

Evaluating the Use of Renewable Energy for Developing Tourism Industry

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Abstract: The UNESCO has implemented the "villages with renewable energy" project since so many years ago. Considering such a fact, the officials of the Iranian tourism industry can also develop plans and programs along with the given project hoping that they would have the benefit of the support from the UNESCO to help the tourism. Nowadays, the world has highly considered the renewable energy and many organizations and institutes have directed their purposes toward such issue. Due to its climatic condition, our country has the potentiality for the exploitation of this kind of energy. An example of such energy is the use of wind and sun energy, which can be best, exploited and used regarding the vast size and space of Iran and the high source of the given energy for the so-called "the villages with renewable energy" plan. The "villages with renewable energy" project is implemented under the UNESCOs supervision and objectives in some areas of the world. The "villages with renewable energy" plan can provide the country with tourists' attractions, which is considerably important for the country.

Key words: Tourism • Sustainable Development • Renewable Energy • Scenario

INTRODUCTION

Windward (vent hole) is considered as one of the symbols of Iranian civilization. It is not exactly known which city in Iran was the first to build the first vent hole, but the travel writers of the medieval era mentioned some cities in the desert such as Yazd, which have warm and dry climate. Flume (Waterway), domed houses and vent hole are undoubtedly the symbol of Iranian civilization. The first vent hole in the history record of the world was first emerged in Yazd.

The vent hole in Dolatabad Garden with the height of 33 meters in Yazd is the tallest vent hole in the world. The eight-sided vent hole with a long stature is unique in the world. There is a direct relationship between the vent hole and the climate in each region [1,2].

Vent hole serves as an air-conditioner running over water in a way that the wind goes through different holes in to the vent hole and is directed toward a pool of water, which causes water evaporation when exposed to the water. The evaporation process absorbs the heat because of which the air entering the vent hole is cooled and is directed to the summer-suited rooms that would ventilate the rooms. In some old buildings belonging to the rich people, the pool area was enclosed so that the wind entering the vent hole would be directed through some

channels, which were provided for each room to receive the cool air; such a condition would exist if an only if there were many summer rooms. Another use of the vent hole was for cooling the basement space, which were used for storing the foods, as well as cooling the warehouses [3].

The Iranian architectural capabilities used to build the vent hole in a way that they meet both the environmental requirements and the attractiveness of the buildings. The passerby when going through the city streets and watching the various vent holes would take the advantage of visual pleasure. Vent holes have different types, but one of unique ones is the pipe-like type the example of which is existed in Sirjan. Due to having the modern architecture, especially using the mechanical installation in building the houses, the role of climate in buildings gradually vanished. However, from the mid-last century, which emphasized the importance of the climate and environmental condition, the use of technologies compatible with the environment, industrial waste recycling and suing the clean energies such as the water, wind and sun energies received significant attention. Speaking for the architecture, the issue of the environment and the attempt to design the buildings, which were compatible to the climate, came into vogue [4].

In fact, it seems that the monuments of ancient Near East such as the Pharaohs' time of Egypt and Babylon used such architecture. In the Fatimid (Fatimian) era, "Badhanj" or vent hole was part of the city structure, because the astronomer, Ibn-e-Yunus, discussed the proper direction for "Badhanj" or vent hole. We know that the cool air in Egypt blows from the North or Northwest so that's why the Egyptians "Badhanj" or vent-hole was a hole. From the written works of Abdolatif Baghdadi, the cost of the vent holes for the large buildings had reached up to 500 dinars (the currency of that time). Apparently, the oldest example of this type of vent hole remained in Cairo is the wall of Kibleh of the Asaleh Talaee mosque [5-7].

A Comparative Study of the Energy-Based Economy and Tourism Development: The tourism industry in Iran based on a 20 year prospective in the tourism sector in 1404 horizon with %1.5 growth in the number of incoming tourists should attract at least 20 million tourists annually from the global market to which it necessitates an investment of over 30 billion in the industry, which is proportionately divided between the private sectors and the government of which %16 is given to the government and the remaining part is on the private sectors shoulder. However, the current situation is not satisfactory and shows the difficult route that the Iran faces to achieve 2% of global tourism revenue.

