Strategic plans to improve production processes in the fishing sector of Chimbote, Peru

Abstract

The research aimed to determine if the strategic plans improve production processes in the fishing sector of Chimbote, 2020. The research focus is quantitative, applied type and non-experimental cross-sectional causal correlational design. The exhibition is composed of 165 people including businessmen and leaders of the fishing sector of Chimbote, 2020; two valid questionnaires with a reliability of 0.862 and 0.868 were used. Data analysis was performed using frequency tables and Spearman's Rho correlation coefficient. It was determined that the strategic plans significantly improve production processes in the fishing sector of Chimbote, 2020; being the Rho = 0.958 (high degree of correlation and positive) ($p < 0.01$). It was identified that the strategic plans have a regular level according to 63% of the entrepreneurs and leaders of the fishing sector of Chimbote, 2020. It was identified that the productive processes have a regularly efficient level according to 61.8% of the entrepreneurs and leaders of the fishing sector of Chimbote, 2020. The development of strategic plans could influence the development of fishing activities in an efficient manner, aiming to achieve the maximum use of raw materials, promoting high quality production processes.

Keywords: strategic plans, production processes, fisheries sector

INTRODUCTION

Both fisheries and aquaculture, worldwide, continue to play a leading role in economic activities, since they provide the population with nutritious food and are sources of employment, as well as the complex challenges that fisheries and aquaculture have gone through on the path of progress and industrial modernization. In addition, when fishing activity is subject to adequate legal regulations, the populations systematically exceed the objectives set, or on the other hand, they manage to overcome the difficulties they have to go through, giving credibility to those responsible for determining the fishing regulations and, likewise, most states around the world are interested in making firm decisions.

However, despite the success achieved by many countries, this has not been sufficient to deal with the problems caused by the overexploitation of resources, which shows that the implementation of fisheries management has not been present in these countries, or in some cases, this management is not effective, causing fish stocks to be deteriorated or deficient. These circumstances that lead to uneven progress imperatively require the reproduction and readaptation of the measures and policies that have turned out to be productive in relation to the current and real context, as well as the specific needs of the

fishery. In recent years, fishing has become an activity of constant growth in the world. We have that, in 2018, it has been estimated that the world production of capture fisheries has managed to reach a figure that has been constituted as a production record to 96.4 million tons, which is equivalent to an increase of 5.4% compared to the average amount of the last three years. Likewise, the increase reported in 2018 was thanks to marine capture fishing, such an increase consisted of the figure equivalent to 84.4 million tons. It should be noted that the seven countries that are the main producers of capture fisheries are: China, Peru, Indonesia, Russia, India, the United States of America and Viet Nam, countries that produce capture fisheries with almost 50% of total production (FAO, 2020).

It is mentioned that a considerable third of fish stocks still continue to fall prey to indiscriminate overfishing, a discouraging scenario given that it increases day by day, in addition the percentage of fish stocks in which overfishing occurs has multiplied significantly in recent decades. In 2017, fisheries reported very low rates in terms of the margins established to continue with a biologically sustainable fishery, those fish stocks that were caught within these considerations constituted less than two thirds of such. Allowing fish stocks to deteriorate, as a result of poor management and the lack of a relevant regulatory framework, means that ocean production will be much lower and that, in the long term, the survival of ecosystems is at risk. More than 34% constitutes the population of fish that have been affected by indiscriminate overfishing, although this generates only 22% of landings. On the contrary, when fisheries operate in a properly managed manner, an increase in the average biomass and a reduction in the effort that the fishing work deserves can be evidenced. Therefore, it is necessary to implement adequate management policies that are propagated in the different nations and that governments rigorously promote the FAO Code of Conduct for Responsible Fisheries. This would lead to the strengthening and proper organization of scientific capacity in the locality; in addition, the establishment of certain regimes in relation to fishing regulations with a scientific basis, in order to put a stop to illegal fishing, which is not regulated, nor does it declare its activities and, likewise, liquidate those subsidies that cause damage (UN, 2020).

