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STRATEGY TO FULFILL THE NEED FOR FISHERIES SUPERVISORS TO SUPPORT THE MINISTRY OF MARINE AFFAIRS AND FISHERIES' BLUE ECONOMY POLICY

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ABSTRACT

This study aims to analyze the factors that influence and formulate strategies to meet the needs of functional positions of fisheries supervisors and assistant fisheries supervisors in supporting the Blue Economy Policy of the Ministry of Maritime Affairs and Fisheries to be optimal. The research method used is a qualitative approach. The aspects of analysis include the state of work, the use of working time, and the goals that must be achieved based on the theory of workload indicators and Analytical Hierarchy Process (AHP) method. The results showed that the fulfillment of functional position needs was not optimal due to several factors, namely 1) the level of skills and understanding of some JF Waskan and Assistant Waskan was still quite low; 2) limited formation because there was no determination of latest position map; 3) Standard Operating Procedures (SOP) that differed between the center and UPT PSDKP; 4) fisheries supervision was still carried out manually with physical inspection of fishing vessels. For strategies to fulfill the needs of functional positions, several suggestions were formulated, namely 1) preparation of Human Capital Development Plan (HCDP) as a basis for training and development; 2) determination of the formation of the results of calculating the needs of functional positions in the latest position map; 3) improvement and refinement of SOPs; and 4) development of an independent fisheries monitoring system with risk assessment. Managerial implications are outlined in the priority strategy, while the highest factor is formation through accelerating the determination of the latest position map.

KEYWORDS *Needs Fulfillment Strategy, Functional Position, Analytical Hierarchy Process Method*

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INTRODUCTION

Based on its sea area, Indonesia has 6.4 million km² of waters consisting of territorial, inland and Exclusive Economic Zone waters (BIG, 2019). The long coastline makes the sea an important asset for national development. The government, through the Ministry of Maritime Affairs and Fisheries (KKP), is implementing a Blue Economy policy that focuses on marine conservation, metered fishing, sustainable fisheries, coastal area surveillance and marine debris management (KKP, 2024). This program emphasizes effective ocean management as part of the 2020-2024 National Medium-Term Development Plan (RPJMN).

In maintaining the sustainability of marine and fisheries resources, monitoring is a key factor. KKP is tasked with overseeing fisheries activities and enforcing the law to prevent illegal actions that can damage the ecosystem. Human resource management (HRM) is a crucial aspect in supporting the success of this program. HR professionalism, especially in supervision, determines the effectiveness of marine and fisheries resource management (Sunyoto, 2015; Sedarmayanti, 2013). Proper human resource management ensures that organizations are able to respond effectively to operational needs (Hasibuan, 2011).

The Directorate General of Marine Resources and Fisheries Monitoring (DG PSDKP) is responsible for fisheries monitoring. This unit consists of various directorates and surveillance bases throughout Indonesia. However, there is still a shortage of human resources, especially in the position of Fisheries Supervisors at various levels. Based on data from 2023, DG PSDKP lacks 526 First Expert Fisheries Supervisors and 248 Junior Experts (DG PSDKP, 2023). This shortage has the potential to hamper the implementation of surveillance programs and increase the workload of existing employees.

In supporting the Blue Economy policy, DG PSDKP also relies on surveillance vessels to patrol Indonesian waters. These vessels serve to prevent illegal fishing practices and protect marine ecosystems (KKP, 2024). However, the limited number and distribution of surveillance vessels remains a challenge. The shortage of human resources on supervisory vessels has led to some Assistant Fisheries Supervisors taking on tasks that should be carried out by the Supervisory Ship Crew (AKP). This can lead to fatigue and decreased productivity (Qureshi et al., 2013; Ilies et al., 2015).

Good HR planning at DG PSDKP is the main solution to overcome this gap. The Workload Analysis (ABK) conducted shows an urgent need to recruit more Fisheries Supervisors and Assistant Fisheries Supervisors. In addition, increased training and position formation adjustments are needed to support the optimization of Blue Economy policies. With adequate and well-trained human resources, Indonesia's marine management is expected to become more sustainable and able to provide maximum economic benefits for the community.

The shortage of Functional Position (JF) Fisheries Supervisors and Assistant Fisheries Supervisors at the Directorate General of PSDKP of the Ministry of Maritime Affairs and Fisheries (KKP) is an issue that affects supervisory performance. Data for

2023 shows a significant deficit at various levels, including 526 First Expert Fisheries Supervisors and 69 Associate Experts. This limitation results in a backlog of work, delays in completing tasks, and causes employee fatigue due to excess working hours. Many supervisors also hold concurrent positions, for example as PWP3K Special Police, which increases their responsibilities, especially in priority programs such as marine conservation and plastic waste cleanup.

The limited number of position formations is an obstacle to the mobility and career development of supervisors. In some work units, employees who have met the requirements for promotion cannot be promoted because there are no formations available in the applicable position map. This mainly affects UPT PSDKP work units in the western and eastern regions of Indonesia. This shortage also occurs at the Assistant Fisheries Supervisor level, where 255 beginner positions and 194 advanced positions are still vacant. In addition, some Assistant Fisheries Supervisors are instead placed as Supervisory Ship Crews (AKP), even though their main duties should focus on direct supervision, not ship operations.

