

**A Developmental Model of Marine Tourism Industrial Zone To Improve The Community
Economic Resilience at Kepulauan (Islands) Seribu, DKI Jakarta, Indonesia**

Dr. Hamidah, M.Si , Dr. Ucu Cahyana, M.Si, Dr Supriyadi, M.Si. ,

*Khrisnamurti, M.Sc (Presenter)

Lecturers, State University of Jakarta
Jl. Rawamangun Muka, Jakarta Timur 13220
Indonesia

Telp: +62 813 9889 0640
Email : nino.khrisnamurti@gmail.com

Introduction

Nowadays, Marine tourism is gaining much attention than before, tourist use of the coastal and marine environment has continued to increase rapidly which is expected to bring benefits for the regional economy and to contribute to the nature conservation (Orams, 1993). With its 17,508 islands and an area of sea to reach 62 % of the entire region, Indonesia has been recognized as the biggest archipleago country with a great potential of nature-based tourism, especially in the marine-based (princeton.edu).

The Seribu (Thousand) Islands , located north of the Jakarta Bay, are a chain of islands to the north of Jakarta's coast with a string of 110 islands, It forms the only regency of Jakarta, the capital of Indonesia,. This makes Jakarta the only capital city in the world which contains more than 100 islands within its capital boundary (UNESCO, 2000). As the only Jakarta's nautical

tourism paradise, Marine tourism is an important asset. It offers a wide range of passive and active recreational activities in near-pristine wilderness areas.

This paper examines on the framework of Marine Tourism Industrial Zone (Zona Industri Bahari) / ZIWEB at Seribu Islands, an integrated zone system of multi-stakeholder partnerships which are connected to the network of marine tourism industry to avoid negative environmental and social impacts on the communities who live in the area. The environmental education programs, employment and capacity building of the Seribu Island will be focused upon.

In the first year, the research focused on the development of the southern zone as the location of Marine Tourism Industrial Zone which are Onrust Island as an archaeological park, Untung Jawa Island and Lancang Island as a model of the involvement of local government in tourism through entrepreneurship, Pari Island as the potential island for marine tourism and Tidung island as the center Marine Tourism for the development of mangrove plantation and coral reef transplantation. The model is validate by experts by conducting limited tryouts, therefore the model could be used in the following studies for the development of zone 2 and zone 3.

This paper aims to provide some directions which were obtained from an academic study and analysis in order to develop ZIWEB model development at Seribu Islands. The objectives of the study were:

- a) To form a model of " ZIWEB"
- b) To socialize ZIWEB among the tourist industry , SMEs , public , and government
- c) To collaborate with governments , local governments , schools , and tourism industry
- d) To Improve the capacity building and human resources
- e) To improve the welfare of marine community

The study was undertaken in several steps, namely:

(i) research preparation, including: literature review, developing research instruments (check lists, questionnaires, and interview guide), and undertaking a coordination effort with the local government.

(ii) data collection: undertaken by field survey, including on site observation, distributing questionnaires and interview to visitors, tourism stakeholders and local community, and Focus Group Discussion (FGD) involving tourism stakeholders and local community.

(iii) data analysis: undertaken by using tourism destination indicators to analysis of existing tourist attractions and facilities available at the study area

(iv) workshop: undertaken in order to develop a recommendation of ZIWEB strategies and programs, involving tourism industry, local government tourism authorities, local community and NGOs at the study area.

Description of the Area

Seribu Island is distinct than other Indonesian national parks which have contiguous area of marine and terrestrial areacombined, Kepulauan Seribu National Park consists of only 2 islands (terrestrial) and marine area surrounding 78 islands Of the 78 islands located within the national park, 6 islands are inhabited by people, 20 islands are managed as recreational sites, and the rest are either uninhabited, privately owned or being used for other commercial activities. (excluded those islands) (Balai Taman Nasional Kepulauan Seribu,2010).In all area of Kepulauan Seribu, 11 islands are inhabited by people. The rest are either uninhabited (too small or does not have any freshwater resources) or legally privately owned.The area was inaugurated a national park in

2002, the aim was to prevent further ecosystem deterioration due to excessive use and harvest because the area has been utilized by people for many purposes, including for settlement, fishing, mariculture, recreation, sand harvesting, and transportation route of boats and ships to the big harbor of Jakarta , Tanjung Priok, for quite long periods (Mardiastuti, 2012).

