one

As there is not a standardized method for measuring the significance of consensus within Delphi technique, many Delphi studies have used descriptive statistics for the determination of consensus (Heiko, 2012). In our study we used the mean to determine the consensus value which is ≥ 3.75. It was noticed that the means were occurring above this value in their highest limit while the other means where occurring far below this value in their lowest limit. Thus, the value 3.75 is near the highest limit more than the lowest limit and this assures for us high relevancy fields and criteria. The Fig. 4.3 presents relevancy scale with the consensus value. The acceptance and rejection of fields, criteria and indicators is based on the consensus value. Means ≥ 3.75 were accepted while the means < 3.75 were rejected.

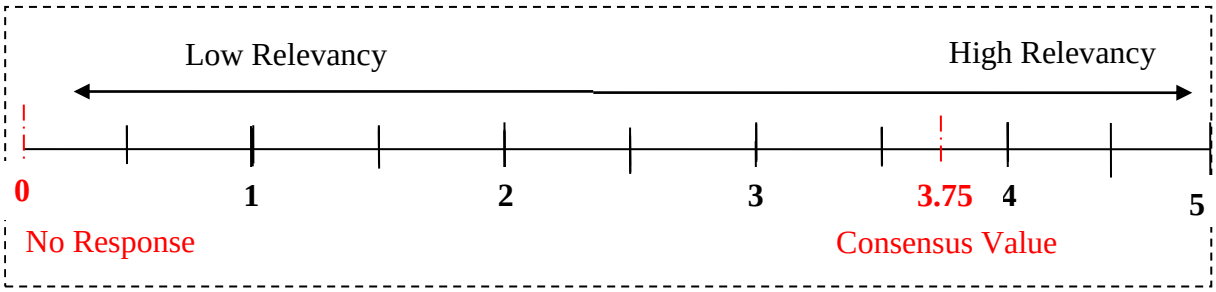

Fig. 4.3: Relevancy scale presenting the consensus value

In this Delphi study, the data were analyzed using SPSS 22.0 and were presented using MS Excel. In the two rounds, analysis of the data included descriptive statistics. Formulas and explanations for calculations are as follow:

1. The formula for the mean of the respondents' scores for any field, criterion or indicator:

$$Weight\ i = \left(\frac{\sum_{n=1}^{n=39} Score\ i}{39}\right) \dots\dots\dots\dots\dots\dots\dots formula\ 4.1$$

where *n* denotes the number of respondents whereas in the second round *n* = 26, *i* denotes the number of the field or criterion or indicator. The weight was used in the results chapter to indicate the ranking position of the fields, criteria and indicators. It was also used to calculate the Relative Importance.

2. The formula for the Total Accepted Weights for a set of fields, criteria or indicators:

$$Total\ AW = \frac{\sum_{i=1}^{i=N\ accepted} Weight\ i}{N_{accepted}} \dots\dots\dots formula\ 4.2$$

where $N_{accepted}$ denotes the number of accepted weights , *i* denotes the number of the field or criterion or indicator.

3. The formula for the Relative Importance for any field, criterion or indicator:

$$Relative\ Importance\ i = \left(\frac{Weight\ i}{\sum_{n=i}^{n=N\ accepted} Weight\ i}\right) * 100\% \dots\dots\dots formula\ 4.3$$

where $N_{accepted}$ denotes the number of accepted weights , *i* denotes the number of the field or criterion or indicator.

4. The formula for the Overall Indicator Importance:

$$Overall\ Indicator\ Importance\ ijk = Relative\ Importance\ Field\ i * Relative\ Importance\ Criterion\ j * Relative\ Imprtance\ Indicator\ k \dots\dots\dots formula\ 4.4$$

5. The formula for the Overall Criterion Importance:

$$Overall\ Criterion\ Importance\ ij = Relative\ Importance\ Field\ i * Relative\ Importance\ Criterion\ j \dots\dots\dots formula\ 4.5$$

6. The formula for the Overall Field Importance:

$$Overall\ Field\ Importance\ i = Relative\ Importance\ Field\ i \dots\dots\dots formula\ 4.6$$

The overall field importance is overall relative field importance. The formulas of the overall importance of any indicator, field or criterion were used in the computational model in the results chapter. While the Weight , Total AW and the Relative Importance formulas were the bases for reporting round one and two results.

4.2.5. Phase five: Developing the computational method:

This study provided a computational model to be developed as a tool to enable parties involved in tourism to direct the tourists, investments, and developments towards environmentally distinctive locations. Also it will have greatest impact on decision makers to nominate or declare
ecotourism destinations. The model portrays how developmental indicators could be developed through it and how destinations could be compared. The model was developed using MS VISIO 2013 which is special for drawing advanced diagrams. The screens are portrayed for an interface for the end user module and were developed through photoshop program.

4.3 Study Boundaries

The study took place in the Palestine specifically the West Bank which is part of the historical Palestine. It started in January 2014 and finished in June 2015.

4.4 Description of respondents

This section is a summary of the most important characteristics of the study respondents for the rounds separately, which includes sex, age, academic specialization, work sector, position, working experience and other institutional information.

4.4.1. First round respondents description:

Thirty nine experts in ecotourism were invited to participate in this round. Contact was made with them and all of them agreed to become panel members.

The 39 panel members in this round represented 23 institutions. The panel members were made up of 34 males and 5 females. This is due to tourism work nature. The tourism work is sort of work that requires being in the field, communicating with foreigners and open working hours. This kind of work is not preferable or in some cases not allowable in the Palestinian culture and society.

Most of the panel members fell within the 40-49 age range (38.5%) followed by 30-39 age range (28.2%). These ranges show that the panel is in the middle age and has accumulative experience. This assures that the tourism work requires minimal experience and requires high energy sufficient for field work. This does not apply to 20-29 age range (5.1%) that lack experience nor to the 50-59 age range (28.2%) that lack energy.

Most of the panel members working experience was 10-14 years or over 20 years with the same percentage of (25.6%).

Nineteen experts hold the master's degree (48.7%) and thirteen (33.3%) hold the bachelor degree, represented in Fig. 4.4. It is quite known that the percentage of educated people in Palestine is high and our results assure it. They are motivated to gain excellence in their field and seek uniqueness in their work to conserve it.

Ecotourism is related to different fields, as shown in Fig. 4.5. We see the panel specialization is in environmental sciences (41%), whereas, the developmental sciences and tourism and arts are equally (23%). The natural and engineering sciences were the least (13%) as the natural sciences are a subdivision of environmental sciences subject in the Palestinian academic institutions.

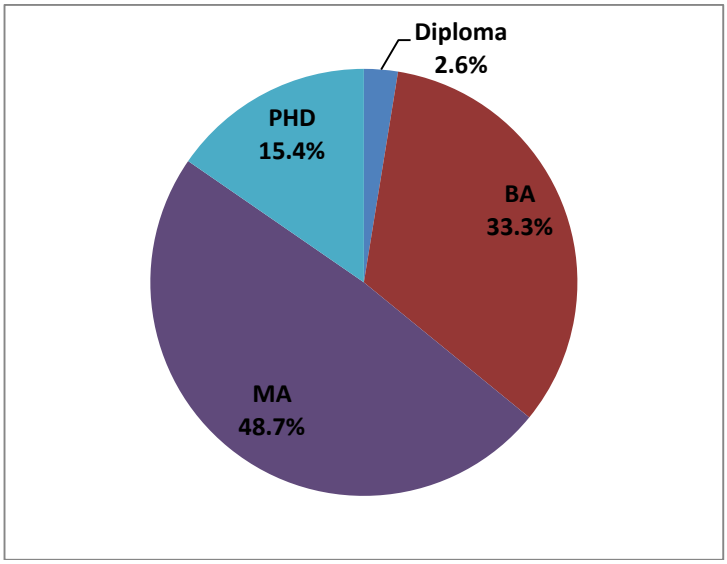

Fig. 4.4: Distribution of panel members according to their academic degree

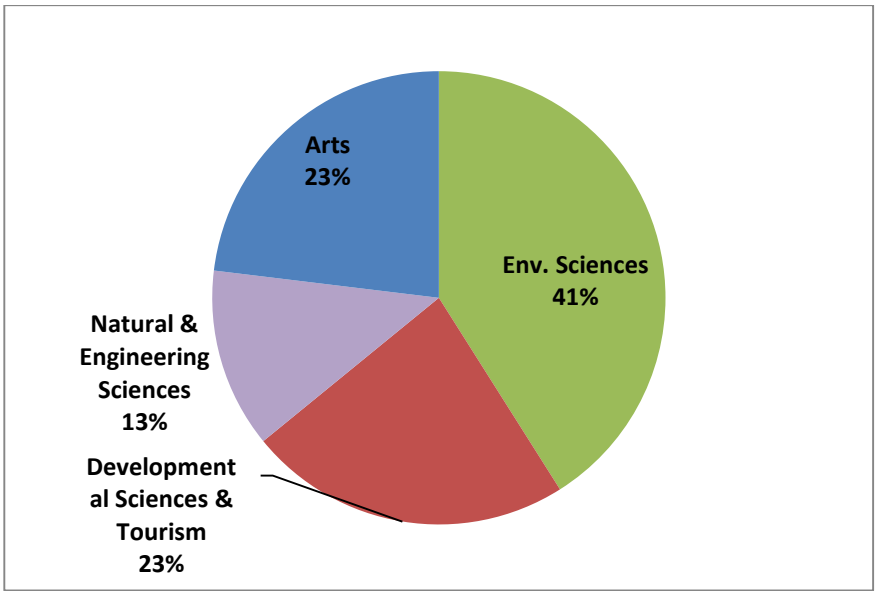

Fig. 4.5: Distribution of panel members according to their academic specialization

Fig. 4.6 shows that he panel members who are specialized in environmental sciences were mainly members of academic staff (31%). Those who are specialized in developmental sciences and tourism were mainly employees in MOTA or its directorate.

Further, those who are specialized in arts were (22%) equally members of academic staff and employees in NGOs working in environmental field. Lastly those who are specialized in natural and engineering sciences were mainly working as employees in NGOs working in environmental field with (40%).

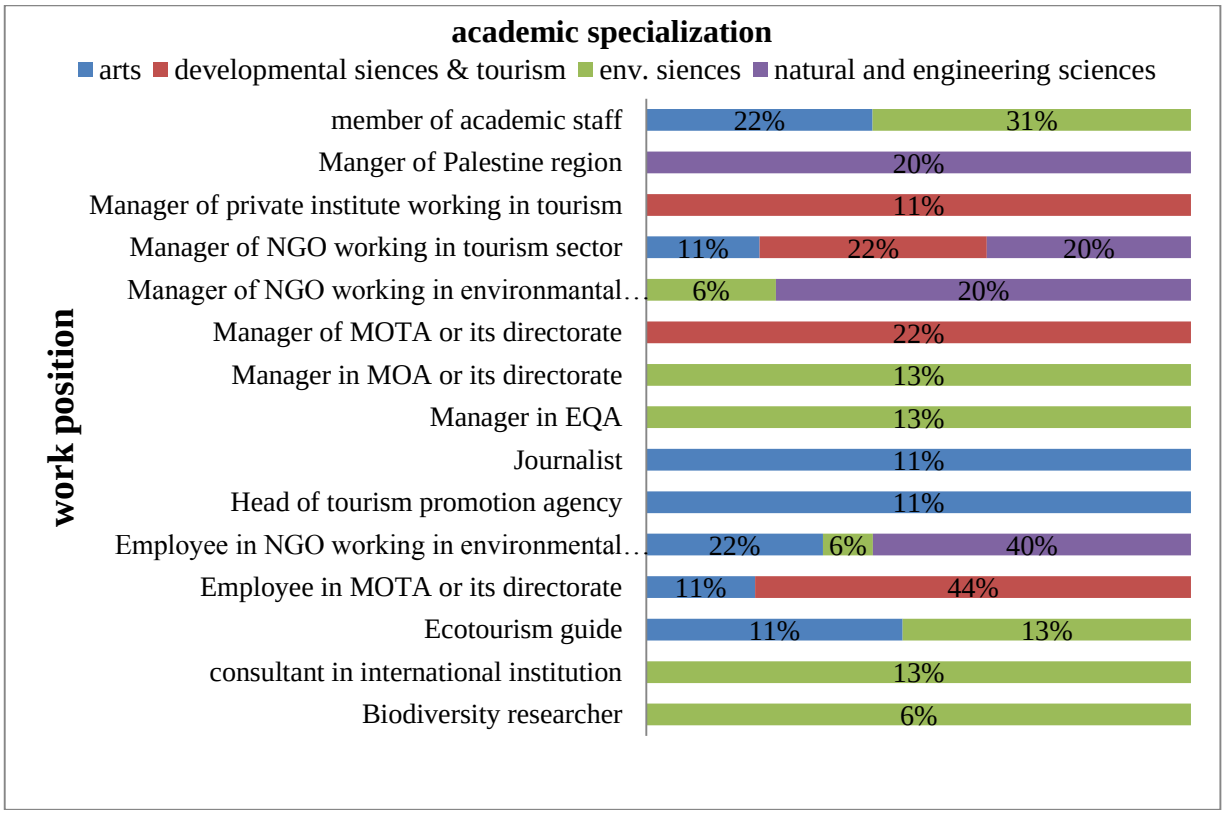

Fig. 4.6: Distribution of panel members according to their academic specialization in respect to their work position

The panel members were mainly working in NGOs (46.15%). This could be referred to the fact that alternative tourism NGOs have grown increasingly in the past few years. They significantly assist in activating other forms of tourism by exploiting Palestinian nature to attract tourists. On the other hand, environmental NGOs work hardly to ensure good tourism practices with minimal impact on destinations to conserve the nature. Both environmental and alternative tourism NGOs pool their efforts to build networks which include partnerships to build new tourism products and packages, and develop marketing strategies. About (28%) of the panel members work in governmental organizations. This indicate that governmental bodies are less active at activating ecotourism in West Bank compared to NGOs yet they are supportive and have complementary role. Moreover, (15%) of the panel members work in academic institutions. This is because this study is academic in first place and secondly the academic respondents do practice environmental and tourism activities in the fields through

other institutions thus they have accumulated practical and academic experience in ecotourism. About (3%) of the panel members work in private institutions. These institutions are mainly tour operators least involved and aware of ecotourism as they are interested in mass tourism and still depend on selling the holy land tour packages. Also this could be referred to the fact that ecotourism concepts and practices are not mature enough or popular in the Palestinian context.

The points of views in the ranking process of ecotourism were related to five different work sectors with different working activities, see Fig. 4.7. This aims at reaching best results that represents them all and covering all the aspects of ecotourism. The tourism activities in the study were (60%) represented by NGOs and (33.3%) by government. The environmental activities were (50%) represented by NGOs, (37.5%) by the government and (12.5%) were related to international institutions. While for the developmental point of views, it was equally represented by NGOs and international institutions. Finally all what is related to education were represented (100%) by academic institutions.

