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## Prospect and Adversity the Downstream of “Softbone Milkfish” in Semarang City, Indonesia

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### Abstract

Softbone milkfish [*Chanos chanos* (Forsskål, 1775)] industry as very supportive of the real sector as food and nutrition security for our community. This products was being one of the culinary products of superior value-added competitive and public interest both as a daily product or as souvenirs. The downstream look profitable but viewed from the upstream condition such as land degradation resulted that raw material depends on other regions. This condition was feared could not keep the balance of demand for milkfish. The purpose of the study was aimed to identify the dimensions and attributes that affect the sustainability status of Softbone milkfish industry, analyzed the sustainability index and categorized sustainability status in multidimensional and gave the formulation of management strategies.

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### 1. Introduction

Sustainable development is a discipline that has long been sought after by scientists, technologist, businessman and politician. Thomas Malthus in an essay on the “Principle of Population” in 1798 that population increases in the

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strength of the geometric ratio will surpass the power of the earth in sustaining human increases in an arithmetic ratio (Hall, 2011). That means human population tends to grow faster than the ability of the world to meet their food needs.

The orientation of the development of the coastal area it was time of beginning to see the marine and fisheries sector as one of the priorities and consider the potential as one of the economic development. At least there are 11 sectors of the economy can be developed (BPS, 2011; Dahuri, 2013), so that the resources of the sea and the coast need to be managed wisely and can become the object and source of new growth for Indonesia's economic development in a sustainable way.

Indonesia as a rich country in culture and has a generous of different culinary regions with the characteristic of each others. Semarang has some superior products typical of the area some of which are Softbone milkfish, *Lumpia*, *Wingko*, *Mochi*, etc. Softbone milkfish [*Chanos chanos* (Forsskål, 1775)] or softened-bone milkfish is one of the excellent products, there are various types of business scale in the capital of Central Java Province (Agustini et al., 2010) . It is as the product of the creativity traditional fish processing which included in one of the commodities in the creative industries of culinary were in great demand as a public good and the daily product or as souvenirs. The increasing number of tourists visit increases the demand for softbone milkfish as the culinary industry in Semarang.

Meanwhile, downstream is an effort to prioritize the value added in the country in the hope would be able to add value to the economy and generate employment opportunities. Note that the added value should have the competitive advantage that will ensure the supply chain. It means that the flow of raw materials from upstream will not be choked and at a decent price.

This research was conducted descriptive and was aimed to determine from three different dimension which is ecological and raw material, economy, food safety and quality dimension of “Softbone Milkfish”; identified the attributes from each dimension which affected the sustainability; analyzed the sustainability index and categorized sustainability status and gave the formulation of management strategies.

## **2. Material and methods**

### *2.1. Fish preparation*

Samples of fish as raw material (fresh milkfish) - (D) and softbone milkfish were taken from different scales ranging from small - scale (households) – (A), medium (B) to large scale industrial processing roomates (C) had different technical and sales location.

### *2.2. Sensory*

The fresh milkfish and softbone milkfish were evaluated by ten semi-trained panelist panel using score sheet from Indonesian National Standard, SNI 01-2729.1-2006 and SNI.4106.1 : 2009.

### *2.3. Moisture content*

Water content determined by moisture analyzer instrument (Ohaus MB45).

### *2.4. Protein content*

Protein content determined by Micro-Kjeldahl method in three stages which is destruction, distillation and titration (Legowo et al., 2005).

### *2.5. Lipid content*

Lipid content determined by Soxhlet extraction method (Legowo et al., 2005).

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