Theoretical Framework

Marine Tourism

Marine tourism includes all activities associated with the coast and adjacent waters. It includes a wide range of activities such ,beach camping, sea-kayaking, marine wildlifeobservation, sport fishing and sightseeing trips. The origins and definitions of marine tourism have been reported by Orams (1999), Garrod and Wilson (2003) and Murphy and Norris (2005). Consequently, generic definitions are not discussed here. Instead, Jafari (2003) has been used as a source for key terms, concepts and definitions related to tourism. In the local context, nature-based tourism has been defined by Crawford (2000, 94). Tourism is recognised globally as causing ecological problems (Butler, 1991; Hall, 1991;Orams, 1999; Gunn and Var, 2002; Harris *et al.*, 2002). Tourism has experienced sustained worldwide growth since the 1980s and is now considered to be the world's largest industry, with marine and coastal tourism being its fastest growing sector (Nelson, 1999; Hall, 2001; Murphy and Norris, 2005). Much of this rapid growth has focused on nature-based tourism and is largely unplanned (Moore and Carter, 1993; Flaherty and Sampson, 2005). Concomitant with industry growth, concern about the impacts of tourism on the environment has increased. Tourism now represents a major threat to the destination environment in many areas (collins, 2007).

According to Orams , (1999) " Marine tourism includes those recreational activities that involve; travel away from one 's place of residence and roomates have as their host or focus the marine environment (where the marine environment is defined as those waters roomates are saline and tide - affected) " . Marine Tourism extends beyond the activities for a broad spectrum of traditional activities are passive and tend to be transformed into a modern tourism which tend to be more active and participative , such as scuba - diving and snorkeling , windsurfing , jet skiing , fishing , sea kayaking , visits to villages fishing village , marine park and aquarium , sailing , participating and attending festivals and other marine (Luck , 2007) . Experts believed that the participatory activities of visitors / tourists in the Marine Tourism has a positive impact in psychology , education and environmental conservation for the visitors / tourists (Higham , 1998; Orams , 2000; Schänzel and McIntosh , 2000; Tisdell and Wilson , 2002, 2005 ; Luck , 2003; Finkler and Higham , 2004; Mayes et al , 2004; . Hughes and Saunders , 2005; Andersen and Miller , 2006) . Psychological benefits gained by tourists with marine tourism activities is looking directly underwater life . It could create the excitement for the tourists as well sense the uniqueness of the intensity and quality of life (Muloin , 1998; Schänzel and McIntosh , 2000; . Birtles etc. , 2002; Curtin , 2005) .

Research Method

This study was conducted using a mixed method approach to research that combines quantitative and qualitative research . In the first year the study was conducted using a survey method followed by research Research and Development , and in the second year will be carried out by the method of action research . Targets to be achieved in the first year is to produce products in the form of a model " ZIWEB" (ZIWEB) which will be obtained through the following steps :

- 1 . Introduction Research and Analysis Needs

The study begins with a descriptive quantitative study (survey) in : (1) Onrust Island , (2) Untung Jawa, (3) Island Lancang (4) Pari Island , (5) Tidung Island , (6) Pramuka Island , (7) Panggang Island , (8) Semak Daun Island (9) Harapan Island , and (10) Kelapa Island , to collect information on the characteristics of the community which is a series of potential marine following : (a) Property owned biodiversity of an area , (b) Values of the local wisdom , (c) entrepreneurship by the local community , (d) the role of the community in developing the area into a marine tourism , (e) government intervention in developing marine tourism . The data and information is obtained from the survey that were analyzed to attain a model of the development potential of the marine each location . At this stage also conducted a needs analysis to map potential environmental and marine issues through : (a) the study of literature and the roadmap on marine , (b) Mapping marine potential , (c) Mapping of the local culture of excellence , (d) Mapping of environmental sustainability , (e) Mapping marine product excellence .