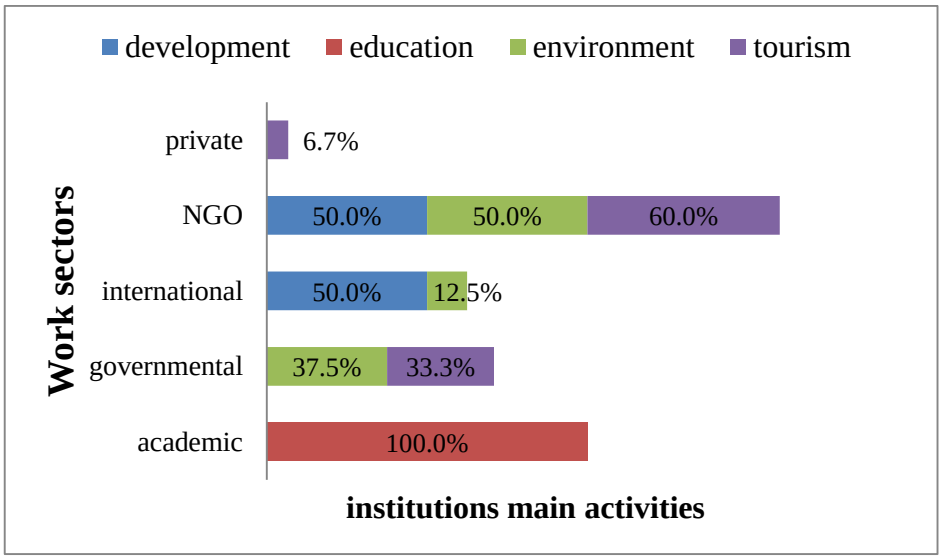

Fig. 4.7: Representation of point of views according to work sectors

All panel members (100%) showed their positive impression about ecotourism and gave four main indications assuring it. The indications were unsurprisingly related to the activity of the institution they work at. We can read from Fig. 4.8 that all institutions working in different fields can participate in spreading ecotourism concepts. While surveys and researches were only related to environmental and educational institutions with equal representation (50%). This is rational if they were related to environmental subjects but if they were related to ecotourism this means there is weakness in the role of both the tourism and developmental institutions to take part in it. Moreover, those who gave an indication by working in ecotourism sector whether as guides, trail developers, trainers, tour coordinators or guide trainers were from tourism and environmental institutions, with (69.2%) and (30.8%) respectively. Finally those who were able to practice a combination of the other mentioned indications were mainly related to environmental and tourism institutions with (60%) and (30%) respectively.

Fig. 4.9 shows source of information about ecotourism in relation to the respondents working sector. The Fig. shows that respondents who obtained information from their work were from NGOs and the governmental sectors. This reflects that these sectors are the most enriched with ecotourism concepts and practices. Those who have their information from an academic background were equally related to international institutions and NGOs (50%). This shows that the governmental and academic institutions do not depend on academic background as main source of information about ecotourism. Instead, academic institutions depend on personal research with (80%) while the governmental institutions succeeded to gain information from work and other combination of personal and academic background with (41.2%) and (26.7%) respectively.

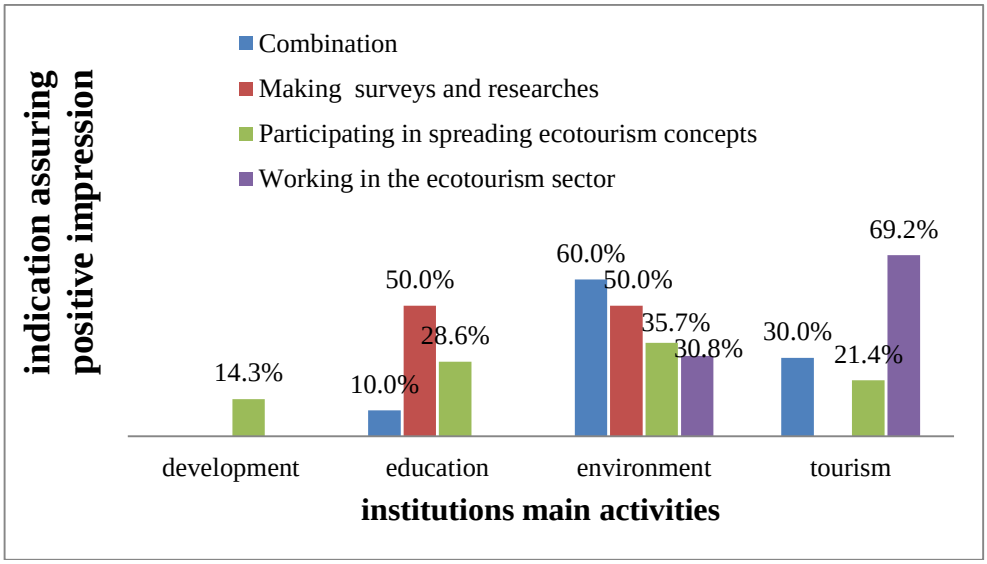

Fig. 4.8: Distribution of indications assuring positive panel impression towards ecotourism

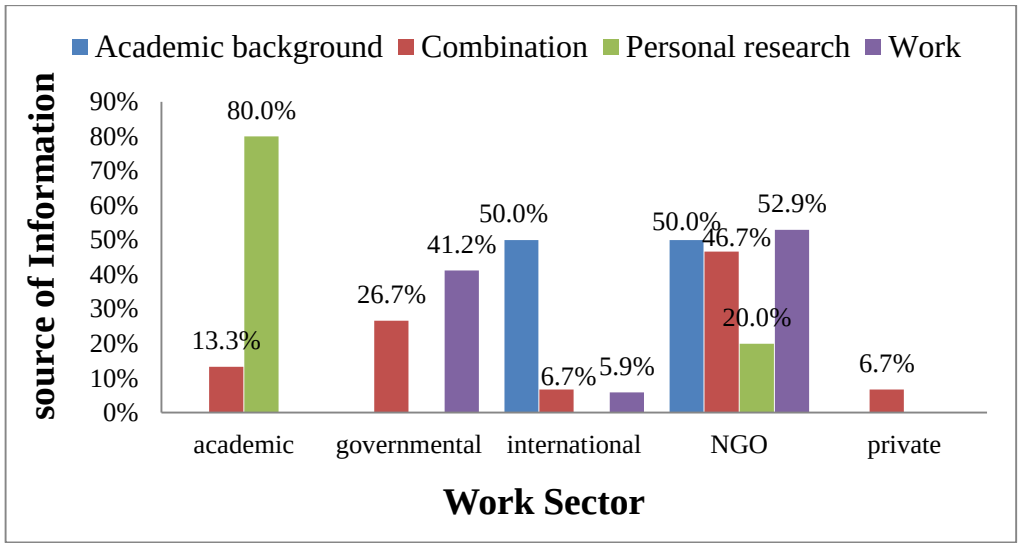

Fig. 4.9: Distribution of source of information about ecotourism in respect to the respondents working sector

4.4.2. Second round respondents description:

Of the 37 who were invited to this round, only 26 participated, which resulted in response rate (70%). The 26 panel members represented 20 institutions out of 24. They were made up of 23 males and 3 females. Most of the panel members fell within the 40-49 age range (34.6%) followed by 50-59 age range (30.8%). Their working experience was 10-14 years (30.8) and over 20 years (26.9%). Thirteen experts hold the master's degree (50%) and nine (34.6%) hold the bachelor degree. The age ranges, the working experience and the academic degree of the panel enriches the results of this round with both accumulative experiences and theoretical backgrounds.

The panel specialization was mainly in environmental sciences (46.2%) which increased from round one. Also the arts representation was clearly dropped in this round as it became (15.4%). This is referred to the level of specialization the second round required in environmental and tourism fields, see Fig. 4.10.

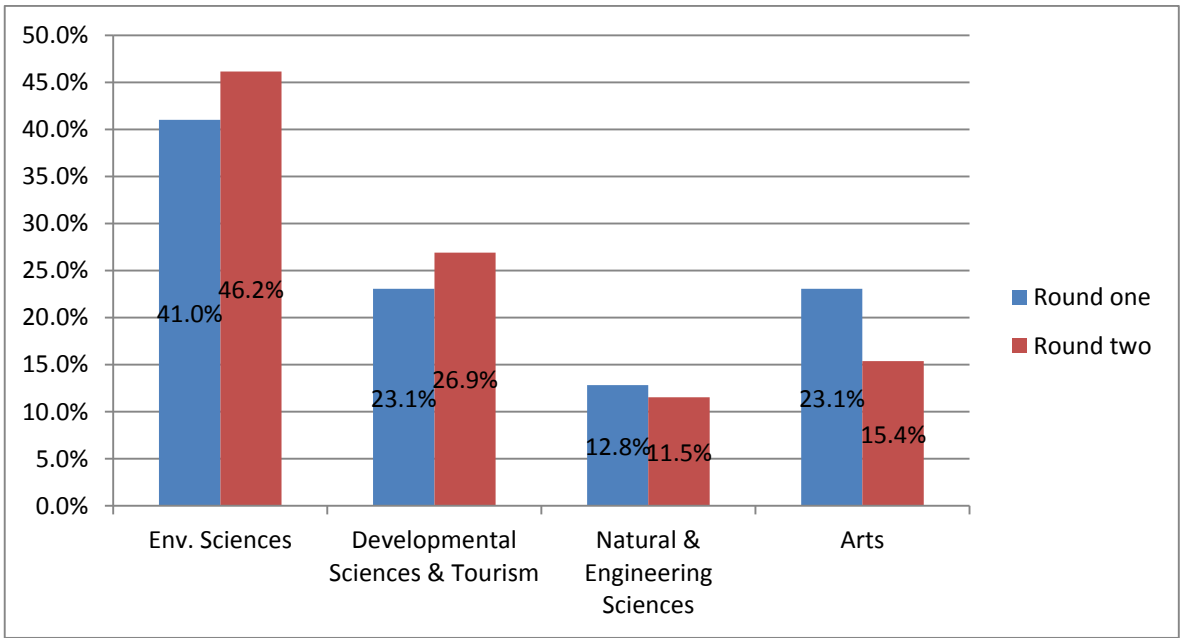

Fig. 4.10: Comparison of academic specialization representation in the two rounds

Similar to the first round, the panel members were mainly working in NGOs (50%). The other half were mainly working in governmental organizations (26.9%) and academic institutions (11.54%).

Chapter Five:
Study Results

In this chapter we present the answers of the study question "what are the appropriate developmental indicators to evaluate the natural locations for ecotourism?" from the respondents point of view. The fields and criteria are presented in the first section while the indicators are presented in the second. In addition, a comparison is conducted in the third section to give a further understanding for the results. The fourth section which is the last, presents the computational model.

5.1 Fields and Criteria

This section presents the study results that answer the study question "what are the appropriate fields and criteria to evaluate the natural locations for ecotourism?". The results are reported in the Tables 5.1-5.5 below.

Table 5.1: Mean, status and the relative importance of the ecotourism fields

A	**Fields**	**Mean[a]**	**Status[b]**	**Relative Importance**
B	Environmental	4.72	Accept	23.0%
C	Social	4.10	Accept	20.0%
E	Managerial	4.03	Accept	19.5%
D	Economical	3.9	Accept	19.0%
F	Political *	3.8	Accept	18.5%
I	Awareness*	0.95	Reject	
G	Cultural*	0.62	Reject	
H	Religious*	0.41	Reject	
J	Historical*	0.38	Reject	
K	Scientific*	0.26	Reject	
L	Service*	0.15	Reject	
	Total AW[C]	4.11		100%

* Refers to proposed fields by the respondents

[a] Refers to the Weight assigned by respondents

[b] Status is based on the mean values where the consensus value ≥ 3.75

[C] Total AW is the total accepted weight according to formula 4.2

The results in the Table 5.1 show the ranking of fields relative to ecotourism destination, in descending order: environmental, social, managerial, economical and political. Their means came above the consensus value thus they were accepted and passed to the second round of the study. The results show that among 11 fields 5 were accepted, where 4 were derived from literature and 1 was proposed by the respondents. The total rejected fields was 6 deriving from respondents' proposals. The results indicate that the highest relative importance was gained by the environmental field (23.0%) and the lowest was gained by the political field (18.5%). As the basic element of ecotourism is the environmental field, it gained the highest ranking and highest relative importance. However, the interest in the environmental field is not independent from other developmental fields such as the social and economical. Thus they gained close relative importance to reflect the interest of Palestinians in the development. Moreover, the political aspect was not deniable by the respondents who agreed to highlight it in the Palestinian situation due to the Israeli practices against Palestinians. These practices may lead to interruptions for the ecotourism activities and programs. In addition, the managerial field gained high importance due to what the tourism sector faces in general from institutional and legislative challenges that the respondents have experienced through their work or studies.

Table 5.2: Mean, status and the relative importance of the environmental criteria

B	**Environmental criteria**	**Mean**	**Status**	**Relative Importance**
BA	Conservation of natural resources and biodiversity	4.77	Accept	22.2%
BD	Maintenance of scenery, natural & physical features	4.49	Accept	20.9%
BB	Maintenance of soil and water resources	4.18	Accept	19.4%
BE	Climate	4.18	Accept	19.4%
BC	Carrying capacity (cc) of the ecosystem	3.90	Accept	18.1%
BG	Control negative acts (overgrazing, hunting..) *	1.08	Reject	
BI	Maintaining natural topography*	0.38	Reject	
BJ	Planting native plants*	0.33	Reject	
BF	Organizing tourist's experiment and determine its objectives*	0.33	Reject	
BL	Organizing times for visits*	0.26	Reject	
BH	Expanding green areas*	0.13	Reject	
BK	Raising awareness about water consumption for tourists in rural areas*	0.13	Reject	
	Total AW	4.30		100%

*proposed environmental criteria by the respondents

The results in the Table 5.2 show the ranking of environmental criteria relative to the environmental field, in descending order: conservation of natural resources and biodiversity, maintenance of scenery, natural & physical features, maintenance of soil and water resources, climate, carrying capacity (cc) of the ecosystem. Their means came above the consensus value thus they were accepted and passed to the second round of the study. The results show that among 12 environmental criteria, 5 were accepted deriving from literature, while 7 were rejected deriving from the respondents' proposals. Moreover, the results indicate that the

highest relative importance was gained by the criterion BA- "conservation of natural resources and biodiversity" (22.2%) and the lowest was gained by the criterion BC- "Carrying capacity (cc) of the ecosystem" (18.5%). This result actually accords with what have preceded in literature that ecotourism is distinguished by its emphasis on biodiversity and natural resources conservation. Also it shows that the Palestinian experts see this criterion as the most important environmental potential for ecotourism in Palestine. However, we refer the result of the least important criterion-BC to low level of awareness for the negative impacts of tourism especially among the respondents working in the tourism sector.