This research aims to analyze the factors that influence the shortage of JF Waskan and Assistant Waskan and formulate strategies to meet these needs. Through in-depth analysis, this research is expected to contribute to the development of human resource management of the KKP apparatus, both in the academic and practical realms. In addition to increasing literacy about HR planning in the marine sector, the results of this study are expected to guide KKP in developing effective strategies to meet the needs of supervisory personnel, who play an important role in supporting blue economy policies and maintaining the sustainability of Indonesia's marine resources.

This research refers to various journals that discuss strategies for meeting the needs of functional positions (JF) and workload analysis. One notable study is that of Namaganda et al (2022) who used the Delphi method to evaluate the implementation of the Workload Indicator of Staffing Need (WISN) in various countries. This study highlighted the ease of implementation of WISN and the challenges in determining the allowance factor. Meanwhile, Joarder et al's (2020) study in Bangladesh assessed the workload of doctors and nurses using the WISN method, with the results showing high work pressure and recommendations for staffing adjustments as needed. This research provides insight into the importance of workload analysis methods in improving health human resource management.

Research by Rachmuddin et al (2020) and Syafrian et al (2023) adopted different approaches to optimize workload in the engineering and healthcare sectors. Rachmuddin used the Modified Full Time Equivalent (M-FTE) and NASA-TLX methods to measure the physical and mental workload of engineers, showing workload imbalances in various positions. Meanwhile, Syafrian assessed the need for medical record staff in hospitals through the ABK Kes approach, finding that system optimization was more necessary than additional personnel. These two studies confirm that equitable workload distribution and proper HR management can improve operational efficiency in various sectors.

Rachman's (2019) study at the Ministry of Agriculture used a combination of WISN and Analytical Hierarchy Process (AHP) to formulate a strategy to fulfill JF needs, finding that training and development is the main solution to improve HR performance. This approach is similar to Sukwadi's (2013) research that combined Delphi, AHP, and Markov methods in HR planning, resulting in a model that can predict future workforce needs. This research is the basis for the Ministry of Maritime Affairs and Fisheries (MMAF)'s efforts to formulate a strategy to fulfill the needs of JF Fisheries Supervisors and Assistant Fisheries Supervisors to support blue economy policies effectively and efficiently.

RESEARCH METHOD

This research uses a qualitative method with a descriptive approach to analyze the strategy of meeting the needs of Functional Position (JF) Fisheries Supervisors and Assistant Fisheries Supervisors in supporting the blue economy policy of the Ministry of Maritime Affairs and Fisheries (KKP). This method allows researchers to collect data through observation, in-depth interviews, and documentation conducted at DG PSDKP. The main focus of the research is to understand the phenomena that occur in the field and obtain in-depth information from key informants who have knowledge related to HR issues. The results of the analysis will then be formulated into a strategy using the Analytical Hierarchy Process (AHP) method to determine the priority scale in fulfilling JF needs.

The data collected in this study consisted of primary and secondary data. Primary data was obtained through interviews with various informants who have responsibilities in monitoring fisheries resources, while secondary data came from official documents, regulations, and previous research results related to workload analysis and HR strategies. Observation techniques were carried out directly in the field, especially at the UPT Pangkalan PSDKP Jakarta, to observe the condition of the service room, SOP, and supervision infrastructure. Documentation of various policies and regulations was also used as a reference in supporting the analysis of the data collected.

Data processing and analysis were conducted through three stages: data reduction, data presentation, and conclusion drawing. In this stage, the Root Cause Analysis (RCA) method was used to identify the root causes of the lack of JFs in DG PSDKP. Data validity was ensured through source triangulation techniques, which allowed cross-verification of data from multiple sources. Furthermore, the AHP method was used to prioritize strategies to fulfill JF needs. This technique assisted in assigning weights and rankings to factors influencing the need for JFs, based on inputs from experts and specialists.

The research participants included seven key informants, including high-ranking officials of DG PSDKP, heads of working teams in KKP, and fisheries supervisors with various levels of positions. These informants were selected because they have experience and accessibility in human resource management and the implementation

of fisheries supervision. Through in-depth interviews and direct observation, this research is expected to provide concrete solutions to overcome the shortcomings of JF Waskan and Assistant Waskan in supporting the success of the blue economy policy implemented by the MMAF.

RESULT AND DISCUSSION

Analysis of Factors Affecting Need Fulfillment JF Waskan and Waskan Assistant

Job Situation Aspect

Aspects of the work situation at DG PSDKP show that the level of skills and understanding of JF Waskan and Assistant Waskan is still quite low. This is due to changes in legislation related to marine and fisheries management, such as PP No. 11 of 2023 and PP No. 26 of 2023. The large task load in supporting KKP's blue economy policy requires competent employees, but the results of observations and interviews show that some employees have not been optimal in carrying out their duties. Measurement of the ASN Professionalism Index (IP) in DG PSDKP is still below the set target. One of the contributing factors is the lack of training and skills development needed to adjust to the latest regulations and challenges.

Employee training and development is a top priority in improving the performance of JF Waskans and Assistant Waskans. A Human Capital Development Plan (HCDP) is proposed to ensure that each functional position has an appropriate training and development plan. Suggested training includes basic fisheries surveillance training, intelligence training, and technical training related to case handling and inspection of fishing vessels. DG PSDKP has followed up on this through a competency development memorandum issued to accelerate the improvement of employee skills. With this training program, it is expected that JF Waskans and Assistant Waskans will be able to carry out their duties more effectively and efficiently, thus supporting the achievement of KKP's blue economy policy priority programs.