2 . Draft Development Model

Draft model was developed based on the results of preliminary research and analysis needs . Based on a literature review of a number of models formulated ZIWEB, and taking into account the results of the mapping of potential marine , local cultural excellence , environmental sustainability , and excellence marine products , developed website ZIWEB Seribu Islands , and the model of marine education in the form of educational tours module educational tours for each marine nautical tourism .

3 . Conduct focus group discussion (FGD) ,

ZIWEB draft generated models studied in depth through focus group discussions (FGDs) involving stakeholders .

4 . Model Validation

Draft model that has been getting feedback from the focus group , and then validated by experts consisting of : education experts , skilled nautical / marine , tourism experts , and environmentalists . Based on the results of validation and input from experts , the draft revised ZIWEB models , especially the parts that are still considered weak or poor .

5 . Limited testing

The model has been revised based on the results of the evaluation is tested on a limited target group , participants were invited and asked to be participants in the use of models ZIWEB . At the end of the program they will be asked to evaluate and give feedback on the ZIWEB .

6 . Field Trials Evaluation

Field trials evaluation are conducted to see the effectiveness and attractiveness of the model . The process of testing is done by promoting the model to various targets and offering programs contained in the model to follow. To test the attractiveness and effectiveness of the model , developed instruments that will be distributed to the respondents who followed the model .

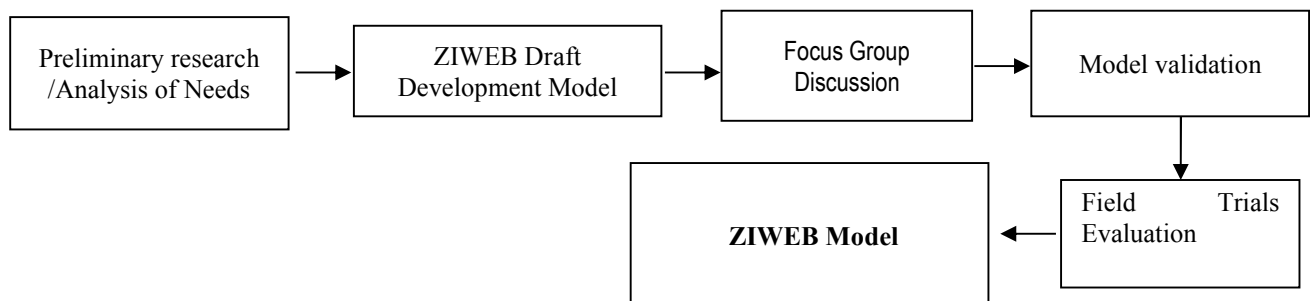


Figure 1. The research activity year first stage

Discussion :ZIWEB Model

Marine Tourism Industrial Zone (Zona Industri Wisata Bahari/ZIWEB) is , an integrated zone system of multi-stakeholder partnerships which are connected to the network of marine tourism industry to avoid negative environmental and social impacts on the communities who live in the area. The cooperation between the community , local government , and local university (Jakarta Sate University) will be constructed based on the results of research that has been done before .The research activities will develop an educational tours marine industrial zone in the Seribu Islands as part of efforts to accelerate the economic development and expansion of the local community. The entire concept is based on sustainable tourism through environmental education and ecologically and socially responsible tourism.