Table 5.3: Mean, status and the relative importance of the social criteria

C	**Social criteria**	**Mean**	**Status**	**Relative Importance**
CA	Educational affairs and public awareness	4.54	Accept	25.4%
CD	Conservation of cultural heritage	4.54	Accept	25.4%
CB	Local people participation in ecotourism activities	4.49	Accept	25.2%
CC	Local people and tourists' satisfaction	4.28	Accept	24.0%
CE	Maintaining safe human environment	3.69	Reject	
CH	Maintaining architectures in harmony with the environment*	0.90	Reject	
CI	Host community acceptance of the tourist's cultures that may contradict theirs *	0.41	Reject	
CF	Making related educational centers*	0.26	Reject	
CG	The experience of the local people as a source of information*	0.21	Reject	
	Total AW	4.46		100%

*proposed social criteria by the respondents

The results in the Table 5.3 show the ranking of social criteria relative to the social field, in descending order: educational affairs and public awareness, conservation of cultural heritage, local people participation in ecotourism activities, local people and tourists' satisfaction. Their means came above the consensus value thus they were accepted and passed to the second round of the study. The results show that among 9 social criteria, 4 were accepted deriving from literature, while 6 were rejected deriving from the respondents' proposals and from literature. Moreover, the results indicate that the highest relative importance were equally gained by the criterion CA- "educational affairs and public awareness" and CD- "conservation of cultural heritage" with (25.4%). However, the lowest relative importance was gained by the criterion CC- "local people and tourists' satisfaction" with (24.0%). From the respondents point of view, the irrelevancy and rejection of the criterion CE-"maintaining safe human environment" is referred to the fact that ecotourists are aware of the instability of the political situation in Palestine and they are also aware of the risks in the wild. Although we gained consensus for the criterion CB-"local people and tourists satisfaction" and the criterion-CC "local people participation in ecotourism activities", yet most participants suggested to combine them to one criterion in the second round "local people participation and tourist satisfaction". The participants felt that tourists' satisfaction should be separated from local

people satisfaction in the ranking process. Due to this modification the total number of the social criteria passed to the second round is 3.

Table 5.4: Mean, status and the relative importance of the economical criteria

D	Economical criteria	Mean	Status	Relative Importance
DB	Economic benefits as outcomes and revenues from ecotourism	4.05	Accept	100%
DA	Investments in infrastructure and superstructure	3.68	Reject	
DD	Giving environmental services from the ecosystem (wood, wild plants, ..) *	0.51	Reject	
DC	The kind of investment in the ecotourism industry*	0.44	Reject	
	Total AW	4.05		100%

*proposed economical criteria by the respondents

The results in the Table 5.4 show that a positive consensus was gained only by the criterion DB-"economic benefits as outcomes and revenues from ecotourism". Its' mean came above the consensus value thus it was accepted and passed to the second round of the study. Moreover, the results show that among 4 economical criteria, only 1 criterion was accepted deriving from literature, while 3 were rejected deriving from the respondents' proposals and literature. This resulted in (100%) relative importance to the criterion DB. However, the criterion DA was rejected although it derived from literature. We refer this rejection to the fact that the respondents find ambiguity in the criterion as it does not reflect the way the infrastructure and superstructure are developed. From their point of view, any development should be environmentally friendly. The rejection is also because the respondent might not be aware of the criteria benefits.

Table 5.5-A: Mean, status and the relative importance of the managerial criteria

E	Managerial criteria	Mean	Status	Relative Importance
EB	Enabling environment for ecotourism promotion	4.33	Accept	100%
EA	The existence of institutions, laws, legislation and policies	3.68	Reject	
EC	Revising and activating environmental laws *	1.82	Reject	
ED	The partnership and collaboration between private and public bodies *	1.15	Reject	
EG	The existence of qualified administrative who can replicate in successful experiences from other countries*	1.13	Reject	
EF	The environmental destination should belong to public management and is not a private property*	0.38	Reject	
EE	Monitoring the quality of tourist services in host communities*	0.38	Reject	

Table 5.5-B: Mean, status and the relative importance of the managerial criteria

E	Managerial criteria	Mean	Status	Relative Importance
EH	Development of a comprehensive plan to promote cultural heritage stories rather than religious stories*	0.23	Reject	
	Total AW	4.33		100%

*proposed managerial criteria by the respondents

The results in the Table 5.5 show that a positive consensus was gained only by the criterion EB-" enabling environment for ecotourism promotion". Its' mean came above the consensus value thus it was accepted and passed to the second round of the study. Moreover, the results show that among 8 managerial criteria, only 1 criterion was accepted deriving from literature, while 7 were rejected deriving from the respondents' proposals and literature. This resulted in (100%) relative importance to criterion EB. Its importance indicates that the development and management of ecotourism requires conductive environment that can facilitate its development. This criterion addresses the institutional and legislative frameworks requirements that are necessary to make sustainable ecotourism management possible. This also requires proper infrastructure, skilled manpower, and good administrative environment right from the planning level to its implementation. However, the criterion EA-" the existence of institutions, laws, legislation and policies" was rejected although it is derived from literature. We refer this rejection to the respondents' vision who see that the criterion EB implicitly includes it.

5.2 Developmental Indicators

This section presents the study results that answer the study question "what are the appropriate developmental indicators to evaluate the natural locations for ecotourism?". The results are reported in the five following sections: environmental indicators, social indicators, economical indicators, managerial indicators, political indicators.

5.2.1 Environmental Indicators

The environmental indicators are reported upon specific criterion its related to in the Tables 5.6…5.10 .

Table 5.6-A: Mean, status and relative importance of the environmental indicators related to criterion 1

BA	Criterion1: Conservation of natural resources and biodiversity	Mean	Status	Relative Importance
BA1	Number and diversity of species	4.46	Accept	10.5%
BA8	Protection of species (number of rare, threatened, vulnerable to be endangered species)	4.46	Accept	10.5%
BA3	Number and diversity of endemic species (Palestine, Mediterranean)	4.35	Accept	10.2%

Table 5.6-B: Mean, status and relative importance of the environmental indicators related to criterion 1

BA	Criterion1: Conservation of natural resources and biodiversity	Mean	Status	Relative Importance
BA10	Extent of damaged area due to human activities (encroachment, road foundations, poaching ...)	4.35	Accept	10.2%
BA2	Existence of different species	4.31	Accept	10.1%
BA9	Increased interest in sighting and documentation of species	4.27	Accept	10.1%
BA6	Percentage of protected area	4.24	Accept	10.0%
BA5	The destination being located at internal or external migration routes	4.15	Accept	9.8%
BA4	Richness of the destination with endemic species (existing only in the destination)	4.08	Accept	9.7%
BA7	Percentage of pastures	3.80	Accept	8.9%
	Total AW	4.25		100%

The results in the Table 5.6 show the ranking of environmental indicators relative to the environmental criterion1-"conservation of natural resources and biodiversity", in descending order: BA1, BA8, BA3, BA10, BA2, BA9, BA6, BA5, BA4, BA7. Their means came above the consensus value thus they were accepted. The results show that 10 environmental indicators where accepted within criterion1. Moreover, the results indicate that the highest relative importance was gained equally by the indicator BA1- "number and diversity of species" and BA8-"protection of species (number of rare, threatened, vulnerable to be endangered species)" with (10.5%) and the lowest was gained by the criterion BA7- "percentage of pastures" with (8.9%).

Table 5.7-A: Mean, status and relative importance of the environmental indicators related to criterion 2

BB	Criterion 2: Maintenance of soil and water resources	Mean	Status	Relative Importance
BB2	Number and types of water resources (springs, wells, streams..)	4.38	Accept	9.1%
BB10	Level of physical contamination in waters (clarity, turbidity, color and odor)	4.27	Accept	8.8%
BB6	Usage of pesticide and chemical fertilizer	4.23	Accept	8.7%
BB8	Prohibition of cutting trees in the pastures within the destination borders	4.19	Accept	8.6%
BB11	Level of water resources fluctuation (ground and underground)	4.19	Accept	8.6%
BB7	Existence & implementation of action plans (for maintenance of soil and water resources)	4.04	Accept	8.4%
BB9	Control of domestic animals in the destination	4.00	Accept	8.4%
BB1	Amount of soil erosion	3.85	Accept	7.9%

Table 5.7-B: Mean, status and relative importance of the environmental indicators related to criterion 2

BB	Criterion 2: Maintenance of soil and water resources	Mean	Status	Relative Importance
BB3	Percentage of replanting of depleted forests	3.85	Accept	7.9%
BB5	Extent and percentage of bare lands	3.85	Accept	7.9%
BB12	Attention to therapeutic water resources (sulfur, hot, of special salinity)	3.85	Accept	7.9%
BB4	Percentage of the reforested area	3.77	Accept	7.8%
	Total AW	4.04		100%

The results in the Table 5.7 show the ranking of environmental indicators relative to the environmental criterion2-"Maintenance of soil and water resources", in descending order: BB2, BB10, BB6, BB8, BB11, BB7, BB9, BB1, BB3, BB5, BB12, BB4. Their means came above the consensus value thus they were accepted. The results show that 12 environmental indicators where accepted within criterion2. Moreover, the results indicate that the highest relative importance was gained by the indicator BB2- "number and types of water resources (springs, wells, streams..)" with (9.1%) and the lowest was gained by the criterion BA7- "percentage of the reforested area" with (7.8%).

Table 5.8: Mean, status and relative importance of the environmental indicators related to criterion 3

BC	Criterion 3: Carrying Capacity (CC) of the ecosystem	Mean	Status	Relative Importance
BC5	Deterioration of floral and faunal habitat (area, density)	4.40	Accept	34.3%
BC4	Strength or fragility of the ecosystem	4.28	Accept	33.3%
BC3	Compliance to CC norms by tourism permit authority and tour guides	4.16	Accept	32.4%
BC1	Availability of CC norms developed by local community	3.69	Reject	
BC2	Availability of CC norms in terms of ecological, financial social economic and visitor cc	3.68	Reject	
	Total AW	4.28		100%

The results in the Table 5.8 show the ranking of environmental indicators relative to the environmental criterion3-"Carrying Capacity (CC) of the ecosystem", in descending order: BC5, BC4, BC3. Their means came above the consensus value thus they were accepted. The results show that among 5 environmental indicators within criterion3, 3 indicators were accepted, while 2 were rejected. Moreover, the results indicate that the highest relative importance was gained by the indicator BC5- "deterioration of floral and faunal habitat (area, density)" with (34.3%) and the lowest was gained by the criterion BC3- "compliance to CC norms by tourism permit authority and tour guides" with (32.4%).

Table 5.9: Mean, status and relative importance of the environmental indicators related to criterion 4

BD	Criterion 4: Maintenance of scenery, natural & physical features	Mean	Status	Relative Importance
BD1	Conservation of natural plants in the destination	4.42	Accept	17.3%
BD2	Protection of spectacular landscape area in the destination (plans, programs, activities)	4.42	Accept	17.3%
BD3	Extent and number of specific natural plant (e.g. forest & its extent)	4.27	Accept	16.8%
BD4	Diversity of water resources types (springs, wells, streams..)	4.23	Accept	16.6%
BD5	Growth rate of incompatible construction with natural environment in the destination	4.12	Accept	16.2%
BD6	Protection of the topography and geographical features in the destination (cracks, geological exposures, karsts, ...), (plans, programs, activities)	4.04	Accept	15.8%
	Total AW	4.25		100%

The results in the Table 5.9 show the ranking of environmental indicators relative to the environmental criterion4-"maintenance of scenery, natural & physical features", in descending order: BD1, BD2, BD3, BD4, BD5, BD6. Their means came above the consensus value thus they were accepted. The results show that 6 environmental indicators within criterion4 were accepted. Moreover, the results indicate that the highest relative importance was equally gained by the indicator BD1- "conservation of natural plants in the destination" and "Protection of spectacular landscape area in the destination (plans, programs, activities) "with (17.3%) and the lowest was gained by the criterion DB6- "protection of the topography and geographical features in the destination (cracks, geological exposures, karsts,...), (plans, programs, activities)" with (15.8%).

Table 5.10-A: Mean, status and relative importance of the environmental indicators related to criterion 5

BE	Criterion 5: Climate	Mean	Status	Relative Importance
BE1	Diversification of climate conditions	4.28	Accept	35.7%
BE2	Annual rainfall (number of rainy days, quantity, distributions..)	3.92	Accept	32.7%
BE5	Hours of solar radiations (seasonal and annual averages)	3.80	Accept	31.6%
BE3	Air temperature (seasonal and annual averages)	3.69	Reject	
BE4	Atmospheric pressure (seasonal and annual averages)	3.58	Reject	

Table 5.10-B: Mean, status and relative importance of the environmental indicators related to criterion 5

BE	Criterion 5: Climate	Mean	Status	Relative Importance
BE6	Winds speed (seasonal and annual averages)	3.54	Reject	
BE7	Relative humidity (seasonal and annual averages)	3.50	Reject	
	Total AW	4.00		100%

The results in the Table 5.10 show the ranking of environmental indicators relative to the environmental criterion5-"climate", in descending order: BE1, BE2, BE5. Their means came above the consensus value thus they were accepted. The results show that among 7 environmental indicators within criterion5, 3 indicators were accepted, while 4 were rejected. Moreover, the results indicate that the highest relative importance was gained by the indicator BE1- "diversification of climate conditions" with (35.7%) and the lowest was gained by the criterion BE5- "hours of solar radiations (seasonal and annual averages)" with (31.6%).

5.2.1. Social Indicators:

The social indicators are reported upon specific criterion its related to in the Tables 5.11..5.13 .

Table 5.11: Mean, status and relative importance of the social indicators related to criterion 1

CA	Criterion 1: Educational affairs and public awareness	Mean	Status	Relative Importance
CA4	Availability of translated maps and brochures for the destination and its environment	4.46	Accept	21.2%
CA 5	Number of leaflets distributed among tourists about paying respect to local culture and belief	4.35	Accept	20.7%
CA3	Number of information dissemination centers in the destination and its surrounding	4.12	Accept	19.7%
CA1	Number of local people qualified to participate in ecotourism (visitors respectability, local culture..)	4.08	Accept	19.4%
CA2	Number of educational workshops in various educational centers about nature usage and protection	4.00	Accept	19.0%
	Total AW	4.20	Accept	100%

The results in the Table 5.11 show the ranking of social indicators relative to the social criterion1-"educational affairs and public awareness", in descending order: CA4, CA5, VA3, CA1, CA2. Their means came above the consensus value thus they were accepted. The results show that 5 social indicators within criterion1 were accepted. Moreover, the results indicate that the highest relative importance was gained by the indicator CA4- "availability of

translated maps and brochures for the destination and its environment" with (21.2%) and the lowest was gained by the criterion CA2- "Number of educational workshops in various educational centers about nature usage and protection" with (19.0%).