One of the most significant objectives of FAO with the contribution of the World Health Organization (WHO) is to put an end to the indiscriminate overexploitation of edible products from marine resources. However, and despite all the effort and work done by these two organizations, there has been an increase in these activities that explode greatly in recent decades, and with greater notoriety in developing countries. These countries have been forced to apply a reduction in their fishing industry and this, as a result of the imposition of sustainability policies, being that the demand for food products has a tendency to import or seek licenses for fishing activity in other areas; meaning that there is evidence of a shift in the focus of production which results in an imminent risk in developing countries, including countries that are part of Latin America. In Chile, the study carried out by SUBPESCA (Undersecretary of Fisheries and Aquaculture) determined that the Chilean fishery is in crisis, due to the overexploitation of the species of which twelve companies remain in full exploitation,

eight are in overexploitation and eight more are listed as exhausted for the year 2013. This situation was reached because marine species had a level of overexploitation, such is the case of southern hake and three-finned hake. Other species in a critical situation are the anchovy of the south-central zone, the golden conger eel, the Volantine ray and the alfonsino. Likewise, when trying to introduce innovative technological tools applied to fishing, these offer advantages and disadvantages, since although they facilitate the increase of production and it becomes more efficient; there is a danger that this activity will be carried out excessively, thus causing an imminent risk to maintain environmental sustainability.

Today, the different measures that are applied in relation to fisheries management are characterized by being inefficient and insufficient, since their application does not lead to a significant decrease in the indiscriminate exploitation of marine resources. With this vision of the discouraging context through which the fishery passes in the region, it is that in Peru there is an excessive extraction of anchovy, causing a result that has caused the decrease of the biomass of anchovy, making it a highly vulnerable spice, increasingly narrowing the number of beneficiaries of its extraction. In the field of fisheries in Peru, it has been guided by a monospecific approach, which is aimed at carrying out the processes of extraction of the anchovy species for the elaboration of the product consisting of fishmeal whose final destination will be the manufacture of food products for poultry and swine animals from Asia and Europe (National Fisheries Society, 2020). Chimbote has become one of the main fishing ports in Peru, however, the quality of the fishing industry in this town has left much to be desired, since most of its factories are very old which causes damage to the ecosystem, as a result of the few security measures implemented in the development of their activities. In the economic sphere, the pressures to obtain fishery resources have caused fishermen to complement each other vertically, acquiring boats to ensure their supply.

Regarding the impact generated in the marine ecosystem and the environment, it has not been possible to determine quantitatively, and the tangible has not been able to be restored. Today, there is no denying the significant impact on fish stocks and invertebrate species, mostly the resources of coastal regions. Likewise, it is undeniable that the commercialization of sardine has become extinct, in turn, hake is residual since it has been strongly affected by indiscriminate exploitation and the show of little responsibility on the part of the State. Imarpe, has made recorded catches that have yielded alarming statistics that show a negative slope of most of the Marian species, which evidences the deterioration of the marine ecosystem due to predatory fishing. That is why, in order to obtain a relevant degree of sustainability of marine resources, strategic plans must be implemented to establish that species reproduce in abundance, recovering, in this way, full productivity that is sustainable and full, to achieve this purpose a collection of reliable scientific information must be available, and there must also be a legal and technical capacity to control access to fishery resources. Therefore, in order to increase fish production, it will be necessary to design a series of strategies that are efficient and relevant in order to avoid overfishing that brings negative results for the ecology and causes a decrease in the production of marine species, causing,

finally, negative consequences for society and the economy. it causes negative ecological consequences and also reduces fish production; this subsequently brings with it negative social and economic consequences.

