



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

REVIEW AND ASSESSMENT THE SUSTAINABLE DEVELOPMENT INDICATORS FOR RURAL TOURISM IN IRAN, CASE STUDY: EAST AZERBAIJAN

Mofareh Bonab. Mojtaba

Department of Art &
Architecture,
University of Bonab, Bonab,
Iran

Majnoony Tootakhane. Ali

Department of Art &
Architecture, University of
Bonab, Bonab,
Iran
a.majnoony@gmail.com

Ebrahimi. Khadije

Master at Geography and Planing,
University of Mohaghegh rdabili,
Iran

ABSTRACT

Sustainable tourism development requires the informed participation of all stakeholders as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process requiring monitoring and control of impacts as well as of the implementation stage of corrective and mitigation measures and the effect of policy responses. This process can be very efficient if quantitative indicators are used that describe in an unbiased way the changes that are of importance for tourism development and management. This paper describes the identification of potential sustainable indicators for tourism destinations and enterprises in Iran, and their pilot application to a well-known tourism destination in Iran, i.e. Eastern Azerbaijan, to develop and implement an Environmental Management System for Sustainable Tourism in the area. In addition, the findings showed that tourism development is conducive to the sustainable development of rural business. Finally, according to research findings presented practical suggestions.

Keywords: Tourism, Environmental, Management, Sustainable Rural, Iran

1. INTRODUCTION

Tourism industry has become during the last decades a major sector of the world economy, especially in relation to the international trade in services. Until recently tourism has been misleadingly considered as having no environmental impacts because there was little knowledge about its real social, cultural, and environmental impacts. It is well known now days that the tourism affects the conditions of destinations and host communities, and more broadly the future of ecosystems, regions and nations.

With this position in the world economy, tourism has a moral responsibility to take the lead in making the transition to sustainable development. It also has a vested interest in doing so. This is because of its unique dependency on quality environments, cultural distinctiveness and social interaction, security and wellbeing. Tourism can be a tool to aid or drive regeneration and economic development as well as enhancing the quality of life of visitors and host communities. Making tourism more sustainable will contribute significantly to the sustainability of Third World countries, including Iran.



Sustainable tourism is directly related to [Tourism Sustainability Group, 2007]:

- ❖ Sustainable destinations, since the involvement of all the responsible stakeholders is more efficient at this level;
- ❖ Sustainable businesses, since sustainable tourism cannot be achieved if the tourism businesses do not embrace sustainability in their operations, and
- ❖ Responsible tourists, since tourists must react in a sustainable manner in their travel choice and behaviour.

Sustainable tourism development requires the informed participation of all relevant stakeholders, as well as strong political leadership to ensure wide participation and consensus building. Achieving sustainable tourism is a continuous process (Buckley, 2012: 529) and it requires constant monitoring of impacts, introducing the necessary preventive and/or corrective actions/measures whenever necessary. As a result planners and academics in many nations and specific destinations have been working to develop indicators suitable to provide unbiased information on the measurement of changes that are of importance for tourism development and management (EEA, 2007: 25).

Indicators are information sets which are formally selected to be used on a regular basis to measure:

- a. Changes in tourism's own structures and internal factors;
- b. Changes in external factors which affect tourism, and
- c. The impacts caused by tourism.
- d. Relations arising from the host community and tourists (Bramwell, 2011: 461-463)

In order to classify indicators several frameworks have been proposed (Van et al, 2007: 887). The OECD developed the Pressure-State-Response framework in the late eighties (OWCD, 1991), the UN adapted it to the Driving force-State-Response framework (UN, 1996) and the Environment Agency (EA) introduced the Driving force – Pressure – State – Impact – Response (DPSIR) framework (Jimenez, 1996).

