

# Sustainable Development Goals for Empowering Women Fishers Through Mangrove Use

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**Abstract:** The Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers Act of 2016 protect small fishermen by requiring the government to give financial assurances if harvest yields are low. This law does not recognise or demand affirmative action for women fishermen to obtain equal access to protection and empowerment programmes. This forces women fishermen, culturally segregated from the fishing sector, into the home. Indonesia's Sustainable Development Goals (SDGs) include gender equality. This study examines gender imbalance in Law 7 of 2016's fisherman support programme in Brebes' Mangrove area. In this place, women fishermen can empower themselves through mangroves and fish farming despite Law 7 of 2016's policy vacuum. The socio-legal study examines the role of laws, rules, legal policies, and other legal systems in people's lives, including non-legal variables. In Brebes Regency, the primary concern is the lack of a statute that accommodates women fishers. This study uses socio-legal and descriptive analysis. From this research, it is hoped to learn about the implications of and not yet maximal programmes for empowering women fishermen according to Law Number 7 of 2016, which affects their economic and social life, and how these women fishermen have opportunities and equality (Gender Equality) so they can empower themselves among the people of Brebes Regency in particular and Central Java in general.

**Keywords:** Women Fishermen, Gender Equality, Mangrove Utilization, Brebes Regency.

**JEL Classification:** K23; K38; J08; J16; J18; D04.

## INTRODUCTION

Gender equality is a fundamental principle of effective environmental management and sustainable development (Koehler, 2016). Progress towards gender equality in fisheries is essential for effective and fair development in littoral nations (Torre et al., 2019). Even though commitments to gender equality have increased at the global, regional, and national levels, little is known about how this principle is developed and used in many geographies and settings (Sen & Mukherjee, 2014). As a result, gender equality development is challenging to analyse and navigate.

Traditionally, fishing operations have been considered a male domain, particularly in the primary sector (Máñez & Pauwelussen, 2016). In fishing, fishermen are typically viewed as providers/hunters/fishers (Alami & Raharjo, 2017). Understanding the conventional duties of men contributes to the concept. In truth, women fishermen, including women who fish for a living and fisherman's wives who are directly or indirectly involved in their husbands' operations, play an essential role and contribute significantly to the fisheries industry (Acheson, 1981; Davis, 1986; Harper et al., 2013; Chirwa et al., 2020).

Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers was enacted in 2016 by the House of Representatives and the

government to promote the welfare of Indonesian fisheries (Pramoda et al., 2021; Rimmer et al., 2021). This rule is quite positive because it protects small fishermen by requiring the government to provide them with financial protection through insurance for a poor harvest during the harvest season. However, the actual implementation of this programme is in disarray due to incompetence, corruption, and excessive bureaucratic red tape. This affects fishing villages, particularly women fishermen. As stated in the introduction of Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, one of the state's fundamental duties is to provide social justice for all Indonesians (Hartanto et al., 2019; Nugroho & Pawestri, 2020). The Elucidation of the Law describes the role of fishermen, fish farmers, and salt farmers who have contributed to the development, especially the economic growth of coastal and rural communities (Gibbs, 2009; McGoodwin, 2001).

Legislators are acutely aware of the potential of fishermen whose livelihoods are endangered by various factors, including the supply of fuel oil, illegal fishing, overfishing, climate change, and inclement weather (Sovacool, 2009; Tanner et al., 2014). Disease, pollution, the availability of broodstock, seeds, and inexpensive feed all pose the same challenge to fish growers (Paul & Vogl, 2011). Salt farmers face climate and price issues, coastal usage conflicts, shifting seasons, deteriorating environmental quality, and insecure land tenure (Didar-Ul Islam & Bhuiyan, 2016; Parvin et al., 2017). Fishermen, fish farmers, and salt farmers suffer poverty, insufficient facilities and infrastructure, and restricted access to funding and financing (Béné et al., 2007; Zainul Anwar et al., 2019). This condition affects their respective family

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members directly. On this basis, it is evident that the initial desire to place Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers is fundamentally crucial for the protection and empowerment of fishermen, cultivators, and salt farmers (Purwanti et al., 2021). Initial research revealed that this regulation contains a gender-biased definition of small fishing households.

This study focuses on the issue of gender inequality, especially regarding women fishermen, which we believe is inadequately addressed under Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers. According to Williams (2008), the adoption of a gender perspective provides a more accurate and comprehensive view of the entire fishing sector and its social environment. As this approach gives a more excellent grasp of the nature of fisheries, it provides the foundation for comprehending the problem and proposing a more suitable policy. In addition, the gender perspective emphasises the need for a comprehensive and integrated approach to fisheries and women fishermen (Coulthard et al., 2011; Ruddle & Hickey, 2008; Woodhead et al., 2018).