The tourism industry is considered the third dynamic and developing economic phenomenon after the oil and automobile industries. The world development and cooperation organization has announced that after the banking industry, the tourism industry is the second service provider in international trade and based on the statistics and figures released by the world trade organization, the amount of the money in the tourism sector worldwide in 2010 would reach to over 1400 billion which is approximately about 10.6 of the total international investment. It is also predicted that the number of the world tourists in 2010 would reach to 1 billion people which would earn an income of about 1550 billion dollars for the countries involved

The Geographic distribution of revenue from tourism in the world is not the same that is the 80% of the revenue and job vacancies related to the tourism industry was occurred in the America and Europe and from the remaining 20%, only 2.5% was allocated to the Middle East of which less than 1% was related to Iran. The proper use of the potentialities and capacities of tourism in Iran would bring about a benefit twice as much of the oil resources for the country.

Statistics showed that between 400 and 700 billion dollars of national income of countries come from the tourism industry, but unfortunately for the case of Iran, despite the richness of cultural, historical and natural advantages, this income has not been met yet, While many macro-economic programs in tourism industry in countries like the United Arabic of Emirates, Turkey and Saudi Arabia would fail if we take out the Iranian investment. The 25 billion dollars investment provided by the private sectors and 5 billion dollars on the government part based on the 20- year development perspective and allocating 5% of the states budgets to improve the tourism infrastructures of each province would be a significant step for developing tourism industry. One way to move from the oil-based economy to non-oil economy is to change the country's economic structure and an integrated approach in economic, social, legal and administrative aspects would be effective to achieve such a change. Meanwhile, due to the timely scientific information sharing through the experiences of the people around the world and going beyond the information borders, culture improved the variety in the case of economy [2-5].

Tourism and the Oil-Based Ideas: During this year in March, Iran hosted 40,471,770 tourists, which showed an increase of over 95% compared with that of the 20 million tourists of the last year. Based on the given statistics, more than 24,283,062 people had family trip and 3227741 stayed in camps and 12950966 were provided with the classes in schools tents and campers, which is the result of tourism boom and a 95% increase in New Year holiday trip, which led to such an opportunities.

Iran is among the oil- rich countries in the Middle East that an increase in the oil prices would result into its economic growth. Consequently, by an increase in the world oil prices and oil revenue growth, the tendency to reform the tourism industry will dramatically be reduced. Iran's oil income is the major cause and the leading factor, which is affected by the global economy. On the other hand, because Iran's oil revenue (based on the currency) is dollar-based, a decrease in the dollar value would lead to a decrease in the real value of oil and, therefore, the oil revenues would be reduced.

Even Saudi Arabia, which is one of the oil-bearing countries of the world, is focusing on tourism industry and attracting more tourists by its three main projects in the Red Sea coast. The projects have been approved by a cost of \$ 40 million because the double return of this investment would be obviously less than the time needed to extract a barrel of oil. Perhaps for Iranian, the tourism

industry would be a popular and attractive industry and serves as a good support for the economy; and if we try to integrate the oil revenues and the tourism industry instead of setting the opposite and separated, we could have better and more productive outcome because the background in the oil industry would be an opportunity to invest in Iran's oil tourism industry, that's because the world knows Iran as having the oil and gas resources. Unfortunately, the oil well of Middle East oil is located in Masjed Soleiman city center neighboring the residential areas in the region. Moving from the oil-based economy to tourism-based economy is in direct relationship with the private sector development. Privatization of the offices and tourism institutes means that the tourism industry must rely on its own source of financial support instead of seeking dependence on the government's support for improving its activities in the country [4-8].

Economy and Tourism: In the world today, the number of free resource is quite few if there are any left that is every type of human activities creates a demand that requires someone pay for the expenses, but undoubtedly many demanded goods in tourism are public goods. They can be facilities that have not been fully exploited and anyone can use them without reducing the use of the facilities by the others. In other words, this indicates that the ratio of cost - chance is equal to zero.