Tourism has gained countless positive aspects, but tourism is also recognised globally as causing ecological problems such as erosion and natural habitat loss (Butler, 1991; Hall, 1991; Orams, 1999; Gunn and Var, 2002; Harris *et al*). Much of this rapid growth has focused on nature-based tourism and is largely unplanned (Moore and Carter, 1993; Flaherty and Sampson, 2005). Concomitant with industry growth, concern about the impacts of tourism on the environment has increased. Tourism now represents a major threat to the destination environment in many areas (Collins, 2007). The ZIWEB model was initialize by the concern of many issues and challenges faced by the Seribu Islands, many of which still ongoing and need to be taken care of. The challenges are:

a. Coordination of area management

Unlike other national parks whose management is fully carry out by the Ministry of Forestry, many Government agencies are officially authorized the area, one way or another, including Ministry of Interior, Ministry of Fisheries and Marine Affairs, Ministry of Tourism, Ministry of Environment, and the Ministry of Forestry. Each Government agencies has their own agenda and sometimes the agenda is not compatible one and another. Ministry of Fisheries and Marine Affairs, for example, has a plan to increase a production of fisheries and the most suitable sites are in the core area of national park where such activity is strictly prohibited. Moreover, the role of local government in terms of regulation is required.

b. Deterioration of biodiversity

Having a depth of 20 to 40 m, the marine ecosystem of Kepulauan Seribu National Park thrives with coral reef. There are 60 genera of coral with an average abundance of 10.19 colonies/ha and the coral reef coverage has been decreasing to 36.48% (average) (Balai Taman Nasional Kepulauan Seribu 2004). The lack of mooring buoy at diving sites and the careless beginner divers also contributes to the destruction of coral reef. Further, mangroves and sea grasses are declining in most areas and even vanished on islands with heavy settlements due to land clearing and sedimentation. Landing sites for Hawksbill turtle has been diminishing from 13 islands in 1998 down to 1 island in 2003.

c. Harvest of biotic and abiotic resources

The natural resources of the islands, including fishes and many other marine species (for food and ornamental), coral (for construction and ornament), and sand have been heavily harvested to fulfill the need of local community. Currently there are 232 fish species with a density of 36.132 individuals/ha, of which the density is too low for the catch of fishermen in the area. The use of

cyanide, potassium, bomb and destructive fishing method (e.g. muro-ami net gills) is still a common practice to harvest fishes for food and ornament by local fishermen (Balai Taman Nasional Kepulauan Seribu 2005).

d. Mass tourism

As the income of the people of Jakarta tends to increase, coupled with the current movement of 'back to nature' for recreation and tourism, Kepulauan Seribu National Park has been packed with mass tourism (Adirani undated). In the last five years of tourism activities in the islands already exceeded its carrying capacity, it is very dangerous for the development of tourism itself and the appeal of a place that will soon disappear. Not to mention the influence of modern culture such as skimpy clothing, promiscuity, and drug abuse, which would destroy the culture and the future of the traditional marine community itself.

e. Environmental pollution

The southern part of the national park borders with Jakarta Bay. Thirteen rivers are ended in the bay, bringing various environmental pollutions from the densely populated of Java, including both industrial pollution (there are about 100 various industries along those rivers) and domestic pollution. In addition, there is a busy international sea harbor in Jakarta Bay area (Tanjung Priok), give an additional pollution from ships' and boats' fuels. Thus, the environmental condition of the southern part of the national park is worse than the northern. All recreational sites are located in the north, where the environment is still good and coral reef thrives (Mardiastuti, 2011).

The Seribu Islands communities, in particular traditional users of natural resources, are often concerned about threats to their livelihoods and destruction of their environments but do not have

the awareness, skills and political power to control the development that comes from the tourism industry. Education and collaborative partnerships are one approach that can help destinations achieve more sustainable tourism. These inevitable negative impacts will lead to the loss of the appeal for tourists to visit Seribu Islands in future years. ZIWEB is expected to be a great value both for the development Jakarta tourism.

The result from the FGD which was conducted with the involvement of local government, Economic Development Experts from LIPI (Indonesian Institute of Sciences), Corporate Division of PT. Jaya Ancol and the community of the Seribu Islands. For the development of ZIWEB, they suggested that all of the island must be identified in order to obtain the competitive advantages to create uniqueness in all islands. In general, the Seribu Islands Regional Government hopes the university in this case the State University of Jakarta could assist the development of the Seribu Islands into a holistic tourist destination, since it has an impact on economic resilience and the quality of the island communities. They also expect an increase in knowledge and skills of its people with empowerment to improve the quality of service such as guiding, accommodation, food and beverages, etc.

