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Survey the role of bird watching for Tourism development of Sistan and Baluchestan province by using Pearson Correlation

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A B S T R A C T

Sistan & Baluchestan province of Iran with the extent of 178502 Km² and 11.2 percent is the country's biggest province by area. It is located in South East of Iran and has 35 wetlands where annually a large number of water birds migrate to spend their winter. With such potential as Oman's long beach (approximately more than 360 km) is the most suitable place for bird watching and has a significant role for tourist attraction and the development of tourism in this province. So we collected data via questionnaire by using Lickret method with a good permanence of 0.982 Cronbakh Alfa. The results obtained from 54 questionnaires were analyzed by using SPSS software and Pearson Correlation. The result prove that there is a conceptual relation between tourism development and bird watching factor such as variety, accumulation, richness, habitat, preserved and endangered extinction species.

Introduction

Today large number of countries have perceived spread dimension of tourism industry from production, employment and as an income source, though they have anticipated a lot to develop this industry from past few decades (Rezvani, 1390). Islamic republic of Iran is one of the countries that potentially enjoys natural,

historical and cultural attractions and for this reason a lot of tourists from all over the world have visited this region due to its great expanse ,climate variety, special geographical position and altitude longitude varieties, Iran possesses different habitat and animal species (Akbari and Garakhlu 1389). The variety in birds and species is on

of the major cause for Iran to be one of the important tourist attractions. People always pay a lot of attention to the world of birds because of their versatility, beauty and number in comparison with other animals (Cheraghi and Sateie 1389). Iran has different bird species had been located in three bio geographical region, Pale arctic, Indomalial and African (Cheraghi and Sateie 1389). This is the main reason that makes Iran one of the attractive countries for watching birds (Seeling and Dekeyser, 2009). Bird watching is one of the main branches of ecotourism which studies role and effect of birds on tourism development in wetland sites (Cheraghi and Sateie 1389).

Wet lands or winter immigrant birds habitats cover 6 percent of the earth and play an important role such as; weather and water settlement, survival, feeding underground water canals, marine life and bird habitat, preventing desert expansions and other features (Dugan, 1990). More than hundreds sites have been recognized as bird habitat in Iran (Amozaga, 2006). The existing eight different habitable types have made Iran an attractive and suitable place for bird watching tours. Among these two types are mentioned in this survey related to studied sites (Bagherzadehkarimi, 2007).

1. Iran south east region (Oriental habitat type) this site is farthest end of oriental region or India and Malaysia which also includes Hormozgan and some parts of Sistan and Baluchestan. The climate of this region is hot and humid most of the birds came from oriental region. The most attractive bird of this region includes, Great White Egret, Indian Pond Heron, Indian lark, osprey, Indian green finch, Great Stone Plover and Western Reef Heron. Gando conservative region, Mangrove forests in Govatr, Oman beaches, Mangrove forests in the east of

Bandar Abbas and south parts of Makkoran mounts are the main part of this habitat type (Bagherzadehkarimi, 2007).

2. Wet lands and seashores are Considerable habitat type all over the country where water birds and side water birds migrates. Most of the endangered and attractive species are found in this region. Iran has 22 wetlands (Sistan and Baluchestan has 3 international wet lands) and more than 2000 km seashore (Khazar seashore and Persian Gulf and Oman sea). Among all other habitats these types has suffered the most. Unlimited hunting, poison the surrounding and damaging the habitat are only few cases of harming this habitat. Sea shores are the best habitat for Gulls and Terns. We can also view a large number of side water birds like plovers, sander ling and sandpipers in seashores (Bagherzadehkarimi, 2007).

Officials in Iran and Sistan and Baluchestan have ignored bird watching which is a branch of ecotourism and no essay, article and study have been done independently. Although a few birds and tourism surveys have separately been done. The surveys performed by foreign counties have proved that bird watching have a positive financial effect on the development of tourism.

A survey titled as development of ecotourism and bird watching through training and conservation environment in Vietnam have been done in Hanovi university by Huyang lung hanson and lea teragdav in 2011. The conclusion shows that development of bird watching helps economic growth and environment conservation. According to this survey Vietnam government decided to establish 30 parks, 67 conservative regions, 50 wild life shelters and 16 marine conservative regions,

they helped to improve this type of tourism by increasing personal knowledge via training in credible scientific institution. The tourists are being guided by establishing comprehensive information bank for recognizing birds. For example some tourists were able to recognize the bird species just by their voice (Hanson, 2011).

In Extremadura another survey titled planning, developing and income of bird watching tourism have been done by Joz mineral Hernandez & Maria Kampan in 2011. Its results shows that bird watching tourism is a reality and everyday people loves to visit natural places and enjoy wild life. Extremadura has considerable bird watching potentials and capacities. Unfortunately lacks facilities in order to increase its tourism growth. This region has caused to increased growth and improved conservative situation in Extremadura. For economic development point of view services such as accommodating convenience must be used so that living standards will rise (Hernandez, 2011).

