

Strategies and Directions for Sustainable Tourism

– Focusing on Deokjeok-do Eco-Island Project –

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Abstract

The city of Incheon has selected Deokjeok-do Island as a zero-carbon demonstration area using only renewable energy for promotion of Deokjeok-do Eco-Island project. Deokjeok-do Island boasts of having rich ecological resources as well as cultural ones, and attracts many tourists to the island. However, Deokjeok-do Eco-Island project has its limits in building housing and infrastructure with the use of renewable energy. In this regard, there is a need to propose a policy for sustainable tourism through a linkage of Deokjeok-do Eco-Island project with the island's tourism industry. For environmentally sustainable tourism, it is necessary to build a Deokjeok-do Eco-Island experience center and develop eco-friendly tourism programs for the prevention of the ecosystem in principle. For economically sustainable tourism, the city should operate an electric bicycle rental business and fair travel agencies based on the efficiency of local economy. For socially sustainable tourism, it needs to operate the consultative council of local residents and establish a public-private-academic network based on the equity of the community.

Keywords : Sustainable tourism, Eco-Island, Zero-carbon, Ongjin-gun, Deokyeok-do

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I. Introduction

In the 2014 New Year's address, President Park Geun-hye announced that the government will be focusing on the development of green energy, saying that the energy sector is an important investment for the future, and it is urgent to create a eco-friendly energy town that can produce electricity using renewable energy. This could help Deokjeok-do Eco-Island project gain attention.

The Deokjeok-do Eco-Island project seeks to create a clean pollution-free island, which uses only 100% renewable energy. The contents of the project include Solar-Village, Wind-Village, Bio-Village, Tide-Village and Smart-Grid construction projects. Incheon city has configured the local network through cooperation with local residents, local businesses and research institutes to promote Deokjeok-do Eco-Island project. However, the project is intended to maintain eco-friendly houses and road infrastructure using renewable energy. Thus, it is necessary to devise strategies and directions for sustainable tourism development through a linkage with the Eco-Island project.

So far, the island tourism has not yet been developed on a systematic basis due to land-based development policies and limited transport accessibility, and it did not contribute to the regional development due to problems caused by destruction of ecological and cultural resources, non-specialization of infrastructure and disintegration of local communities (Byun, 2010). Therefore, Incheon city needs to adopt sustainable development policies to fit in with the regional characteristics, not with social trends and business profitability for the island tourism development (Pak et al., 2009; Byun, 2010).

Thus, this study is aimed at presenting sustainable tourism strategies and directions for Deokjeok-do Eco-Island. First, it seeks to divide the

tourism into three categories; environmentally, economically and socially sustainable tourism based on the previous studies related to sustainable tourism, thereby deriving sustainable tourism development strategies and directions. Second, it investigates cultural and social status of Deokjeok-do Island as well as Deokjeok-do Eco-Island promotion status. Third, it presents strategies and directions for environmentally, economically and socially sustainable tourism of Deokjeok-do Island.

II. Sustainable Tourism and Island Development

The concept of sustainable tourism is established by applying the concept of sustainable development³ in the tourism sector. As mentioned in the Brundtland Report, sustainable development is based on the definition of development to meet the needs of the present generation without compromising the needs of the future generations. Thus, sustainable tourism seeks to meet the needs of the current tourists and local communities, while at the same time protecting and promoting tourism opportunities of future generations. Towards this end, it aims not only to promote the preservation of culture and maintain essential ecological processes, biological diversity and life support systems, but also to manage all the resources to meet economic, social and aesthetic needs (Kim, 2001; Byun, 2010).

Sustainable tourism is divided into environmentally sustainable tourism, socially sustainable tourism and economically sustainable tourism. For sustainable tourism to achieve its objectives, environmental conservation, social equity and economic efficiency should be ensured, and when these elements complement each other, substantiality becomes greater (Kim,

³ The term sustainable development emerged at the 1979 United Nations Symposium, and it was first brought into common usage in the report of the World Commission on Environment and Development (the Brundtland report) in 1987 (Moon, 1995; Ha et al., 2003; Kim, 2014). The concept of sustainable development refers to the development to meet the needs of the present generation without compromising those of future generations.