Community economic development experts from LIPI advised is to improve the readiness of the community to provide services in the field of education in accordance with the advantages of each island. PT. Jaya Ancol indicate the importance of providing a means of transportation for tourists who will travel to a Seribu Islands, as long as there are still limitations in the provision of transports, especially in terms of the frequency and a number of passenger ships.

In this study, educational marine tourism activities will be developed into an integrated tourism

industrial zone management system . Each site will be developed into a center of marine educational tours that have distinct characteristics of each region , then the system will be built through a network of inter-regional cooperation with local travel agency management and cooperation with local governments . Therefore, the research will be studied in depth model of human resource preparation , preparation of models supporting facilities and infrastructure (transport and utilities) , educational package tour activities that reflect the local cultural heritage of each region , as well as the management system model IT -supported technology . During the activities of marine educational tour participants will be involved in education and training , research , and nautical character building , the activities is more likely to be fun and entertaining. The development of the zones is based on the competitive advantages possessed by each island .

Based on the research, the ZIWEB Model are clustered into 3 Zones, which are:

- Southern Zone consist of :
 - a. Onrust Island as an Archaeological Park.
 - b. Tidung Island Mangrove as the center Marine Tourism for the development of mangrove plantation and coral reef transplantation.
 - c. Untungjawa and Lancang Island as a model of the involvement of local government in tourism through entrepreneurship.
 - d. Pari Island as the development of Seaweed plantation.

- Middle Zone consist of
 - a. Panggang Island
 - b. Pramuka Island
 - c. Semak Daun Island

- Northern Zone consist of
 - a. Harapan Island for Shark
 - b. Kelapa Island.

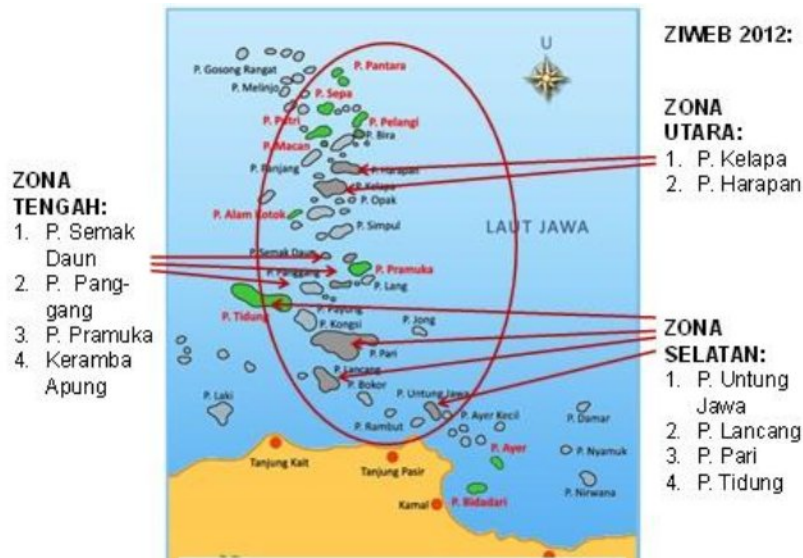


Figure 2: Zonation of ZIWEB

In order to enhance the development of the ZIWEB, a variety of tools has been created to support it, such as :

- 1 . ZIWEB Website (<http://www.zona-wisata-edukasi-bahari-kep1000.com/>)

In general, the target of this website is a wide range of audience, it means that the information published on this website could be used by anyone who are interested in the field of marine tourism.