Observation of the Standard Operational Licensing (SLO) Service room at UPT Pangkalan PSDKP Jakarta shows unsupportive conditions because it is in the process of renovation. Limited space and facilities are one of the obstacles in public services. In addition, the number of employees on duty in the service room is minimal. At locations such as PPS Nizam Zachman Muara Baru Jakarta, a minimum of 30 JF Waskans and Assistant Waskans are neededbut only 3 people are on duty. This heavy workload is not only due to the number of vessels being monitored, but also due to the responsibility for various monitoring tasks at fishing ports and harbors.

Human resource shortages and limited position formations are the main factors hindering the optimization of JF Waskan and Assistant Waskan performance. The 2023 BPK report shows that to supervise 171 ports involved in the Measured Fishing (PIT) program, 2,993 employees are needed, but only 1,214 are available. There are still 25 ports that have no supervisors at all. This condition shows an urgent need to increase human resources in order to support optimal fisheries supervision.

The Directorate General of PSDKP has submitted a proposal to determine the formation needs of JF Waskan and Assistant Waskan to the Head of the HR Apparatus and Organization Bureau of KKP. However, until now the proposal has not been able to be determined in the latest position map due to several administrative obstacles. This process involves adjustments to changes in position nomenclature and recommendations for the needs of other functional positions. The determination of this formation is crucial to ensure that there is a recruitment and transfer mechanism that supports the KKP's priority programs.

With the establishment of formation and continuous training, it is expected that the fulfillment of JF Waskan and Assistant Waskan needs can run optimally. This will ensure that each port has adequate supervision, thus supporting the sustainable management of marine and fisheries resources in accordance with the blue economy policy launched by KKP.

Aspects of Working Time Utilization

The aspect of the use of working time in the implementation of Standard Operating Procedures (SOPs) at DG PSDKP shows significant differences between the central work unit and UPT PSDKP in various regions. The ideal SOP should be a uniform guideline to ensure the effectiveness and efficiency of the implementation of JF Waskan and Assistant Waskan duties. The principle of SOP preparation refers to PERMENPANRB Number 35 of 2012 which emphasizes convenience, effectiveness, harmony, and legal compliance. However, the results of interviews and observations show that the SOPs implemented in UPT have different stages and time standards, resulting in non-uniformity in the implementation of tasks in the field.

The establishment of different SOPs between the center and UPT PSDKP results in differences in the duration and stages of service, as seen in the SOP for the Issuance of Standard Operating Licenses (SLO). The SOP made by the Directorate of PSDP sets the administrative and technical feasibility examination time for 70 minutes, while the Jakarta PSDKP UPT uses the SIPEPI Application which shortens the examination time to 50 minutes. On the other hand, UPT PSDKP Cilacap Station implemented the CEKATAN innovation that allows officers to visit service users directly, so that the SLO issuance process can be completed in 55 minutes. Although these innovations are efficient, differences in time and stages of implementation between work units create potential inconsistencies in public service standards.

Innovations such as SIPEPI and CEKATAN show the dynamics in improving services in the field. The SIPEPI application allows service users to submit applications digitally via WhatsApp, while CEKATAN provides direct services at the port without queuing. Both methods are effective in accelerating the SLO issuance process and bringing services closer to the community. However, the different SOPs in each UPT indicate a lack of alignment in standard procedures, which has the potential to cause legal uncertainty and operational obstacles. This is reinforced by the findings of Key Informants who highlighted the need for SOPs established by the central work unit so that all UPTs can follow the same reference.

The problem of SOP non-uniformity is exacerbated by the lack of integration between applications that support KKP's blue economy policy, such as E-SLO, E-PIT, and E-Teman SPB. The E-SLO application used for SLO issuance is not yet directly connected to the fishing quota-based monitoring system (E-PIT) and sailing approval application (E-Teman SPB). As a result, the process of supervision and licensing of fishing vessels becomes fragmented and slows down the service. As stated by one of the Key Informants, the integration of these applications is a major obstacle in the implementation of the blue economy policy because there is no SOP that regulates the use of the three applications in an integrated manner.

Efforts to overcome this problem have been made through a Memorandum from the Head of the Bureau of Human Resources Apparatus and Organization recommending improvements to SOPs related to the supervision and control of fishing vessels. This improvement includes the integration of the E-SLO application with E-PIT and E-Teman SPB so that all processes of SLO issuance, fishing supervision, and sailing approval can be carried out in one integrated system. This step is expected to increase legal certainty, work time efficiency, and accountability in the implementation of JF Waskan and Assistant Waskan duties in the field.

The conclusion from the results of this study shows that aspects of the use of working time at DG PSDKP require improvement through SOP alignment and integration of supporting applications. This corrective action is important to ensure that the implementation of the blue economy policy runs optimally and provides direct benefits to fisheries business actors. This SOP improvement should include three main procedures, namely the SOP for administrative examination and technical feasibility of vessels, the SOP for analysis and recommendations for unloading catches, and the SOP for supervision of unloading and weighing fish. Thus, the process of SLO issuance and fisheries supervision will be more structured, uniform, and able to answer the challenges faced in the field.