2004). Accordingly, sustainable tourism should be designed to guarantee the efficiency in terms of economy, the equity from a social perspective and the conservation from an environmental point of view (WTO, 1993).

Korea's island⁴ development policies focused only on tourism development without considering ecological environment of islands, which has led to the large-scale development such as urban development. However, this reckless development has in turn compromised the ecological and cultural resources of the islands (Shin&Byun, 2012). Unlike land, the island takes a lot of time and efforts to restore since its environmental healing power is significantly lower, and it is very sensitive to climate change and natural disasters. Therefore, the future island development strategies should be devised in terms of sustainable development by considering environmental, social and economical characteristics of the island.

III. Status of Deokjeok-do Island

Deokjeok-do Island is located in the southwest coast, and it serves as a transportation hub among islands off the west coast. Deokjeok-do Island is a main island in Deokjeok-myeon, which consists of 41 islets including 8 inhabited islets such as Soyado, Mungapdo and Uldo, and 33 uninhabited islets like Seonmido, Gakheuldo and etc.

The island has a population of 1,378, and the number of households is 776 with 1.8 people in a household, which accounts for 71.2% of the total population living in Deokjeok-myeon. The industrial economic structure is mainly composed of a primary industry (agriculture and fisheries) and a tertiary industry (restaurants and accommodations). The total number of ac-

comodations is 87, which includes 7 inns, one lodging house and 79 private residences temporarily taking lodgers, and they are distributed in the whole area of Seopo-ri and Jin-ri. Among them, four lodging facilities have more than 15 guest rooms and can accommodate 100 to 200 tourists. Restaurants are located in the whole neighborhood of Seopo-ri and Jin-ri, and those in Seopo-ri serve food for groups of people. The main means of transportation includes two shuttle buses that operate seven times a day and vans provided by the accommodations. In addition, the city of Incheon supplied 10 electric bicycles to allow local residents of Seopo 1-ri to run a bicycle rental business.

Tourism resources of the island are Seopo-ri Beach, Batjireum Beach, Neungdong Pebble Beach, Guksu-bong and Bijo-bong, which hold rich marine and forest resources. The number of tourists to the island has been constantly increasing over the past three years. Many tourists travel to Deokjeokdo Island to enjoy camping and swimming in summer, and they visit mountains on the island to ride mountain bikes and enjoy bike tracking⁵.

The city of Incheon has promoted Deokjeok-do Eco-Island project by selecting Deokjeok-do Island as a zero-carbon demonstration area using only renewable energy. In the primary business, an energy-saving green housing complex was created by supplying photovoltaic power facilities to 108 houses in Seopo-ri for maintenance of living environment. In addition, 10 electric bicycles and photovoltaic power stations were installed in the town hall of Seopo 1-ri, where local residents have run a bicycle rental business. In the mid-to-long term business, wind farms and tidal power complex were created to foster energy self-sufficient township enterprises.

⁴ The island is a space of sub-continental land that is surrounded by the seas, and it refers to all the islands of the seas, except for the main island of Jeju Special Self-Governing Province (the Island Development Promotion Act). The islands have geographical characteristics which are surrounded by seas, distant from the land and limited in area (Ministry of oceans and fisheries, 2013).

⁵ The number of tourists visiting Deokjeok-do Island was 95,563 in 2010, 100,046 in 2011 and 106,290 in 2012. showing a continuous increase over the past three years(Shim, 2013).

Thus, it is necessary to seek strategies and directions for sustainable tourism by dividing its concept into environmentally sustainable tourism, economically sustainable tourism and socially sustainable tourism through a linkage with Deokjeok-do Eco-Island project.

