

# The Impact of IUU Fishing Policy (Moratorium License of Fishery Commerce) to the level of Employment of Maritime and Fishery Vocational Schools Graduates

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**Abstract.** The limited capacity of human resources (HR) that is competent in their field often causes the less than optimal utilization of the marine and fisheries resources in Indonesia. Maritime and Fishery Vocational Schools (MFVS) can be the solution to this problem, as they are expected to generate capable and competitive human resources; thus, utilizing and sustainably managing the vast marine resources in Indonesia, and in turn improving the efforts taken to advance Indonesian people's welfare. However, the level of employment for MFVS graduates in Indonesia is still limited to large scale fishing activities. Additionally, since the launch of Moratorium License of Fishery Commerce of Fishery States in the Republic of Indonesia (56/PERMEN-KP/2014) by the Indonesian Ministry of Marine and Fisheries (IMMaF), most fishery companies have ceased to operate. The study aimed to determine the impact caused by this regulation against the level of employment of MFVS graduates, as well as the scheme of policies that should be applied to maximize the human resources in the field of marine and fisheries. This research used a qualitative method, where the descriptive analysis was used as a primary tool of analysis. The results of the analysis indicated that the trend of employment of MFVS graduates shifted after the enactment of this policy. The lack of synergy between policies in the field of marine and fisheries and policies in the field of education and transportation resulted in the difficulty of MFVS graduates to achieve a good career in this field..

## 1 Introduction

Indonesia, along with many other countries in the world, had the opportunity to adopt several objectives related to the current global problems. These objectives were known as Sustainable Development Goals (SDGs), consisting of targets that had to be achieved through the New Sustainable Development Agenda in the year 2020 [1].

There was a total of 17 targets/ goals of SDGs, including the eradication of poverty, the growth of people's welfare, the protection of nature, and management of climate change [1]. Indonesia, through the Vice President Jusuf Kala, demonstrated a commitment to adopting these 17 SDGs targets [2].

One of the global objectives included in the SDGs that was very relevant to the Indonesian government program was the eradication of poverty and protection (and conservation) of marine resources and their sustainable utilization. These objectives were set out in Nawa Cita which was issued by the Indonesian government under President Joko Widodo, containing, among others, the eradication of poverty and the improvement of people's welfare achieved through the utilization of the marine resources [3].

Indonesia has a vast potential of marine and fisheries resources, with more than 2/3 of the territory of

the Indonesia Republic being sea areas. In addition, Indonesia has 17,508 islands and a coastline of 81,000 km [4]. However, these potentials have not been fully utilized, which may be caused by the low quality of human resource in the field of marine and fisheries. This is shown from the fact that most human resources involved in the sector having a low level of formal education whereas to be able to achieve optimum utilization and sustainable marine resources, qualified and capable human resources are needed [5].

Maritime and Fishery Vocational Schools (MFVS) is one of the answers to solve the problem of human resources in the field of marine and fisheries [6]. MFVS is expected to generate capable and competitive human resources; thus, utilizing and sustainably managing the vast marine resources in Indonesia, and in turn improving the efforts taken to advance Indonesian people's welfare.

Education, in many countries, is essential in the creation of qualified human resources. This is because the quality of human resources improves the economic productivity from per person to the country [7]. It is indicated by the large output that generates more value in the market. Besides, education is one of the forms of investment that contributes to the sustainable development. This is because every country needs human resources who can solve problems, especially

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those related to sustainable development. Human resources must be considered in order to provide benefits from these three aspects: economic, social, and environmental aspects.

Indonesia, having the vast potential of marine and fishery resources, needs to maximize the potential of the required human resources quality. One of the ways in creating high quality human resources is the development of MFVS, especially in areas having high potential of marine and fishery resources, to enable them to explore and manage the potentials of the region. Additionally, according [8] and [9], there are approximately 140 million or 60% of Indonesia's population living in coastal areas (approximately 50 km from the coast). This shows that MFVS is one of the solutions to improve people's standard of living by improving the quality of human resources in the coastal areas. In the future, it is expected that people in coastal areas will have the knowledge, understanding, and expertise in marine resource management [8]. Indonesia has set up around 326 MFVSs (including Vocational Schools of Nautical Sciences) that are spread all over Indonesia. However, the high existence of MFVS has not been able to exploit the potential of Indonesian marine and fishery resources, as capable and competitive human resources are still categorized as low [10].