Aspects of Objectives to be Achieved

The Objectives to be Achieved aspect reflects the work targets set by DG PSDKP, with a focus on compliance of marine and fisheries business actors. This target is realized through performance indicators such as the Marine and Fisheries Resources Monitoring Performance Index. In order to support KKP's blue economy policy, DG PSDKP runs priority programs such as Measured Fishing (PIT). The workload of JF Waskan and Assistant Waskan includes fisheries surveillance throughout WPPNRI, with a focus on violation-prone areas such as WPPNRI 711, which is often the location of illegal fishing by foreign vessels.

The duties of JF Waskan and Assistant Waskan include supervision of fisheries activities and operations at fishing ports. With a limited number of human resources, manual supervision from the beginning to the end of the unloading of fishing vessels is a challenge. Some Key Informants suggested the use of technology such as CCTV as a solution to monitor unloading activities at fishing ports. Thus, supervision does

not have to be carried out directly at the location, so that the task of supervision becomes more efficient and affordable.

The process of checking the administration and technical feasibility of fishing vessels by JF Waskan and Assistant Waskan is currently still carried out conventionally. JF must visit the vessel directly at the port to ensure the completeness of documents and the physical condition of the vessel. In addition, cargo unloading supervision is also done manually, requiring a large number of personnel at each port. The PIT program that involves supervision at hundreds of ports adds a significant workload for JF Waskan and Assistant Waskan.

In monitoring fisheries activities, limited human resources are the main factor affecting the effectiveness of monitoring. The number of vessels that choose to unload at anchorage ports complicates monitoring. BPK reports show that fish landings do not always go according to procedure, and many vessels do not unload at authorized fishing ports. This has led to a proposal to implement a technology-based self-supervision system as an effort to reduce the direct workload for JF Waskan and Assistant Waskan.

The proposed self-supervision system involves businesses in the reporting process, while JF Waskan and Assistant Waskan analyze the reports. The risk assessment method is used to determine the focus of further supervision. This approach allows DG PSDKP to identify hotspots of violations and determine more targeted supervision steps.

Needs Fulfillment Strategy Formulation J F Waskan and Waskan Assistant

Vertical Processing

Vertical data processing is carried out to prioritize each element in the hierarchy towards the focus of the Strategy for Fulfilling the Needs of JF Waskan and Waskan Assistants in Supporting KKP's Blue Economy Policy. For factors, actors, objectives and alternatives in strategy formulation are obtained from literature studies and in-depth interviews with experts. Then the experts were given a questionnaire to provide values related to the strategy to fulfill the needs of JF Waskan and Assistant Waskan. Expert judgment is considered consistent if it has a *Consistency Ratio* (CR) of no more than 0.10.

1) Factor Analysis of Functional Position Fulfillment Strategies

Factor analysis aims to see the level of influence of a factor element on the focus. The weight and priority of the factor elements that make up the strategy to fulfill the needs of JF Waskan and Assistant Waskan at KKP are as follows:

Table 1. Weight and priority of factors against fulfillment strategy

Factor	Weight	Priority
Budget	0.106	3
Position Requirements	0.320	2

Factor	Weight	Priority
Leadership Policy	0.090	4
Formation	**0.483**	**1**

(Source: Primary data, processed 2024)

Based on the data processing shown in Table 1, it can be seen that the factor that has the greatest influence in the strategy for meeting the needs of JF Waskan and Assistant Waskan at KKP is the formation factor (0.483), for the next factor, namely job requirements (0.320), budget (0.106), and leadership policy (0.090).

Position formation is the main factor in fulfilling the needs of JF Waskan and Assistant Waskan, which is obtained through the recommendation of the supervising agency and determined by the Ministry of PAN and RB. After the formation is calculated and approved, the user agency will put it in the position map. The availability of this formation facilitates leadership policies to propose employee recruitment and selection and ensure budget allocations that include salaries and performance benefits. Clear formations provide direction and focus for organizational leaders in meeting HR needs, especially to support priority programs in KKP such as tackling illegal fishing and fisheries supervision.

In addition to formation, position requirements are an important factor that requires employees to have competence according to regulations. JF Waskan and Assistant Waskan are required to attend basic fisheries supervision training in order to have the ability to analyze fisheries business supervision, compliance with vessel monitoring systems, and inspection of fishing vessels. These competencies are crucial because these functional employees are the spearhead in tackling illegal fishing practices. With clear requirements, organizations can efficiently recruit employees and ensure that they have the appropriate expertise to support targets and work programs.

Other factors that play a role are budget and leadership policies. Although the budget does not have a major influence in meeting HR needs, the allocation of funds for HR must still be considered in organizational budget planning. If the budget is limited, then shifting the budget from non-priority activities can be a solution. Meanwhile, leadership policies play a role in making decisions to support the fulfillment of HR needs through coordination and validation with the Ministry of PAN and RB. This support is reflected in the issuance of PERMENKP Number 8 of 2023 which is the legal basis for calculating the needs of JF Waskan and Assistant Waskan, strengthening the organization's steps in ensuring adequate human resources to carry out the tasks and functions of fisheries supervision.