If a family goes onto a vacation in a non-holiday season with their own car, they can use road system, public or national parks and beaches and enjoy the sceneries by watching or taking pictures without intruding other people's right. However, if the same family travels in holiday seasons, they will have to pay a significant chance cost due to the vehicles congestion and people swarm to tourist destinations. Travel and tourism providers will offer various combinations of the scarce resources, which other providers use. Many efforts have been made to identify and classify sources, which have statistically significant contribution to the travel and tourism (Table 1).

Global investment in the tourism industry suggested that the tourism industry is an industry distributing revenues and when a tourist enters a country, he should pay for the costs of the service, which are provided for him and the payment would be in foreign currency. Therefore, this industry can replace the oil-based economy. Statistical analysis of tourism in different countries in 2008 proves the given point, which shown in Table 2.

Meanwhile, 25% of tourists in France just wanted to see Paris, half of the tourists in Mexico wanted to see the coast of Cancun and half of the tourists visited Spain desired to see the beaches of southern regions of Spain. The Income from tourism in Italy was exactly equal to Iran's budget in 2009 in budget and the Germany in the

Table 1: Types of tourists based on the relation with the destination country

Type of tourist	The effect on the type of tourist destinations and travel industry
Researchers	Few and almost non-consuming of (tourism products)
Elites	Relatively few, showing no tendency for the high quality travel and tourism products and the possible cause for investment in the destination country
Guest or owning a house (second house)	Constant traveling applicant, but staying in host homes or private residential house, therefore using few tourism products of the host country but the cause of local expenditure increase in the host country
Individual traveler	Numerous with extensive travelling, high tendency for the tourism products manufactured in the host country or belonging to that country
Mass tourism	Remarkably numerous, in touristic areas and predetermined destinations the total dependence of the travelling industry on them (like private airplanes), high economic effect and expenses in the host country, the probable cause of significant investing of the tourists' country in the host countries

Table 2: Statistical analysis of tourism in different countries in 2008.

Countries	Number of foreign tourists (million)
France	80
America	58
Spain	57
China	53
Italy	43
United Kingdom	30
Ukraine, Turkey, Germany	25
Mexico	22

Table 3: Long-term comparison of two scenarios in different regions

Regions	1990		2020 (CP)		2020 (ED)	
	Traditional	Modern	Traditional	Modern	Traditional	Modern
North America	38	19	46	55	36	68
Western Europe	20	10	20	24	15	34
Eastern Europe and NIS	30	10	36	23	23	32
Australia and Japan	4	7	5	20	3	23
Industrialized world	92	46	107	122	77	157
Latin America	125	46	179	72	144	186
Middle east and north Africa	21	0	39	0	27	11
The south of Sahara in Africa	141	5	299	12	239	48
Pacific and south-eastern Asia	347	16	409	23	341	91
South of Asia	204	8	291	14	232	68
Developing worlds	838	5	1216	123	983	404
The world	1051		1568		1621	

Table 4: Tourism development perspective using the renewable based on the current policies scenario

