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Strengthening the social security of the Indonesian fishermen

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Abstract

This study aims to explore efforts in strengthening social security for Indonesian fishers prone to high-risk work accidents through the Indonesian National Insurance and Health Security scheme or commonly known as Badan Penyelenggara Jaminan Sosial (BPJS). This research employed a normative legal method by adopting types of legal studies that emphasize legal references. Data gathered by collecting primary and secondary sources from previous research were analyzed synthetically afterward. The results show that the exercises to strengthen fishermen's social security in Indonesia are carried out partially in several regions. Viewing fishers as non-wage workers, they mostly do not receive labor insurance/BPJS Ketenagakerjaan. Since formal/salaried employees are registered in four BPJS Ketenagakerjaan programs: Work Accident Security/Jaminan Kecelakaan Kerja (JKK), Dead Security/Jaminan Kematian (JKM), Old Age Security/Jaminan Hari Tua (JHT), and Pension Insurance/Jaminan Pensiun (JP), a scheme helping fishers receive complete social security through Indonesia's BPJS needs to strive. © 2020, BIOFLUX SRL. All rights reserved.

Author keywords

BPJS; Indonesian fishers; Insurance; Social security

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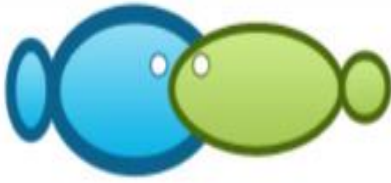
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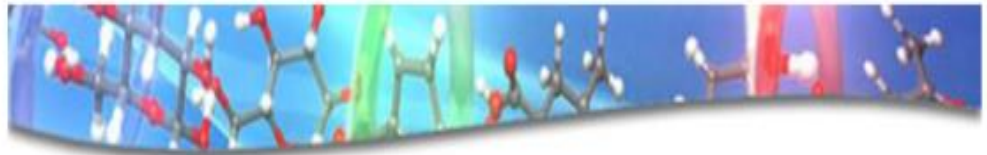
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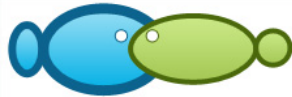
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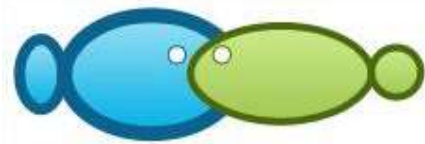
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Strengthening the social security of the Indonesian fishermen

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Abstract. This study aims to explore efforts in strengthening social security for Indonesian fishers prone to high-risk work accidents through the Indonesian National Insurance and Health Security scheme or commonly known as *Badan Penyelenggara Jaminan Sosial (BPJS)*. This research employed a normative legal method by adopting types of legal studies that emphasize legal references. Data gathered by collecting primary and secondary sources from previous research were analyzed synthetically afterward. The results show that the exercises to strengthen fishermen's social security in Indonesia are carried out partially in several regions. Viewing fishers as non-wage workers, they mostly do not receive labor insurance/*BPJS Ketenagakerjaan*. Since formal/salaried employees are registered in four *BPJS Ketenagakerjaan* programs: Work Accident Security/*Jaminan Kecelakaan Kerja (JKK)*, Dead Security/*Jaminan Kematian (JKM)*, Old Age Security/*Jaminan Hari Tua (JHT)*, and Pension Insurance/*Jaminan Pensiun (JP)*, a scheme helping fishers receive complete social security through Indonesia's *BPJS* needs to strive.

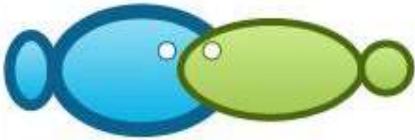
Keywords: *BPJS*, Indonesian fishers, social security, insurance.

Introduction. The establishment of the social security program is one of the country's commitments in providing socio-economic protection for the community welfare, and this responsibility is offered to create clean and civilized social justice for all Indonesians (Alexandra 2012; Mboi 2015; Berenschot et al 2018).

Apart from being mandated in *Pancasila* (foundational philosophical theory of Indonesia), the commitment to establish a social security program was also designated in Article 28 H and Article 34 of the 1945 Constitution of the Republic of Indonesia. The state constitution stated that "the country is required to provide support for all Indonesians' social protection and welfare". Based on juridical and philosophical perspectives, the country is obliged to protect its citizens through social security. Social security provided by the government helps the community in the economic aspect. Initially, several institutions managed by State-Owned Enterprises/*Badan Usaha Milik Negara (BUMN)* have dealt with social security concerns: PT. Jamsostek, PT. Taspen, PT. Asabri, and PT. Askes (Habibie et al 2017).

