

Benefit distribution and management of inland fisheries: A case study at Batu Tegi Dam, Lampung Province, Indonesia

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Abstract. Inland water ecosystems in Indonesia harbor significant fisheries potential, yet challenges persist in optimizing inland fisheries, including unclear institutional authority and coordination. This study, conducted in 2019 at Batu Tegi Dam in Tanggamus Regency, Lampung Province, Indonesia, aims to highlight the benefits of inland fishery resources for local communities and assess the current management situation. Findings from this research, combining primary and secondary data, intend to contribute to the relatively unexplored field of inland fisheries research and offer insights for policymakers. Batu Tegi Dam, originally designed for various purposes, faces issues in achieving its goals, primarily functioning for irrigation, but grappling with leakage and operational constraints. Fisheries activities exhibit fluctuating statistics. They support the livelihoods of local communities, and there is an evolving shift from common property to private management due to their newfound role as a tourist attraction. While specific fishing regulations are absent, destructive gear is prohibited. National regulations provide a legal framework for dam water management, despite not being dam-specific. The shift in governance authority from districts to central and provincial levels, driven by regional autonomy, necessitates enhanced coordination while posing potential bureaucratic challenges. Effective dam management requires the establishment of local regulations tailored to dam-specific issues; an aspect currently absent. To unlock the full potential of Batu Tegi Dam, addressing water management, environmental concerns, and governance challenges is imperative. Developing local regulations should be a future consideration to enhance effective and sustainable dam management.

Key Words: fisheries management, inland waters, livelihood, policy makers.

Introduction. The inland waters ecosystems in Indonesia hold significant potential for fisheries resources. With an approximate area of 13.45 million ha, it is estimated that these inland waters can yield around 3.035 million tons of fish annually (Kartamihardja et al 2009). These fishery resources are distributed across various types of inland waters, including reservoirs, lakes, swamps, small dams, rivers, and other water bodies. According to Kartamihardja (2014), these inland waters ecosystems are spread across Indonesia, with 50% in Kalimantan, 23% in Sumatera, and the remaining 27% dispersed in Sulawesi, Jawa, Maluku, Papua, Bali, and Nusa Tenggara.

In addition to their substantial quantity, the inland fisheries in these aquatic ecosystems exhibit a remarkably high biodiversity. Many countries have successfully utilized their natural resources as the main economic driver (Faturohim et al 2023; Hidayat et al 2024). For instance, Riau Province boasts 160 fish species that can be utilized for both food and ornamental purposes (Wiadnyana & Lukman 2014). Similarly, Aceh is home to around 114 freshwater and brackish water fish species (Muchlisin 2020). Proper management of these inland fishery resources can transform them into a vital source of protein, food security, regional revenue, and even national foreign exchange earnings. Beyond their economic function, these inland aquatic ecosystems serve

purposes related to education, culture, community, spiritual services, socio-ecology, and recreation (Partomo et al 2011).

Nevertheless, the actual utilization of these inland fishery resources currently stands at only about 48% of the estimated potential, producing 1452947 tons annually out of a possible 3034934 tons per year (MMAF 2019). This situation is supported by the findings of Soeprbowati (2018), according to whom the degradation of lakes in Indonesia is a significant concern, with human activities such as agriculture, hydroelectric power, and industrial use leading to impairment of surface waters. This has resulted in a decrease in both the quantity and quality of several lake ecosystems, reducing their functions. The utilization of inland water resources has also led to problems such as water pollution, siltation, and eutrophication (Sumawijaya 2006). Furthermore, research by Muchlisin (2020) underscores the endangered status of native fish species. If certain types of fish become scarce, households will face food shortages (Erlyn et al 2023). Inland public water fisheries are the main source of affordable protein for the population in the region (Hidayat et al 2023).

The aforementioned challenges are indicative of the suboptimal management of inland fisheries. The complexity of management stems from the common pool resource nature of inland waters and the intricacies of categorization and the number of resource users. Often, a single water body hosts multiple types of resource users, and externalities generated by one user can affect others, either positively or negatively. Additionally, a centralized management approach fosters a sense of disinterest or indifference among local communities. For example, Partomo et al (2011) revealed that a centralized management model that reduces the role of local resource users leads to inefficiencies in managing floodplains.