Table 5.12: Mean, status and relative importance of the social indicators related to criterion 2

CB	**Criterion 2: Local people participation and tourist satisfaction**	**Mean**	**Status**	**Relative Importance**
CB2	Reputation of the local people (theft, violations..)	4.50	Accept	10.5%
CB6	Ability of the local community to provide tourist's needs (health care, food and water,...)	4.46	Accept	10.4%
CB3	General attitude of local people towards the visitors of the destination	4.42	Accept	10.3%
CB7	Number of tourist visits per year	4.42	Accept	10.3%
CB5	Respectability of local community to visiting tourists (hosting in their homes)	4.35	Accept	10.0%
CB4	Frequency of destination usage by local people	4.23	Accept	9.8%
CB10	Number of tourists complaints at police stations, tourism and reviews offices	4.19	Accept	9.7%
CB1	Number of local people participating in ecotourism (guides, service providers..)	4.15	Accept	9.7%
CB8	Duration of tourist stay (increases or decreases of planned staying)	4.15	Accept	9.7%
CB9	Number of tourists repeating visits to destination	4.12	Accept	9.6%
	Total AW	4.30		100%

The results in the Table 5.12 show the ranking of social indicators relative to the social criterion2-"local people participation and tourist satisfaction", in descending order: CB2, CB6, CB3, CB7, CB5, CB4, CB10, CB1, CB8, CB9. Their means came above the consensus value thus they were accepted. The results show that 10 social indicators within criterion2 were accepted. Moreover, the results indicate that the highest relative importance was gained by the indicator CB2- "reputation of the local people (theft, violations..)" with (10.5%) and the lowest was gained by the criterion CB9- "number of tourists repeating visits to destination" with (9.6%).

Table 5.13-A: Mean, status and relative importance of the social indicators related to criterion3

CC	**Criterion3: Conservation of cultural heritage**	**Mean**	**Status**	**Relative Importance**
CC5	Promotion of local handicrafts	4.46	Accept	15.2%
CC1	Protection and development of historical religious and holy places	4.31	Accept	14.7%
CC6	Offering traditional local foods to the tourists	4.31	Accept	14.7%

Table 5.13-B: Mean, status and relative importance of the social indicators related to criterion3

CC	Criterion3: Conservation of cultural heritage	Mean	Status	Relative Importance
CC4	Conducting and revival of local festivals (games, dances, horseback riding, ..)	4.12	Accept	14.1%
CC3	Protection and revival of diverse traditional clothing	4.04	Accept	13.8%
CC7	Enabling the tourists to practice traditional activities of local events (festivals, weddings, ..)	4.04	Accept	13.8%
CC2	Using traditional agriculture and animal husbandry practices which are compatible with environment	4.00	Accept	13.7%
	Total AW	4.18		100%

The results in the Table 5.13 show the ranking of social indicators relative to the social criterion3-"conservation of cultural heritage", in descending order: CC5, CC1, CC6, CC4, CC3, CC7, CC2. Their means came above the consensus value thus they were accepted. The results show that 7 social indicators within criterion3 were accepted. Moreover, the results indicate that the highest relative importance was gained by the indicator CC5- "promotion of local handicrafts" with (15.2%) and the lowest was gained by the criterion CC2- "using traditional agriculture and animal husbandry practices which are compatible with environment" with (13.7%).

5.2.2 Economical Indicators:

The economical indicators are reported upon specific criterion its related to in the Table 5.14 .

Table 5.14: Mean, status and relative importance of the economical indicators related to criterion 1

DA	Criterion 1: Economic benefits	Mean	Status	Relative Importance
DA2	Amount of investment in ecotourism sector	4.35	Accept	17.6%
DA1	Amount of local revenue from ecotourism	4.23	Accept	17.2%
DA3	Number of people who work in ecotourism sector (seasonally, permanently)	4.15	Accept	16.8%
DA6	Volume of sold from home-made and handicraft products (embroidery, leather, glass..)	4.04	Accept	16.4%
DA5	Transportation expenditures to reach the destination	4.00	Accept	16.2%
DA7	Diversity of agriculture-related products	3.88	Accept	15.8%
DA4	Number of handicraft workshops in the destination	3.62	Reject	
	Total AW	4.10		100%

The results in the Table 5.14 show the ranking of economical indicators relative to the economical criterion1-"economic benefits", in descending order: DA2, DA1, DA3, DA6, DA5, DA7. Their means came above the consensus value thus they were accepted. The results show that among 7 economical indicators within criterion1, 6 were accepted, while 1 was rejected. Moreover, the results indicate that the highest relative importance was gained by the indicator DA2- "amount of investment in ecotourism sector" with (17.6%) and the lowest was gained by the criterion DA7- "diversity of agriculture-related products" with (15.8%).

5.2.3. Managerial Indicators:

The managerial indicators are reported upon specific criterion its related to in the Table 5.15.

Table 5.15: Mean, status and relative importance of the managerial indicators related to criterion1

EA	**Criterion 1: Enabling environment for ecotourism promotion**	**Mean**	**Status**	**Relative Importance**
EA4	Local planning accords with the national plan in destination management	4.58	Accept	17.5%
EA3	Availability of human resources qualified to manage the ecotourism (number and specializations)	4.42	Accept	16.9%
EA1	Existence of institutional framework for ecotourism management in the destination and its surrounding	4.31	Accept	16.5%
EA2	Existence of collaboration among different organizations and sectors related to ecotourism in the destination and its surrounding	4.31	Accept	16.5%
EA5	Diversity of tourism media associated to ecotourism destination	4.31	Accept	16.5%
EA6	Participation of the community and institutions in decision making about ecotourism destination	4.23	Accept	16.1%
	Total AW	4.36		100%

The results in the Table 5.15 show the ranking of managerial indicators relative to the managerial criterion1-"enabling environment for ecotourism promotion", in descending order: EA4, EA3, EA1, EA2, EA5, EA6.

Their means came above the consensus value thus they were accepted. The results show that 6 managerial indicators within criterion1 were accepted. Moreover, the results indicate that the highest relative importance was gained by the indicator EA4- "local planning accords with the national plan in destination management" with (17.5%) and the lowest was gained by the criterion EA6- "participation of the community and institutions in decision making about ecotourism destination" with (16.1%).

5.2.4. Political Indicators:

The political indicators are reported upon specific criterion its related to in the Table 5.16.

Table 5.16: Mean, status and relative importance of the political indicators related to criterion1

FA	Criterion 1: Strengthening the destination's national identity and combating judaization	Mean	Status	Relative Importance
FA8	Existence of the destination on schools and universities visits map for the purpose of community support against the occupation practices	4.62	Accept	13.5%
FA1	Frequency and volume of Israeli violations in the destination and its surrounding	4.42	Accept	12.9%
FA4	Volume of funds directed to protect the destination from confiscation and judaization	4.31	Accept	12.6%
FA5	Existence of the destination on the ladder of priorities of national institutions to provide development projects to face the occupation practices	4.31	Accept	12.6%
FA3	Number of national events and activities directed towards the destination for political purposes	4.23	Accept	12.4%
FA2	Targeting the destination by Israeli media	4.12	Accept	12.0%
FA6	Number of national and political Fig.s visits to the destination to protect it from judaization and for rooting citizens there	4.12	Accept	12.0%
FA7	Number and frequency of exposition of the Israeli threatened destination in various kinds of media materials	4.12	Accept	12.0%
	Total AW	4.28		100%

The results in the Table 5.15 show the ranking of political indicators relative to the political criterion1-"strengthening the destination's national identity and combating judaization", in descending order: FA8, FA1, FA4, FA5, FA3, FA2, FA6, FA7. Their means came above the consensus value thus they were accepted. The results show that 8 political indicators within criterion1 were accepted. Moreover, the results indicate that the highest relative importance was gained by the indicator FA8-"existence of the destination on schools and universities visits map for the purpose of community support against the occupation practices" with (13.5%) and the lowest was gained by the criterion FA7- "number and frequency of exposition of the Israeli threatened destination in various kinds of media materials" with (12.0%).

5.3 Double-Check on results

This section presents a method to double check on the results attained. The method is based on attaining the mean of a specific criterion by calculating the total mean of indicators related to it. Then compare it with the mean attained by the respondents' direct ranking of that criterion

through round one. Same goes with the fields, which can be attained by calculating the total mean of criteria related to it and then compare it with the respondents' direct ranking of fields. This method gives us the opportunity to judge the response of respondents as they go through rounds.

Fig.s 5.1..5.3 show that the actual and calculated means occurring above the consensus value, thus there is consistency in the acceptance and rejection of the respondents. The actual and calculated means values can be found in Appendix 5.1, Appendix 5.2 and Appendix 5.3.

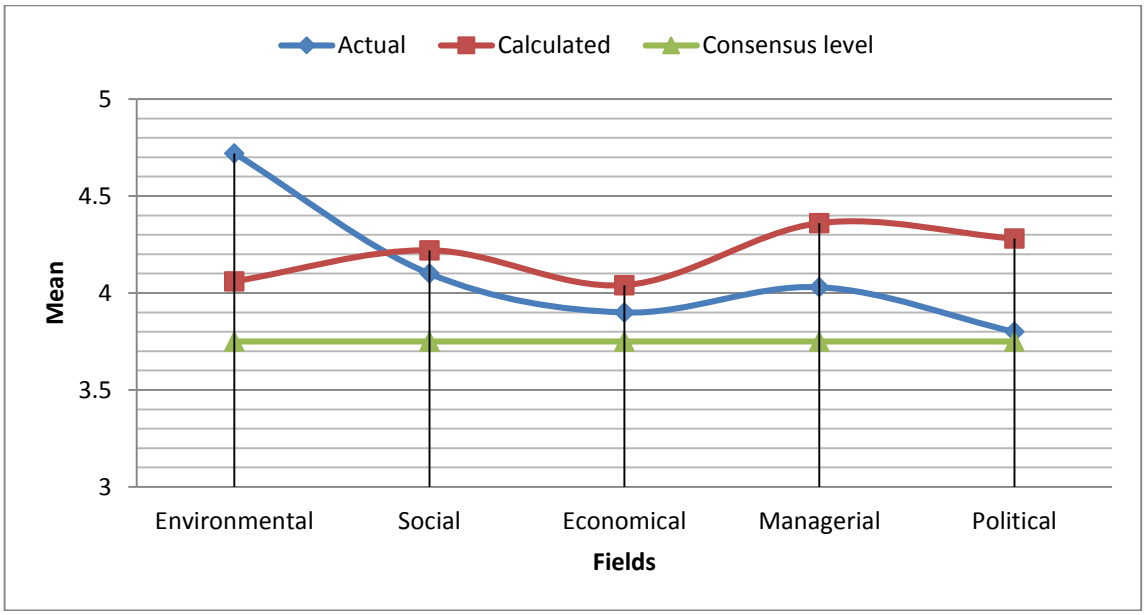

Fig.5.1: Double check on the fields results

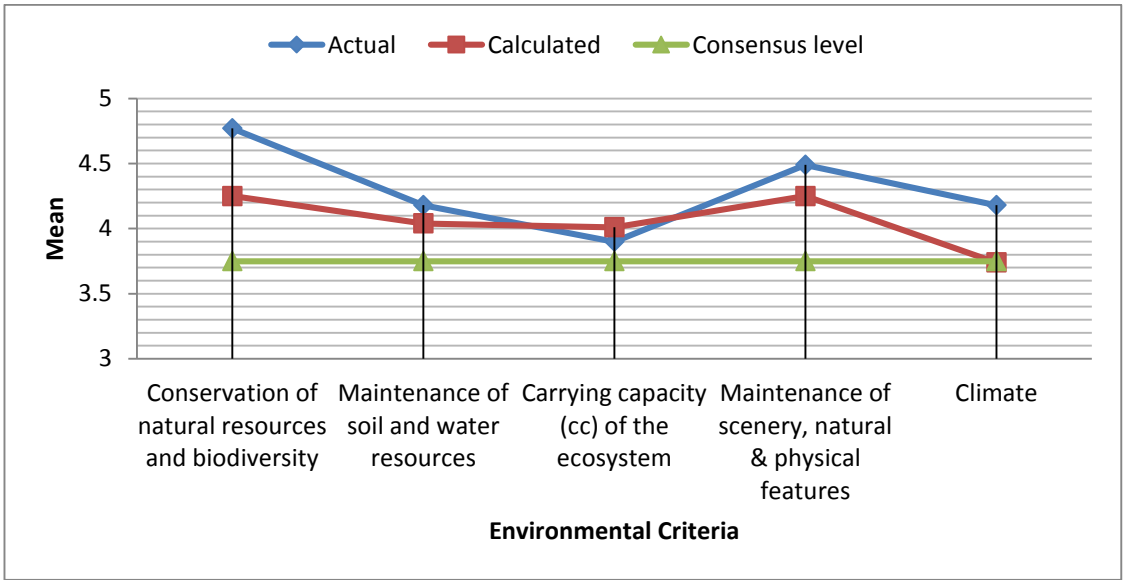

Fig. 5.2: Double check on the environmental criteria results

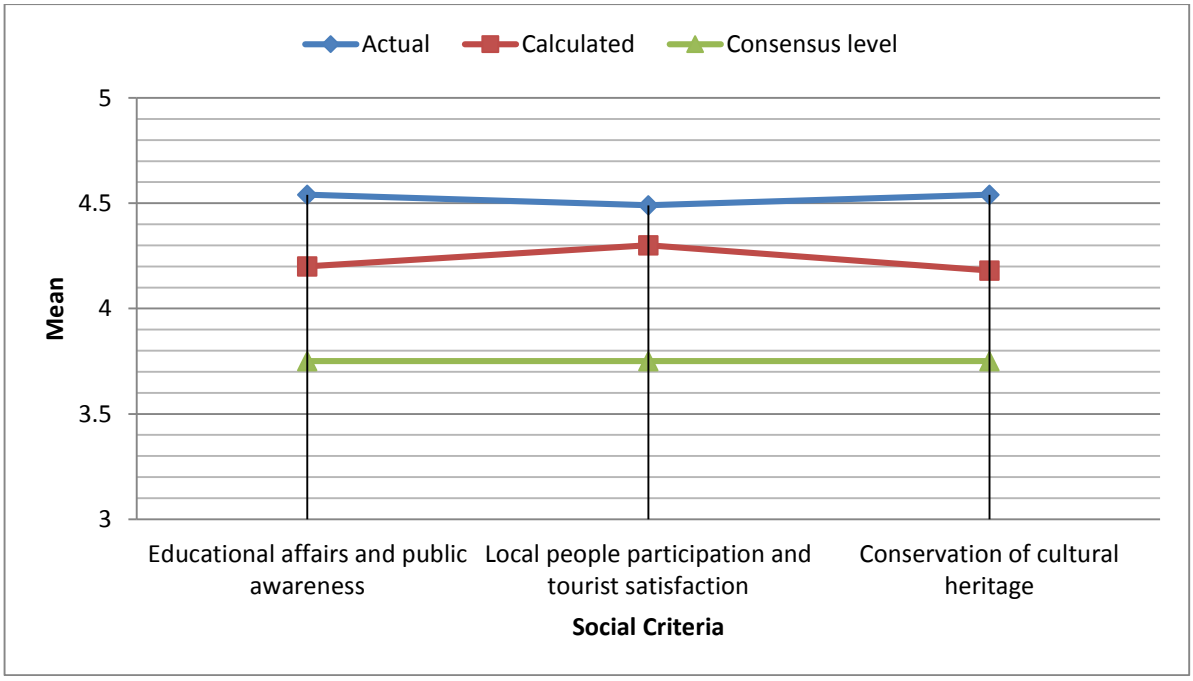

Fig. 5.3: Double check on the social criteria results

5.4 Computational model

In this section presents the study results for the study question "What does the computational model do and how it facilitates the assessment of indicators and the evaluation of natural locations for ecotourism? The model is developed and presented in Fig. 5.4.