The mangrove sector is one of the sectors that need a significant amount of female participation (Barbier, 2006; Lambeth et al., 2002; Stone et al., 2008; Treviño & Murillo-Sandoval, 2021). The participation of women is crucial since it may prevent coastal erosion, provide a food supply, and provide for necessities (Harper et al., 2013; Hossain, 2001). Despite their vital role, Indonesia's quantity of mangrove trees continues to decline. According to data from the Ministry of Forestry, the width of the mangrove area in Indonesia in 2019 was 3.311.207.45 ha (Wahyuningsih, 2021). We must be concerned about the 637.624 hectares (ha) in critical condition. According to the Department of Forestry in South Sulawesi, 90 per cent of the mangrove forest in that province is in critical condition (Malik et al., 2015). These numbers indicate that mangrove protection in Indonesia could have been more optimal. One of the reasons for the lack of gender equality in the coastal sector is the preservation of mangroves. Consequently, it is vital to address the measures that might be employed to empower women in mangrove utilization (Seddon et al., 2021; Siles et al., 2019).

Public participation is a crucial feature of human growth (Ebbesson, 2021; Rowe & Frewer, 2000). According to research undertaken by the United Nations Development Program, there is a framework for analysing the connection between women's representation and effective governance (Krook & True, 2012; Rippenaar-Joseph, 2009). In addition, it has been demonstrated that allowing women to participate in decision-making can assist with various societal issues and eventually increase the welfare of the community so that development goals can be achieved. Another objective is to generate numerous chances for a more just society where human rights are safeguarded, and gender equality is the norm in the social and institutional environment.

Human development, particularly for women, is one of the 17 Sustainable Development Goals (SDGs), the fifth of which is to achieve gender equality. Thus, the main component of sustainable development is the realisation of gender equality; therefore, it is essential to conduct research on the development of gender equality through the representation of

women in the Village Consultative Body in Semarang Regency as part of an effort to realise the Sustainable Development Goals (Agarwal, 2018; Esquivel & Sweetman, 2016; Razavi, 2016).

In Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, the issue of the repercussions of discrimination against women fishermen and policy strategies to recognise the role and improve the welfare of women fishermen based on gender equality are required (Purwanti, 2018; Situmeang, 2019). Therefore, the government must strive to enhance the welfare of women fishermen and eliminate all stereotypes and discrimination that impede their life. This research will therefore contribute to developing policy strategies for the implementation of Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, which can improve the welfare of women fishermen and eliminate discriminatory practices against women fishermen.

The subject of this study is Human Resource Development, particularly Women's Resources. This research contributes to and provides solutions for human development, particularly for women, through policy strategies that can improve the welfare of women fishermen and eliminate discriminatory practices against women fishermen through the implementation of Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers. The findings of this study can be utilised as a basis for policy formulation in the implementation of Law No. 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, thereby enhancing the welfare of women fishermen and eradicating discriminatory practices against them. In addition, it is anticipated that the findings of this study will inform government programmes designed to empower women fishermen and raise awareness of gender equality in the fishing sector and fishing communities. Consequently, this research has contributed indirectly to developing Science and Technology-Social Culture and Social Humanities, Arts and Culture, and Education.

## RESEARCH METHODS

This research method is known as socio-legal research. Its purpose is to investigate the influence of laws, rules, legal policies, and other legal structures in people's lives more in-depth. In the context of female fishermen in the Brebes Regency, the research challenge is centred on the absence of a law that can satisfy the requirements of female fishers.

A Socio-Legal method and an Analytical Descriptive Analysis are utilised in this investigation. The legal strategy is based on a normative legal study of Indonesian laws and regulations, Law Number 7 of 2016, passed to protect and empower fishermen, fish cultivators, and salt farmers. The primary question that will be investigated in this study is whether or whether this law is implemented for the benefit of female fishermen using a variety of measures designed to protect and empower them on social, legal, and economic fronts within the fishing industry. This study makes use of both primary and secondary data, with primary data consisting of information obtained directly through field research and secondary data consisting of information obtained from

two main sources: primary legal materials (i.e. laws, regulations, regulations, and case law), secondary legal materials (i.e. legal reviews, journals, guidelines, and legal opinions), and tertiary legal materials (dictionaries, encyclopedias, and websites).

Interviews with respondents, informants, resource persons and other respondents served as primary sources of data that were collected. Purposive sampling and snowball sampling are two methods that can be used to determine the sample. The Central Java Provincial Government department that is in charge of Maritime Affairs and Fisheries will be the source of the primary data that will be used in this study. In addition, the research focus is on the Regional Government of the Brebes Regency. Several villages will be chosen, and residents of those villages, including village officials, and other members of the village, such as fishermen, mangrove cultivators, traders in mangrove regions, and village women, will be asked to participate in the survey.