Another issue contributing to the suboptimal state of inland fisheries, as per MMAF (2019), is the lack of clarity regarding the authority and responsibilities of each institution involved in resource management. This has resulted in disjointed development programs for inland fisheries with little coordination. For instance, in the case of fish restocking, a clear program protocol and a management unit with the authority to oversee the program's implementation are needed. The management of fishery resources in Indonesia is primarily the responsibility of the Ministry of Marine Affairs and Fisheries, which is continually seeking the most suitable approaches. One existing example is the allocation of fisheries management areas based on ecosystem considerations, as recommended by Metcalf et al (2009). In light of the above discussion, this study aims to demonstrate the benefits of inland fishery resources to local communities and analyzed the current state of management in the Tanggamus District area of Lampung Province. The findings of this study are expected to contribute to the relatively underexplored field of inland fisheries research and serve as a basis for policy makers in managing inland fishery resources.

Material and Method

Study area. This research was conducted in 2019 in the province of Lampung, Indonesia, specifically at Batu Tegi Dam in Tanggamus Regency. Construction started in 1995 and was officially inaugurated on March 8, 2004. The Batu Tegi Dam is recognized as the largest dam in Southeast Asia, boasting an expansive area of 3560 ha. Renowned for both its appeal to tourists and the growing fishing activities it accommodates, the dam serves as a prominent landmark in the region.

Data collection. The study's data collection comprised both primary and secondary data, tailored to demonstrate the benefits of inland fishery resources to local communities and analyze the current state of management in the Tanggamus District area of Lampung Province. The comprehensive dataset included various dimensions such as stakeholder types, roles, and influences; management goals; formal and informal regulations related to resource management in inland water ecosystems (specifically inland fisheries); resource types; distribution channels; production relationships; marketing of outputs; and institutional operation costs (administrative, development and

training, maintenance, coordination, enforcement of fisheries management areas, monitoring and supervision, and socialization costs). Additionally, it encompassed data on the extent of community involvement in the management process, from planning to enjoying outcomes. Secondary data focused on the potential of fishery resources, catch production in inland aquatic ecosystems, the number of inland fishermen, and relevant previous research reports or studies in the study area. Primary data were acquired through in-depth interviews with 37 fishermen, 2 village heads, and 1 representative from the Batu Tegi Dam Management Authority. The secondary data were gathered through literature reviews of documents held by pertinent stakeholders and previous research findings related to fishery resource management in inland waters. Aligned with the research objectives, the collected data covered resource characteristics, user characteristics, types of resource utilization, and patterns of resource utilization. The data collection utilized two methods: in-depth interviews and focused group discussions.

Data analysis. The data analysis in this study employs a mixed method, incorporating both quantitative and qualitative approaches. Quantitative data analysis is utilized to calculate the production and income of fishermen. Descriptive analysis is employed to map out the distribution of benefits derived from the resource. Empirical juridical analysis was used to examine the management of fishery resources in the target area. This empirical juridical analysis involves a case study approach, serving as a means to delve deeper into the management, national regulations, and their implementation within the context of fisheries resource management at the research location. Additionally, the interpretation of legal rules regarding national regulations is conducted to elaborate on the meaning of the regulations outlined in the policy.

Results and Discussion

Overview of Batu Tegi DAM. Batu Tegi Dam is situated in the village of Batu Tegi, Air Naningan District, Tanggamus Regency, Lampung Province, and falls within the Inland Waters Management Area (Kawasan Pengelolaan Perairan-Perairan Umum Daratan or KPPUD) 438. The dam is located approximately 90 km southwest of Bandar Lampung and is built on the Way Sekampung river, at a distance of 65 km from Argoguruh Reservoir. Batu Tegi Dam regulates the flow of two rivers, Way Seputih and Way Sekampung. Construction of Batu Tegi Dam began in 1978, funded by the national budget (APBN) and a loan from the World Bank (Loan IBRD). The project's implementation occurred in several phases, starting with a feasibility study in 1978, detailed dam design completion in 1983, design review and supervision of construction in 1994, tunnel construction work in 1995, and finally, dam construction that commenced in 1996 and concluded in 2000, with an official inauguration in 2004.