The DPSR framework identifies cause – effect relationships and allows for the separation of categories of issues and provides flexibility for usage and analysis. The DPSR categories are defined as follows:

- Driving force indicators reflect pressures exerted by natural phenomena and anthropogenic activities that, in general, cannot be easily manipulated but provide essential information to understand the regional context.(Wärnestål and Nygren, 2013: 17-18)
- Pressure indicators reflect the pressures exerted on environment of a region, as a result of the driving forces.(Graymore et al, 2010: 462)
- State indicators assess the current status of the environment.(Heink and Kowarik, 2010: 586)
- Responses related to the social response via policies, laws, measures etc.(Nsemwa, 2013: 82)

The constituents of a State of tourism environment, as can be seen in Figure 1, are the Drivers and Pressures that are applied on the system. That State in itself leads to impacts on the human and natural environment, the Responses to which feed back onto the Drivers and Pressures.(Elmqvist et al, 2014: 117-121)

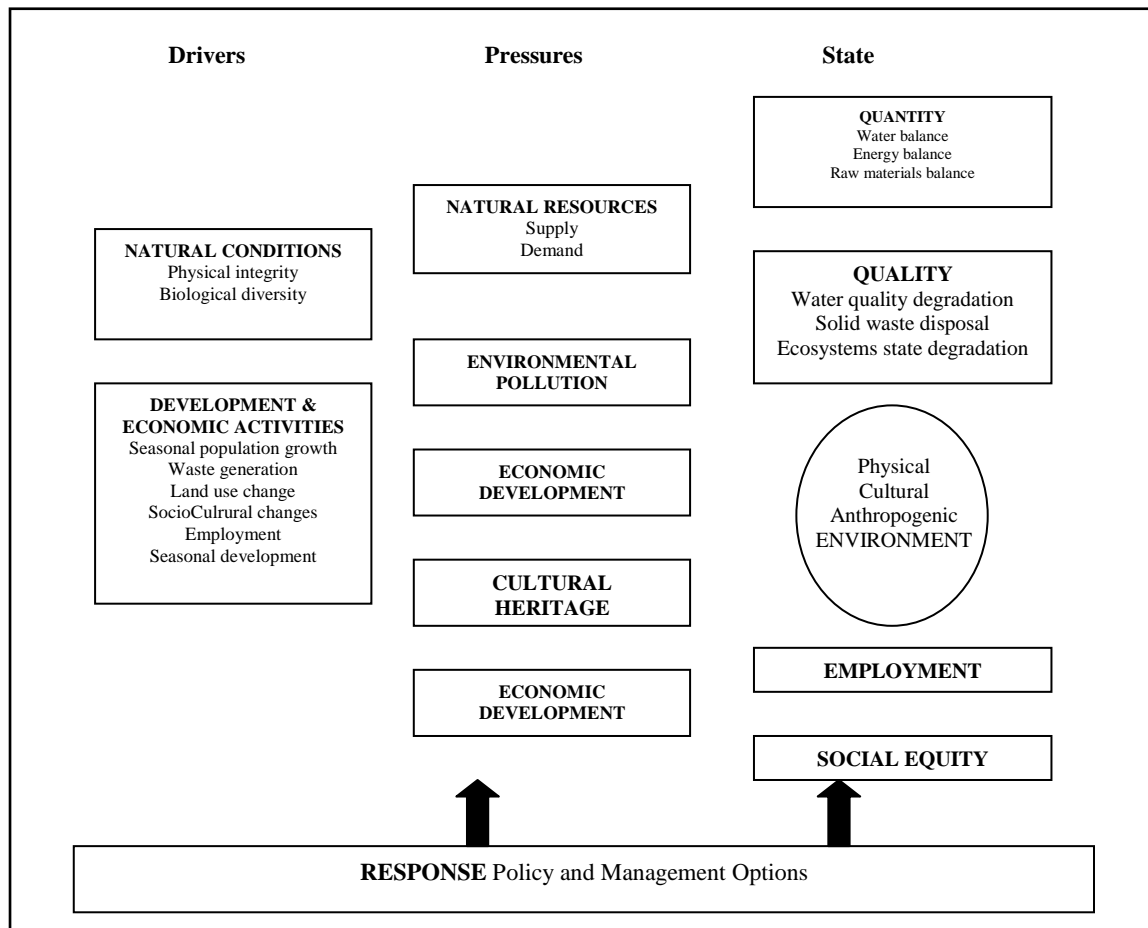


Figure1. Schematization of the DPSIR framework

Various international initiatives have resulted with a number of indicators for sustainable development that can be applied to tourism destinations and enterprises (The Agenda 21 & The Agenda 21 for Tourism & The UN Commission on sustainable development & the Global Reporting Initiative (GRI) & The Tour Operators Initiative). All these indicators are based either on available records and directly measurable data or rely on surveys of tourists, businesses and permanent population. A recent work on indicators by EUROSTAT, UNWTO, and the VISIT project (VISIT Project) resulted in a set of indicators reflecting the four aims of the proposed Iran Sustainable Development Strategy – SDS (World Tourism Organisation and United Nations Environment Programme, 2005):