This study uses descriptive analysis to describe the legal system's functioning within social life. This particular setting refers to female fishermen, particularly those working in the Mangrove area of the Brebes Regency.

## RESULTS

The purposeful application of the legal system to accomplish specific objectives is one of the defining features of modern law (Mathieu, 2008; Trubek, 1972). The aspiration to advance and the movement to advance women in Indonesia is a process carried out sustainably as an intrinsic part of the growth of the state and nation. This is done as a part of the aspiration to move forward and the movement to advance women in Indonesia (Hyunanda et al., 2021).

The following is a list of the essential principles of the rule of law, as outlined by Jimly Asshiddiqie (2008): The preeminence of legal authority. There is a normative and empirical acknowledgement of the principle of the rule of law, which states that the law, in its role as the ultimate guideline, is responsible for resolving all problems. From the point of view of the rule of law (supremacy of law), the actual supreme leader of the state is not a human being but rather a constitution that reflects the highest law. This is the case since the constitution is the highest law. On the other hand, empirical acknowledgement is an acknowledgement that is reflected in the behaviour of the majority of people that the law is indeed "supreme." Normative acknowledgement of the rule of law refers to an acknowledgement that is reflected in the formulation of laws and constitutions. In contrast, empirical acknowledgement refers to an acknowledgement that is reflected in the formulation of laws and constitutions (Costa & Zolo, 2007; Fukuyama, 2009).

A level playing field before the law. Everyone occupies a position of equality in the eyes of the law and the government, which is acknowledged normatively and demonstrated experimentally (Dewi, 2022; Purwadi et al., 2022). Within this principle of equality, any discriminatory attitudes and actions, in any form and manifestations, are acknowledged as being forbidden attitudes and actions (Anderson & Pildes, 2000). The only exception to this rule is notable and temporary actions known as "affirmative actions," which are de-

signed to encourage and accelerate certain community groups or groups of citizens to pursue progress in order to achieve the same and equal level of development as the general population, who are much more advanced (Natalis, 2020). Isolated tribal groups or certain indigenous legal community groups whose conditions are disadvantaged are examples of community groups that may be eligible for preferential treatment under the auspices of "affirmative actions," a term that does not fall under the purview of the legal definition of discrimination. In the meanwhile, there are certain groups of people that can be given special care that is not discriminatory. One such category is women, and another is children who have been neglected (Nel, 2011).

The idea is that everything should be lawful. Power restraints and restrictions. It is a requirement that the principle of legality is applied in all forms (due process of law) in every state's legal system (Orth, 2003). This means that all acts taken by the government must be founded on legal laws and regulations that have been set down. It is necessary for there to be written statutory regulations that are put into effect or for those regulations to come before any administrative acts or activities are conducted. Therefore, every conduct and administrative action needs to be based on the procedures and rules (regels). These normative norms come off as being extremely inflexible, which has the potential to make the bureaucracy more cumbersome. Therefore, to ensure space for state administration officials in carrying out their duties, it is also recognised that the principle of "Freies Ermessen," which permits state administration officials to develop and set their own "beleid-regels" or "policy rules," applies freely and independently within the context of carrying out the responsibilities of the position that are imposed by legal regulations (Eck, 2018; Ringeling, 1978). This is done as a counterweight to ensure space for state administration officials to carry out their duties.

In this scenario, the limitation of power is comprehensive, indicating a hierarchy in the idea, starting from the highest level, the national level, and going all the way down to the lowest level, which is the village. Each of these hierarchies has branches that function as "checks and balances" in an equal position, meaning that they control and balance each other while keeping each other in check. As a result, power is not centred on or concentrated in a single organ as a result of this. "Checks and balances" can be found in the context of village governance in collaboration between the Village Government and the Village Consultative Body.