According to DJKN (2009), Batu Tegi Dam is the largest rock-fill dam in Southeast Asia, spanning 3650 ha. It boasts a fill volume of 9641071 m³, a crest length of 701 m, a crest elevation of +284.5 m (midpoint), and a crest width of 12 m, with a dam height of 122 m. Initially constructed for irrigation and agricultural development in the Metro, Branti, and Bandar Lampung regions, it aimed to irrigate 66591 ha across four areas. However, significant leakage reduced the irrigable land to 54032 ha (Wardhono 2014). Wardhono (2014) noted that Batu Tegi Dam never reached its intended water elevation of 275 m, with a continuous decline to 12.6 m, rendering the targeted agricultural irrigation unfeasible.

Furthermore, Batu Tegi Dam was initially designed for multiple purposes, including fisheries development, flood control, tourism, and the supply of raw water for the Regional Water Company (PDAM) at a rate of 2250 L per second. It was also intended to function as a hydroelectric power plant (PLTA) with a capacity of 1x14 megawatts annually. However, due to inconsistent water level variations, PLTA Batu Tegi has been unable to operate at full capacity. In 2008, the dam was even temporarily closed due to a significant drop in water levels, falling below 274 m above sea level. This cessation of operation was caused by the inability to capture the catchment area, leading to an

outflow well below the normal discharge of 15 m³ per second, resulting in PLTA Batu Tegi producing electricity at only half of its capacity.

In 2009, DJKN conducted an economic assessment, valuing Batu Tegi Dam at IDR 2.01 trillion (121.38 million USD). Currently, the dam is facing ongoing siltation due to sedimentation and river fluctuations, resulting in a sedimentation rate exceeding the normal ratio of 40:1, reaching 84:1 (Yuwono et al 2018). The erosion rate at Batu Tegi Dam is estimated to be 167 tons per ha per year (Antara 2018). Fishery production at Batu Tegi Dam, as reported in BRPPUP (2017), is characterized by fluctuating statistics. The average standing stock is 84.4 kg per ha, with an average catch production of 129 kg per ha annually and 212 fishermen RTP (fisherman units). The potential fish production in 2017 ranged from 228.47-439.97 kg per ha per year, equivalent to 802.1 tons annually. Referring to the maximum sustainable yield (MSY) set by the Lampung Province, the estimated sustainable potential for inland waters at Batu Tegi Dam was 17425 tons per year, with a maximum effort of 3626 units (standard fishing gear). This estimate surpasses the MSY data provided by the Lampung Province Fisheries Office, which is set at 15000 tons per year. According to BRPPUP (2017), with an area of 2400 ha, Batu Tegi Dam is assumed to have a maximum sustainable yield of 1296 tons.

Fishing gear used to catch fish at Batu Tegi Dam includes gill nets, arrows or harpoons, longlines, hand lines, pole lines, traps, lift nets, traps, and scoop nets, among others. The most commonly used fishing gear, and the primary tool of fishermen at Batu Tegi Dam, is the gill net, with an average daily productivity of 5 kg. Hand lines have an average productivity of 1.13 kg per day, pole lines 1.6 kg per day, and arrows or harpoons and longlines 2.6 kg per day. BRPPUP (2017) lists 21 species of fish that have been caught, over a one-week period of fishing/research (Table 1).