- ❖ Economic prosperity;
- ❖ Social equity and cohesion, and
- ❖ Environmental and cultural protection.
- ❖ Eliminating inequalities between rural and urban

From these a set of 50 indicators are more relevant and achievable to be applied in tourism destinations and businesses and are presented in Table 1.

2. METHODOLOGY

Eastern Azerbaijan is located Iran, and is a well-known tourist destination worldwide. The area contains a variety of ecosystems which may be affected by tourist use, including fragile dune and beach social, areas subject to erosion and adjacent Wind and runoff as well as historic communities which can be tourist attractions.



Table 1: Destination Indicators (IR Sustainable Development Strategy)

No.	Indicator	Purpose – what the indicator shows	Collected by
1	Total visitor arrivals or bed nights per month	Tourism volume and seasonality	Records from accommodation establishments
2	Total day visitor estimate per annum or per month	Tourism volume and seasonality	Counts and visitor survey at arrival points/ key sites
3	Number of bed spaces (by accommodation type)	Tourism capacity and basis for calculating volume.	Existing records or regular audit
4	Annual average % bed space and bedroom occupancy of accommodation	Enterprise performance and basis for calculating volume.	Business records or survey
5	% of enterprises reporting growth in business over previous year	Relatively robust measure of growth and competitiveness	Business survey
6	Average spending per head	Economic return from tourism	Visitor survey
7	Local spending (or GDP) generated by tourism	Tourism value and contribution to local economy	Visitor survey showing spend plus business survey on occupancy (or local TSA process)
8	% of bed spaces available all year	Seasonality	Existing records, regular audit or business survey
9	Ratio of average occupancy (or total bed nights) between busiest and least busy 3 months	Seasonality	Business records or survey
10	Number of bed spaces per 1000 local population	Potential imbalance and pressure on community and resources	From indicator 3 and population records
11	Ratio of number of tourists to local population	Potential imbalance and pressure on community and resources	From indicators 1 and 2 and population records
12	Average length of stay	Value to the community as against impact of transport	Visitor and business surveys
13	% tourism enterprises accessible by public transport	Potential to accommodate non-car access and need for improvement	Facility audit and business survey
14	% of visitors arriving by means other than car or plane	Trend in transport modal change – effect on carbon emissions	Visitor survey
15	% visitor use of public transport when in the destination	Trend in transport modal change – effect on carbon emissions	Visitor survey

Table 2: Destination Indicators (IR Sustainable Development Strategy)

No.	Indicator	Purpose – what the indicator shows	Collected by
16	Total employment in sector as percent of total employment	Relative importance of tourism jobs and balance in the economy	Industry sector records/codes
17	% of tourism jobs that are seasonal only	Job quality and seasonality	Business survey
18	Average hourly earnings in tourism as ratio of all industry hourly earnings	Job quality	Business survey and comparative sector figures
19	% employees with vocational qualifications in tourism	Job quality and career conditions.	Business survey
20	% residents indicating that they are satisfied with local impact of tourism	Community acceptance and benefit from tourism	Residents survey
21	% residents identifying that they are directly benefiting from local tourism and % believing that it adds to overall quality of life	Community benefit from tourism	Residents survey
22	% of enterprises with recognized environmental certification	A robust indication that action is actually being taken	Records from certification schemes and/or business survey



23	% of enterprises reporting that they are taking environmental management measures	Wider (but less robust) indication of environmental management irrespective of reaction to certification	Business survey
24	Amount and proportion of waste sent to landfill (Total or sum from tourism)	Resource efficiency and land pollution	Municipal measurement or sum of data submitted by tourism enterprises
25	% of waste recycled by tourism enterprises	Commitment to resource efficiency	Business survey
26	Sewerage discharge (Total or sum from tourism)	Pollution potential	Municipal measurement or sum of data submitted by tourism enterprises
27	% tourism enterprises not connected to efficient sewerage treatment	Pollution potential	Municipal records and business survey