2) Actor Analysis of Functional Position Fulfillment Strategies

Actor analysis aims to see the influence of actor elements at the second level on the factors contained at the first level. The results of data processing are as follows:

Table 2. Weight and priority of actors on fulfillment strategies

Factor	Weight	Priority
Secretary of DG PSDKP	**0.326**	**1**
Katimja	0.284	2
Katimja Binbang PSDP	0.080	5
Head of UPT PSDKP	0.124	4
JF Waskan Principal Expert	0.186	3

(Source: Primary data, processed 2024)

Based on the data processing shown in Table 2, it can be seen that the most influential actor in fulfilling the needs of JF Waskan and Assistant Waskan in KKP is the Secretary of the Directorate General of PSDKP with a weight of 0.326. This indicates that the Secretary of the Directorate General of PSDKP is an important actor who is the most influential and has the responsibility as the leader of the managerial field and the staff development official within the Directorate General of PSDKP. Fulfilling the needs of JF Waskan and Assistant Waskan must get approval and policies from the leadership at DG PSDKP. The second influential actor is the Head of the Organization and Management Work Team of the SDMAO KKP Bureau (Katimja Ortala) with a weight of 0.284. Katimja Ortala of the SDMAO Bureau of KKP has the authority to verify and validate every proposal for position formation needs from echelon I work units within KKP. The actor also coordinates outside the agency, namely with the functional position supervisory agency and the Ministry of PAN and RB for the approval process and determination of the proposed recommendations.

The most influential actor in fulfilling the needs of Functional Position (JF) Waskan and Assistant Waskan in KKP is the Secretary of DG PSDKP with the highest weight of 0.326. As a managerial leader and staffing official, the Secretary of the Directorate General of PSDKP has a central role in providing approval and policies related to the formation of this position. The second influential actor is the Head of the Organization and Management Working Team of the SDMAO Bureau of KKP (Katimja Ortala) with a weight of 0.284, who is responsible for the verification and validation of the formation proposal as well as coordinating with outside agencies, including the Ministry of PAN and RB, for the approval and determination process. Katimja Ortala plays an important role in ensuring that all processes run according to applicable regulations.

The third actor with great influence is the JF Waskan Principal Expert with a weight of 0.186, who contributes to the preparation of materials, strategies, and supervision of studies related to meeting the needs of JF Waskan and Assistant Waskan. In the fourth position, the Head of UPT PSDKP has a weight of 0.124, responsible for technical operations and placement of human resources in the supervision area. The

Head of UPT has an important role in the rotation, coaching, and distribution of human resources in the field. The fifth actor is the Head of the Fisheries Resources Monitoring and Development Work Team (Katimja Binbang PSDP) with a weight of 0.080. Katimja Binbang PSDP plays a role in institutional development, fisheries supervision, and the development and evaluation of the electronic Standard Operating License (SLO) system, all of which have a close relationship with the performance of JF Waskan and Assistant Waskan in supporting KKP's blue economy policy

3) Objective Analysis of Functional Position Fulfillment Strategies

Goal analysis intends to see the effect of goals at the fourth level on actors contained in the third level and factors contained in the second level. The results of data processing can be seen in the following table:

Table 3. Weight and priority of objectives against fulfillment strategies

Factor	Weight	Priority
Getting competent employees	0.251	2
Filling vacant positions	0.128	4
Creating a conducive working atmosphere	0.143	3
Improving performance	**0.477**	**1**

(Source: Primary data, processed 2024)

Based on the data processing shown in Table 3, it can be seen that the top priority goal in the strategy to fulfill the needs of JF Waskan and Assistant Waskan at KKP is to improve performance with a weight of 0.477, the second priority goal is to get competent employees with a weight of 0.251, the third priority is to create a conducive work atmosphere with a weight of 0.143, and then the fourth priority is to fill vacant positions with a weight of 0.128.

Limited formation and human resources for JF Waskan and Assistant Waskan face a large workload, so improving performance is a top priority. Employee performance is a reflection of the level of success in completing organizational tasks. Proper HR planning and management is crucial to support the distribution of workload evenly, improve organizational performance, and achieve priority program targets such as PIT in KKP and efforts to tackle illegal fishing. In addition, competent employees can be achieved through continuous HR training and development. Basic supervisory training and technical skills are strategic steps in preparing employees to carry out tasks optimally, so that work quality can improve in line with organizational needs.

A conducive work atmosphere is also an important factor in encouraging employee performance. A safe and comfortable working environment, both physically and non-physically, plays a big role in creating productive employees and avoiding

stress due to excessive workload. Employee rotation and refreshing activities can be a solution to reduce boredom and maintain harmonious working relationships. In addition, filling vacant positions is a strategic step in HR planning, ensuring an adequate number and qualifications of employees to support activities at PIT fishing ports. Effective recruitment and selection will strengthen human resources, distribute employees evenly, and fill vacant positions that are vital for the sustainability of KKP's priority programs.

4) Analysis of Alternative Strategies for Fulfillment of Functional Positions

The results of data processing on alternative strategies based on weights and priorities can be seen in the following table:

Table 4. Weight and priority of alternative strategies to fulfill the needs of functional positions

Factor	Weight	Priority
Recruitment and selection	0.119	4
Training and development	**0.372**	**1**
Internal promotion	0.095	5
Rotation	0.157	3
Transfer of position	0.206	2
Hiring external parties	0.051	6

(Source: Primary data, processed 2024)

Based on the data processing shown in Table 4, it can be seen that the top priority alternative strategy in the strategy to fulfill the needs of JF Waskan and Assistant Waskan in KKP is training and development with a weight of 0.372, the second alternative strategy is job transfer with a weight of 0.206, the third alternative strategy is rotation with a weight of 0.157, the fourth alternative strategy is recruitment and selection with a weight of 0.119, the fifth alternative strategy is internal promotion with a weight of 0.095, and the sixth alternative strategy is hiring external parties with a weight of 0.051.