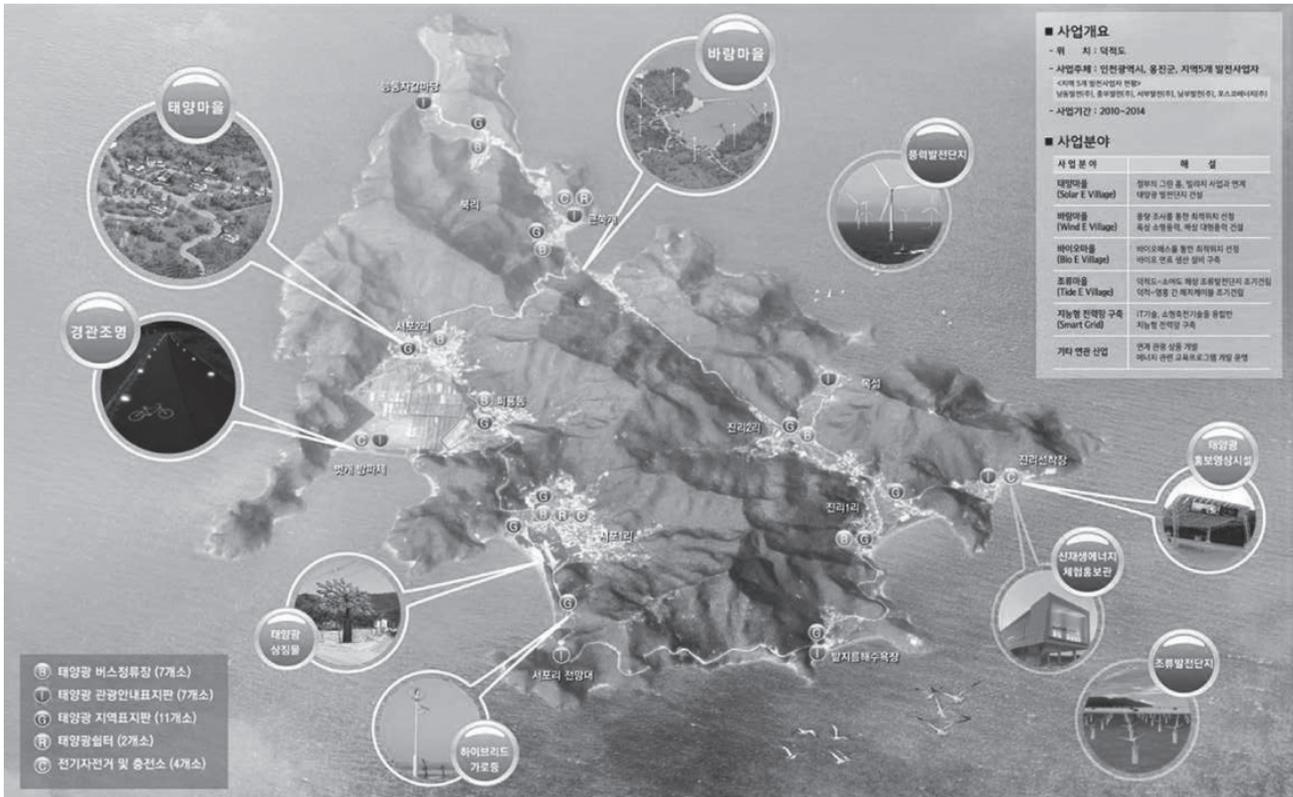


Figure 1. Deokjeok-do Eco-Island Plan

Source : Incheon Metrocity (2013), Energy design and validity of Eco-Island

IV. Strategies and Directions for Sustainable Tourism of Deokjeok-do Island

This study is intended to present strategies, principles and directions of sustainable tourism through a linkage with Deokjeok-do Eco-Island project in achievement of shared objectives. The strategies of sustainable tourism for Deokjeok-do Island are devised for environmentally sustainable tourism, economically sustainable tourism and socially sustainable tourism respectively, according to the concept of sustainable tourism. Environmentally sustainable tourism

should be made under the principle of ecological conservation, economically sustainable tourism under the principle of economic efficiency, and socially sustainable tourism based on the principle of social equity in local communities.

Table 1. Strategies and Directions for Sustainable Tourism of Deokjeok-do Island

Strategy	Principle	Direction
Environmentally sustainable tourism	ecological conservation	·Operation of Deokjeok Eco-Island experience center ·Development of nature-friendly tourism courses
Economically sustainable tourism	economic efficiency	·Eco-friendly bicycle rental company ·Fair travel agency
Socially sustainable tourism	social equity	·Establish the Deokjeok Eco-Island consultative council ·Establish the public-private-academic network

A. Environmentally sustainable tourism

Environmentally sustainable tourism aims to maximize the satisfaction by meeting the needs of local residents and tourists, and to ensure the tourism opportunities of future generations based on the conservation and improvement of ecological resources. In this regard, environmentally sustainable tourism of Deokjeok-do Island should be accompanied by the operation of Deokjeok Eco-Island experience center and development of nature-friendly tourism courses under the principle of ecological conservation.