Table 3: Destination Indicators (IR Sustainable Development Strategy)

No.	Indicator	Purpose – what the indicator shows	Collected by
28	Water consumption (Total or sum from tourism) – total and at busiest period	Resource efficiency and community impact	Municipal measurement or sum of data submitted by tourism enterprises
29	% water recycled by tourism enterprises	Commitment to resource efficiency	Business survey
30	Water quality (sea and freshwater areas)	Nature conservation and attractiveness of environment for local people and tourists	Regular water sampling
31	Total energy consumption (or CO ₂ emissions) from tourist facilities	Resource efficiency and pollution	Sum of data submitted by tourism enterprises
32	Air quality	Attractiveness of environment for local people and tourists	Regular air purity sampling
33	Quantity of strewn litter at selected sites	Attractiveness of environment for local people and tourists	Observation. Visitor and residents surveys)
34	Number of people at selected sites on busiest days	Pressure on community and environment	Visitor counts and survey
35	Environmental state of selected sites	Damage to landscape and biodiversity	Observation, Visitor and residents survey
36	Number and size of protected sites and land area	Natural and cultural heritage quality and ability to withstand pressure	Recorded designations
37	Percentage of selected types of precious landscape area (e.g. length of coastline) that is built upon	Reduction in attractiveness	Land use records and observation
38	Percentage of area subject to land use planning and development control	Ability to withstand pressure	Land use plans
39	Contribution of tourism enterprises and visitors to conservation	Support from tourism for conservation	Visitor survey, business survey. Monitoring of specific schemes
40	% tourism enterprises participating in quality	Business engagement, quality and competitiveness	Records from schemes. Business survey

**Table 4: Destination Indicators (EU Sustainable Development Strategy)**

No.	Indicator	Purpose – what the indicator shows	Collected by
41	% visitors indicating that they are satisfied with overall experience	Destination quality and visitor satisfaction	Visitor survey
42	% visitors who are on a repeat visit and % who say they will return	Destination quality and visitor satisfaction	Visitor survey
43	% tourism enterprises meeting specified accessibility standards	Ability to provide a visitor experience without discrimination	Inspection scheme records. Business survey
44	% of visitors with a physical or sensory disability	Relative social inclusion of the destination	Visitor survey
45	% of visitors from lower socio-economic groups	Relative social inclusion of the destination	Visitor survey
46	% of visitors who are benefit from a supported holiday scheme	Importance of social tourism to the destination	Visitor or business survey
47	Level of satisfaction of visitors with a physical or sensory disability	Relative social inclusion of the destination	Visitor survey
48	Presence of a destination management organization that involves different stakeholders	Inclusive approach to destination management	Presence/absence against definition
49	% of businesses that belong to local tourism association	Degree of engagement by the private sector in destination management	Membership records
50	Existence of an agreed and monitored sustainable tourism strategy and action plan	Commitment to sustainable destination management	Presence/absence against definition

As with nearly all destinations, the area share the issue of control of building, issues of crowding of some specific localities in (peak) season, erosion, removal of solid waste, seasonality of water demand and waste production, identification and protection of fragile habitats, and seasonality of use.

Based on the DPSR analysis (Figure 1) sustainable tourism indicators for the destination and the enterprises in the area were selected based on measurable and observable data. The selected indicators for the tourist destination provide information about sustainable tourism aspects and are focused on the local economy and tourism development (local jobs, economic benefits from tourism), the society and culture (visitor fulfilment, local management control) and the environmental richness and protection (environmental resources, biodiversity) aspects of sustainable tourism policy and management.

Consequently, the proposed sustainable tourism indicators for the enterprises, are focused on the level of integration in the local economy (local jobs, economic benefits from tourism), promotion of local society and culture (local culture promotion, integration with community) and environmental protection (measures for the protection of natural resources, local environment integration).