The model consists of two modules: experts' module and end users module. The experts' module is to be used for assessing the developmental indicators which are stored in the database. The experts should make assessments periodically. The assessments are based on 5-Likert scale and are stored in the database. The system calculates the weights according to formula 4.1. The experts should be given the opportunity to add indicators if they wish to have it assessed by all experts. However, privileges should be given to the end user to insert the developmental indicators to initialize the system, add, modify or delete them. The end user should also specify the relations of the fields, criteria and indicators as presented in Fig. 5.5.

A consensus value should be determined according to the weights (should be specified by the end user). Thus, the system should transfer a list of developmental indicators occurring above the consensus value to the users' module. The system should calculate the relative importance to them according to formula 4.3 which is based on the Accepted Weights. The system should calculate the overall relative importance for the developmental indicators according to formulas 4.4, 4.5 and 4.6.

The end user should be able to load the developmental indicators of a specific year which they wish to add destinations parameters to. As the parameters are of different qualitative and quantitative measurement types (e.g. number of water resources, amount of soil erosion) the

system should manipulate them to one unified scale measurement. This scale manipulates the parameters into 5 point Likert scale range (5 ranks) upon which they can be compared. It should be noted that the parameters of any destination are related to a specific time and can be inserted to indicators only. It should be also noted that the 5 point Likert scale range should be developed through a study with experts.

The end user can make comparisons between destinations through Fig. 5.6. The indicators comparisons could be in 3 different types:

1. Comparing different destinations upon one indicator for a specific time.
   $Total\ Evaluation\ Value_{\text{Ind}} =$ Overall Indicator Imporatnce $*$ $\text{Rank}_{\text{Time}}$
2. Comparing different destinations upon different indicators for a specific time.
   $\text{Total Evaluation Value}_{\text{Ind n}} = \sum_{n=1}^{n}$ Overall Indicator Imporatnce $*$ $\text{Rank}_{\text{Time}}$
3. Comparing different destinations upon different indicators for a series of time.

$$\text{Total Evaluation Value} = \sum_{n=1}^{n} \text{Overall Indicator Importance} * \text{Avg } (\text{Rank}_{\text{Time}})$$

where n denotes the number of selected indicators and Avg ($\text{Rank}_{\text{Time}}$) denotes the average of the ranks assigned to the indicator .

Moreover, the user should be given the opportunity the compare upon criteria and fields. But as parameters are only connected to indicators, any selected criterion should load the parameters of the indicators related to it, and any selected field should load all the indicators related to it.
Fig. 5.6 shows a proposed screen for the end user. It shows chosen indicators by the end user upon which he will make the comparison. The user specified that the comparison should consider time series, including the date of for entering the parameters. He specified to have two destinations to be compared and its name.

The output of the comparison is the calculated total evaluation value. See Appendix 5.4 for the overall values of fields, criteria and indicators. The higher it is the more the destination is applicable for ecotourism. As ecotourism is relatively new to Palestine we cannot make a threshold upon which we can consider the destination is applicable or not. The comparisons assist in determining what destinations are more applicable only. However, in the future after activating the system and having enough data, experts can determine a threshold.

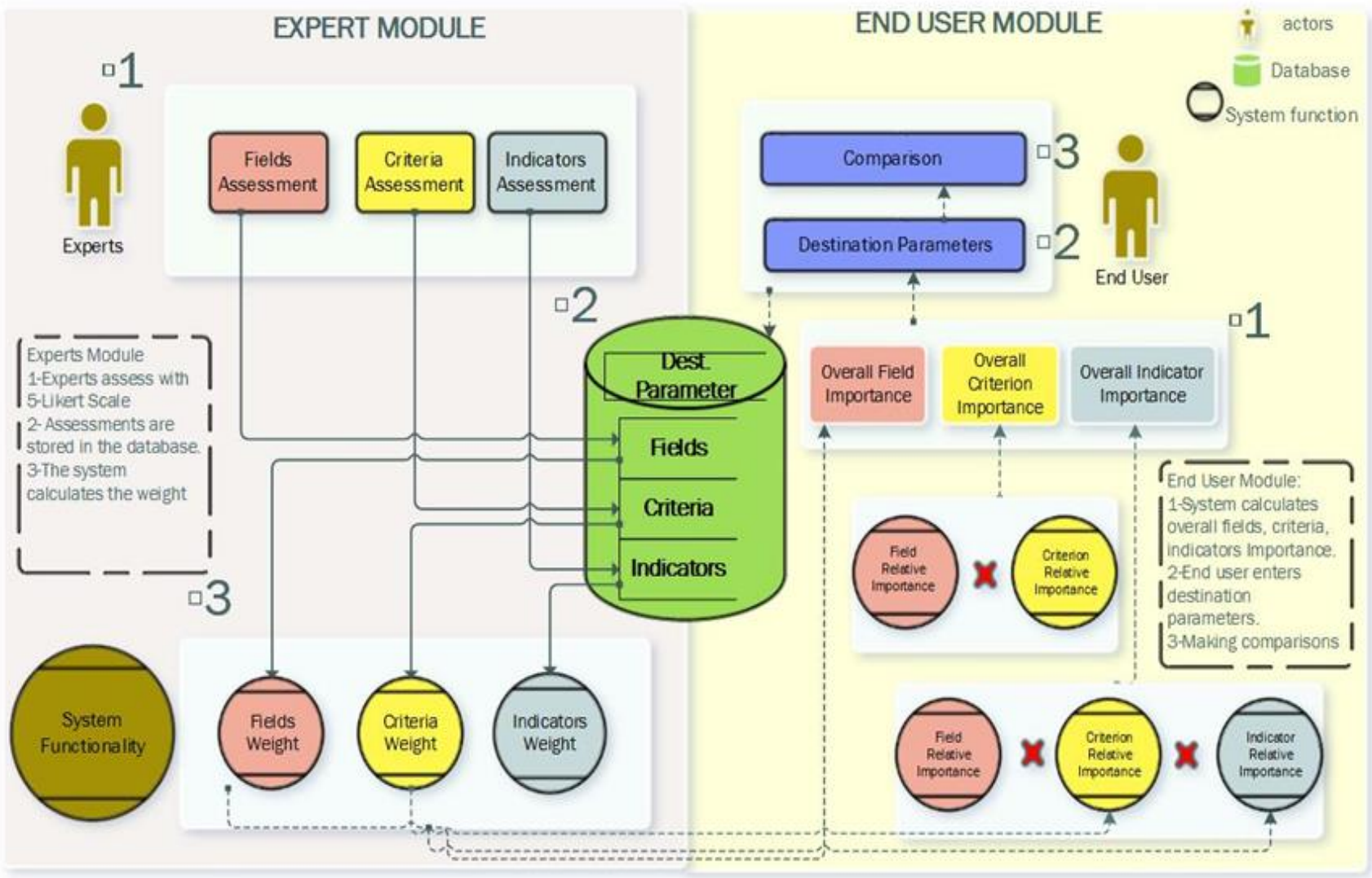

Fig. 5.4: Computational model for evaluating ecotourism destinations based on developmental indicators

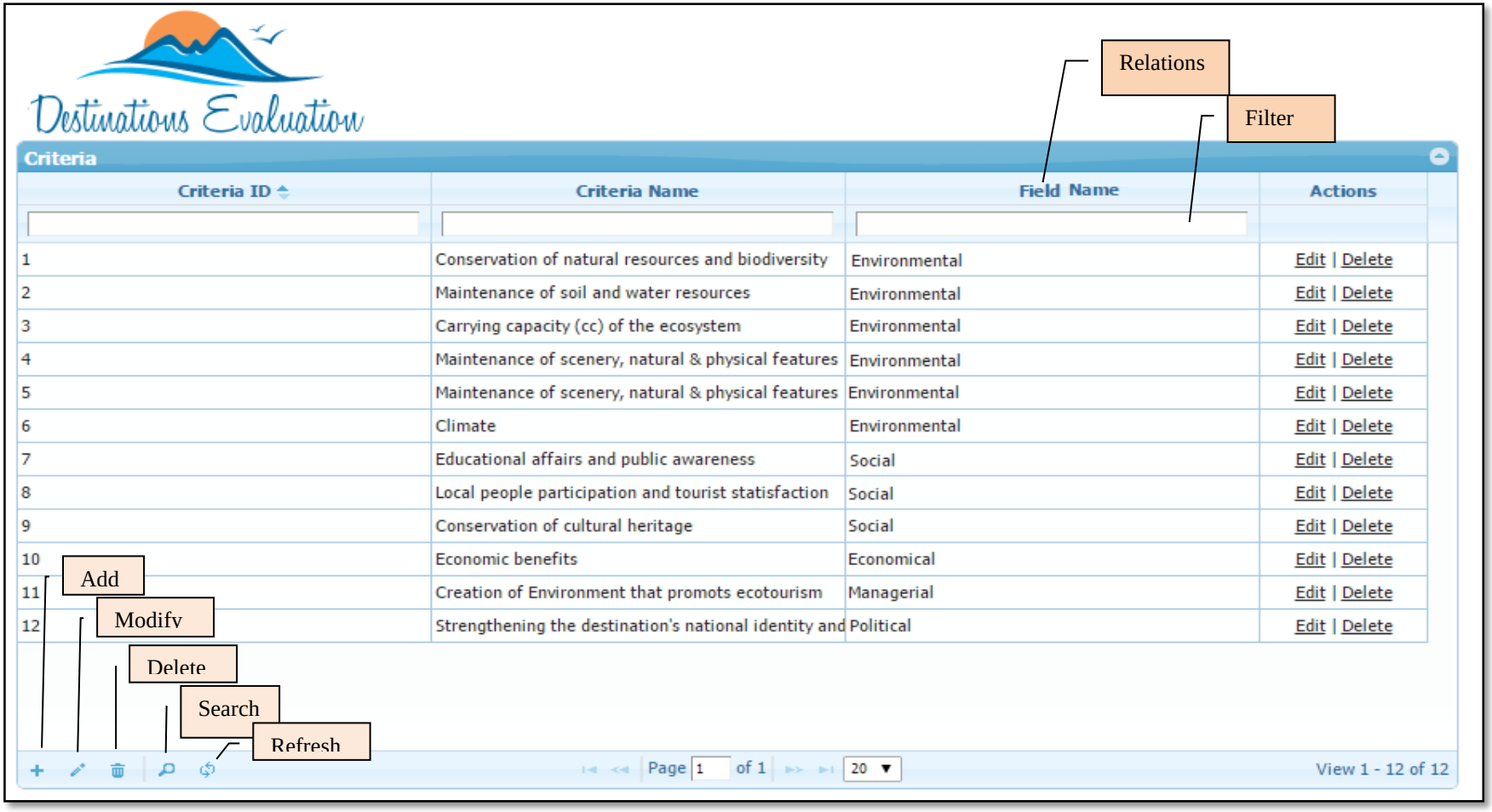

Fig.5.5: End user screen depicting privileges and relations between fields and criteria.

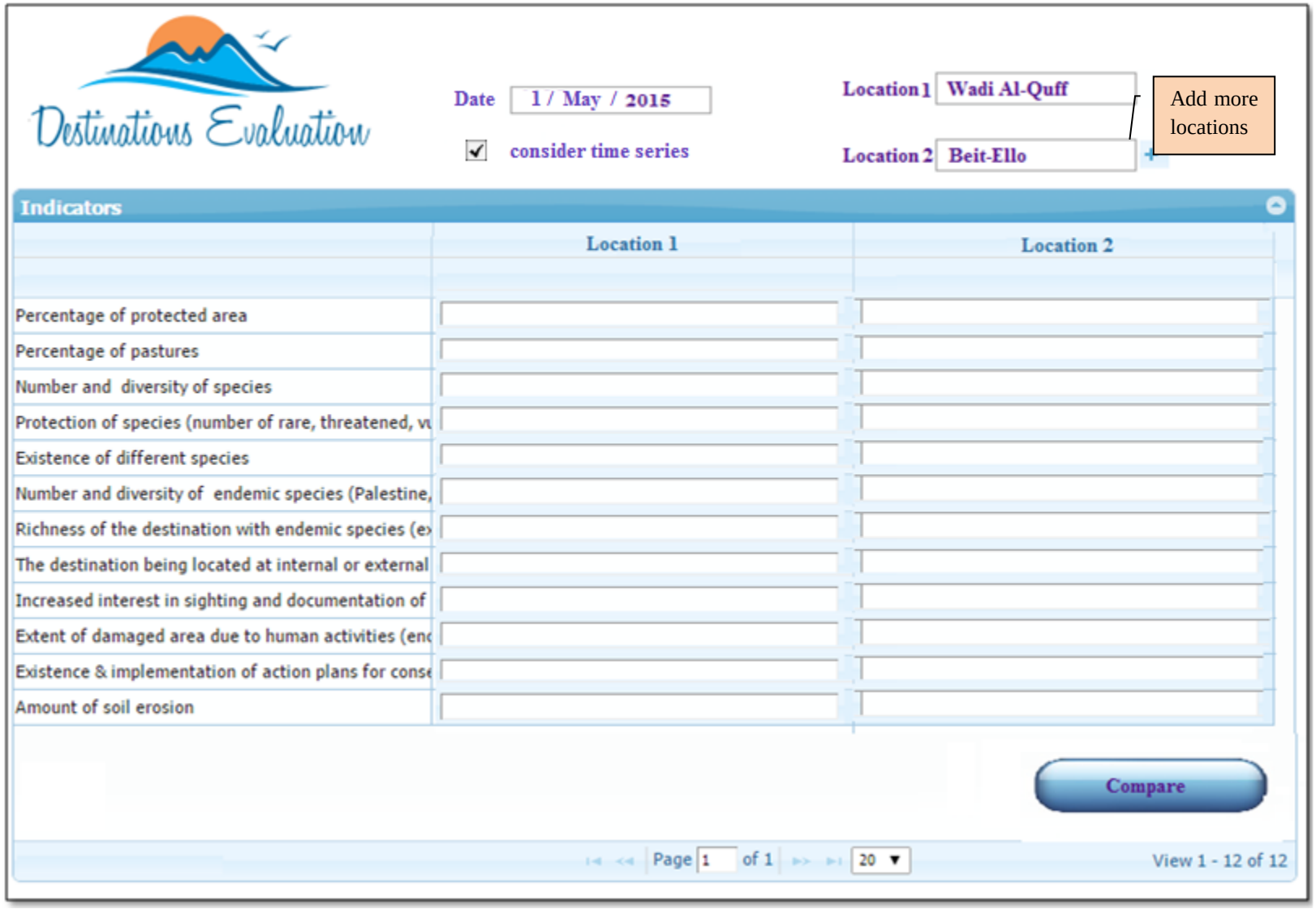

Fig. 5.6: End user screen for comparing destinations upon specified indicators and time.

