2nd International Symposium on Aquatic Products Processing and Health
ISAPPROSH 2015

Fisheries Development Strategies of Biak Numfor Regency, Indonesia

Dian Wijayanto*

Faculty of Fisheries and Marine Science, Diponegoro University, Jl. Prof. Soedarto SH, Tembalang, Semarang, 50275, Indonesia

Abstract

The purpose of this research was to develop the fisheries development strategies of Biak Numfor Regency. This research used primary data and secondary data. Primary data were collected through field observations and indepth interviews with key stakeholders. Secondary data were collected from related publications and documents issued by the competent institutions. SWOT Analysis was used to inventory the strengths, weaknesses, opportunities and threats. TOWS matrix was used to develop an alternative of fisheries development strategies. QSPM was used to determine a priority of strategies. Based on the research results, there are 22 alternative strategies that can be applied for optimization of fisheries development in Biak Numfor Regency. The strategies priority is the development of 'Wadibu' ocean fishing port, 'Fandoi' fish landing place and 'Bosnik' fish landing place. Each alternative strategies can be synergized to optimize the fisheries development in Biak Numfor Regency

Keywords: Biak Numfor Regency; fisheries; QSPM; strategy and SWOT

1. Introduction

Biak Numfor regency has high potential of fisheries resources. Marine waters of Biak Numfor regency is relatively low pollution. Biak Numfor regency also has several protected waters where potential to be developed for marine fish farming, such as grouper fish, snapper fish and napoleon fish. Several marine waters of Biak Numfor

* Corresponding author. Tel.: +62 815 954 2717; fax: +62 24 747 698.
  E-mail address: dianwijayanto@gmail.com

regency also could be developed as an area for seaweed culture. Biak Numfor regency is bordered with the Pacific Ocean, so have a high potential to be developed fishing industry.

However, the fishing industry in Biak Numfor regency is not optimally be developed. Biak Numfor regency has not a ocean fishing port (PPS) yet. Biak Numfor regency still have a fish landing place (PPI) in Bosnik district and Fandoi district. Fisheries business in Biak Numfor regency is still dominated by artisanal fisheries (vessels without motors and outboard motor) that can be operated oneday fishing. Intensive fish farming has not developed in Biak Numfor regency yet. So, efforts to accelerate the fisheries development in Biak Numfor regency is needed to optimize the fisheries potential of Biak Numfor regency.

The purpose of this study was to develop the fisheries development strategies in Biak Numfor regency. The fisheries development strategy in Biak Numfor regency should take account to an internal and external factors. Internal factors include fisheries resources, human resources, and infrastructure as an input factor in the fisheries development. While the external factors include a markets, business competition and political support that can not be controlled by the stakeholders of fisheries development of Biak Numfor regency.

2. Material and methods

This research followed an applied research, that is to solve the problems, especially fisheries development in Biak Numfor regency.

2.1. Data collection

This research used a primary data and secondary data. Primary data was collected by field observations and in-depth interviews with the stakeholders. Respondents in this study included a regency goverment employee of marine and fisheries departement (three persons), employee of fish seed producer (one person), fisherman (five persons), fish traders (four persons), fish processors (four persons), fish farmers (three persons), employees of the state electricity company (one person) and employees of the regency water supply company (one person). While secondary data was collected from a publications and documents issued by the competent authority.

2.2. SWOT analysis

SWOT Analysis was used to inventory the strengths (S), weaknesses (W), opportunities (O) and threats (T). Strengths and weaknesses were derived from the internal environment, including an existing resources of stakeholders, both natural resources, human resources and infrastructure as an input factor in the fisheries development of Biak Numfor regency. The external environment was a source of opportunities and threats, including market, business competition and political support that can not be controlled by the stakeholders. Research used SWOT analysis to develop a strategies has been done by several researchers, both to business strategies (Abdi et al., 2013; Agarwal et al., 2012; Chan, 2011; Dyson, 2004; Ommani, 2011; Shojaei et al., 2010; Wang et al., 2014) and public policy strategies (Adepoju and Famade, 2010; Chen, 2014; Jamshidi et al., 2012; Kantawateera et al., 2013; Sayyed et al., 2013). Developing fisheries strategies used the TOWS matrix. In the TOWS matrix, there are four strategies types, i.e. SO strategy (integrating the strengths and opportunities), ST strategy (integrating the strengths and threats), WO (integrating the weaknesses and opportunities), and WT (integrating the weaknesses and threats).

2.3. QSPM

Quantitative Strategic Planning Matrix (QSPM) was used to determine the strategic priorities. In QSPM, each alternative strategy assessed for compliance with the key factors. Each of key factors have the weight of factors. Strategies rated of 1 if it has not related to the key factor, then the value of 2 if it has less relevance, the value of 3 if it has relevance to the key factor and value of 4 if it has a high relevance to the key factor. Several researchers also used QSPM to determine the strategic priorities, including Ommani (2011) and Shojaei et al. (2010). In this study, the key factors used natural resources, human resources, infrastructures, regulation, markets and technologies.