First, the city of Incheon needs to establish the Deokjeok Eco-Island experience center through a linkage with the Deokjeok-do Eco-Island project. In Deokjeok-do Island, the Eco-Island project designed to produce, consume and sell electric power using renewable energy has been promoted, and excellent ecological and cultural resources are distributed. In this connection, the city should provide a place to experience renewable energy, climate change and ecological environment, and to educate the public. Incheon city collected citizen's opinions and agreed to establish the Eco-Island experience center by utilizing existing facilities such as Seopo-ri community center and Buk-ri inclined wharf (Shim, 2013). Eco-Island experience center is constructed with photovoltaic power generation, geo-thermal

heating and concept of a Passive House for thermal insulation system, and the move is aimed to raise awareness of energy shortage environmental crisis and inform the public about the importance of environmental conservation.

Second, the city should develop nature-friendly tourism programs in consideration of tourism resource characteristics and travelers' tourism patterns. In Deokjeok-do Island, there are a variety of marine and forestry resources such as Seopo-ri Beach, Batjireum Beach, Neungdong Pebble Beach and Guksu-bong. The number of tourists coming to enjoy mountain bike tracking has recently been increasing. In addition, tourists visiting Deokjeok-do Island are mostly middle-aged people in their thirties and forties who come to Deokjeok-do Island to enjoy the natural beauty and take relaxation with their family members and business colleagues during their stay for more than two nights. Therefore, it is necessary to develop nature-friendly tourism programs using ecological and cultural resources of Deokjeok-do Island, and to create Deokjeok tourist passport that gives a brief introduction to major attractions and restaurants in Deokjeok-do Island and is imprinted with a stamp to demonstrate their visits to tourist attractions.

Therefore, it is expected that the construc-

tion of Deokjeok Eco-Island experience center and development of nature-friendly tourism programs will contribute to achieving environmentally sustainable tourism by minimizing the degradation of ecological resources, maintaining bio-diversity and ensuring opportunities for present and future generations to use natural resources.

B. Economically sustainable tourism

Economically sustainable tourism is promoted through the active participation of local residents in the tourism industry, leading to a virtuous cycle of the local economy activation. To achieve the goal of economically sustainable tourism of Deokjeok-do Island, the city of Incheon needs to establish an eco-friendly bicycle rental company and a fair travel agency, and to construct a system in which the residents themselves can run a township enterprise based on the principle of the efficiency of the local economy.

First, the city should establish eco-friendly bicycle rental township enterprises operated by local residents. At present, 10 electric bicycles and photovoltaic power stations are installed in the town hall of Seopo 1-ri on Deokjeok-do Island, and the village committee runs a electric bicycle rental business. In addition, it has planned to install 10 eco-friendly electric bicycles each in Jin-ri wharf, Buk-ri and Beotgae reservoir and promoted Deokjeok-do bike lane specialization project for the maintenance of bike courses and roads.

In a related move, local residents should be encouraged to operate township enterprises that grant the use of eco-friendly bicycles to tourists. In addition, the eco-friendly bicycles and infrastructure need to be installed at the nearest ferry terminals and tourist attractions so that tourists as well as local residents can freely lend and return the bicycles. The rental scheme is designed to lend tourists eco-friendly bicycles after entering their basic information, and to issue regular passes such as 4-hour pass, half day

pass and one day pass in consideration of tourist behaviors. Meanwhile, an education on safety and travel guide for bicycle travel should be provided before lending eco-friendly bicycles, and eco-friendly bike travel certificates are issued for tourists after completing their bike travel.

Second, local residents are guided to operate fair travel agencies. In Deokjeok-do Island, excellent ecological and cultural resources are distributed, and since most inhabitants are engaged in tourism services, they are well aware of unknown tourism resources and interesting stories about Deokjeok-do Island. Thus, it is required for residents community to take the initiative in establishing and operating fair travel agencies to provide jobs for local residents and offer attractions and experiences to tourists. In addition, the city of Incheon plans to operate an electric bus for group tourists and induce the electric bus operated by a fair travel agency to take bus service route differentiated from the one for existing shuttle buses.