3. IDENTIFICATION OF INDICATORS

From the identified 50 potential indicators (Table 1), the final selection of the indicators was performed applying the method proposed by EEA (VMM. MIRA-T 2004) and VMM (EEA. EEA core set of indicators, 2005) which is based on the fulfilment of six criteria :

- ❖ temporal coverage : the indicator should illustrate continuous or semi-continuous (i.e. discrete data, but frequently sampled) data;
- ❖ spatial coverage : the indicator should be applicable to the whole country or region;
- ❖ availability : the data for the indicator should be available and routinely allocated;
- ❖ methodology : the indicator should be significantly quantified, based on a well-founded method;
- ❖ target reaching : the indicator should allow to assess policy targets;
- ❖ policy relevance : the indicator should illustrate what is perceived as a sustainable environmental issue



In total 24 indicators were selected:

- ❖ 8 indicators related to local economic aspects;
- ❖ 8 indicators related to society and cultural aspects;
- ❖ 8 indicators related to environmental aspects

From them 2 can be considered as pressure indicators, 8 as response indicators and 14 as state indicators.

The proposed indicators are shown and analysed.

3.1 Ratio of tourism employment to total employment

The indicator shows the relative importance of tourism jobs and balance in economy. Total employment in tourist sector as percent of total employment is calculated as the ratio of the number of employees which are occupied in the tourism industry (hotels and restaurants) to the employees which are occupied in other industries such as : agriculture, construction, education etc

3.2 Ratio of part time to full time employment in tourism

The indicator refers to the job quality and seasonality. Percentage of part time to full time jobs in tourism employment is calculated as the ratio of the number of employees who are occupied in the tourism industry (hotels and restaurants) in part time jobs to those employees which are occupied in full time jobs.

3.3 Total fees collected by community for access/use of community attractions

The Governor of Eastern Azerbaijan collects fees from the Municipal Museum of rural Life. All other community attractions are free of charge.

3.4 Revenue from to tourism business permits licenses or concessions and taxation

3.5 Percentage (%) of tourism establishments open all year (of all kind)

The indicator refers to the seasonality of the tourist product.

3.6 Number of local people(men/women) employed in tourism enterprise

3.7 Tourist spending/spending per tourist

The indicator refers to the achieved economic return from tourism. An incremental trend of the indicator reflects the long term competitiveness and prosperity of tourism enterprises and destinations

3.8 Occupancy rates in accommodation establishments per year

The indicator refers to the tourist business performance.

3.9 Perception of value for money by visitors

The indicator refers to the destination quality and visitor satisfaction.

3.10 Existence of Public Transport Means

Trend in transport modal change- effect on carbon emissions. The aim of this indicator is to minimize pollution and degradation of the global and local environment and the use of scarce resources by tourism activities.

3.11 Percentage (%) of return visitors

The indicator refers to the destination quality and visitor satisfaction. Half of the tourist gave the higher rating (5) that they will return to Eastern Azerbaijan but one out of the five said that it is unlikely to return (1).

3.12 Existence of local development plan with specific goals for tourism

This indicator refers the commitment of the local authorities to the sustainable destination management.

3.13 Number of cultural events throughout the year

The indicator refers to the level of importance of the cultural activities as a tourist promotion means for the local authorities. The indicator is calculated as the number of the events that take place in the area of Eastern Azerbaijan to expose the culture and the customs of the region.

3.14 Historical sites/buildings, mosques

This indicator refers to the preservation and protection of historical and cultural heritage of the destination.

3.15 Number of tourist industry businesses using local products

3.16 Number of tourist visiting cultural sites or attending cultural activities (ratio to total visitors)

The indicator refers to conserving and giving value to natural and cultural heritage.

3.17 Percentage (%) of waste water or grey water recycled

The indicator refers to the commitment of the local authorities to resource efficiency. The reclaimed water volume produced is used for irrigation (public green areas, hotels, gardens, football playgrounds, etc).

3.18 Solid waste volume produced by the destination (m3) by month or year

The indicator refers to resource efficiently and land pollution.

3.19 Number of protected areas/ecosystems



The number of protected areas/ecosystems refers to the areas /ecosystems that are in danger from pollution and other contagious factors so that the government needs to take measures to protect them. It can be used to minimize pollution and degradation of the global and local environment and the use of scarce resources by tourism activities.