5.5 Constraints affecting the results:

The following factors were constraints affecting the results :

- The diversification in the respondents specializations, sectors of work, institutions they represent and the positions they occupy .
- The respondents mostly occupy different positions in different institutions.
- The respondent's view reflects his interest and the institution he belongs to.
- The economic situation importance as it directly relates to the difficult situation in Palestine.
- The subject of ecotourism is relatively new to the Palestinian context.
- The difficult situation in Palestine makes Palestinians - including the study respondents- to accept the little and what is available.
- The existence of legislative and managerial challenges in the Palestinian context.
- The Israeli administrative divisions for the West Bank (Area A, B, and C).
- The variance in the relation level between the institutions and the local communities.
- The diversification in the respondents' perception of the ecotourism concept. This is due to the shortage in the ecotourism literature and studies related to the Palestinian context. Moreover, the variance in the practical experience of the institutions.
- The respondents' interest in the feedback process.
- The respondents are not used to iterative kind of researches thus they respond differently throughout the rounds.

5.6 Results summary

In both rounds, a high level of consensus existed among the respondents. Despite this, some disagreements occurred among the respondents especially concerning the fields and criteria which derived from their proposals. At the end of the first round the study attained a consensus on 5 fields and 11 criteria. At the second round we attained a consensus on 76 indicators, which include 34 indicators related to the environmental field, 6 to economic field, 22 to social field, 6 to managerial field and 8 to political field. The total number of developmental indicators attained up is 76. Table 5.17 and Table 5.18 show round one and two results in terms of numbers of acceptance and rejection while Fig. 5.7 show the determined fields, criteria and indicators to evaluate the destination. The developmental indicators were then developed into a model which consisted of 2 modules, presented in Fig. 5.4.

Table 5.17-A: Fields and criteria results (round one results)

	Accept		**Reject**		**Total ranked**	**Total Accepted**
	Literature	**Proposed**	**Literature**	**Proposed**		
Fields	4	1	0	6	11	5
Environmental Criteria	5	0	0	7	12	5
Social Criteria	4*	0	1	4	9	4

Table 5.17-B: Fields and criteria results (round one results)

	Accept		Reject		Total ranked	Total Accepted
	Literature	**Proposed**	**Literature**	**Proposed**		
Economical Criteria	1	0	1	2	4	1
Managerial Criteria	1	0	1	6	8	1

* 4 criteria were accepted but upon the recommendation of respondents 2 criteria were combined together, thus the total social criteria passed to the second round was 3

Table 5.18: Indicators results (round two results)

Field	**Criteria #**	**Accept**	**Reject**	**Total Ranked**
Environmental	Criterion 1	10	0	10
	Criterion 2	12	0	12
	Criterion 3	3	2	5
	Criterion 4	6	0	6
	Criterion 5	3	4	7
Environmental Indicators Total		34	6	40
Social	Criterion 1	5	0	5
	Criterion 2	10	0	10
	Criterion 3	7	0	7
Social Indicators Total		22	0	22
Economical	Criterion 1	6	1	7
Economical Indicators Total		6	1	7
Managerial	Criterion 1	6	0	6
Managerial Indicators Total		6	0	6
Political	Criterion 1	8	0	8
Political Indicators Total		8	0	8
Total Developmental Indicators		76	7	83

The results show the number of rejections in round 1 were much more than the second round. This is because round 1 had half closed questions were participants can propose new criteria, while the second were all closed questions. Most of the rejections were for the proposed criteria in round one. The rejections to indicators from literature we refer them to the lack of the awareness of the participants in the benefits and aspects of that indicator. Furthermore, one should point out that the Palestinian case has resulted in having a Political dimension to ecotourism.

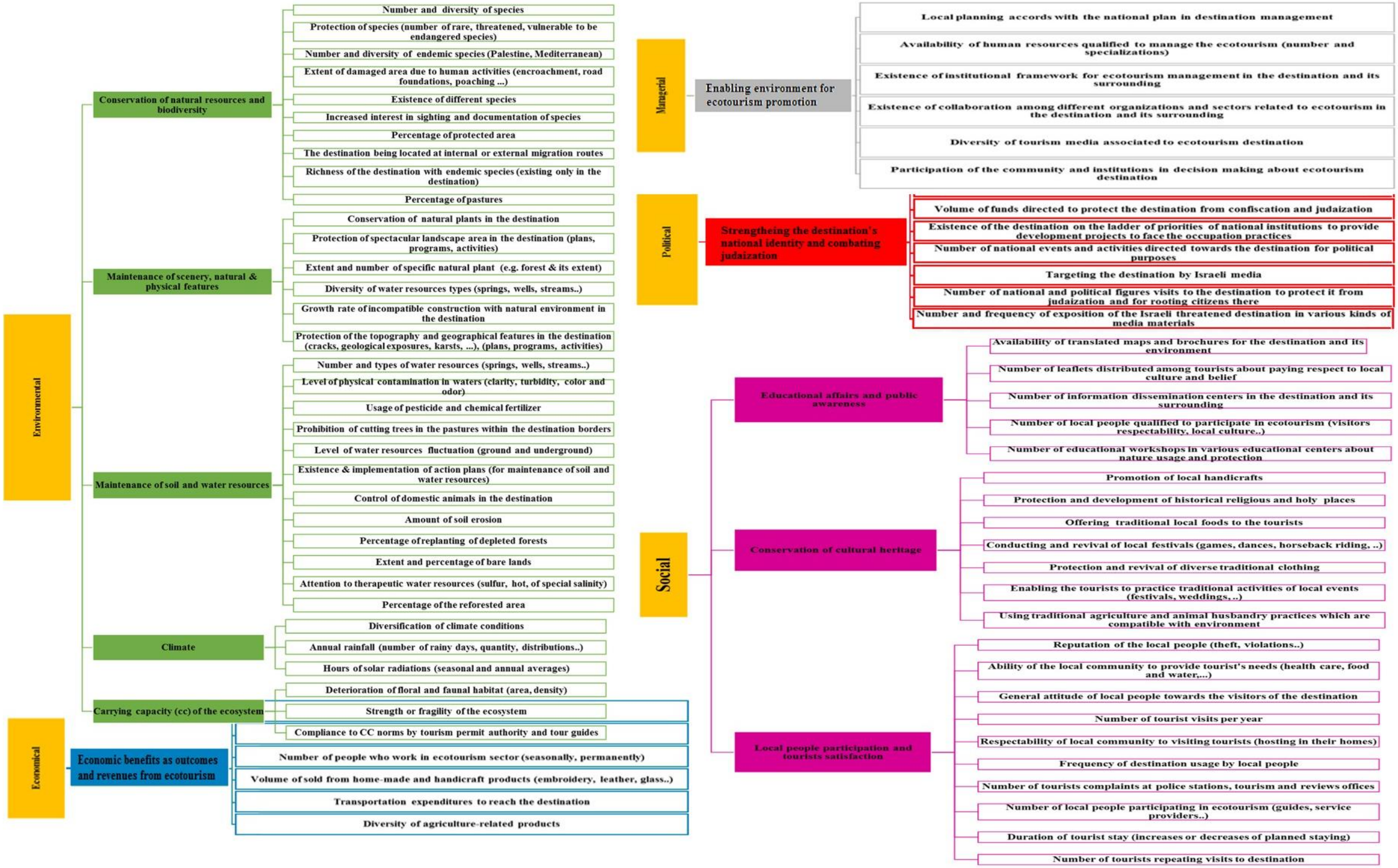

Fig. 5.7: Developmental Indicators for ecotourism destinations evaluation

Chapter Six:
Conclusions and Recommendations

This chapter presents the study conclusions, recommendations and future work.

6.1 Conclusions

- The feedback is one of the challenges of Delphi technique as many respondents abstain from assessing the experts proposed indicators.
- The detailed knowledge and experience of the experts were insufficient for assessing the indicators from the community perspective.
- There was deficiency in the holistic view of ecotourism as the experts came from different specializations.
- The determined indicators were in congruence with what came in the international guidelines and studies, thus they can be adopted by countries with similar conditions to Palestine such as Jordan.
- The fields, criteria and indicators were limited by a number of constraints, of which the most important were: the absence of norms such as those related to the carrying capacity, the knowledge of the respondents, and the vision of the institutions they work at.
- The ecotourism is feasible to the Palestinian reality as to the other world countries, yet it is distinguished by adding the coservation of the national identity of the land to the environmental, social, economical feasibilities.
- To have the ultimate practical benefit from this study, there is a need of a web-based program that will provide the desired classification data for the natural locations.
- As Delphi technique is respondent dependent, other techniques could ensure and support the results of the study.
- The success of ecotourism in the Palestinian context is related to the availability of a managerial body that ensures data availability and flow between partners and the distribution of roles according to specialization.

6.2 Recommendations

- To assess the indicators performance and feasibility by evaluating destinations already used for ecotourism .
- To utilize the indicators in its current form as guidelines to evaluate destinations and develop tourism programs.
- Countries with similar conditions are recommended to benefit from the results of the study.
- Developing unavailable norms such as those related to the carrying capacity by the official Palestinian Institutions.

- Ecotourism related knowledge dissemination such as the concepts, norms, feasibility and indicator measurements. Also to unify ecotourism concepts by a conceptual strategy.
- Developing a computerized model by MOTA with the support of official, non-governmental, private and social expertise.
- Ecotourism planners and managers could utilize the application to formulate action plans in order to develop their destination into an ecotourism destination. Moreover, they can develop ecotourism programs and advice ecotourists of special interest with destinations.
- Conducting similar studies with other tools and methodologies such as AHP, and with different samples (tourists, local communities, etc.) to support the outputs of this study.
- Continuous efforts and activities in ecotourism under a national slogan "Ecotourism towards the conservation of Palestinian identity of the land" .
- Forming a participatory and integral managerial body under the responsibility of MOTA and with the cooperation of the different authorities such as (MOA, EQA, PWA) supported by NGOs, social and private organizations for the consultation, implementation and funding.
- To conduct a study for developing a unified scale measurement to manipulate the indicators parameters from the experts' expertise in each field.

Appendices

Appendix 3.1: Additional nature reserves nominated by PWLS (PWLS, 2015)

#	Nature Reserve	Location	#	Nature Reserve	Location
1	Ein Fash-kha	Dead Sea	7	Solomon's Pools	Bethlehem
2	Auja spring	Jericho	8	Wadi Khritoon	Bethlehem
3	Wadi Quilt	Jericho	9	Ein Qinya	Ramallah
4	Jordan River	Jordan Valley	10	Wadi Bathan	Nablus
5	Um Rehan	Jenin	11	Gerzim mountain/ Samaritans	Nablus
6	Wadi Maleh	Tubas	12	Sabastia	Nablus

Appendix 4.1: List of specialists and experts who revised the questionnaires

#	Name	Field of specialization	Institution
1	Imad Atrash	Environment and Ecotourism	PWLS
2	Sami Khoury	Tourism	Visit Palestine
3	Banan AlSheikh	Environment	NARC
4	Ala' Abu Sada	Tourism	Abraham Path

Appendix 4.2: Round one questionnaire

جامعة القدس
معهد التنمية المستدامة

أخي المبحوث الكريم، أختي المبحوثة الكريمة:
تحية طيبة وبعد:

تقوم الباحثة بإعداد دراسة بعنوان:

تقييم المقاصد السياحية البيئية في ضوء مؤشراتها التنموية: نموذج معلوماتي

وذلك استكمالا لمتطلبات الحصول على درجة الماجستير في التنمية المستدامة – مسار بناء المؤسسات وتنمية الموارد البشرية –معهد التنمية المستدامة – جامعة القدس.

ولغرض تحقيق أهداف الدراسة تم تصميم هذه الاستبانة كأداة رئيسية لجمع البيانات. لذا يرجى التكرم بالإجابة على فقراتها باهتمام، مع العلم أن كافة البيانات ستعامل بسرية تامة، وكمجاميع إحصائية، ولأغراض البحث العلمي فقط.

"**شاكرين لكم حسن تعاونكم**"

إكرام قطينة

الجزء الأول: بيانات تعريفية

الرجاء وضع رقم الإجابة المناسبة التي تنطبق عليك في المربع المقابل وإكمال الفراغ أينما تطلب ذلك:

1	الجنس	.....	1) ذكر 2) أنثى
2	العمر		.....
3	التحصيل العلمي	.....	1) دبلوم متوسط فأدنى 2) بكالوريوس 3) دبلوم عالي 4) ماجستير 5) دكتوراة
4	التخصص العلمي	.....	.....
5	طبيعة العمل	.....	.....
6	مؤسسة العمل	.....	.....
7	نشاط مؤسسة العمل الرئيسي	.....	
8	سنوات الخبرة في العمل	.....	.....
9	مصدر المعرفة حول السياحة البيئية	.....	.....

10- ما هو اتجاهك نحو السياحة البيئية و ما هي المدلولات التي تؤكد اتجاهك؟

الاتجاه:

.....

المدلولات (مؤشرات تؤكد الاتجاه):

.....

الجزء الثاني: تقييم المجالات التنموية

برجاء وضع اشارة (X) في المربع المناسب للتعبير عن مدى ملائمة المجال لقياس امتلاك المقصد البيئي لمقومات مناسبة للسياحة البيئية، وكذلك وضع علامة من 100 (نسبة مئوية) تمثل اوزان نسبية للمجالات المختلفة فيما بينها (وزن واهمية كل مجال نسبةً الى مجموع المجالات ادناه)، علما بأن 100% هي الوزن النسبي الكلي لمجموع المجالات.

	المجال	ملائمة المجال لقياس امتلاك المقصد البيئي لمقومات مناسبة للسياحة البيئية					العلامة النسبية للمجال (%)
		ملائم بشدة	ملائم	ملائم بصورة متوسطة	ملائم بصورة ضعيفة	غير ملائم	
1	البيئي						
2	الاجتماعي						
3	الاقتصادي						
4	الاداري (مؤسسي)						
5	مجال مقترح (1):.....						
6	مجال مقترح (2):.....						
7	مجال مقترح (3):						
	الوزن النسبي الكلي						%100

الجزء الثالث: تقييم المعايير التنموية

برجاء وضع اشارة (X) في المربع المناسب للتعبير عن مدى ملائمة المعيار (ضمن نفس المجال) لقياس امتلاك المقصد البيئي لمقومات مناسبة للسياحة البيئية، وكذلك وضع علامة من 10 ، تمثل اوزان نسبية لمعايير المجال المختلفة (وزن واهمية كل معيار نسبة الى مجموع معايير نفس المجال)، علما بأن العلامة 10 تفيد الاهمية النسبية الاعلى، وعلامة 1 تفيد الاهمية النسبية الادنى، ويجوز اعطاء نفس العلامة لمعيارين في حال تساوي اهميتهما النسبية ضمن نفس المجال.