Table 1

Fish caught at Batu Tegi Dam, 2019

No	Local name	Scientific name	Family	Description [#]
1	Keperas	<i>Cyclocheilichthys apagon</i>	Cyprinidae	**
2	Sebarau	<i>Hampala macrolepidota</i>	Cyprinidae	**
3	Palau	<i>Osteochilus haseeltii</i>	Cyprinidae	*
4	Gurame	<i>Osphronemus gourami</i>	Osphronemidae	*
5	Kepiat	<i>Mystacoleucus marginatus</i>	Cyprinidae	*
6	Baung	<i>Mystus nemurus</i>	Bagridae	*
7	Nila	<i>Oreochromis niloticus</i>	Cichlidae	**
8	Patin	<i>Pangasius</i> sp.	Pangisidae	*
9	Sepat	<i>Trichogaster</i> sp.	Belontiidae	*
10	Gabus	<i>Channa striata</i>	Cannidae	*
11	Cengak atau Semah	<i>Tor</i> sp.	Cyprinidae	*
12	Betutu	<i>Oxyeleotris marmorata</i>	Eliotridae	*
13	Toman	<i>Channa micropelies</i>	Cannidae	*
14	Tembakang	<i>Helostoma temminckii</i>	Helostomatidae	*
15	Tawas	<i>Puntius javanicus</i>	Siprinidae	*
16	Mas	<i>Cyprinus carpio</i>	Siprinidae	*
17	Sili atau Tilan	<i>Mastacembelus</i> sp.	Mastacembelidae	*
18	Betok	<i>Anabas testudineus</i>	Anabantidae	*
19	Belut	<i>Monopterus albus</i>	Synbrachidae	*
20	Bujuk	<i>Channa melanopterus</i>	Cannidae	*
21	Sihitam	<i>Labio chrysophekadion</i>	Cyprinidae	-

Note: [#] - adjusted based on in-depth interviews with fishermen; * - low stock; ** - high stock; - no longer found; source: BRPPUP (2017).

The water quality is in a eutrophic or fertile condition. According to BRPPUP (2017), the total phosphorus content in Batu Tegi Dam is 291.0 µg L⁻¹, and the chlorophyll-a content is 16.335 µg L⁻¹. Phytoplankton comprises 22 species, with *Oscillatoria* being the most prevalent, while zooplankton consists of 12 species, with *Peridinium* being the most abundant. There are 16 species of benthos, with the highest abundance originating from the Way Sekampung inlet, including annelids and mollusks.

Fishermen and fishing activities. Batu Tegi Dam serves as a source of livelihood for local communities engaged in fishing activities. In the southern bay-like part of the dam, fishermen land their catches, primarily consisting of freshwater fish such as snakehead (*Channa striata*), catfish (*Pangasius* sp.), tilapia (*Oreochromis niloticus*), hampala (*Hampala macrolepidota*), palau (*Osteochilus haseeltii*) and gourami (*Osphronemus gourami*). According to Batu Tegi Dam's managers, the dam's surrounding forest has experienced degradation, which impacts the dam's water-capturing capacity. The decline in water capture, as per the dam's managers, is partly attributed to the damage to the forested area surrounding the dam. Management of fishery resources closely relates to the management of input units for capture and the target fish species. Fishing activities are vital for the local community's livelihood. For those without agricultural land, fishing is their primary livelihood, while for those with agricultural land, it serves as a secondary source of income. In 2017, 212 Fisherman Units (RTP) engaged in fishing at Batu Tegi Dam. The common fishing methods employed were gill nets, arrows, longlines, hand lines, and poles.

It is important to note that only three fishermen originate from Batu Tegi Village, with the rest hailing from nearby villages such as Sinar Sekampung, Air Kubang, and Mandi Angin. The dominant group is from the Sinar Sekampung region. The fishermen mainly operate close to the dam's edges. Dominant fish species include snakehead, palau, and tilapia, although some river fish species, such as kelari, cengka, and species with inferior mouth morphology that can adhere to rocks, have started disappearing since the dam's construction. It is suspected that these fish are linked to river currents and shallow water with abundant rocks for attachment. Therefore, when river currents are dammed by Batu Tegi Dam, not many of these fish can adapt to the dam's characteristics of still and deep waters.

As per interviews with fishermen, the predominant fish species caught are generally snakehead, catfish, tilapia, hampala, with occasional catches of palau, gourami, and tilapia, particularly during certain seasons. The fish sizes vary, with catfish, weighing up to 1.5 kg, tilapia around 500 g per fish, and other consumption-sized fish measuring 10 to 20 cm in length. Fishermen typically use gill nets with mesh sizes of 1 to 2 inches, and some occasionally use fishing lines with self-collected worms as bait. Fishermen at Batu Tegi Dam engage in traditional fishing methods. Traditional fishing techniques are a common characteristic among inland water fishermen in Indonesia (Prianto et al 2023). Currently, introduced fish species like tilapia, gourami, catfish, and clown featherback have not dominated. Local river fish species predominate the catches, preserving the diversity of native fish. However, some fish introductions were reported around 2016, including carp (*Cyprinus carpio*), but they did not thrive and many perished, floating on the water surface. According to local residents, the dead fish were relatively large, containing numerous eggs in their bellies, suggesting that Batu Tegi Dam may not be a suitable habitat for carp reproduction. These fish introductions were carried out by the Public Works Department (PU). Despite the unsuccessful establishment of carp in Batu Tegi Dam, it highlights the importance of preliminary research and guidance from local fisheries departments regarding the species of fish to be introduced into the dam. Without such regulations, there is a concern that alien species may be introduced, potentially dominating the waters and reducing the biodiversity of native fish. Moreover, excessive carp numbers could affect the aesthetics and water quality, producing a strong odor and damaging water quality if many large carp cannot reproduce in the dam.