Participation in political processes is essential to the advancement of humankind and should be encouraged (Prasad, 2007; Rao, 2000). A United Nations Development Program study demonstrates an analytical framework for the relationship between women's political participation and good governance. The study also provides several examples of situations in which the provision of opportunities for women to be involved in decision-making has improved the general welfare of society as a whole. This paves the way for a plethora of options to construct a more just society, one in which human rights are safeguarded, and gender equality is the norm that is applied within the context of social and institutional structures. Equality between the sexes refers to a situation in which women and men are afforded the same

chances to better their standard of living and are accorded the same legal protections for their rights. Due to the growing awareness of the discrimination women face in today's society, which is produced by cultural norms and patriarchal structures, gender equality has emerged as a pressing issue (Brydon & Chant, 1989; Inglehart et al., 2003; Langvasbråten, 2008). Through establishing laws and regulations and their subsequent enforcement, the government is obligated to respect, fulfil, and safeguard human rights, especially women's rights. Because all persons are born with equal dignity, gender equality is representative of human rights (Agosin, 2001; Fredman & Goldblatt, 2015). In light of this, the state is obligated, within the context of gender equality, to ensure that women's and men's rights in the political sphere, as well as in the economic sphere, the social sphere, and the cultural sphere, are treated in an equally respectful manner. Equality between the sexes is based on three guiding principles: substantive equality; non-discrimination; and the obligation of the state to respect, fulfil, and safeguard (Durojaye, 2012).

The Indonesian government has enacted Law Number 31 of 2004, covering Fisheries at the national level (Nur & Susanto, 2019). This law was then modified by Law Number 45 of 2009. Therefore it is now Law Number 45 of 2009. The waters around Indonesia will now be managed as fisheries thanks to this new rule. Fishery Management Areas are defined as areas for fishery management, cultivation, conservation, research, and fishery development by Regulation 1 of 2009 issued by the Minister of Marine Affairs and Fisheries. These areas include waters, archipelagic waters, territorial seas, and contiguous zones. Additionally, they include the Indonesian Exclusive Economic Zone. The goals of Fishery Management Areas are to achieve an optimal and sustainable level of fisheries management and to ensure the long-term viability of fish resources and the surrounding ecosystem.

As can be observed in the introduction of Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, realising social justice for all Indonesian people is one of the tasks of the state as a constitutional requirement. The Elucidation of the Law outlines the status of fishermen, fish farmers, and salt farmers who have contributed significantly to development, notably to the economic growth of coastal and rural communities. Legislators are well aware of the potential of fishermen, whose livelihoods are jeopardised by various factors, including the accessibility of fuel oil, illegal fishing, overfishing, climate change, and weather. Disease, pollution, the availability of broodstock and seeds, and the cost of feed are all things that might be problematic for aquaculture operations. Salt farmers encounter challenges related to the environment, fluctuating prices, conflicts over the usage of coastal areas, shifting seasons, poor environmental quality, and insecure land tenure. Poverty, a lack of facilities and infrastructure, limited access to finance, and limited financing are all challenges confronted by fishermen, fish farmers, and salt farmers. This condition has an immediate and direct effect on the members of their respective families. Based on this information, it is not possible to deny that the initial desire to position Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers as a fundamentally significant measure for the protection and empow-

erment of fishermen, cultivators, and salt farmers is. Unfortuitously, the issue of gender bias from tiny fishing households is included in this statute.

Women play a significant role as fish cleaners for consumption at home or sale in the market, but there is the minimal discussion about them, and they need to be considered. This is because fishermen tend to be defined as those who catch fish, whereas women play a significant role as fish cleaners. Sometimes, they may still need to receive payment for their work in the family business. They are thought only to accompany their husbands even if they are successful in catching fish while out at sea. Because women are not considered fishermen according to this definition, the fishing industry does not include them. Since of this, women fishermen need access to loans, processing technologies, cold storage facilities, or training provided by the government. This has a detrimental effect on women fishermen because it prevents them from being able to participate in the fishing industry. This problem demonstrates that despite the efforts made by the state to promote the welfare of communities engaged in small-scale aquaculture, women fishermen are still left behind or do not merit such help. According to recent results, the importance of women's participation in the aquaculture industry is higher than it has ever been. It is estimated that women make up approximately 42 per cent of the labour force in aquaculture communities in Indonesia. They are taking into account the procedures that occur before and after harvest, bringing this number to a level that is even higher than half of the total workforce in the horticulture industry.

There are significant legal concerns that have the potential to weaken these women fishermen. However, it is envisaged that Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers would accommodate the welfare of these women fishermen (Hartanto et al., 2019). By the provisions of Article 45 of Law Number 7 of 2016 on the Protection and Empowerment of Fishermen, Fish Cultivators, and Salt Farmers, which states, "Empowerment activities (for fishermen, fish raisers, and salt farmers, ed. Please take note of the contributions that women provide to the household as well as the roles that they play. Households engaged in fish and salt farming and fishermen and fishermen's wives. This item stirs controversy since it assigns women to a position considered of a lesser social class, or as the law puts it, to a "part" of the fishing household, rather than acknowledging their eligibility to play a prominent role in the fishing enterprise. At least 5.6 million individuals are active in fishing operations in Indonesia, according to the KIARA organisation, which is a part of the Indonesian civil society and is focused on the welfare of fishermen. These activities include fishing, processing, and selling the catch once it has been obtained.