Training and development is the main strategy in improving the skills and understanding of JF Waskan and Assistant Waskan, especially in dealing with changes in regulations related to blue economy policies such as PP Number 11 of 2023 and PP Number 26 of 2023. By applying the Analytical Hierarchy Process (AHP) method, this training is expected to increase the effectiveness of employee work without the need to add many new human resources. The recommended training covers fisheries intelligence, investigation, and inspection of vessels and fishing gear, which is in

accordance with PERMENKP No. 44 of 2022. Another alternative is position transfer, which allows employees with certain experience and competencies to switch to JF Waskan and Assistant Waskan. However, the limited formations in the position map hamper the implementation of this strategy, so it is necessary to accelerate the determination of formations by the Secretary of DG PSDKP.

Employee rotation is the next strategy that serves to refresh and improve performance, where employees are transferred between work units without a change in position. Recruitment and selection is also an important step in adding new qualified human resources, but its implementation depends on the availability of formations approved by the Ministry of PAN and RB. Internal promotion provides an opportunity for executive employees to advance to JF Waskan or Assistant Waskan, encouraging motivation and improving performance. In addition, hiring external parties through the PJLP mechanism can support the operational tasks of JF Waskan and Assistant Waskan, especially in handling activities that require special skills without having to appoint them as permanent employees.

Horizontal Processing

According to Marimin and Maghfiroh (2010) horizontal processing aims to prioritize decision elements at each level of the decision hierarchy. Horizontal processing analyzes the actor element at the second level, the goal element at the third level and the alternative element at the fourth level.

1) Actor Element Analysis of Factors

The purpose of actor analysis is to see the level of influence of actor elements at the second level on factors at the first level. The weight of the actors who make up the strategy for fulfilling JF Waskan and Assistant Waskan is shown in the following table:

Table 5. Weights of each actor against factors

Actor	**Factor**			
	Budget	**Position Requirements**	**Polic Leader**	**Formation**
Secretary of DG PSDKP	**0.384**	**0.320**	**0.434**	**0.368**
Katimja	0.086	0.295	0.153	0.258
Katimja Binbang PSDP	0.132	0.134	0.098	0.109
Head of UPT PSDKP	0.318	0.092	0.244	0.091

Actor	Factor			
	Budget	**Position Requirements**	**Polic Leader**	**Formation**
JF Waskan Principal Expert	0.081	0.160	0.070	0.174
Consistency Ratio	0.0122	0.0027	0.0123	0.0002

(Source: Primary data, processed 2024)

Based on Table 5, the Secretary of the Directorate General of PSDKP is an important actor in achieving the fulfillment of JF Waskan and Assistant Waskan needs in KKP, especially in the leadership policy factor with a weight of 0.434. The Secretary of the Directorate General of PSDKP has the authority to make decisions and policies related to meeting the needs of JF Waskan and Assistant Waskan within the Directorate General of PSDKP. Calculation of needs and strategic focus must go through the approval of the person concerned. In the matter of preparing and discussing the budget portion with a weight of 0.384, the Secretary of DG PSDKP has the authority to divide a number of budget portions in the current year for a number of KKP priority activities. Furthermore, in terms of formations with a weight of 0.368 and job requirements with a weight of 0.320, the Secretary of the Directorate General of PSDKP participates in providing decisions on the results of the formation needs and job requirements for JF Waskan and Assistant Waskan that must be met in each work unit *modeling* the PIT program. The Secretary of DG PSDKP is authorized to give approval, before the proposed formation determination is submitted to the Ministry of PAN and RB.

2) Objective Element Analysis of Actors

This analysis aims to see the level of influence of a goal element at the third level on actors at the second level. The weighting of the objectives of the strategy to fulfill the needs of JF Waskan and Assistant Waskan in KKP is shown in the following table:

Table 6. Weights of each goal against actors

Destination	Actor				
	Secretary of DG PSDKP	Katimj Ortala	Katimj Binban PSDP	Head of UPT PSDKP	JF Waskan AhliUtama
Getting competent employees	0.262	0.302	**0.499**	0.253	**0.537**
Filling vacant positions	0.136	0.165	0.167	0.111	0.158

Destination	Actor				
	Secretary of DG PSDKP	Katimj Ortala	Katimj Binban PSDP	Head of UPT PSDKP	JF Waskan AhliUtama
Creating a conducive working atmosphere	0.117	0.148	0.121	0.120	0.112
Improving performance	**0.484**	**0.385**	0.212	**0.516**	0.192
Consistency Ratio	0.0061	0.0005	0.0030	0.0048	0.0032

(Source: Primary data, processed 2024)

The highest goal element is to get competent employees, with the most influential actor being JF Waskan Ahli Utama with a weight of 0.537, this is an ideal thing that JF Waskan Ahli Utama as a JF with the highest level of expertise wants JF Waskan and Assistant Waskan below him to be more capable and competent to support KKP's priority programs. In line with these objectives, there is a further influential actor, namely Katimja Binbang PSDP with a weight of 0.499, who is authorized to provide guidance and evaluation of JF Waskans and Assistant Waskans so that obstacles can be identified and recommendations can be made for improvement in order to obtain capable and competent employees.