The purpose of Batu Tegi Dam, according to the local government, is primarily for irrigation, a view shared by the local fishermen. There were previous attempts to introduce floating net cages (karamba) to the dam. Still, these were discontinued within a year due to local PU regulations. In general, the fishermen at Batu Tegi Dam do not support the use of floating net cages, as they are aware that excessive usage can damage the environment. This situation is reinforced by Deswati et al (2023), as the presence of floating net cages (for tilapia culture) in Maninjau Lake has led to a decline in water quality and has an impact on pollution. However, some fishermen approve of using them as long as they are involved in these activities. The conversion of farmland into dam waters results in changes to community livelihoods. Therefore, efforts must be made

to provide alternative livelihoods. This situation affects both communities around Batu Tegi Dam and Jatigede Dam. The alternative livelihoods prepared by local governments are mostly focused on tourism, with fisheries serving as a secondary function. However, the fishery activities that can be developed at Jatigede Dam and Batu Tegi Dam are limited to capture fisheries.

Benefits distribution of fishery resources at Batu Tegi Dam. The interviews with local fishermen have provided insights into the predominant fish species caught at Batu Tegi Dam. The most frequently captured species include snakehead, clown featherback, and hampala, while others like *Oxyeleotris marmorata*, tilapia, and gourami are caught seasonally. The captured fish exhibit various sizes, with some reaching up to 1.5 kg for catfish and 500 g per individual for tilapia, while others fall within the consumable size range of 10 to 20 cm. Fishermen typically employ nets with mesh sizes ranging from 1 to 2 inches, and some occasionally use fishing gear with self-collected bait such as worms.

As of now, introduced fish species such as tilapia, gourami, catfish, and hampala have not yet dominated the waters of Batu Tegi Dam. Indigenous river species continue to be the primary catch, preserving the diversity of native fish species. Some fish seedlings were introduced in 2016, including carp. However, these introductions did not thrive, and many died and floated on the surface of the dam. There has been speculation that the conditions at the dam may not be suitable for the reproduction or spawning of carp. The failure of the carp to thrive at the BatuTegi dam, however, highlights the need for preliminary studies, advice, and attention from the local fisheries department to determine the appropriate fish species to be introduced. Without such guidelines, there is concern that the introduction of non-native species could reduce the biodiversity of native fish and adversely affect water quality due to the large number of dead carp. Batu Tegi Dam primarily serves for irrigation purposes, and there have been previous attempts to use floating net cages. However, these attempts did not last long (less than a year) due to local regulations. Several jetties in Batu Tegi Dam, including Talang 20, Pancasila, and Pintu Margo, distribute the catch to different collection points, with Pak Agus often being the buyer at Batutegi. Fish catches are bountiful during the rainy season but significantly reduced during the dry season. Mechanized boat users can achieve up to 50 kg to 1 quintal during the rainy season, but their daily catches during the dry season range from 5 kg to 1.5 kg, mostly in 0.5 to 1.5 kg sizes per individual fish.

