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The optimization of the tangguh coastal village development program as an effort to develop coastal areas

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Abstract

This study explores the optimization of the Tangguh Coastal Village Development Program to improve coastal areas. Empirical legal studies and normative law investigation are employed as methods in this study. The investigation stage consists of a) preparation; b) data acquisition; c) field survey; and d) classification of potentials and problems. The results prove that synergy can be achieved if the Tangguh Coastal Village Development Program and its communities are supported by various sectors, governments, and other related agencies. Based on the principle standards in judging villages to be categorized in Tangguh Coastal Village Development Program, Mangkang Kulon Village is proposed to execute arrangements concerning opportunity developments in the strategic economic areas (in villages, industries, trades, and offices areas) and vulnerable economic areas (low economic potential). Such anticipatory steps are expected to accommodate growth equalization and accelerate community economic development on the seashore.

Author keywords

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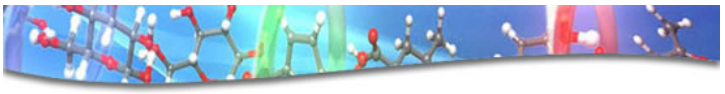

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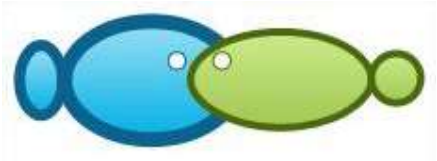

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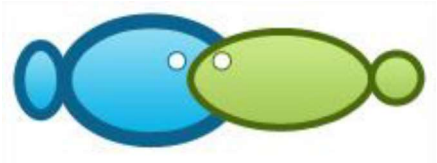
Abstract. This study explores the optimization of the Tangguh Coastal Village Development Program to improve coastal areas. Empirical legal studies and normative law investigation are employed as methods in this study. The investigation stage consists of a) preparation; b) data acquisition; c) field survey; and d) classification of potentials and problems. The results prove that synergy can be achieved if the Tangguh Coastal Village Development Program and its communities are supported by various sectors, governments, and other related agencies. Based on the principle standards in judging villages to be categorized in Tangguh Coastal Village Development Program, Mangkang Kulon Village is proposed to execute arrangements concerning opportunity developments in the strategic economic areas (in villages, industries, trades, and offices areas) and vulnerable economic areas (low economic potential). Such anticipatory steps are expected to accommodate growth equalization and accelerate community economic development on the seashore.
Key Words: coastal community, economic areas, Mangkang Kulon, village development.

Introduction. Perceiving the evidence that Indonesia's sea area is far more extensive than land (Mcllgorm & Campbell 2018), Indonesia has enormous potential in the fisheries and marine sectors. Such great possibilities should be optimally utilized to improve the community's welfare, especially for people in coastal areas. Unfortunately, coastal communities can only benefit from 20% of the existing potential (Folber 2020). The low level of communal absorption to the coastal resources is linked to the revealing situation that most Indonesian coastal communities still grapple against poverty, defend lives over coastal threats, have low independence in village organizations, and struggle due to poor coastal infrastructure. The above four problems nonetheless exacerbate the vulnerability of village society to natural disasters and climate change.

According to Rudiarto et al (2018), the top main problems faced by Indonesian coastal communities are (1) the high level of poverty, shown by the number of poverty in 10,639 coastal villages covering 7 million people in 2010; (2) severe damage to coastal resources; (3) low autonomy of village organizations in addition to the degradation of local wisdom; (4) the shortage of village infrastructure; and (5) the feeble well-being of the home environment. Such problems also weaken the status of coastal communities against natural disasters and climate change. Consequently, through the Directorate General of the Management of Coastal Areas and Small Islands, the Ministry of Marine Affairs and Fisheries (2017) launched an innovative program called the Tangguh Coastal Village Development Programs to offer new hope for better coastal villages in Indonesia.

With a coastline of 36.63 km and strategically located at the center point of the Java Island's North Coast route, Semarang City is a potential area for industrial, trade, and service activities (Giyarsih & Marfai 2017). The advancement of Semarang City as a capital city heading to a metropolitan one is characterized by the increasing population density in its coastal area.



The parasite fauna in fish from the Kazakhstan portion of the Caspian Sea

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Abstract. The purpose of this work was to evaluate the extent of parasitization of various fish species from the Kazakhstan part of the Caspian Sea. 3133 fish from 30 species were collected between 2008 and 2017, and 31 parasite species were identified (apart from *Myxosporidia* species) by using the compression technique. Among the species, 11 were free of parasites. The extensity of the parasite infestation for the studied fish ranged from 0.4% - *Mazocraes alosae* (Hermann, 1782) in freshwater bream (*Abramis brama*) - to 97% - *Contracaecum rudolphii* (Hartwich, 1964) in the bersh (*Sander volgensis*). To our knowledge, this is the first report on *Dactylogyrus cornu* (Linstow, 1878) and *Hemiurus appendiculatus* (Rudolphi, 1802) inhabiting fish in the area researched. Moreover, the ide (*Leuciscus idus*) as a carrier of *Opisthorchis felineus* (Rivolta, 1884) in the Caspian Sea basin is described for the first time. Some of the fish were infested with potentially zoonotic parasites, which indicates the need for regular monitoring of the extensity of parasite infestation in the fish fauna of the Caspian Sea, to further prevent parasitic diseases in the human population.

Key Words: helminth, monitoring, parasite infestation, trematode, zoonotic parasites.

Introduction. The introduction of parasites modifies ecosystem processes and degrades biodiversity, thus inflicting damage to commercially important fisheries and causing considerable financial losses. An example of a disruptive impact on native fish population caused by the intrusion of alien parasite species into their habitat is the decline in *Acipenser nudiventris* (Lovetski, 1928) population by the monogenean *Nitzschia sturionis* (Abildgaard, 1794) introduced to the Aral Sea with the beluga *Huso huso* (Linnaeus, 1758) in the 1930's (Vignon & Sasal 2010).

In 1984, losses of wild Norwegian salmon (*Salmo salar*) induced by the invasion of *Gyrodactylus salaris* (Malmberg, 1957) amounted to 520 tons. The parasite has completely destroyed salmon population in 6 rivers and jeopardized the survival of the fish in 34 other rivers (Bakke et al 2007).

Cestodes of the family Ligulidae dwelling in the northern part of the Caspian Sea are causative agents of a lethal fish disease, ligulidosis. In the body of juvenile bream (*Abramis brama*), Ligulidae cause dystrophy and dysfunction of internal organs, skeleton deformation, abdominal rupture, and consequently, the death of infested fish (Kon'kova 2015).

Fish farms have good possibilities to influence the welfare of fish and its environment, which is important in the prevention of diseases (Austin & Austin 2007; Rahkonen et al 2013).

When the fish are infested with various parasites, they begin to release pathogenic bacteria into the environment, further increasing the infectious pressure (Austin & Austin 2007).

Freshwater fish serve as the primary epidemiological reservoir for *Diphyllobothrium latum* (Linnaeus, 1758) and *Opisthorhis felineus* (Rivolta, 1884). It has