The next priority goal element is to improve performance, the influential actor is the Head of UPT PSDKP with a weight of 0.516. This is in accordance with the number of JF Waskan and Assistant Waskan compositions, most of which are in UPT PSDKP, with limited formations and no additions can be made, it is necessary to provide training and development through training so that existing JF Waskan and Assistant Waskan can improve their performance. The next influential actor is the Secretary of the Directorate General of PSDKP with a weight of 0.484, because the actor in question is the central staffing coach and is responsible for managing and developing human resources, it is his authority to find the right formula in improving the performance of JF Waskan and Assistant Waskan in supporting KKP's blue economy policy. This element of purpose also affects the next actor, namely Katimja Ortala KKP with a weight of 0.385, the actor in question in verifying and validating the formation of the work team will see the extent to which the main performance indicators are the responsibility of the work unit and which are *mandatory for* UPT PSDKP, so that there is alignment in achievement to improve performance.

3) Analysis of Alternative Strategy Elements against Objectives

The purpose of this analysis is to see the level of importance of objectives to alternative strategies and provide information related to various strategic options that are most important in achieving objectives. The weighting of alternative strategies to fulfill the needs of JF Waskan and Assistant Waskan at KKP is shown in the following table:

Table 7. Weights of each alternative strategy against objectives

Strategy Alternative	**Destination**			
	Getting competent employees	Filling vacant positions	Creating a conducive working atmosphere	Improving performance
Recruitment and selection	0.119	0.148	0.125	0.119
Training and development	**0.386**	0.156	0.155	0.339
Internal promotion	0.090	0.093	0.100	0.098
Rotation	0.149	0.158	0.292	0.153
Transfer of position	0.199	0.277	0.199	0.206
Hiring external parties	0.058	0.168	0.129	0.086
Consistency Ratio	0.0201	0.0044	0.0034	0.0109

(Source: Primary data, processed 2024)

Based on table 7, it can be seen that training and development is the most important alternative strategy in order to achieve the goal of getting competent employees with a weight of 0.386. Training and development will make the implementation of the task of supervising the management of marine and fisheries resources in overseeing the blue economy policy more effective and efficient, which if in accordance with the calculation of needs will require a lot of human resources in the organization, then with training and development can minimize the need for JF Waskan and Assistant Waskan in KKP. If training is a process of systematically learning skills and knowledge to achieve effective work, then according to PERMENKP Number 44 of 2022 concerning Competency Development within KKP, HR development is an effort to fulfill civil servant competencies with job competency standards and career development plans. The training and development needs of human resources that are

not the same for JF Waskan and Assistant Waskan encourage DG PSDKP to prepare a *Human Capital Development Plan (HCDP)* as a first step in improving the competency development of the JF. Some training and development carried out on JF Waskan and Assistant Waskan simultaneously and intensively, will have an impact on improving organizational performance, with the determination of formations will be able to fill vacant positions, and a comfortable work environment will be realized so as to create a conducive work atmosphere, in order to achieve the success of KKP's priority programs.

Managerial Implications of Supporting Blue Economy Policies

Proper HR planning is key in supporting KKP's Blue Economy Policy, especially through the fulfillment of Functional Position of Fisheries Supervisor (JF Waskan) and Assistant Fisheries Supervisor (JF Assistant Waskan). The needs analysis is carried out by taking into account the workload, volume of work results, and Average Ability Standards (SKR). DG PSDKP has calculated these needs, but the results show that the number of existing JF is not optimally sufficient. This prompted the need for a strategy to fulfill HR needs through the Analytical Hierarchy Process (AHP) method. The low skill and understanding factor is one of the main obstacles, which is caused by changes in regulations such as PP No. 11 of 2023 concerning Measured Fishing and PP No. 26 of 2023 concerning Management of Sedimentation Results in the Sea. The main solution proposed is training and development for JF Waskans and Assistant Waskans to ensure they have relevant skills and are able to carry out their duties effectively.

The limited number of formations is another challenge that hampers the mechanism for transferring positions, recruitment, and selection of new employees. DG PSDKP has not been able to fill functional positions because the available formations have not been updated in the latest position map. The process of determining the formations is crucial to ensure an equitable distribution of employees in accordance with the workload faced by the work units. When the formations have been updated and determined, recruitment and selection steps can be taken immediately to fill vacant positions, improve organizational performance, and create a conducive work environment. Efforts to accelerate the determination of formations have been made through a meeting to revise the Draft KEPMENKP Number 108/2020, involving the HR Bureau, Legal Bureau, and related work units within the KKP, as part of the strategy to strengthen human resources to support blue economy policies.