On the other hand, women make up 70%, or 3.9 million persons, of the workforce. This is because female fishers play an essential part in the entire economic chain of the fishing industry, beginning with the pre-production phase and continuing through the marketing phase. When women in the fishing community are only considered to be complements, volunteers, or accessories, the support and protection that is guaranteed to fishermen, fish cultivators, and salt farmers in Law Number 7 of 2016 on the Protection and Empowerment

of Fishermen, Fish Cultivators, and Salt Farmers is unavailable to women fishermen. Women fishermen face a unique form of social marginalisation in a position due to the nature of their occupation. In terms of both legislation and policies, their very presence and the actions they engage in are frequently disregarded even though they constitute an essential part of the stakeholders. Fisherwomen are also contributing factors to the broader social exclusion trap that threatens their ability to survive. The contribution comes in the shape of the essential function that women fishermen do in everyday fishing operations. Particularly for the fisherman who only does little production of fish. The role of women fishermen after going to sea is related to processing and marketing fish and processed fisheries products; yet, their presence is sometimes not counted because the masculinity of labour as a fisherman is solely believed to be appropriate for men. This view originates from the cultural practice of dividing labour in a way that takes gender into account. Because men and women perform different types of work, there is a widespread misconception that fishers consist of men and women who are complementary to one another.

The Sustainable Development Goals (SDGs), commonly referred to as the Global Goals, are an international rallying cry to end poverty, safeguard the planet, and ensure that all people live in peace and prosperity (Jones et al., 2018). In general, the Sustainable Development Goals serve as a guide for nations to follow in order to take the necessary steps to end poverty, safeguard the environment, and make sure that all people live in peace and prosperity. In September 2015, in New York City, the United States, the 70th General Assembly of the United Nations (UN) constituted a new historical turning point in the progression of globalisation. There were a total of 193 heads of state and world governments present to reach an agreement on a new universal development agenda. This new agenda is contained in a document titled *Transforming Our World: the 2030 Agenda for Sustainable Development*. This document contains 17 Goals and 169 targets valid from 2016 to 2030. This document is referred to as the Sustainable Development Goals (often abbreviated as SDGs) (Agbedahin, 2019).

The Sustainable Development Goals (SDGs) are a continuation of the Millennium Development Goals (MDGs), which were agreed upon by UN member states in 2000 and continued through 2015. However, there are significant distinctions between the two, particularly regarding the composition and the preparation method. In contrast to its predecessors, the Sustainable Development Goals (SDGs) take into account development issues more comprehensively. This is accomplished qualitatively (considering development issues that are not in the MDGs) and quantitatively (by targeting the full completion of each of its goals and objectives). The Sustainable Development Goals (SDGs) are universal in that they provide a balanced role for all countries – developed countries, developing countries, and least developed countries – to contribute to developing fully. As a result, each country has the same roles and responsibilities as the others to achieve the SDGs.

Since the document known as the 2030 Agenda or the Sustainable Development Goals (SDGs) did not originate as a legally binding document, countries are not obligated to re-

port on the progress of the SDGs at the national level. However, this does not imply that the implementation of the SDGs should proceed without a reporting mechanism that is both transparent and well-structured. The United Nations created the High-Level Political Forum (HLPF) as an integrated forum to facilitate the presentation of various stakeholder sectors to monitor each other's progress in the implementation of the Sustainable Development Goals as a monitoring, follow-up, and reporting mechanism at the global level.

The first High-Level Political Forum (HLPF) that was convened after the SDGs were agreed upon took place in July 2016. It supported strengthening the country's political commitment with the acceptance of a Ministerial Declaration. The High-Level Political Forum (HLPF) has concluded that the Sustainable Development Goals (SDGs) must be implemented using an integrated strategy that involves all relevant stakeholders, including government and non-government organisations. The High-Level Political Forum (HLPF) evaluates the need for a new understanding to realign financial requirements to foster human progress, protect the earth, and enhance the welfare of the community (Abbott & Bernstein, 2015).

Indonesia is using what it has learned from its experience with the Millennium Development Goals (MDGs) to achieve the Sustainable Development Goals (SDGs). Before this, there was a delay of ten years in the actual implementation of the MDGs in Indonesia, starting from the year 2000 when they were ratified. The Indonesian government explained that this delay was caused by the fact that Indonesia was still recuperating from the economic condition that followed the crisis in 1998.