3.20 Number of tourism activities related to the biodiversity of the area (number and type of tours)

It refers to the natural and cultural heritage quality of the destination and its ability to withstand pressure. It is useful to maintain and strengthen cultural richness and biodiversity and contribute to their appreciation and conservation.

3.21 Number of tourism establishments recycling their own waste

A robust indicator that action towards environmental management is actually being taken.

3.22 Percentage (%) of businesses using renewable energy resources

A robust indicator that action towards environmental management is actually being taken.

3.23 % of establishments in the destination with formal certification (in each or all EMAS , ISO 14001, HACCP)

A robust indicator that action towards environmental management is actually being taken.

3.24 Number and type of tourism activities related to environment offered by the region

4. INDICATORS ASSESSMENT

4.1. Economic aspects

Almost 30% of the labour force of the Eastern Azerbaijan area is occupied in the tourism industry, with variations related to the business seasonality (tab 3 - Indicator EcDS1). During the winter time almost half of them are occupied in other economic activities. The business seasonality is a major issue of concern for the local authorities and the local association of tourism businesses especially if it is taken into account that less than 10% of the labour force is working as part time personnel (Table6 - Indicator EcDS2), almost 90% are locals (Indicator EcBS3) and only 1/3 of the businesses are open all time of the year (Table 5 - Indicator EcBS1).

Table 5: Indicator EcBS1

Quarters	Years					
	2010	2011	2012	2013	2014	2015
Jan-Mar.	13.45	15.07	14.16	13.49	15.02	13.66
Apr-Jun	25	28.14	26.16	28.37	14.52	14.20
Jul-Sept	24.36	27.28	28.18	26.09	13.54	17.5
Oct-Dec	22.12	24.77	26.94	21.08	16.33	13.33

Table 6: Indicator EcDS1 - Ratio of tourism employment to total employment (2010 – 2015)

Quarters	Years					
	2010	2011	2012	2013	2014	2015
Jan-Mar.	9.93	9.65	9.87	9.37	8.65	9.17
Apr-Jun	9.79	9.51	9.72	8.46	9.21	9.85
Jul-Sept	9.34	9.08	9.48	7.40	9.54	8.97
Oct-Dec	9.53	9.27	10.08	7.52	9.33	8.88

Table 7. Indicator EcDS2 - Ratio of part time to full time employment (2010 – 2015)

Quarters	Years					
	2010	2011	2012	2013	2014	2015
Accommodation establishments	10.3	11.5	12	14	14.2	14.65
Catering	28.6	29.7	29	25.35	13.5	15.28



4.2 Social and cultural aspects

The key principles underlying the regional tourism policy of the Eastern Azerbaijan area [16], include:

- ❖ sustainability;
- ❖ value rather than volume;
- ❖ focused investment;
- ❖ selective and targeted marketing, and
- ❖ profitability.

The Eastern Azerbaijan area strives to remain price competitive in the face of competition. This is best delivered by value-added elements and year-round pricing inducements to tour operators. With successful repositioning, product enhancement and a gradual shift to more direct distribution channels, the price point should improve, removing some pressure on price competition and refocusing on value.

The Challenges that the local authorities and the involved stakeholders have to cope with include :

- ❖ The image and perception of the area in the primary source markets, due to the publicity associated with Eastern Azerbaijan during the peak summer months .
- ❖ The seasonality issue, since most businesses close during the winter period due to lack of demand.
- ❖ The quality of some older guest accommodation and the overall environmental management (Table 8 – Indicator EBR3);
- ❖ Increasing competition from within Iran, and the newer Mediterranean resorts in other countries;
- ❖ Reflecting market trends, an opportunity exists to attract visitors on a year-round basis and to improve the competitiveness of the area by means of expanding the range of ‘attractors’ and improving the service quality and value;
- ❖ While tourism to the area is concentrated at Eastern Azerbaijan and Protaras, there is a strong view that the surrounding hinterland offers the potential to establish the Free Famagusta Area as a holistic tourism destination exposing the natural, historical and cultural attractions of the area to visitors staying at the resorts (Table 9 - Indicator SBS4).