Materials & Methods

Sistan and Baluchestan province with 187502 km expansion have been located in south east of Iran with geographical characteristics, between 25 degree, 3 minutes to 31degree and 28 minutes north width 58 degree and 47"to 63degree and 19"east length. This province has 11.2 % of countries land and is the biggest province by area (Ebrahimzade, 1386).Because of Oman sea salt water in the north and beautiful Loot desert in the vest and fresh water lake and Hamooninternational marsh in the north, it has a high climate and ecosystem variety.

335 bird species has been recognized and lives here and are increasing constantly. More than 75 species are winter immigrant

water birds (Mansoori, 1379).bird watching is a kind of tourism that provides scalability among people of the world for years. A large number of nature fans have been attracted to this safe entertainment. Bird watching has such a tranquility and pleasure that many psychologists advise it for mental and spiritual patients.

Because of limited information on this case we have prepared a questionnaire by using Likert method (according to Kronbakh Alfa test its permanence is 0.982 at a good level) to gather required information, our statistical group includes consists of experts of Department of Environmental Science which are well trained. Questionnaires include 16 questions in Likert method and 11questions that reflects special features of society. Correlations between variables were achieved by using Pierson correlation.

38 wetland sites where immigrant birds spend their winter has been recognized and recorded in Sistan and Baluchestan,29.These sites have water and birds throughout winter season.

Result and Discussion

- ❖ 72.2 percent of statistical community were men and 27.8 percent were women.
- ❖ 81.5 percent have M.A, 7.4 have B.A and 11.1 have PhD degree.
- ❖ 83.3 percent of statistical team has a degree in environmental branches.
- ❖ 55.6 % of people were at the age of 35-25, 33.3% were at the age of 45-35 and only 11.1% were under 25.
- ❖ 96.3% of the people were able to recognize and distinguish immigrant birds.

- ❖ 88.9% of them were expertly acquainted with features, benefits and harms caused to birds specially immigrant water birds.
- ❖ 31.5% of people would like to travel with expert tours 24.1% with their colleagues and 14.8% with their friends and others with their family.
- ❖ 40.7% prefer to have 4- 5 days trips and 20.4% like to have 3-2 days trips and 27.8% Most of the female tourist prefer one day tour.
- ❖ 79.6% knows the expressions like tourism and ecotourism.
- ❖ 85.2% of people know the meaning of expert as regarding bird watching.
- ❖ 94.4% of statistical team members were equipped and familiar with endangered species of birds and were able to distinguish between them.
- ❖ 79.6% are acquainted with the effective role of variety and accumulation, richness and ...of the birds in tourism development and they confirm that.
- ❖ 83.4% enjoys watching and hearing the birds.
- ❖ 90.7% had traveled just for bird watching.
- ❖ 94.4% believes that going to the nature and watching the birds reduces mental and spiritual pressures from industrial and mechanical life style.
- ❖ 75.9% believes that bird watching industry have been ignored by officials.
- ❖ 22.2% of people have mentioned that the main reason of ignoring this subject is lack of knowledge and administrator, 18.5% said lack of informing, and 16.7% believed economic problems and 13% have said lack of enough training.
- ❖ 46.3% choose winter, 35.2 spring, 14.8% autumn and 3.7% summer for bird watching.
- ❖ 88.9% are completely acquainted with expression like wet land and its benefits and uses and....
- ❖ 92.6% believes that bird migration to wet land habitats increases not only natural beauty but also develop tourism aspects.
- ❖ 77.8% of tourists are willing to spend 10-25 thousand Tomans, 13% less than 10 thousand Tomans and 9.3% 25- 40 thousand Tomans daily for bird watching.
- ❖ 38.9% of people hold tourism and cultural inheritance organization responsible for bird watching, 25.9% department of environment, 16.7% the ministry and 18.5% other organizations.
- ❖ 25.9% chose bird book, 24.1% binocular, 20.4% telescope and 13% camera as the main equipment for bird watching.
- ❖ 94.4% believed that bird watching causes tourism development.
- ❖ 92.6% believed that bird watching can conserve environment and wild and are willing to volunteer to help.
- ❖ 91.8% believed that the income from bird watching may increase development of tourism
- ❖ 87.1% says income from bird watching can help to support programs such as wild life preservations and environmental safety.

Conclusion

According to the gained information we can conclude that S.B is a suitable site for migration of 68 species of immigrant water birds .This province have many natural attractions and enough ecotourism potentials in the realm of winter immigrant water birds and their habitats including 3 international wetlands (Bahoo estuary wetland, Hamoone Poozak wetland, Hamoon, Hirmand and Sabery wetland), 38 wetland sites suitable for winter immigrant birds and 360km beaches.