Beginning with Vice President Jusuf Kalla's attendance at the United Nations General Assembly in September 2015 to witness the SDGs being signed, Indonesia has demonstrated that it is serious about executing the Sustainable Development Goals promptly. To accomplish the 17 Goals and 169 Targets, we need to: By the year 2030, there is still a significant amount of work that needs to be done—for instance, incorporating the Sustainable Development Goals (SDGs) into the agenda for national development; ensuring that the implementation of the SDGs is inclusive and participatory at both the national and regional levels, and making sure that the SDGs are carried out in a spirit that is conducive to transformation and that no one is left behind in the process.

It is also apparent that other stakeholders are highly active in participating and encouraging the government to open up the spaces provided to achieve the global SDGs. To push the Sustainable Development Goals (SDGs) issue to become one of the national development goals, civil society organisations, for example, have met with numerous important government stakeholders. Several other parties, including the private sector, business, and academics, have started engaging in the same activity.

Presidential Regulation Number 59 of 2017 concerning Sustainable Development Goals is already in place in Indonesia. It serves as a legal instrument that becomes an umbrella in every planning, policy formation, and implementation of activities to realise the Sustainable Development Goals

(SDGs) at the national and regional levels. This regulation can be found here (Karjoko et al., 2022).

## DISCUSSION

The destruction and loss of mangroves are occurring fastest in Southeast Asia. The region accounts for forty per cent of total global losses and sixty per cent of global degradation from 1996 to 2016 (Hagger et al., 2022). The data indicating that 637,624, 31 ha of Indonesian mangroves are in a precarious condition have just been released by the Ministry of Forestry. This accounts for around 19.6 per cent of the total mangrove area in Indonesia, which is approximately 3,311,207, 45 ha. The 25 per cent of the world's mangrove forest found in Indonesia makes this country's mangroves significant for Indonesia and the rest of the globe. The total amount of land covered by mangroves is the greatest in Indonesia. The Mangrove Restoration Potential Map suggests that a total of 1,886 km<sup>2</sup> of Indonesia's mangrove cover might be further restored (Malik et al., 2015). This represents approximately 6.4% of Indonesia's total mangrove cover. However, a significant portion of Indonesia's mangrove land is not regarded as official forest territory. As a result, its application, upkeep, and even damage are all influenced and even determined by society. The transformation of mangrove land into fishponds will account for 700,000 hectares by 2022, making it the leading driver of mangrove deterioration in populated areas (Rudianto et al., 2020).

Because mangroves play a crucial role in preventing erosion in coastal areas, their high level of degradation might severely affect those areas. This can prevent the erosion of coastal land by acting as a barrier between the land and the waves, which are the primary hazard to the coastal environment. Indonesia has 81,000 kilometres of coastline, and abrasion has ruined 40 per cent of that land. It is equivalent to 30,000 km<sup>2</sup> of land located along the coast of Indonesia. If there were abrasion, the width of the land that makes up Indonesia would decrease. The salinity in the soil and land can be influenced by coastal erosion, which can lead to several diseases, including skin diseases, kidney function damage, and digestive diseases. This is yet another impact that may be caused by coastal erosion.

Because mangroves are a source of sustenance for the other coastal biota, the deterioration of mangroves has the additional effect of depriving these other organisms of this resource. This will, in the end, result in the extinction of those types of biota. In addition, this will also directly impact human life because mangroves offer wood that can be used as a raw material in the construction of buildings and as firewood to cook with. Raw material for the pulp industry in addition to having uses in the food and medicinal industries. A high emission rate, which can lead to climate change and other adverse environmental effects, is another impact. Most of the carbon in mangrove forests is stored below ground, making them one of the most carbon-dense types of forests (Francesconi et al., 2022).

Due to a lack of resources and staff, the Indonesian government can only restore about 250 kilometres of mangrove forest. As a result, the Indonesian government must involve all parties involved, including women, to stop the rapid destruction of mangrove forests. The Government Regulation

on Disaster Mitigation in Coastal Areas has been made available by the Indonesian government (abbreviated into DMCA). According to this rule, coastal vegetation can help to mitigate the effects of sea level rise, tsunamis, storms, and erosion. In order to find a solution to this problem, it is necessary to involve a significant number of parties, including women. Because mangroves are found along the coast, we must prioritise the participation of women in both the exploitation and preservation of mangroves. This is because the majority of Indonesia's coastal areas are impoverished.

According to the People Coalition for Woman Justice findings, Indonesia is home to a total of 12,827 coastal villages, which 8.1 million families collectively occupy. Most coastal residents are poor, accounting for 25 per cent of Indonesia's population living in poverty. Under these circumstances, the community still has a significant problem with gender inequality and discrimination (Anwar & Wahyuni, 2019).