Table 8: Percentage (%) of establishments with formal certification (ISO 14001, EMAS, HACCP)

HOTELS	
ISO 14001	5.5 %
EMAS	0
HACCP	8%

Table 9: Number of tourists visiting cultural activities (2010 – 2015)

Cultural events	Total visitors	Tourist visitors	%
Cultural winter 9/11/2010-22/3/2011	300 (Per day)	250	84
Christmas event	1000	500	50
Easter celebrations 5/4/2011-10/4/2012	1000 (per day)	500	50
Flood Fair 26/5/2012-28/5/2013	1 st day 3000 2 nd 10000 3 rd 3000	1500 3000 1500	50 30 50
Children’s Festival	1000	400	40
Medieval Festival 8/7/2013-16/7/2014	300 (per day)	270	90
Cultural summer 7/1/2014-26/7/2015	10000 (per night)	800	80



4.3 Environmental aspects

Eastern Azerbaijan is located at the south eastern coastal zone of Iran, and is a well-known tourist destination worldwide. Tourists, arriving at Eastern Azerbaijan, seek for several types of activities, including:

- ❖ Beach activities – swimming, sunbathing, sports;
- ❖ Viewing and photography of landscapes;
- ❖ Boating;
- ❖ Fishing;
- ❖ Touring – by motor vehicle, bicycle, riding animals, or on foot;
- ❖ Temperature (moderation)

The area contain a variety of ecosystems which may be affected by tourist use, including fragile dune and beach systems, areas subject to erosion and adjacent marine ecosystems, as well as natural beauty areas and historic communities which can be tourist attractions (Table 8 - Indicator EDR2).

Table 10 Number of tourism activities related to biodiversity of the area

Type	Number
Picnic Sites	2
Natural Trails	6

As with nearly all destinations, the area share the issue of control of shore and building, issues of crowding of some specific localities in (peak) season, erosion, solid waste generation (Table – Indicator EBR2) and removal of solid waste from beachfront areas, seasonality of water demand and waste water production and recycling (Table – Indicator EDR3), identification and protection of fragile habitats, and seasonality of use. In addition, due to these reasons – notably high use and limited seasons, it also tend to have issues related to employment, training, retention of services out of season, and provision of funding for infrastructure which is heavily used only for parts of the year.

Table11. Municipal solid waste volume (m³)

Table 11: Percentage (%) of waste water or grey water recycled

	2010	2011	2012	2013	2014
January	600	600	500	300	400
February	600	700	520	360	600
March	600	600	650	550	650
April	900	900	900	850	900
May	1800	1800	1700	1750	1800
June	2200	2200	2100	2150	2250
July	2700	2700	2360	2340	2540
August	2800	2800	2800	2850	2850
September	2700	2700	2650	2850	2850
October	2000	2700	2600	2500	2500
November	700	700	700	650	650
December	600	600	550	500	-
TOTAL	18200	19000	18030	17650	17990

The analysis of the indicators shows that the main challenges for the area towards the sustainable development are its image and perception in the primary source markets, due to the publicity associated with Eastern Azerbaijan during the peak summer months, and the seasonality of operations as most businesses close during the winter period due to lack of demand. On the other hand locals depend heavily on the tourist industry their majority working on a full time basis.

The same conclusion was the result of the most recent “Tourist satisfaction barometer” of the Iran Tourist Organization (2015), according to which Eastern Azerbaijan is placed 6th among the other tourist locations in Iran², better only from Pafos and Polis, in relation to the protection/preservation of the environment and the variety and quality of the activities and entertainment opportunities



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

offered in the area¹. This is directly related to socio-cultural issues (preservation of the local character, monuments, built environment, trips, entertainment). The same conclusion resulted from the discussions with the local stakeholders.

5. CONCLUSIONS

In developing sustainable development programmes, the use of indicators that describe the response of tourism activities to environmental problems at the level of tourism destinations and businesses is still at the very first steps. However, their use can be of valuable help since their use can help [17] :

- ❖ For better decision making and minimising of risks or costs;
- ❖ To identify emerging issues allowing prevention;
- ❖ To identify impacts allowing corrective actions and mitigation measures when needed;
- ❖ To measure the performance of the implementation of plans and management activities and to evaluate the progress in the sustainable development of tourism;
- ❖ To reduce the risk of planning mistakes and to identify limits and opportunities;
- ❖ To provide greater accountability and credible information for the public and other stakeholders of tourism;
- ❖ to continuous improvement.