The township enterprise business should explore ways of investigating the funds of local residents, rather than depending on the support from the government and local authorities. Since the revenue generated from the township enterprises is common income sources of local residents, economic efficiency and social equity should be ensured (Ministry of Oceans and Fisheries, 2014). In addition, the operation of eco-friendly bicycle rental business and fair travel agencies can improve the quality of life in terms of economy and provide tourists with superior tourism services, subsequently helping to achieve economically sustainable tourism.

C. Socially sustainable tourism

Socially sustainable tourism seeks the development of local communities via the cooperation between residents, public institutions, academia and local residents through the establishment of the network. For socially sustainable tourism of Deokjeokdo Island, the city needs to establish

the Deokjeok Eco-Island consultative council and establish the public-private-academic network under the principle of equity of the community.

First, all the decision-making processes should be made through a Deokjeok Eco-Island council between local residents to discuss and resolve the pending issues of the community. The resident organization of Deokjeokdo Island is composed of Deokjeok-myeon development council, resident autonomy committee, community council, women's association, fishing village cooperatives and volunteer centers. All the community members are expected to serve as subjects of decision-making and enforcement processes, and contribute to the sustainable community development and local economy activation by utilizing local resources.

Second, the public-private-academic network between the Incheon metropolitan government, Ungjin-gun district office, experts and local residents needs to be established to provide administrative support and discover leading local industries. Local residents should be actively involved in planning and discovering tourism resources. In addition, they themselves should raise local issues and participate in the problem-solving process from the planning stage to make sure that their opinions are actively reflected in the entire process. Public authorities should be responsible for mediation to resolve the disputes on administrative support and procedures of township enterprises, and differences in opinions between local residents and private companies. Academic experts should serve as advisors to help local residents to take the lead in implementing the project.

Thus, it is essential that local residents of Deokjeokdo Island should raise local issues and continue to be involved in related discussions, and it is necessary to establish the public-private-academic network so that public institutions, private companies and research agencies can participate in administrative support and project implementation.

V. Conclusion

This study seeks to present strategies and directions for sustainable tourism of Deokjeok-do Eco-Island by investigating cultural and social status of Deokjeok-do Island as well as Eco-Island promotion status.

First, Deokjeok-do Island serve as a center of Deokjeok-myeon, and 71.2% of the total population of Deokjeok-myeon lives in this island. Due to its beautiful natural landscape, city dwellers visit this island to enjoy mountain and bike tracking. The city of Incheon has recently promoted the Deokjeok-do Eco-Island project to create a clean pollution-free island using only 100% renewable energy. In this connection, it is necessary to explore strategies and directions for environmentally, economically and socially sustainable development of Deokjeok-do Island.

Second, sustainable tourism is the concept established by applying a framework for sustainable development in the tourism sector, and it aims to meet the needs of tourists of the present generation and those of local communities, pursue ecological, cultural and economic maintenance, and promote tourism opportunities of future generations. Therefore, the concept of sustainable tourism can be divided by environmental, social and economic factors. The efficiency should be ensured from an economic perspective, the equity from a social aspect, and the conservation in terms of environment.

Third, strategies and directions for sustainable development of Deokjeok-do Island were presented based on the concept of sustainable tourism and direction of creating Deokjeok-do Eco-Island. For environmentally sustainable tourism, it is necessary to operate the Deokjeok Eco-Island experience center and develop nature-friendly tourist routes under the principle of conservation of ecological environment. For economically sustainable tourism, there is a need to establish eco-friendly bicycle rental township enterprises and fair travel agencies, and to construct a system in which local residents can

run the township enterprises based on the principle of efficiency of local economy. In the case of socially sustainable tourism, the Deokjeok Eco-Island consultative council and public-private-academic network should be created under the principle of equity in the community.

This study is designed to present strategies and directions for sustainable tourism of Deokjeok-do Island through a linkage with the Deokjeok-do Eco-Island project. Thus, it is determined that its political significance lies in establishing education centers, developing tourism programs, fostering township enterprises and promoting the construction of networks under the initiative of local residents.

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