Table.1 Bird watching sites situation of Sistan and Baluchestan

NO.	Name Site	Situation	NO.	Name Site	Situation
1	Nargesidam	With bird	20	Estuary and Govatr Gulf	With bird
2	Mashkid dam	With bird	21	Pishin dam	With bird
3	Kheirabad dam	With bird	22	Bahoo Estuary	With bird
4	Shikalak dam	With bird	23	Port and Pasabandariland	With bird
5	Parak dam	With bird	24	Estuary andBeris port	With bird
6	Zirdan dam	With bird	25	Ramin Port	With bird
7	Tang Estuary	With bird	26	Liparseasonal Marsh	With bird
8	Estuary and seashore park	With bird	27	Lolokdan Marsh	With bird
9	chahnime lake	With bird	28	Estuary andPozm Gulf	With bird
10	Mydani Estuary	With bird	29	Galak Estuary	With bird
11	Kavari Marsh	Without bird	30	Javaher Gulf	With bird
12	Samsoor River	Without bird	31	Estuary andTiss seashore	With bird
13	Apatan dam	Without bird	32	Estuary andKonarak seashore	With bird
14	Hamoon Marsh	Without water	33	Konarak Gulf	With bird
15	Jazmoriyan Marsh	Without water	34	Bahokalal River	With bird
16	Sardarya Marsh	Without bird	35	Rashedi Estuary	With bird
17	JoJak dam	Without bird	36	Konarak Cliff	With bird
18	Bampor dam	Without bird	37	Hoomadan Estuary and Kalat port	With bird
19	Bazman dam	Without water	38	Shirgovaz dam	With bird

Table.2 Recognized immigrant water birds list

NO.	Species Name	NO.	Species Name	NO.	Species Name
1	Green Sandpiper	24	Red-crested Pochard	47	Great Crested Grebe
2	Terek Sandpiper	25	Pochard	48	Little Grebe
3	Common Sandpiper	26	Greater Scaup	49	Dalmatian Pelican
4	Ruddy Turnstone	27	Water Rail	50	Great Cormorant
5	Sanderling	28	Moorhen	51	Grey Heron
6	LittleStint	29	Common Coot	52	Great White Egret
7	Dunlin	30	Crab Plover	53	Western Reef Heron
8	Broad-billed Sandpiper	31	Eurasian Oystercatcher	54	Little Egret
9	Slender-billed Gull	32	Black-winged Stilt	55	Squacco Heron
10	Parasitic Skua	33	Great Stone Plover	56	Indian Pond Heron
11	Sooty Gull	34	Red-wattled Lapwing	57	Striated (Little Green) Heron
12	Great Black-backed Gull	35	Grey Plover	58	Black-crowned Night Heron
13	Armenian Gull	36	Ringed Plover	59	Black Stork
14	Caspian Gull	37	Kentish Plover	60	Spoonbill
15	Heuglin'sGull	38	Mongolian Plover	61	Greater Flamingo
16	Great Black-headed Gull	39	Greater Sand Plover	62	Ruddy Shelduck
17	Black-headed Gull	40	Black-tailed Godwit	63	Shelduck
18	Lesser Crested Tern	41	Bar-tailed Godwit	64	Eurasian Wigeon
19	Sandwich Tern	42	Whimbrel	65	Gadwall
20	Gull-billed Tern	43	Eurasian Curlew	66	Common Teal
21	Caspian Tern	44	Redshank	67	Marbled Teal
22	Great Crested Tern	45	Marsh Sandpiper	68	Mallard
23	Northern Shoveler	46	Greenshank		

Table.3 total statistic of the bird censuses in different sites of Sistan and Baluchestan

NO.	Scali Marsh sites	Number of bird species	Total Bird Population
1	Estuary and Govatr Gulf	54	1881
2	Pishin dam	31	446
3	Bahoo Estuary	53	13190
4	Port andPasabandar island	23	2492
5	Estuary and Beris port	28	731
6	Ramin Port	21	225
7	seasonal MarshLipar	27	327
8	Lolokdan Marsh	15	139
9	Estuary and Pozm Gulf	37	2313
10	Galak Estuary	38	2581
11	Javaher Gulf	18	421
12	Estuary and Tisseashore	34	894
13	Estuary and Konarak seashore	28	3522
14	Konarak Gulf	19	1747
15	Bahokalat River	39	1553
16	Rashedi Estuary	35	1239
17	Konarak Cliff	21	2414
18	Hoomadan Estuary and kalat port	27	551
19	Shirgovaz dam	27	165
20	Nargesi dam	30	326
21	Mashkid dam	38	294
22	Kheirabad dam	33	284
23	Shikalak dam	27	262
24	Parak dam	32	198
25	Zirdan dam	16	102
26	Tang Estuary	40	2932
27	Estuary and seashore park	29	1347
28	Chahnimeh lake	25	1865
29	Mydani Estuary	57	3387

These capacities have made S.B an important case in ecotourism and bird watching by virtue of gained information from questionnaires by analyzing them via SPSS soft ware and evaluating them, we conclude that first there is a meaningful relation between bird watching, its related parameters and Sistan and Baluchestan tourism development. And secondly there is a good relation between our variables according to Pierson correlation, which shows relation between bird watching and tourism development in S.B. The numbers achieved from this survey are correlated with each other and are near one which according to Person is a positive sign. Hence the theory proposed by us that bird watching and its effects on tourism development is proved to be right.

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