This paper presents the pilot application of a number of sustainable indicators for tourism destinations and businesses in a well-known tourism destination in Iran, ie. Eastern Azerbaijan, in order to develop and implement an Environmental Management System for Sustainable Tourism in the area.

The methodology presented in this paper can be applied in other tourism destinations and businesses in the country but in other countries as well. Performing the same exercise in different destinations a benchmarking process can be initiated that would help the various stakeholders for better planning and to improve their environmental behaviour.

6. REFERENCES

- [1] Bramwell, B. (2011). "Governance, the state and sustainable tourism: A political economy approach." *Journal of Sustainable Tourism* **19**(4-5): 459-477.
- [2] Buckley, R. (2012). "Sustainable tourism: Research and reality." *Annals of Tourism Research* **39**(2): 528-546.
- [3] EEA. EEA core set of indicators, Guide. Technical report no. 1/2005. 2005.
- [4] EEA. Environmental indicators : typology and overview. Technical report, no. 25, 1999.
- [5] Elmqvist, T., et al. (2014). *Global Sustainability & Human Prosperity:—contribution to the Post-2015 agenda and the development of Sustainable Development Goals*, Nordic Council of Ministers.
- [6] Graymore, M. L., et al. (2010). "Sustaining human carrying capacity: a tool for regional sustainability assessment." *Ecological Economics* **69**(3): 459-468.
- [7] Heink, U. and I. Kowarik (2010). "What are indicators? On the definition of indicators in ecology and environmental planning." *Ecological Indicators* **10**(3): 584-593.
- [8] Iran Tourism Organisation. *Strategic Plan for Tourism Development 2003-2010*. 2003.
- [9] Jimenez-Beltran D. *The EEA and its role in encouraging better water management*. EWPCA workshop on environmental technologies. Copenhagen; November 13th, 1996.
- [10] Nsemwa, C. E. (2013). *The assessment of international conventions and municipal laws in relation to the protection of coastal environment: the case of Dar es Salaam Tanzania*, Mzumbe University.
- [11] Organisation for Economic Co-operation and Development. *Environmental Indicators : a preliminary set*. Paris : OECD; 1991.
- [12] T.Van Gervrn, C. Block, J. Geens, G. Cornelis, C. Vandecasteele. *Environmental response indicators for the industrial and energy sector in Flanders*. *Journal of Cleaner Production* **2007**; **15**: 886-894
- [13] *The Agenda 21 for Tourism*. WTO, WTTC, EC. 1995. <http://www.world-tourism.org/sustainable>.
- [14] *The Agenda 21*. Chapter 40. <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter40.html>
- [15] *The Global Reporting Initiative (GRI)*. <http://www.globalreporting.org>
- [16] *The Tour Operators Initiative*. <http://www.toinitiative.org>
- [17] *The UN Commission on Sustainable Development*. <http://www.un.org/esa/sustdev/nat/info/indicators/isd.html>
- [18] *The VISIT Project*
- [19] *Tourism Sustainability Group. Action for more sustainable European tourism*. February 2007.



GLOBAL JOURNAL OF ADVANCED RESEARCH
(Scholarly Peer Review Publishing System)

- [20] United Nations. Indicators of sustainable development : framework and methodologies. New York : United Nations; 1996.
- [21] VMM. MIRA-T 2004, Milieu- en natuurrapport Vlaanderen : thema's. Leuven. LannooCampus; 2004 D/2004/45/502.
- [22] Wärnestål, P. and J. Nygren (2013). Building an experience framework for a digital peer support service for children surviving from cancer. Proceedings of the 12th International Conference on Interaction Design and Children, ACM.
- [23] World Tourism Organisation and United Nations Environment Programme. In making tourism more sustainable. 2005
- [24] World Tourism Organisation. Indicators of sustainable development for tourism destinations : A Guidebook. 2004