The effectiveness of a strategic plan depends on the viability of such, and how clear the activities, programs, projects and action plans are established with the purpose of making it viable for the organization to make a projection of these aspects in the future and thus this allows it to achieve the objectives set. From the perspective of the state or nations, strategic planning must make it possible to address the closest issues and must also allow the foundations of the future of the sector to be laid. Based on the above, our research proposes the following problem: To what extent do strategic plans improve production processes in the fishing sector of Chimbote, 2020? The justification for this research lies in the importance of fishing activity, given that this is a vital source of highly nutritious food products, it is a source of income and jobs for millions of people, and all this, because fish is one of the species that are transformed into food products with a high percentage in the world's shops. It should be noted that both the oceans and seas have considerable potential in terms of their contribution to food security, therefore, it is necessary to grow this sector that has had a downward trend due to different factors such as overexploitation or oversizing of fishing effort, in that sense, the implementation and execution of sectoral strategic plans becomes a great challenge, which will allow a correct functioning as well as the execution of the standards established by the countries, managing to improve profitability and productivity levels in a sustainable way. Theoretical justification; considering that our country has the right natural conditions that make it favoring considerable advantages in efficient development of the fishing sector. It is remarkable to appreciate the few works focused on this aspect, so this study is important, given that the strategic plans in the economic sector dedicated to the fishery contributes significantly to food security, also strengthens activities related to aquaculture, contributes to the development of artisanal fishing, facilitates the elevation of fishing in certain areas such as the high seas achieving sustainable results in the activity Fishing. In addition, they promote environmental quality, institutionalize a transparent culture and contribute to the strengthening of aquaculture and fisheries management. Practical justification: the strategic plans applied to the fisheries sector seek to contribute to the realization of a production chain that is effective for the sector, and that resources can be used to the maximum without this constituting overexploitation. In turn, this may allow a much greater added value to be generated in relation to the production of the specific sector, and thus guaranteeing that ecosystems are preserved and the environmental balance is not broken. On the other hand, the sustainability of the small sector, the productivity of industries undoubtedly requires specific public policies from the government. Methodological justification: the present study has assumed a quantitative nature, as well as a design of causal correlational translational type, in turn it was propitious to use the survey as an ideal technique for the purposes of our research, this finding was reflected in a questionnaire, which has allowed us to collect the necessary and timely data for further analysis.

Likewise, the chosen methodology aims to ensure that the results are accurate, the same ones that when contrasted by statistical tests give greater certainty to the research.

In that order, the general objective was proposed: OG: Determine if the strategic plans improve production processes in the fishing sector of Chimbote, 2020. And as specific objectives: O_1: Identify the levels of strategic plans in the chimbote fisheries sector, 2020; O_2: Identify the level of production processes in the fishing sector of Chimbote, 2020. O_3: Determine if strategic plans improve production processes in the extraction of raw materials in the chimbote fishing sector, 2020. O_4: Determine if strategic plans improve the production costs of production processes in the chimbote fisheries sector, 2020. O_5: Determine if strategic plans improve the planning and control of production processes in the chimbote fisheries sector, 2020. O_6: Determine if strategic plans improve production processes through the maintenance of equipment in the fishing sector of Chimbote, 2020.

METHODOLOGY

Type and design of research

The research was applied in nature, with non-experimental design; the type of design is cross-sectional correlational causal.

Variables and operationalization

Conceptual definition

Independent variable: Strategic plans

They are a dynamic and continuous process of external and internal analysis, as well as the setting of general and specific objectives that contribute to the guidance of the organization to guarantee its future and to be able to develop, in order to be able to achieve an identification and selection of the most suitable strategies that facilitate the unification of efforts and thus be able to achieve institutional goals. (Ortegón, 2014).

Dependent variable: Production processes

It is said that it constitutes a series of activities by which several or only one productive factor become products. This conversion, by way of evolution, facilitates the creation of wealth, in other words, it constitutes the addition of value to the elements or inputs that the company has acquired. The material acquired has a considerable value and its potential is increased in order to satisfy those specific needs of customers as it progresses through the production process, it is necessary that in these processes all the

inputs that have been used to obtain the outputs can be identified. Finally, processes are carried out with flows, tasks and storage (Fernández and Avella, 2006).

Operational definition:

Independent variable: Strategic plans

This variable was operationalized through 5 dimensions: political-administrative dimension, organizational cultural dimension, knowledge and innovation dimension, competitiveness dimension, productivity dimension. For its measurement, a questionnaire composed of 30 items was applied.

Dependent variable: Production processes

This variable was operationalized through 4 dimensions: extraction of raw materials, cost of production, planning and control of production, and maintenance of equipment. For its measurement, a questionnaire composed of 28 items was applied.