Regions	Traditional renewable				Modern renewable			
	1990	2000	2010	2020	1990	2000	2010	2020
Western Europe	14%	14%	14%	14%	0.07	0.09	0.13	0.17
	38	40	43	46	19	26	40	---
Eastern Europe and NIS	0.04	0.04	0.04	0.04	0.02	0.03	0.04	0.05
	20	20	20	20	10	12	18	23
Australia and Japan	0.08	0.08	0.08	0.08	0.02	0.03	0.04	0.05
	30	32	34	36	10	14	19	23
Industrialized world	0.03	0.03	0.03	0.03	0.05	0.07	0.07	0.07
	4	4	5	5	7	10	15	20
Latin America	0.03	0.03	0.03	0.03	0.04	0.07	0.07	0.07
	92	96	102	107	46	62	92	122
Middle east and north Africa	0.28	0.28	0.28	0.28	0.1	0.07	0.07	0.07
	125	145	163	179	46	54	63	122
The south of Sahara in Africa	0.08	0.08	0.08	0.08	0	0.07	0.07	0.07
	21	28	32	38	0	0	0	0
Pacific and south-eastern Asia	0.28	0.28	0.28	0.28	0.01	0.07	0.07	0.07
	141	198	250	299	5	7	10	12
South of Asia	0.21	0.21	0.21	0.21	0.01	0.07	0.07	0.07
	347	373	393	409	16	19	21	23
Developing worlds	0.18	0.18	0.18	0.18	0.01	0.07	0.07	0.07
	204	240	268	291	8	10	12	14
The world	0.21	0.21	0.21	0.21	0.21	0.07	0.07	0.07
	838	985	1106	1216	75	90	106	123

same year spent doubled as much for their tourism. However, for Iran, we should not expect more than half a million passengers in a year most of whom were probably the Afghan and Pakistani pilgrims (they are respected but do not bring a lot of money). The resources, which are neglected in tourism industry in Iran, include sport tourism - medical tourism nature goers - historic goers - business tourism [8-10].

Accelerating the Development of Tourism by the Year 2020 Through Renewable Sectors: The world is facing an outstanding chance to pursue its long path to reach a

permanent cooperation in providing energy and tourism sustainable development. Such a scenario will offer the total change in policies set for the best and most efficient use of the wind energy in order to develop and control the tourism and reduce the growth rate of the “least remorse” strategy. This strategy would preserve the sustainable solution while limiting the fossil fuels to a lower degree that they would otherwise reach it. Thus, we should focus on the necessary moments for developing and completing each strategic condition change for developing the tourism.

ED environmental scenario clearly encourages the wider and faster distribution of renewable materials in the energy markets for tourism development. Due to the multiple advantages, the external costs of renewable energy compared to that of the traditional energies are very low and it will just be acting if there are very strong environmental standards for all kinds of energies. Nowadays, in micro-economy, such expenses would not be counted whereas if the expenses are taken into account along with the efficient use of the energies and other positive measures in the tourism development, it is obvious that a high influence of the wind energy in the global market will be achieved (Tables 3 and 4).

The widespread use of renewable wind energy for the tourism development will take place in the world's energy markets soon, but the most important fact here is how fast such an application is done. If in energy decision-making strategy for energy, the changes are not considered based on the long-term effects, the distribution of renewable without the energy markets will be slow and will have a minor contribution in providing energy by 2020. In addition, their significant distribution in the world's energy market would happen in a century and this will happen if the non-renewable energies have their impact on the world's energy market. Many types of renewable energy are adaptable to the energy consumption patterns in rural areas. A number of countries now have a great dependence on renewable consumption. If a balanced plan is developed for providing energy, more countries can benefit from it. Within the governments, especially in developing countries, the need for having coordination in regional plans for tourism development in energy, agriculture, forestry and rural development is expected [10-15].

CONCLUSION

We can cite the following items as conclusion consequences:

- Maximizing the contribution of tourism to create job opportunities.
- Creating an ideal ground to attract cooperative and private sector participation and managing the private sectors investment for developing tourism activities along with the development of renewable energy.
- Conducting studies to provide the context for the construction of tourism infrastructure using the renewable energy.

- Expanding the historical and cultural researches and trying to identify and document the historical monuments and buildings like vent holes and using renewable energies.
- Attempts to increase the passengers' stay in the tourist destination.
- Developing and organizing natural tourism like state's waterfalls with the intentions of both energy production and tourism attractions.
- Establishing an effective system for managing energy resources to develop tourism.
- Establishing a communication between the Central Asian countries as target markets for sustainable tourism development.
- Developing information technology and applying it in renewable energy for developing tourism industry.
- Providing the renewable energy official center for tourism on the Web.
- Advertising and promoting the tourism energy bases in Iran (such as museums and other sites) in the national media [12-19].

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