The signatories of the memorandum of understanding (MoU) between the Ministry of National Education and the Ministry of Maritime Affairs No. 06 / XII / KB / 2004 and No. 09 / KB / Dep.KP / 2004, dated 14 December 2004 can be used as one of the basic considerations for developing MFVSs in Indonesia as well as supporting the Ministry of National Education's policy in changing the proportion between the number of vocational schools and high schools in Indonesia. On the other hand, in 2014 the Indonesian Ministry of Marine and Fisheries (IMMaF), issued a Ministerial Decree (KEPMEN) No. 56 of 2014 concerning the Moratorium License of Fishery Commerce of Fishery States in the Republic of Indonesia. The impact of the application of these rules is that many fishery companies have ceased to operate.

The study aimed to determine the impacts caused by this regulation against the level of employment of MFVS graduates by answering two research questions: (1) what are the impacts of the application of these regulation against the level of employment of MFVS graduates, and (2) what other policies intersect and influence the absorption of MFVS graduates. The results of the study are expected to provide an overview of the impact of the policy against the absorption of MFVS graduates in particular, and human resources in the marine and fishery field in general.

## 2 Material and methods

This research was conducted by collecting both primary data and secondary data. Primary data were collected through surveys and interviews with several MFVS as the research samples, while secondary data were obtained from the Directorate General of PSML

Indonesian Ministry of Education. Primary data was used to validate the obtained secondary data. Primary data was collected from 10 schools located in the Jakarta Province, West Java, East Java, Nusa Tenggara Timur, North Maluku, South Sulawesi, and Papua. These schools had good accreditation and were chosen with the assumption that schools with good accreditation would produce well qualified and competitive graduates. The analysis used the descriptive analysis in the form of comparison between the conditions of MFVS graduates before and after the enforcement of the moratorium regulations.

## 3 Result and Discussion

### 3.1 Conditions of MFVS Graduates

Survey results in several regions showed that around 15-20% of MFVS graduates did not work in fields related to their educational background. Graduates opted to enter The Indonesian National Army and the police force. The rest, about 20-30% of graduates, preferred to continue their education to the undergraduate degrees, in fisheries and maritime affairs or in other more common fields such as law and economics. Most students who continued their education to undergraduate studies came from well off families, while many students from less prosperous families were unable to continue to a higher-level education. One of the causes was the number of scholarships provided not able to meet the level of demand of students coming from less prosperous families wishing to continue to higher-level education.

The highest percentage (50% to 65%) showed that MFVS graduates still worked in accordance with their educational background. These graduates worked in fishing vessels as well as in cultivation companies related to their studies. The starting position for graduates majoring in nautical science and technical fishing vessels were ship's crew and the highest position was the propagator. The process to become a propagator depended on the policies of the vessel and the performance of the graduates, and sometimes it took 4-5 working years for graduates to reach the position of navigator. Besides, most graduates worked under a 4-year contract.

The waiting time between graduating and working for the graduates of MFVS did not show much differences in each province, only about 0-1 months. The difference was caused by whether the MFVS had a cooperative relationship with the World Business Industries (WBI). The more relationships the MFVS had, the easier it was for the school to channel these graduates to companies. The systems implemented by MFVS was the distribution of students' lists to companies for the recruitment process. After that, the companies carried out a recruitment process based on their needs. For students who did not qualify in the recruitment process of the company, MFVS would repeat the same process to other companies so that graduates of MFVS could be hired by WBI. If MFVS

had little relationship with WBI, it would encounter difficulties in distributing their graduates. This happened in several vocational schools in eastern Indonesia such as Papua and Nusa Tenggara Timur.

Another thing that depicted the state of the MFVS graduates was the career development experienced by these graduates. Developing a career for most graduates majoring in fishery and seaweed agrobusiness meant taking a higher education like undergraduate or postgraduate degree because the company needed human resources having sufficient knowledge and experience to develop the company. In addition, education gave more value compared to other employees, and the career level of the title holder would continue to thrive in the company.

On the other hand, graduates of nautical science and technical fishing vessels preferred to switch to commercial ships for their career development. This was due to the lower standard of salary in fishing vessels compared to commercial ships, with a difference in the obtained salary reaching 4-5 million, causing nearly 70% of graduates of nautical science and technical fishing vessels to switch to commercial ships. Additionally, the low income obtained by these graduates was almost the same as those who did not have related educational background, further causing the graduates to switch to commercial ships. However, there were some graduates (around 30%) who still worked in fishing vessels, with the highest position of ship captain.

### 3.2 MFVS Graduates and the Government Policy

MFVS was originally projected to produce graduates who would become high quality and competitive human resources to help optimize the utilization of the marine and fishery resources in Indonesia. However, in reality there were still many obstacles faced by students, teachers, and the school as a whole to be able to accelerate the making of high-quality human resources. Some of these obstacles unfortunately came from the government. There were some policies currently in effect that were deemed (by the students, teachers, and the head of MFVS) to contradict or complicate the process of making these high-quality human resources in this field. The lack of coordination among the relevant institutions in the process of education in MFVS was also an unsolved problem.