	المجال	المعايير	ملائمة المعيار لقياس امتلاك المقصد البيئي لمقومات مناسبة للسياحة البيئية					العلامة النسبية للمعيار (من 1 الى 10)
			ملائم بشدة	ملائم	ملائم بصورة متوسطة	ملائم بصورة ضعيفة	غير ملائم	
1	البيئي	المحافظة على الموارد الطبيعية والتنوع البيولوجي						
2		صيانة التربة والموارد المائية						
3		السعة التحميلية للنظام البيئي						
4		الحفاظ على المنظر والمعالم الطبيعية و المادية						
5		المناخ						
6		معيار بيئي مقترح (1):.....						
7		معيار بيئي مقترح (2):.....						
8		معيار بيئي مقترح (3):.....						
الوزن النسبي الكلي للمجال البيئي								
9	الاجتماعي	تعليم و وعي المجتمع المحلي بالسياحة البيئية						
10		مشاركة المجتمع في الأنشطة السياحية البيئية						
11		رضا السياح والسكان المحليين						
12		الحفاظ على التراث والتنوع الثقافي						
13		الحفاظ على سلامة البيئة الإنسانية						
14		معيار اجتماعي مقترح (1):.....						

15		معيار اجتماعي مقترح (2):.....						
16		معيار اجتماعي مقترح (3):.....						
الوزن النسبي الكلي للمجال الاجتماعي								
17	الاقتصادي	الاستثمار في البنى السياحية "التحتية و الفوقية"						
18		الفوائد الاقتصادية "مخرجات و عوائد السياحة البيئية"						
19		معيار اقتصادي مقترح (1):.....						
20		معيار اقتصادي مقترح (2):.....						
21		معيار اقتصادي مقترح (3):.....						
الوزن النسبي الكلي للمجال الاقتصادي								
22	الاداري (مؤسسي)	وجود القوانين و المؤسسات والتشريعات والسياسات						
23		البيئة التمكينية لترويج السياحة البيئية						
24		معيار اداري مقترح (1):.....						
25		معيار اداري مقترح (2):.....						
26		معيار اداري مقترح (3):.....						
الوزن النسبي الكلي للمجال الإداري								

هل لديك استعداد للمشاركة في الجولة الثانية Round Two من البحث و المتعلقة بتقييم المؤشرات التنموية للسياحة البيئية. نعم / لا

ارجو أن ترشح مبحوثين لهم علاقة بالسياحة البيئية و تزويدنا بوسيلة الاتصال بهم ان أمكن .....

شكراً لك

Appendix 4.3: Round two questionnaire

تقييم المقاصد السياحية البيئية في ضوء مؤشراتها التنموية: نموذج معلوماتي

استكمالا لمتطلبات الحصول على درجة الماجستير في التنمية المستدامة – مسار بناء المؤسسات و تنمية الموراد البشرية –معهد التنمية المستدامة – جامعة القدس . ولغرض تحقيق أهداف الدراسة تم تصميم هذه الإستبانة كأداة رئيسية لجمع البيانات. لذا يرجى التكرم بالإجابة على فقراتها بإهتمام، مع العلم أن كافة البيانات ستعامل بسرية تامة، و كمجاميع إحصائية، ولأغراض البحث العلمي فقط.

شاكرين لكم حسن تعاونكم.

الطالبة اكرام قطينة

Required *

مهم جدا: ***الاستبانة لا تهدف لدراسة واقع بل تهدف لتقييم المقومات التي يجب ان تمتلكها المواقع السياحية البيئية في فلسطين ***

تعريفات

1-تعريف السياحة البيئية: السفر إلى مواقع طبيعية تعيش نوعًا من التوازن الطبيعي بغرض تأمل الطبيعة والاستمتاع بجمال عناصرها (نباتات، حيوانات، طيور، مياه، غابات، وجبال) أو الدراسة والبحث العلمي بما يعود على المجتمع المحلي بفائدة اقتصادية واجتماعية في ظل تعاون بين كافة الأطراف (الزائرين، المجتمع المحلي، الجهات الرسمية وغيرها ذات العلاقة) نحو المحافظة على سلامة واستدامة هذه المواقع وعناصرها.
2-تعريف المقصد البيئي: موقع جغرافي طبيعي مرشح/يتم التعامل معه كوجهة سياحية بيئية.

اولا: بيانات تعريفية

1 . اسم المبحوث (اختياري)

.....

2 . الجنس *

Mark only one oval.

- ذكر
- انثى

3 . **الفئة العمرية** *

Mark only one oval.

- 20-29
- 30-39
- 40-49
- 50-59
- 60 فما فوق

4 . **التحصيل العلمي** *

Mark only one oval.

- دبلوم متوسط فأدنى
- بكالوريوس
- دبلوم عالي
- ماجستير
- دكتوراة

5 . **التخصص العلمي** *

Mark only one oval.

- علوم بيئة (ادارة و صيانة التنوع الحيوي، زراعة، البيئة المائية.،علم حيوان، ادارة الموارد الطبيعية، علوم بيئة)
- علوم تنموية و سياحية (سياحة، تنمية مستدامة، ترميم ، اثار)
- علوم طبيعية و هندسية (احياء، علوم عامة، هندسة ميكانيكية، كيمياء حيوية، هندسة بيئية. تصنيف نبات)
- اداب (انجليزي، جغرافيا، اعلام و علوم سياسية، تاريخ، اقتصاد،علاقات دولية)
- Other: .....

6 . **قطاع العمل** *

Mark only one oval.

- مؤسسة اهلية - NGO
- مؤسسة حكومية
- مؤسسة اكاديمية
- مؤسسة خاصة
- مؤسسة دولية

7 . مؤسسة العمل *

Mark only one oval.

- جامعة القدس
- وزارة الزراعة
- وزارة السياحة
- سلطة جودة البيئة
- وكالة معا (مجلة افاق البيئة و التنمية)
- مدارس القدس
- International Organization (Birdlife , UNESCO, Welfare..)
- Palestine Wildlife Society - PWLS
- Holy Land Trust -HLT
- Abraham Path
- Siraj Center for Holy Land Studies
- Environmental Education Center - EEC
- Rozana Association
- Network for experiential Palestinian Tourism Organization - NEPTO
- National Agriculture Research Center- NARC
- Hebron-France Association for Cultural Exchange - AECHF
- Auja Eco-Center
- Dubai University
- ARIJ
- Visit Palestine
- ATG
- Jerusalem Bedouin Society
- Tourism Promotion Agency
- Other: .....

8 . **طبيعة العمل** *

*يمكن ان تختار عدة اختيارات

Check all that apply.

- [ ] عضو هيئة تدريس
- [ ] مستشار في مؤسسة دولية
- [ ] مدير مؤسسة اهلية عاملة في قطاع السياحة
- [ ] مدير مؤسسة اهلية عاملة في البيئة
- [ ] مدير مؤسسة خاصة تعمل في السياحة
- [ ] مدير في وزارة الزراعة او احدى مديرياتها
- [ ] مدير في وزارة السياحة او احدى مديرياتها
- [ ] مدير في سلطة جودة البيئة
- [ ] موظف في وزارة السياحة او احدى مدرياتها
- [ ] موظف في مؤسسة اهلية عاملة في قطاع السياحة
- [ ] موظف مؤسسة اهلية عاملة في البيئة
- [ ] مرشد سياحي بيئي
- [ ] رئيس هيئة تنشيط السياحة
- [ ] منسق برامج سياحية
- [ ] صحفي
- [ ] باحث تتوع حيوي
- [ ] مدير منطقة فلسطين
- [ ] Other: .....

9 . **سنوات الخبرة** *

Mark only one oval.

- ◯ 1-4
- ◯ 5-9
- ◯ 10-14
- ◯ 15-19
- ◯ 20 فأكثر

10 . **نشاط المؤسسة الرئيسي** *

Mark only one oval.

- ◯ بيئة
- ◯ سياحة
- ◯ تعليم
- ◯ تنمية
- ◯ Other: .....

Skip to question 11.

ثانيا: تقييم المؤشرات التنموية للمجال البيئي

11 . **المعيار رقم 1 : التنوع الحيوي و حمايته**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 1 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
عدد وتنوع الكائنات الحية					
وجود نوع مختلف من الكائنات الحية (اي غير متوقع الوجود في المنطقة)					
عدد و تنوع الكائنات الحية الوطنية (فلسطين،البحر الابيض المتوسط)					
غنى المقصد السياحي بالاحياء المستوطنة (الموجودة فقط في المكان)					
وقوع المقصد السياحي على مسار الهجرة الداخلية أو الخارجية للكائنات الحية					
نسبة مساحة المنطقة المحمية					
نسبة مساحة المراعي					
حماية الكائنات الحية (عدد الأنواع المهددة، والنادرة ، والمهددة بالاختفاء)					
زيادة الاهتمام بالكائنات الحية (المتابعة و التوثيق)					
حجم الاضرار الناتجة عن الانشطة البشرية (انتهاكات، تاسيس الطرق، ،...الصيد غير المشروع)					

12 . **المعيار رقم 2 : صيانة التربة والموارد المائية**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 2 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
مقدار التاكل في التربة					
عدد وتنوع الموارد المائية (ينابيع، وديان، آبار، الخ)					
نسبة إعادة الزراعة في الاحراش المستنزفة					
نسبة مساحة الأرض المعاد تشجيرها					
مدى ونسبة الأراضي العارية					
استخدام المبيدات والأسمدة الكيماوية (الحجم و النوع)					
وجود خطة شاملة و تنفيذها (لصيانة التربة ومصادر المياه)					
حظر قطع الشجيرات في المراعي الموجودة في المقصد السياحي					
السيطرة على المواشي في المقصد السياحي					
مستوى التلوث الفيزيائي للمياه (الصفاء والتعكر واللون والرائحة)					
مقدار تذبذب مصادر المياه (السطحية و الجوفية)					
الاهتمام بمصادر المياه العلاجية (كبريتية ، ساخنة ، ملوحة مميزة)					

13 . **المعيار رقم 3 : السعة التحميلية للنظام البيئي (Carrying Capacity، القدرة الاستيعابية)**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 3 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
توفر معايير السعة التحميلية التي وضعها المجتمع المحلي	◯	◯	◯	◯	◯
توفر معايير السعة التحميلية الايكولوجية و السعة التحميلية للزوار	◯	◯	◯	◯	◯
الامتثال لمعايير السعة التحميلية من قبل سلطة تصريح السياحة و المرشدين السياحيين	◯	◯	◯	◯	◯
هشاشة او قوة النظام	◯	◯	◯	◯	◯
تدهور المواطن النباتية والحيوانية (مساحة، وكثافة التدهور)	◯	◯	◯	◯	◯

14 . **المعيار رقم 4 : الحفاظ على المنظر والمعالم الطبيعية و المادية**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 4 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
الحفاظ على مجموعة النباتات الطبيعية	◯	◯	◯	◯	◯
حماية المنظر الطبيعي للمقصد السياحي (خطط وبرامج وانشطة)	◯	◯	◯	◯	◯
مدى وعدد مجموعة نباتات معينة طبيعية في المقصد السياحي (مثال غابة و مداها)	◯	◯	◯	◯	◯
تنوع معالم مصادر المياه (ينابيع - وديان - آبار)	◯	◯	◯	◯	◯
معدل نمو البناء الذي يتعارض مع البيئة الطبيعية	◯	◯	◯	◯	◯
حماية التضاريس والمعالم الجيولوجية في المنطقة (صدوع - تكشفات جيولوجية - تكهفات..) (خطط وبرامج وانشطة)	◯	◯	◯	◯	◯

15 . **المعيار رقم 5 : المناخ**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 5 أخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
تعدد و تنوع النظم المناخية					
الامطار (عدد الأيام الممطرة، وكمية الهطول، وتوزع الهطول،..) على مدار العام في المقصد السياحي					
حرارة الهواء (المعدل السنوي، الفصلي)					
معدل الضغط الجوي (المعدل السنوي، الفصلي)					
ساعات الإشعاع الشمسي (المعدل السنوي، الفصلي)					
سرعة الرياح (المعدل السنوي، الفصلي)					
الرطوبة النسبية (المعدل السنوي، الفصلي)					

Skip to question 16.

ثالثا: تقييم المؤشرات التنموية للمجال الاجتماعي

16 . **المعيار رقم 1 : الشؤون التعليمية وتوعية المجتمع المحلي**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 1 أخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
عدد السكان المحليين المؤهلين للمشاركة في السياحة البيئية (المعرفة في الثقافة المحلية،استضافة الزوار، ..)					
عدد ورشات العمل لتعليم كيفية استخدام الطبيعة وحمايتها في مراكز التعليم المحلية					
عدد مراكز نشر المعلومات في المقصد السياحي ومحيطه					
توفر خرائط و كتيبات اجنبية للمقصد السياحي و بيئته					
عدد المنشورات التي توزع على السياح وتساعدهم على تفهم الثقافة المحلية والمعتقدات					

17 . **المعيار رقم 2 : مشاركة السكان المحليين ورضا السياح** *

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 2 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
عدد السكان المحليين المشاركين في السياحة البيئية (ادلاء، مقدمي خدمات، ..)					
سمعة السكان المحليين في تعاملهم مع السياح (حالات السرقة، التعديات على السياح،..)					
السلوك العام للسكان المحليين تجاه المقصد السياحي ومحيطه (حمايته، تنظيفه،...)					
تواتر السكان المحليين لاستخدام المنطقة					
استقبال المجتمع المحلي للسياح (استضافة منزلية للمبيت، للنوم،..)					
توفير المجتمع المحلي لاحتياجات السائحين (الصحية، من الماء والغذاء، ..)					
عدد زيارات السياح سنويا					
مدة إقامة السياح (تزيد او تقل عن مدة البقاء المخططة)					
عدد السياح الذين يكررون الزيارة					
عدد الشكاوى من قبل السياح في قسم السياحة ومخافر الشرطة و مكاتب المراجعة و غيرها					

18 . **المعيار رقم 3 : الحفاظ على التراث والتنوع الثقافي**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 3 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
حماية وتطوير الأماكن الدينية والمقدسة و المباني التاريخية					
ممارسة أنشطة الزراعة التقليدية وتربية الحيوانات بما يتوافق مع البيئة					
حماية وإحياء الملابس التقليدية المتنوعة					
إحياء وتنفيذ الطقوس والمهرجانات المحلية (العاب، والرقص، وركوب الخيل ونحو ذلك)					
تشجيع الحرف اليدوية المحلية					
تقديم الأغذية الشعبية المحلية للسائحين					
تمكين السائحين من ممارسة الفعاليات التقليدية المحلية (المشاركة في مهرجانات و افراح..)					

Skip to question 19.