According to the research findings, the gender gap widens when poverty levels rise in a particular region. This suggests that the greater the poverty level in a coastal area, the greater the level of gender potency in that area. In this particular scenario, the likelihood of gender imbalance in coastal areas, including the management of mangroves, is considerable (Hilmi et al., 2021). Despite this, Indonesia's Government Regulation on Mitigation in Coastal Areas does not promote gender equality or even gender neutrality. Even though the Fisherman Empowerment Act is discriminatory against women, the regulations governing coastal areas in Indonesia continue to be gender-blind (Terry, 2009). This makes it difficult for women to gain access to a variety of subsidies and services. Because of this, the percentage of opportunities available to women in mangrove plantations and management still needs to be higher. The only thing a woman should be doing is taking a supporting position for her husband. When someone is in such a position, men make decisions, and women cannot decide or influence the decisions made. As a result, inequality between the sexes continues to be a problem.

Regarding women's rights regarding land and forest resources, none of the national policies and laws pertinent to the use and management of mangroves contains any language whatsoever (Quisumbing et al., 2001; Rocheleau & Edmunds, 1997). In the same vein, gender does not factor into the creation of the legislation that governs the local villages; instead, equality between the sexes is taken for granted. Local social norms are where behaviours at the community level have their start. These norms are founded on gender roles and the tasks that men and women are expected to be able to conduct appropriately by more considerable social expectations. Women have received training from non-governmental organisations (NGOs) on alternative items for market sales, which can be obtained from mangrove trees' leaves, bark, and fruits by employing various processing procedures. Women are only allowed to participate in activities requiring a low level of ability and are excluded entirely from the decision-making process. Because women are barred from participating in decision-making processes and structures, they have a lower level of awareness compared to men regarding the regulations and programmes that are in

place to manage mangrove ecosystems (Nyangoko et al., 2021; Pearson et al., 2019).

According to the findings of Ratna Indrawasih's (2021) research, gender inequality is still prevalent in coastal societies; as a result, coastal women continue to face marginalisation and have a pressing need for empowerment. In her research on Demak, she concluded that another factor that contributes to gender discrimination is legal culture. She concluded that although many women bear the same responsibilities and burdens, they do not experience a sense of equality in their lives. Another problem is the existence of several gender-based policies that are biased.

As was said earlier, the degradation of mangrove land has reached a concerning position. The reason for this is that the capacity of the government to restore mangrove areas is different from the rate of deforestation in mangrove areas. Under these circumstances, the participation of every stakeholder becomes a crucial subject. Women are one of the most potential stakeholders to involve in the recovery of mangroves because they can accomplish what must be done. In order to provide support for this assertion, it is essential to look at the findings that Murni Djabar uncovered about the engagement of women in mangrove rehabilitation. She concluded that fisherwomen have an excellent comprehension of the process of mangrove rehabilitation. Even this attained 80.67 per cent in her research; woman participation in planning mangrove rehabilitation is high and attained 73.3 per cent in her research; woman participation in implementing mangrove rehabilitation is high; specifically, 79.33 per cent of women are involved in this programme; and woman participation in evaluating mangrove participation is high; specifically, 56.6 per cent. This research demonstrates that women have the potential to play an active role in the restoration of mangrove forests (Handayani et al., 2021).

According to these findings, women have significant potential in recovering mangroves, which is why their active engagement is required. Tanakeke, which is located in Takalar and South Sulawesi, is the location where women are given more agency in the process of repairing mangrove forests. The women of this neighbourhood came together in 2015 to form a collective under the moniker Womangrove to restore the mangrove forests. OXFAM and the Mangrove Action Project, which was renamed Blue Forest not too long ago, are the ones that came up with the idea to form this organisation in order to carry out the Restoring Coastal Livelihood Program and turn uncultivated fishponds into mangrove areas. This location was a mangrove region in the past, but it has since been converted into pondfish. It indicates that the programme would like to restore the land to its previous function.

In order to combat the degradation of mangroves before 2015, the establishment of lady groves is required. The process of degrading mangroves was initiated in 1972 and continued until 1993; during that period, mangrove degrading reached its highest point, which was 46.73%. At that time, the degradation of mangroves was caused by several issues, including the conversion of mangrove areas into pondfish habitats, the production of charcoal on a large scale, and the use of mangrove wood for family interests. At that time, the width of the land conversion involving mangroves reached

3,234.7 hectares. The primary contributor to the destruction of mangroves is the construction of fishponds on formerly mangrove-covered land. The width of the mangrove forest, formerly only 1,690.80 hectares, has since increased to 2,068.18 hectares, representing a growth of 32.50% in just 20 years (1993-2013). The fact that society does not practise cutting selection for mangrove trees makes the problem significantly worse.