This paper only discussed one of the contradictions occurring between the conditions of MFVS graduates and the government policies, namely the IUU Fishing policy issued by IMMaf.

Based on the in-depth interviews with the schools' stakeholders (including students, teachers, and the heads of the schools), it was found that the IUU Fishing policy issued by IMMaf had negative implications in the absorption of the MFVS graduates. In the business-as-usual conditions as described in the previous section, only 65% of MFVS graduate contributed directly in the marine and fisheries sector in that they continued their work in the sector that was linear with their educational background.

The tendency of MFVS graduate absorption by the marine and fisheries WBI declined after the enactment of the IUU Fishing policy. Some companies that absorbed the most graduates were forced to stop their fishing activities as there were indications of illegal fishing. As many as 1132 fishing vessels ceased to operate as the impact of the enforcement of the IUU Fishing policy.

Companies which were forced to stop their operations were companies proven to commit violations in their fishing activities, thus reasonable to be punished. This policy became popular and appreciated not only by the people in Indonesia, but also people from other countries, and it was one of the revolutionary policies to stop all forms of violations in the utilization of marine and fishery resources. On the other hand, this policy removed the employment of the vessels crews and also eliminated the potential for the absorption of human resources graduating from MFVS.

This situation was especially felt by schools having lower cooperation with the WBI. Based on the data collected, MFVS in the eastern region of Indonesia, despite being one of the region with the highest fishing activities, had a much lower number of cooperation with WBI compared to MFVS in Java island. Cooperation with WBI was one of the key principals to facilitate graduates of MFVS in having a higher chance of work. Table 1 shows the amount of cooperation built by MFVS in 33 provinces.

The decline in the potential absorption of MFVS graduates also affected the interest of junior high school students to continue their study to MFVS. In previous years, the interest in continuing to MFVS was already smaller when compared to other vocational schools, and this was reflected from the analysis showing that the percentage decreased from only 0.132% in the year 2014 to 0.101% in the next year.

**Table 1.** Number of Cooperation Relationships with WBI

No.	Province	Collaborative Relationship between MFVS and WBI			
		Nautical Fishing Vessels	Technical Fishing Vessels	Agribusiness Fisheries	Agribusiness Seaweed
1	West Java	23	6	4	0
2	Central Java	33	6	17	1
3	Yogyakarta	10	7	2	0
4	Jakarta	0	0	0	0
5	East Java	8	8	1	6
6	Aceh	11	3	13	0
7	North Sumatra	0	0	0	0
8	West Sumatra	0	0	0	0
9	Riau	0	0	0	0
10	Jambi	3	0	0	0
11	South Sumatra	0	0	0	0
12	Lampung	2	0	4	0
13	West Kalimantan	0	0	0	0
14	South Borneo	0	0	0	0
15	East Kalimantan	1	0	1	0
16	North Sulawesi	12	0	0	0
17	Central Sulawesi	11	0	4	0
18	South Sulawesi	31	0	14	0
19	Southeast Sulawesi	1	0	0	0
20	Maluku	0	0	0	0
21	Bali	0	0	0	0
22	Nusa Tenggara Barat	4	1	1	0
23	Nusa Tenggara Timur	17	16	16	8
24	Papua	5	1	1	0
25	Bengkulu	0	0	0	0
26	Banten	0	0	0	0
27	Bangka Belitung	2	1	1	0
28	Gorontalo	2	0	0	0
29	North Maluku	2	4	4	0
30	Riau Islands	0	0	0	0
31	West Papua	0	0	0	0
32	West Sulawesi	0	0	0	0
33	North Kalimantan	0	0	0	0
Total throughout Indonesia		178	31	83	15

The decline in students' interest in continuing to MFVS will certainly have an impact on the efforts being carried out by the government to produce marine and fisheries human resources. It also certainly affects the efforts to make Indonesia as the centre of maritime countries in the world, where the concept of Indonesia being the centre of the maritime world certainly requires a lot of qualified and competitive human resources.

Kejuruan : <http://psmk.kemdikbud.go.id/data/>  
(2015, September 29).

## 4 Conclusion

The results of the analysis show that the IUU Fishing policy has negative implications for the absorption of MFVS graduates. The decreasing number of graduates employed by fisheries companies and the decreasing interest of junior high school students to continue their education to MFVS is one of the indicators.

IUU Fishing policy is a good initial step for a sustainable fishery management. However, its synergy with policies in other sectors (in this case education) should receive more attention. It is therefore essential for the Indonesian governments to create policies that can bridge the loss of employment and the potential for the absorption of human resources generated by the MFVS.

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