2 . ZIWEB Activities Modules

The main idea of the module is to collaborate the activities in Marine tourism with the educational element into the marine education tour which the target market is predominantly in

the educational area such as teachers and the students. The tour programs is associated with the school curriculum so that schools would benefit the experiential learning resources which are fundamental for students. In schools and colleges they have studied the concepts of science , technology , social and cultural theoretically, however it would be beneficial for the students to experience in a practical way in which encountered them in the natural integrated surroundings . The Module material largely drawn from the results of the needs analysis , which is summarized under four headings , (1) Marine Potential , (2) Local Wisdom , (3) Entrepreneurship , and (4) Environmental Sustainability . At certain parts of the material was deepened in accordance with school subjects . The educational activities using the modules in the tour will include practical things like beach cleanups, transplantation of coral reefs , mangrove planting , observing the social and economic life of the marine , coastal damage observations , and observe the preservation of marine life such as sea turtles breeding.

The objectives of the modules is that the participants knowledge , skills , and character of the in the marine field will expected to be increased . They will also feel proud that their presence in the places of interest has a contribution generate income, employment, and conservation of local ecosystems.

Conclusion

The result in the first year is the identification of 10 potential islands into a tourist destination of marine education tourism which are divided into three zones: (1) South Zone, consists of Onrust Island, Untung Jawa Island, Lancang Island, Tidung Island and Pari Island. (2) Central Zone

consists of Pramuka Island, Panggang Island, Semak Daun Island Keramba Apung (3) North Zone, consists of Kelapa Island and Harapan Island.

The result in the first year is the identification of 10 potential islands into a tourist destination of marine education tourism which are divided into three zones: (1) South Zone, consists of Onrust Island, Untung Jawa Island, Lancang Island, Tidung Island and Pari Island. (2) Central Zone consists of Pramuka Island, Panggang Island, Semak Daun Island Keramba Apung (3) North Zone, consists of Kelapa Island and Harapan Island.

With the development of the three zones, it is expected to enhance the growth and expand the tourism industry in this area. It is also expected to create a multiplier effect and improve the community economic resilience.

References

- Balai Taman Nasional Kepulauan Seribu. 2005. Rencana Pengelolaan Taman Nasional Laut Kepulauan Seribu 2005-2009. Balai Taman Nasional Kepulauan Seribu. Jakarta.
- Dahuri, R. 2003. *Kenekaragaman hayati laut*: Balai Taman Nasional Kepulauan Seribu, 1999/2000, Gramedia Pustaka Utama, Jakarta
- Hammitt W. Cognitive processes involved in environmental interpretation. *Journal of Environmental Education*,
- Holdnak, A., & Holland, s. (1996) *Tourism: vacationing to learn: Parks and Recreation*,
- Kalinowski, K., & Weiler, B. (1992) *Review. Educational travel. In B. Weiler and C. Hall (Eds.), Special Interest Tourism*. London: Bellhaven.
- Kennes, W. (1997) *Developing countries and regional integration*. The Courier,
- Luck, M, (2003) *Education on marine mammal tours as agent for conservation—but do tourists want to be educated?*, *Ocean & Coastal Management* 46 , Elsevier

- Mardiastuti, A (2012) *Protected Areas and Surrounding Communities: Case Study of Kepulauan Seribu National Park*, Indonesia, Bogor Agricultural University
- Moscardo G, Pearce PL. (1986) *Visitor centres and environmental interpretation: an exploration of the relationship among visitor enjoyment, understanding and mindfulness*. Journal of Environmental Psychology
- Simonds MAC. (1990.) Natural encounters: adventure, learning, and research programs for the marine environment in 1990 Congress on Coastal and Marine Tourism: a symposium and workshop on balancing conservation and economic development. Honolulu, Hawaii: National Coastal Resources Research & Development Institute,
- Orams, M.B (1993) *The Role of Education In Managing Marine Wildlife-Tourist Interaction*, National MESA Conference
- Orams , MB. (1999), *Marine tourism: development, impacts and management*. London, New York: Routledge,.
- Roggenbruck JW, Williams DR., (1991) *Commercial tour guides's effectiveness as nature educators*. World Congress on Leisure and Tourism, Sydney,.
- Rtichie, B.W, (2003) *Managing Educational Tourism*, Great Britain, Cromwell Press
- Weiler B, Davis D.(1993) *An exploratory investigation into the roles of the nature-based tour leader*, Tourism Management