In response to this issue, OXFAM and the Mangrove Action Project (recently renamed Blue Forest) have developed a rehabilitation programme called Mangrove Ecology Rehabilitation (MER) that casts women in the role of the program's primary protagonists. This approach focuses on restoring the ecology rather than planting trees to create an environment favourable to mangrove ecosystems. This programme has a particular emphasis on empowering coastal women, promoting gender equality in society, and protecting the legal rights of coastal women in order to better not only their economic situation but also society as a whole (Osland et al., 2018).

The woman participating in this programme is a housewife who is part of numerous business groups Oxfam has created. Participation in planning, implementing, and evaluating was offered to this woman's grove (Vargas, 2002). They will even consent to transform their land into a mangrove region. Because the women are aware of the significance of mangroves and have personally experienced the benefits of this, this initiative can take place. One of the most apparent advantages is that they can approach a greater variety of marine species from a closer distance. Some of these animals can even be approached within the mangrove region. In coastal areas, this may also help avoid land erosion. This indicates that the woman may derive many advantages from the mangrove area. This provides not only practical but also theoretical expertise on the subject of mangrove rehabilitation. Creating a productive working relationship with the government is another reason this woman's grove has a chance of success. Even more, they can urge the creation of village regulations to keep the mangrove areas in that village in good condition. They are also involved in the monitoring of mangroves.

The strong and unambiguous coordination that community institutions have with district-level players like forest agencies, non-governmental organisations (NGOs), and the Watershed Management Agency is a crucial factor in the effectiveness of these institutions (Pambudi, 2019). One example of efficient coordination is when the leadership of the village, the leadership of the district, and the forest agencies at the district level all accept and acknowledge the mangrove laws established at the village level. Village regulations in one area of the country are brought into compliance with national and sub-national laws. These types of endorsements and alignments guarantee that the regulations that apply to the village are consistent with the more significant regulations that are in effect and do not clash with one another. In addition to this, they make greater coordination in practice possible. One such example is the forest guard system that collaborates with nearby communities to monitor and apprehend those who break the rules and conserve mangroves. Village leaders and forest guards are also responsible for coordinating attempts to resolve conflicts. Sanctions for in-

fractions are handed out at the village level; however, recurrent violations are referred to public law enforcement agencies tasked with dealing with them.

## CONCLUSION

In Indonesia, women's empowerment is a sustainable part of state and national expansion. Jimly Asshiddiqie defines law as both theoretical and practical. All bureaucratic behaviour must follow precise standards and regulations (rules). This provides a counterbalance so government workers can work peacefully. Law No. 31 of 2004 regulates fishing in Indonesia.

2009's Law 45 altered it. FMAs manage, cultivate, conserve, study, and improve fisheries. Lawmakers defend fishermen's jobs and livelihoods from threats. The salt business struggles with climate, price swings, and land ownership. This rule includes gender bias in tiny fishing homes, unfortunately.

Aquaculture needs women more than ever. KIARA estimates that 5.6 million Indonesians fish commercially. 42% of Indonesian fishermen are women. Women often accept food processing and marketing professions after fishing expeditions. Women fishermen are socially excluded because of their work.

Even though they are essential, they are often disregarded. In 2000, UN members adopted the Millennium Development Goals until 2015. SDGs continue MDGs. The document outlines 17 goals for 2016-2030. Every country must contribute to SDGs. Indonesia is working toward the SDGs using MDG knowledge (SDGs). Indonesia has shown its commitment to quickly adopting the SDGs.

No national policies or laws about mangrove usage and management mention women's land and forest rights. In the same way, gender does not figure into village legislation; equality is assumed. Women can only do low-skilled work and are excluded from decision-making. Because women are banned from decision-making processes and structures, they are less knowledgeable than men about mangrove management policies and programmes. Women can rehabilitate mangrove forests. Thus their involvement is needed. In Takalar and South Sulawesi, women have more say in rebuilding mangrove forests in Tanakeke. These ladies formed Woman-grove in 2015 to restore mangrove ecosystems. OXFAM and the Mangrove Action Project renamed Blue Forest, formed this organisation to carry out the Restoring Coastal Livelihood Program and turn uncultivated fishponds into mangrove areas. This once-mangrove area is now pondfish. The programme wants to restore the land's previous use. This program's participant is a housewife who belongs to several Oxfam business groups. This woman's grove was planned, implemented, and evaluated. They will even allow mangroves on their land. This effort may happen since the ladies know about mangroves and have experienced their advantages.

The government must mainstream gender in the mangrove rehabilitation process and consider women's perspectives at every stage, including planning, implementation, supervision, and assessment.

## DECLARATION OF CONFLICTING INTEREST

The author declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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