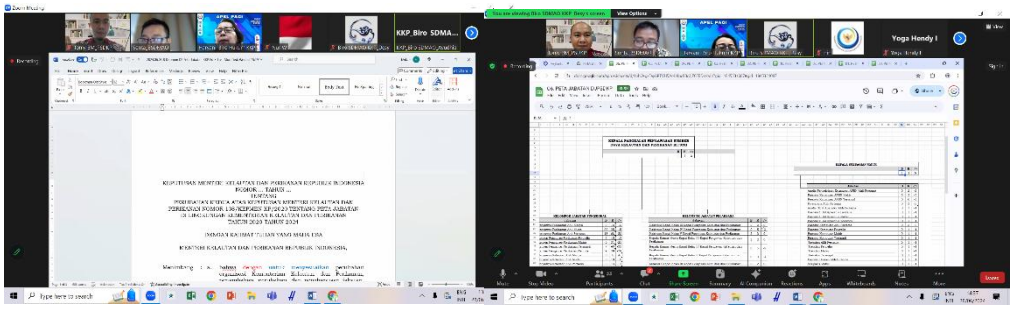

Figure 1. Online Discussion of Determination of Need Formation

At the discussion meeting, researchers conveyed several root *causes* found based on data and information that had been obtained from *key informants* and analyzed through *Root Causes Analysis*. Then, researchers conveyed the strategy for fulfilling the needs of JF Waskan and Assistant Waskan using the *Analytical Hierarchy Process* (AHP) method with the highest factor result, namely formation through accelerating the determination of the latest position map. Based on the meeting conducted, several things were obtained as follows

a. That the Draft KEPMENKP on Position Maps will be coordinated with the Planning Bureau and the Center for Statistics and Information Data (PUSDATIN), to be adjusted to KEPMENPANRB Number 11 of 2024 concerning Executive Positions in Government Agencies.
b. There is a need for technical functional positions in the marine and fisheries sector that will be placed in the Planning Bureau and PUSDATIN, to support technical planning in the marine and fisheries sector and operational command centers for the KKP blue economy program.
c. The addition of several new functional positions that have received recommendations and approval from the fostering agency and KEMENPANRB, including meeting the needs of JF Waskan and Assistant Waskan.
d. Adjustment of the number of functional position requirements that have received recommendations from KEMENPANRB.
e. Adjustment of the needs of executive positions adjusted to the PPPK procurement policy (accommodating Non-ASN personnel registered in BKN) and CPNS in 2024.

The strategy to fulfill the needs of JF Waskan and Assistant Waskan includes the rotation of functional officials from work units with low workload to work units with high workload, especially in PIT ports that have intensive fisheries activities. Internal promotion is a solution for qualified and competent officials, while the utilization of external parties through the mechanism of Procurement of Individual Other Service Providers (PJLP) can support the duties of JF Waskan without replacing their role.

PJLP acts as a ship registrar and supervisory ship handling officer, which helps ease the workload. On the other hand, differences in SOPs between the central work unit and UPT PSDKP in supporting the Measured Fishing (PIT) program cause discrepancies in procedures and implementation time, especially in the issuance of Operational Licensing Standards (SLO). Integration of SOPs with applications such as E-SLO, E-PIT, and E-Teman SPB is an important step to ensure uniformity. A meeting to finalize business processes and SOPs for ship departures and arrivals involving the HR Bureau and the PSDP Directorate has been held, marking a serious effort to improve SOPs so that the implementation of tasks runs more effectively and harmoniously in all work units.

Figure 2. Discussion of SOP for SLO Issuance

The SOP discussion meeting highlighted the root of the problem in the aspect of the use of working time and the importance of improving the SOP for the issuance of Operational Licensing Standards (SLO). Researchers proposed improvements as outlined in the Draft KEPMENKP as an effort to increase the effectiveness of fisheries supervision in supporting the Measured Fishing (PIT) program. With supervision still carried out manually, the need for JF Waskan and Assistant Waskan increases, especially in priority ports. To address human resource limitations, a risk assessment-based self-supervision system is proposed, enabling certification of companies, human resources, and marine systems. Supervision will shift from conventional physical inspection to monitoring using CCTV and self-reporting from businesses. This approach allows JF Waskan and Assistant Waskan to focus on analyzing reports and following up on violations, thereby supporting KKP's blue economy policy more efficiently and effectively.

CONCLUSION

This study concludes that one of the main factors affecting the performance of Functional Position (JF) Fisheries Supervisors and Assistant Fisheries Supervisors is their low skills and understanding of the latest regulations in the marine and fisheries sector. Therefore, the priority strategy generated through the Analytical Hierarchy Process (AHP) method is the training and development of existing human resources, with the aim of increasing work effectiveness in supporting blue economy policies. The Secretary of the Directorate General of PSDKP was identified as the most influential actor in this process, while formation limitations are the main obstacle due to the absence of the latest position map determination in accordance with the results of the Workload Analysis (ABK). In addition, differences in Standard Operating Procedures (SOPs) between the Central Work Unit and UPT PSDKP cause non-uniformity in the implementation of tasks in the field, thus slowing down the process of quota-based fisheries monitoring and physical inspection of vessels.

As a follow-up, the study recommends the preparation of a Human Capital Development Plan (HCDP) that includes intelligence training, PPNS investigation, and ship inspection, to increase the capacity of JF Waskan and Assistant Waskan. Accelerating the establishment of position formations in the position map is essential so that recruitment and transfers can run smoothly. In addition, improvements to SOPs relevant to the blue economy policy must be made immediately, especially those related to administrative checks and technical feasibility of ships. The development of a risk-based supervision system (risk assessment) is also a strategic step to reduce conventional supervision, allowing JF Waskan and Assistant Waskan to focus more on analyzing and following up on business self-reports, so that the efficiency and effectiveness of marine and fisheries sector supervision can increase.

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