Mandatory admission fees of Rp 5000 (0.3 USD) per person indicate the transformation of Batu Tegi Dam from a common property into a private property, managed by a specific group within the community. This change is driven by Batu Tegi Dam's emergence as a tourist destination in Tanggamus Regency. Funds collected from admission fees are reinvested in maintaining the reservoir's tourism area and supporting local development. Despite its common property nature, Batu Tegi Dam is now effectively privately managed by a selected group, imposing exclusivity and rivalry in access. Regarding fishing activities, there is no specific regulation in place, and anyone can extract fish resources from the dam. However, the use of destructive fishing gear, such as electrical shockers and poisons, is prohibited. Fishing activities are allowed at Batu Tegi Dam, whereas aquaculture activities using floating net cages have been prohibited since the dam's inception. The area around Batu Tegi Dam has also witnessed the growth of tourism-related activities, including boat rentals and transportation for locals to access their gardens in neighboring villages. The dam area now hosts kiosks and food stalls that provide catering services, drinks, and tourist boat services. According to the dam's management, the number of kiosks and stalls has increased over the years, but their count has stabilized in recent years. The distribution of benefits from fishery resources in the Batu Tegi Dam is illustrated in Figure 1.

The community has traditionally been able to derive benefits from the Batu Tegi Dam, both from its fisheries resources and non-fishery resources such as transportation and tourism. The utilization of resources at the Batu Tegi Dam is undertaken by the local community residing in the vicinity of the dam, comprising fishermen and recreational anglers, who may come from within or outside the same district. The extraction of fishery resources is achieved through various methods, including conventional fishing gear and

nets. The fishing activities conducted by the local community around the dam serve both commercial and livelihood purposes. Typically, residents from the surrounding areas are not subject to entrance fees, as they frequent the dam almost daily.

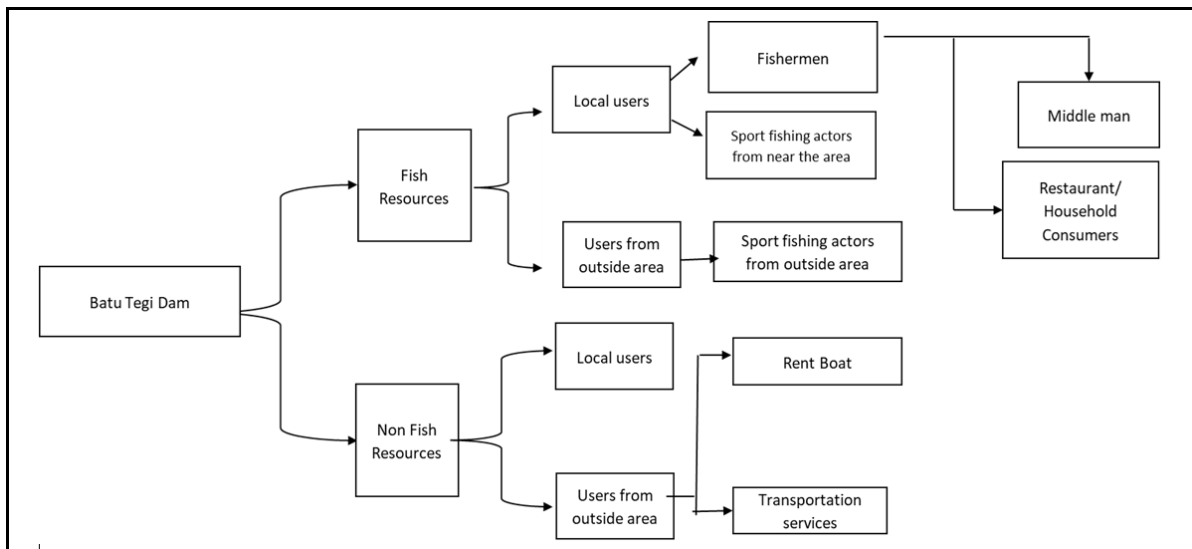


Figure 1. Resources benefits at Batu Tegi Dam, 2019; source: MMAF (2018).