رابعا: تقييم المؤشرات التنموية للمجال الاقتصادي

19 . **المعيار رقم 1 : الفوائد الاقتصادية** *

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 1 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
مبلغ الإيرادات المحلية من السياحة البيئية					
حجم الاستثمار في قطاع السياحة البيئية					
عدد الأشخاص الذين يعملون في قطاع السياحة البيئية (موسميا او دائما)					
عدد ورش الحرف اليدوية في المنطقة (مصانع مصغرة)					
النفقات للوصول إلى المقصد البيئي					
حجم المبيع من الصناعات اليدوية والمنزلية (تطريز، جلود، زجاج، ....)					
تنوع الإنتاج الزراعي المخصص لخدمة السياحة					

خامسا: تقييم المؤشرات التنموية للمجال الاداري

20 . **المعيار رقم 1 : البيئة التمكينية لترويج السياحة البيئية**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 1 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

Mark only one oval per row.

	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
وجود إطار مؤسسي لادارة السياحة البيئية في محيط المقصد السياحي					
وجود تعاون بين المؤسسات والقطاعات المختلفة ذات العلاقة بالسياحة البيئية للمقصد السياحي ومحيطه					
توفر الموارد البشرية المؤهلة لادارة السياحة البيئية (عدد وتخصص)					
تخطيط محلي منسجم مع خطة وطنية لادارة المقصد السياحي البيئي					
تنوع وسائل الاعلام السياحي المتعلقة بالمقصد البيئي					
تشارك مؤسسي مجتمعي في صنع القرار السياحي البيئي حول المقصد السياحي					

سادسا: تقييم المؤشرات التنموية للمجال السياسي

21 . **المعيار رقم 1: تعزيز هوية المكان الوطنية ومحاربة التهويد**

السؤال: قم بتقييم علاقة المؤشرات التالية بمعيار رقم 1 آخذ بعين الاعتبار ان المؤشر ينسب الى المنطقة الممثلة للمقصد السياحي البيئي و محيطه ، كما و يمكن ان يكون مؤشرا مركبا

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	علاقة كبيرة جدا	علاقة كبيرة	علاقة متوسطة	علاقة ضعيفة	لا علاقة
تكرار وحجم الاعتداءات الإسرائيلية الموجهة تجاه المقصد السياحي ومحيطه	◯	◯	◯	◯	◯
الاستهداف الإعلامي الإسرائيلي للمقصد السياحي ومحيطه	◯	◯	◯	◯	◯
عدد الفعاليات والأنشطة الوطنية الموجهة نحو المقصد السياحي لأغراض سياسية	◯	◯	◯	◯	◯
حجم التمويل الموجه لحماية المقصد السياحي ومحيطه من المصادرة والتهويد	◯	◯	◯	◯	◯
وجود المقصد على سلم أولويات المؤسسات الوطنية بتقديم المشاريع التنموية في وجه ممارسات الاحتلال	◯	◯	◯	◯	◯
عدد زيارات الشخصيات الوطنية والسياسية لمحيط المقصد السياحي بهدف تثبيت المواطنين وحمايته من التهويد	◯	◯	◯	◯	◯
عدد وتكرار ظهور المقصد السياحي المهدد إسرائيليا في المواد الإعلامية بمختلف أنواعها	◯	◯	◯	◯	◯
وجود الموقع على خريطة الزيارات المدرسية والجامعية و المؤسسات التنموية و المجتمعية بهدف دعم المجتمع المحلي امام ممارسات الاحتلال	◯	◯	◯	◯	◯

اشكرك لتعاونك الرجاء التأكد من الضغط على زر SUBMIT لارسال الاجابات

Appendix 5.1: Double check on the fields results

Fields	**Actual mean/ Direct ranking**	**Calculated mean**
Environmental	4.72	4.06
Social	4.10	4.22
Economical	3.9	4.04
Managerial	4.03	4.36
Political	3.8	4.28

Appendix 5.2 : Double check on the environmental criteria

Environmental criteria	**Actual mean/ Direct ranking**	**Calculated**
Conservation of natural resources and biodiversity	4.77	4.25
Maintenance of soil and water resources	4.18	4.04
Carrying capacity (cc) of the ecosystem	3.90	4.01
Maintenance of scenery, natural & physical features	4.49	4.25
Climate	4.18	3.74

Appendix 5.3 : Double check on the social criteria

Social criteria	**Actual mean/ Direct ranking**	**Calculated**
Educational affairs and public awareness	4.54	4.20
Local people participation and tourist satisfaction	4.49	4.30
Conservation of cultural heritage	4.54	4.18

Appendix 5.4 : Overall relative importance values

Fields	RI	OI	Criteria	RI	OI	Indicators	RI	OI
Environmental	23.0%		Conservation of natural resources and biodiversity	22.2%	5.1%	Number and diversity of species	10.5%	0.54%
						Protection of species (number of rare, threatened, vulnerable to be endangered species)	10.5%	0.54%
						Number and diversity of endemic species (Palestine, Mediterranean)	10.2%	0.52%
						Extent of damaged area due to human activities (encroachment, road foundations, poaching ...)	10.2%	0.52%
						Existence of different species	10.1%	0.52%
						Increased interest in sighting and documentation of species	10.1%	0.52%
						Percentage of protected area	10.0%	0.51%
						The destination being located at internal or external migration routes	9.8%	0.50%
						Richness of the destination with endemic species (existing only in the destination)	9.7%	0.50%
						Percentage of pastures	8.9%	0.45%
			Maintenance of soil and water resources	19.4%	4.5%	Number and types of water resources (springs, wells, streams..)	9.1%	0.41%
						Level of physical contamination in waters (clarity, turbidity, color and odor)	8.8%	0.39%
						Usage of pesticide and chemical fertilizer	8.7%	0.39%
						Prohibition of cutting trees in the pastures within the destination borders	8.6%	0.38%
						Level of water resources fluctuation (ground and underground)	8.6%	0.38%
						Existence & implementation of action plans (for maintenance of soil and water resources)	8.4%	0.37%
						Control of domestic animals in the destination	8.4%	0.37%
						Amount of soil erosion	7.9%	0.35%
						Percentage of replanting of depleted forests	7.9%	0.35%
						Extent and percentage of bare lands	7.9%	0.35%
						Attention to therapeutic water resources (sulfur, hot, of special salinity)	7.9%	0.35%
						Percentage of the reforested area	7.8%	0.35%
			Carrying Capacity (CC) of the ecosystem	18.1%	4.2%	Deterioration of floral and faunal habitat (area, density)	34.3%	1.43%
						Strength or fragility of the ecosystem	33.3%	1.39%
						Compliance to CC norms by tourism permit authority and tour guides	32.4%	1.35%
			Maintenance of scenery, natural & physical features	20.9%	4.8%	Conservation of natural plants in the destination	17.3%	0.83%
						Protection of spectacular landscape area in the destination (plans, programs, activities)	17.3%	0.83%
						Extent and number of specific natural plant (e.g. forest & its extent)	16.8%	0.81%
						Diversity of water resources types (springs, wells, streams..)	16.6%	0.80%
						Growth rate of incompatible construction with natural environment in the destination	16.2%	0.78%
						Protection of the topography and geographical features in the destination (cracks, geological exposures, karsts, ...), (plans, programs, activities)	15.8%	0.76%
			Climate	19.4%	4.5%	Diversification of climate conditions	35.7%	1.59%
						Annual rainfall (number of rainy days, quantity, distributions..)	32.7%	1.46%
						Hours of solar radiations (seasonal and annual averages)	31.6%	1.41%
	23.0%			**100.0%**	**23.0%**			**23.0%**
Social	20.0%		Educational affairs and public awareness	25.4%	5.1%	Availability of translated maps and brochures for the destination and its environment	21.2%	1.08%
						Number of leaflets distributed among tourists about paying respect to local culture and belief	20.7%	1.05%
						Number of information dissemination centers in the destination and its surrounding	19.7%	1.00%
						Number of local people qualified to participate in ecotourism (visitors respectability, local culture..)	19.4%	0.99%
						Number of educational workshops in various educational centers about nature usage and protection	19.0%	0.97%
			Local people participation and tourist satisfaction	49.2%	9.8%	Reputation of the local people (theft, violations..)	10.5%	1.03%
						Ability of the local community to provide tourist's needs (health care, food and water,...)	10.4%	1.02%
						General attitude of local people towards the visitors of the destination	10.3%	1.01%
						Number of tourist visits per year	10.3%	1.01%

Fields	RI	OI	Criteria	RI	OI	Indicators	RI	OI
						Respectability of local community to visiting tourists (hosting in their homes)	10.0%	0.98%
						Frequency of destination usage by local people	9.8%	0.96%
						Number of tourists complaints at police stations, tourism and reviews offices	9.7%	0.95%
						Number of local people participating in ecotourism (guides, service providers..)	9.7%	0.95%
						Duration of tourist stay (increases or decreases of planned staying)	9.7%	0.95%
						Number of tourists repeating visits to destination	9.6%	0.94%
			Conservation of cultural heritage	25.4%	5.1%	Promotion of local handicrafts	15.2%	0.77%
						Protection and development of historical religious and holy places	14.7%	0.75%
						Offering traditional local foods to the tourists	14.7%	0.75%
						Conducting and revival of local festivals (games, dances, horseback riding, ..)	14.1%	0.72%
						Protection and revival of diverse traditional clothing	13.8%	0.70%
						Enabling the tourists to practice traditional activities of local events (festivals, weddings, ..)	13.8%	0.70%
						Using traditional agriculture and animal husbandry practices which are compatible with environment	13.7%	0.70%
	20.00%			**100.0%**	**20.00%**			**20.00%**
Economical	19.50%		Economic benefits	100.0%	19.5%	Amount of investment in ecotourism sector	17.6%	3.4%
						Amount of local revenue from ecotourism	17.2%	3.4%
						Number of people who work in ecotourism sector (seasonally, permanently)	16.8%	3.3%
						Volume of sold from home-made and handicraft products (embroidery, leather, glass..)	16.4%	3.2%
						Transportation expenditures to reach the destination	16.2%	3.2%
						Diversity of agriculture-related products	15.8%	3.1%
	19.50%			**100.0%**	**19.50%**			**19.50%**
Managerial	19.00%		Enabling environment for ecotourism promotion	100.0%	19.0%	Local planning accords with the national plan in destination management	17.5%	3.3%
						Availability of human resources qualified to manage the ecotourism (number and specializations)	16.9%	3.2%
						Existence of institutional framework for ecotourism management in the destination and its surrounding	16.5%	3.1%
						Existence of collaboration among different organizations and sectors related to ecotourism in the destination and its surrounding	16.5%	3.1%
						Diversity of tourism media associated to ecotourism destination	16.5%	3.1%
						Participation of the community and institutions in decision making about ecotourism destination	16.1%	3.1%
	19.00%			**100.0%**	**19.00%**			**19.00%**
Political	18.50%		Strengthening the destination's national identity and combating judaization	100.0%	18.5%	Existence of the destination on schools and universities visits map for the purpose of community support against the occupation practices	13.5%	2.5%
						Frequency and volume of Israeli violations in the destination and its surrounding	12.9%	2.4%
						Volume of funds directed to protect the destination from confiscation and judaization	12.6%	2.3%
						Existence of the destination on the ladder of priorities of national institutions to provide development projects to face the occupation practices	12.6%	2.3%
						Number of national events and activities directed towards the destination for political purposes	12.4%	2.3%
						Targeting the destination by Israeli media	12.0%	2.2%
						Number of national and political figures visits to the destination to protect it from judaization and for rooting citizens there	12.0%	2.2%
						Number and frequency of exposition of the Israeli threatened destination in various kinds of media materials	12.0%	2.2%
	18.50%			**100.0%**	**18.50%**			**18.50%**

*Note: RI refers to relative importance, OI refers to relative importance

*Total Overall Field Importance≡ Total Overall Criteria Importance ≡ Total Overall Indicator Importance = 100%

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Arabic Abstract

العنوان: تقييم المواقع السياحية البيئية بالاستناد الى المؤشرات التنموية: نموذج معلوماتي

إعداد: إكرام زهير نجم الدين قطينة
إشراف: د. زياد قنام

ملخص:

اجريت الدراسة بين شهري كانون الثاني 2014 وحزيران 2015. وهدفت لتحديد المؤشرات التنموية التي يمكن الاستناد اليها في تقييم مدى ملائمة المواقع الطبيعية للسياحة البيئية، وإلى تقديم نموذج معلوماتي يسهل عملية تقييم المؤشرات والمقاصد السياحية معتمدة المنهج الوصفي. وقد تم تطبيق جولتين من تقنية دلفي على فريق متعدد التخصصات ذات العلاقة بالسياحة البيئية في الضفة الغربية، بمزيج من المعاينة بالكرة الثلجية والقصدية. وجاءت النتائج بحصول الدراسة في الجولتين على مستوى عال من التوافق في الآراء بين المبحوثين. في نهاية الجولة الأولى توصلت الدراسة إلى توافق في الآراء على 5 مجالات تنموية و11 من المعايير المرتبطة بها. أما في الجولة الثانية فتوصلت إلى توافق على 76 من المؤشرات شملت 34 مؤشراً متعلقاً بالمجال البيئي، 6 مؤشرات متعلقة بالمجال الاقتصادي، 22 مؤشراً مرتبطاً بالمجال الاجتماعي، 6 مؤشرات مرتبطة بالمجال الإداري و8 مؤشرات مرتبطة بالمجال السياسي. وخلصت الدراسة إلى أن النتائج يمكن الاعتماد عليها في عملية تقييم المقاصد السياحة البيئية، وان التغذية الراجعة كانت أحد التحديات التي تواجه تقنية دلفي، حيث امتنع العديد من المبحوثين عن تقييم المقترحات، وأن الخبرة والمعرفة التفصيلية للخبراء بالمؤشرات و قياس أهميتها المجتمعية منقوصة، وكان هناك ضعف في النظرة الشاملة للسياحة البيئية نتيجة للاختلاف الكبير في تخصصات العاملين في القطاع. وأوصت الدراسة بإخضاع المواقع المعرّفة كمقاصد سياحية لعملية التقييم استنادا لمخرجات الدراسة الحالية كاختبار لمخرجاتها وتقييماً لها، وتعميم ثقافة السياحة البيئية، وتوحيد مفاهيمها والتعريف بجدواها التنموية، وتطوير تطبيق مبني على شبكة الإنترنت وفقا للنموذج المعلوماتي المقترح، والاستفادة من المؤشرات بشكلها الحالي كأداة توجيهية لتقييم المقاصد وتطوير البرامج السياحية لها. أما على صعيد العمل المستقبلي فجاءت التوصيات بإجراء دراسات لوضع مقياس موحد من قبل المتخصصين لمؤشرات

كل مجال، وإجراء دراسة تأخذ بعين الاعتبار وجهة نظر السياح والمجتمعات المحلية حول المؤشرات التنموية، وتحديث مخرجات هذه الدراسة بإعادتها كون البيئة الفلسطينية متغيرة اجتماعيا واقتصاديا وسياسيا، وخبرة المتخصصين تزداد بتطور التجربة الفلسطينية في السياحة البيئية مع الزمن