But then, at the 2001 Annual Meeting of the Republic of Indonesia, MPR Decree No. X/MPR/2001 concerning Reports on Decree's Implementation appointed the President to establish a National Social Security System. The national security system is proposed to provide comprehensive and integrated social protection based on Indonesia's fisheries laws.

The commitment to provide social security is depicted in the following laws and regulations, as shown in Figure 1. From Figure 1, it can be understood that the stipulation of social security for fishers certainly has the potential to be achieved. Social security is a guarantee by the country to create a just and prosperous society. In early 2011, Law No. 24/2011 concerning the Social Security Administrative Body, Article 5 paragraph 1, stated that social security providers must be established with a law foundation. That designation became the framework for establishing the Indonesian



Determination of an appropriate ratio of N:P for optimisation of algal development in fertilizer ponds

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Abstract. The purpose of this study is to examine the effect of nitrogen and phosphorus ratios (N:P_s) on the development of marine algae in fertilized ponds, which are considered to be natural food for *Artemia* farming. Phytoplankton composition and abundance were determined through qualitative and quantitative assessments. The experiment comprised four treatments, in triplicate (i.e. treatments 1, 2, 3 and 4, with ratios of N:P = 3, N:P = 6, N:P = 9 and N:P = 12, respectively); fishmeal (2nd grade) was used at the rate of 30 g m⁻³, while urea and DAP were combined at the rate of 6 g m⁻³, with urea and DAP accounting for 4.93 g and 1.07 g, respectively. Study results showed that the average density of algae varied from 637x10³ to 2,434x10³ cells mL⁻¹. Algae density produced by the N:P = 6 treatment was the highest (i.e. 2,434x10³ cells mL⁻¹), and there were statistically significant differences ($p < 0.05$) among the treatments. In total, 52 algal species were found: 21 belonging to Bacillariophyta; 21, to Chlorophyta; 7, to Cyanophyta; 1, to Dinophyta; and 2, to Euglenophyta. Additionally, algal compositions were 38, 32, 35 and 27 species observed in four different treatments (N:P = 3, N:P = 6, N:P = 9 and N:P = 12, respectively). The dominant genera were typically *Nitzschia*, *Thalassiosira* (Bacillariophyta), *Tetraselmis* (Chlorophyta) and *Oscillatoria*, *Lyngbya* (Cyanophyta). As results demonstrated that algae developed well at treatment N:P = 6, this could be considered a suitable treatment for fertilizer pond management applied in *Artemia* farming.

Key Words: N:P ratio, phytoplankton, fertilizer pond.

Introduction. Nitrogen and phosphorus are the two key elements for algae development in most water bodies. Kim et al (2007) concluded that high nitrogen levels and low N:P ratios were favourable for cyanobacterial dominance in a shallow hypertrophic reservoir, and that a higher level of nitrogen concentration in the water column is likely to induce critical P-limitation on phytoplankton growth. As reviewed by Rasdi & Qin (2014), N-limitation usually results in low protein content and high carbohydrate or lipid storage, while P-limitation can also shift the relative contents of protein, lipid and carbohydrate in algae cells. Additional nitrogen at appropriately high levels (i.e. 18.53, 24.7 and 30.88 mg.L⁻¹) when culturing *Spirulina platensis* helped to enhance maximal biomass (4.90±0.12, 4.79±0.11 and 4.35±0.28 g L⁻¹, respectively) compared to low nitrogen levels (6.18 and 12.35 mg L⁻¹) and, therefore, to lead their respective lower biomass (3.06±0.27 and 3.46±0.04 g.L⁻¹, respectively) at day 8 (Tran 2013). However, it is well-known that the Redfield ratio of N:P = 16:1 (Redfield et al 1963) is commonly used to evaluate nutritional status (N, P) in a number of marine ecosystems; when N and P appear differently from the above ratio, this will lead to an imbalance in N or P in the water body and affect the growth of algae. Lagus et al (2004) observed that *Chaetoceros* sp. could develop at low nutrient levels, but required an N:P ratio of at least 38.1-39.1. Similarly, *Chlorococcales* sp. was found to be well-developed at N:P = 20-50:1, while Cyanophyta was dominant at N:P = 5-10:1 (Bulgakov & Levich 1999). The same observation was made by Smith et al (2006), who recorded that the N:P ratio is a factor affecting algal community structure. Another research study on the ratio of N:P in soil and water environments related to the development of *Chaetoceros calcitrans* proposed that an N:P ratio in the range of 4-44:1 is considered suitable for the optimal growth of the alga (Thu et al 2008). The authors also suggested that the differences in algae