Fishery resource management policy at Batu Tegi dam. The primary function of a dam is to store excess water, primarily sourced from surface runoff and rainfall (natural or artificial). As per Indonesian law, particularly Article 33, Paragraph (3) of the 1945 Constitution, all land, water, and the natural resources therein belong to the state and should be used for the maximum benefit of the people. With an emphasis on sustainable development, it is crucial to ensure the optimal and responsible utilization of both fishery resources and their habitats. National regulations governing water management for dams include the following laws: (1) Law No. 31 of 2004 on Fisheries, amended by Law No. 45 of 2009, focusing on Amendments to Law No. 31 of 2004 on Fisheries (Fisheries Law); this law mandates the utilization of fishery resources, emphasizing optimal and sustainable benefits and resource conservation; (2) Government Regulation of the Republic of Indonesia No. 60 of 2007 on Fishery Resource Conservation, designed to implement the provisions of Law No. 31 of 2004 on Fisheries; and (3) Minister of Marine Affairs and Fisheries Regulation No. 29/Permen-KP/2016, offering guidelines for the preparation of fisheries management plans, particularly for inland fisheries, as stipulated in Article 7, Paragraph (1)(a) of Law No. 31 of 2004 on Fisheries, amended by Law No. 45 of 2009.

Akib (2010) underscores the importance of translating public policies into action. Water management policies are well-defined at the national level, though not specifically tailored to dam or reservoir areas. However, these regulations can serve as a legal framework for dam water management. Referring to Law No. 7 of 2004 on Water Resources, it advocates for harmonious cooperation and coordination among regions, sectors (including fisheries), and generations. Indonesia's transition to regional autonomy, marked by Law No. 23 of 2014 on Regional Government (UU No. 23/2014), has changed the landscape of governance. It involves both formal and substantive changes. Formal changes encompass the detailed categorization of governance responsibilities, previously found in the appendix of Government Regulation No. 38 of 2007, now elevated to the appendix of UU No. 23/2014. The goal is to ensure that the division of governance responsibilities established by UU No. 23/2014 is not overridden by other sector-specific laws (Perdana 2016).

Substantive changes focus on the classification of governance responsibilities, criteria for concurrent governance responsibilities, and the specifics of governance responsibilities among central government, provincial government, and district/city

government. Notably, the maritime sector's authority, previously shared among central government, provincial government, and district/city government, now falls under the purview of central government and provincial government (Perdana 2016). This shift in policy, as mandated by UU No. 23/2014, places a unique burden on the management of Batu Tegi Dam (Tanggamus Regency, Lampung). It limits the authority of district governments, conferring it to central and/or provincial governments.

This situation calls for increased coordination and may result in bureaucratic challenges. The expanded responsibilities of central and provincial governments could hinder effective dam management. Fishery management comprises two key elements: "management" refers to the control, administration, or oversight of activities, and "fishery" encompasses all organisms that spend part or all of their life cycle in aquatic environments, as defined by Law No. 31 of 2004 on Fisheries. This law covers all activities related to the management and utilization of fishery resources, from production to marketing, within a business framework. Considering this, the establishment of local regulations plays a vital role as a reference and legal framework to prevent potential misuse of authority during the development of the Batu Tegi Dam area. As of now, local policies specifically governing Batu Tegi Dam do not exist, and national regulations continue to apply.

Conclusions. The Batu Tegi Dam in Tanggamus Regency, Lampung Province, Indonesia, was initially designed for multiple purposes, including irrigation, fisheries development, flood control, tourism, raw water supply, and hydropower generation. However, it has faced challenges in realizing these goals, primarily serving irrigation, but experiencing significant leakage issues and operational limitations due to inconsistent water levels. Fisheries activities at the dam have seen fluctuating statistics, supporting the livelihoods of local communities. The dam's traditional role has shifted from common property to private management due to its emergence as a tourist destination. While specific fishing regulations are lacking, destructive fishing gear is prohibited. Addressing challenges related to water management, environmental impacts, and governance is crucial for the dam to fully realize its potential. National regulations governing water management for dams, such as the Fisheries Law, Government Regulation on Fishery Resource Conservation, and Minister of Marine Affairs and Fisheries Regulation on fisheries management plans, provide a legal framework for dam water management, even though they are not dam-specific. The shift in authority from district to central and provincial governments, driven by regional autonomy, requires increased coordination and may pose bureaucratic challenges, potentially hindering effective dam management. Fishery management involves controlling and overseeing activities related to fishery resources. Establishing local regulations tailored to dam-specific challenges is essential to prevent potential misuse of authority. Currently, no specific local policies govern Batu Tegi Dam, and national regulations continue to apply. Future considerations should include the development of local regulations to enhance effective and sustainable dam management.

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Conflict of Interest. The authors declare that there is no conflict of interest.

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