Population, sample, sampling, unit of analysis

The population was made up of businessmen and leaders of the fishing sector of Chimbote, 2020. Table 1 presents the distribution of the population of this research.

Table 1. Distribution of the population of entrepreneurs and leaders of the fishing sector of Chimbote, 2020.

Condition	Total	%
Fishing entrepreneurs	183	18
Fisheries leaders	830	82
Total	1013	100

Source: Ministry of Production (2019)

Sample

The sample was selected by simple random sampling, and was made up of 165 people among businessmen and leaders of the fishing sector of Chimbote, 2020; Table 2 shows the distribution of the same:

Table 2. Distribution of the sample of businessmen and leaders of the fishing sector of Chimbote, 2020.

Condition	Total	%
Fishing entrepreneurs	30	18
Fisheries leaders	135	82
Total	165	100

Source: Ministry of Production (2019)

Data collection techniques and instruments

Techniques

The survey: the technique used in this research is the survey, which facilitated the obtaining of data and information from the selected sample. According to Hernández, et al., (2014), it constitutes the action that is carried out in an investigation in order to collect the opinions of the members of the study sample, which can be written opinions, options of answers categorize them after the application and achieve the obtaining of the results that are desired in the research.

Instruments

The questionnaire: the purpose of the questionnaire is to obtain in an orderly and systematic manner information regarding the population with which we work, on the variables object of the evaluation or research (Hernández, et al., 2014). In this research, two questionnaires were elaborated with closed questions and five answer options, collecting through them the opinion of the businessmen and leaders of the fishing sector of Chimbote.

The questionnaire referring to the independent variable: Strategic plans; it is composed of 5 dimensions: political-administrative dimension, organizational cultural dimension, knowledge and innovation dimension, competitiveness dimension, productivity dimension; with a total of 30 items.

The questionnaire referring to the dependent variable: Production processes; it is composed of 4 dimensions: production costs, production planning and control, maintenance, waiting time; with a total of 28 items.

Data analysis method

Descriptive statistics

The data with the content from the questionnaires of both variables and their dimensions were described statistically by means of frequency distribution tables.

Inferential statistics

The Kolmogorov Smirnov Test with a significance level of 5% was used for the analysis of normality in the distribution of the sample in its variables and dimensions. For the contracting of the hypotheses, the Spearman Correlation Coefficient was used.

RESULTS

Table3 shows that 60.6% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and production processes are regularly efficient; being the Spearman correlation coefficient Rho = 0.958 (high degree of correlation and positive), with a level of significance p = 0.000 less than 1% (p < 0.01), it is verified that the strategic plans significantly improve the production processes in the fishing sector of Chimbote, 2020.

Table 3. Cross table of strategic plans and production processes in the chimbote fishing sector, 2020

			PRODUCTION PROCESSES			Total
			Deficient	Regularly efficient	Efficient	
STRATEGIC PLANS	Bad	N	45	0	0	45
		%	27,3%	0,0%	0,0%	27,3%
	Regular	N	4	100	0	104
		%	2,4%	60,6%	0,0%	63,0%
	Good	N	0	2	14	16
		%	0,0%	1,2%	8,5%	9,7%
Total		N	49	102	14	165
		%	29,7%	61,8%	8,5%	100,0%

Correlations

			Strategic plans	Production processes
Spearman's Rho	Strategic plans	Correlation coefficient	1,000	,958**
		Sig. (bilateral)	.	,000
		N	165	165

**. The correlation is significant at level 0.01 (bilateral).

Table4 shows that 63% of entrepreneurs and leaders in the fishing sector of Chimbote consider a regular level of strategic plans, while 27.3% consider a bad level and 9.7% a good level. Consequently, it is identified that the strategic plans in the chimbote fisheries sector have a predominantly regular level.

Table 4. Levels of strategic plans in the Chimbote fisheries sector, 2020

LEVELS	Strategic plans	
	f	%
Bad	45	27.3
Regular	104	63
Good	16	9.7
TOTAL	165	100

Table5 shows that the level that prevails in the dimensions of the variable strategic plans is the regular level, in the percentages described below: legal political dimension with 58.2%, organizational cultural dimension with 56.4%, knowledge and innovation dimension with 61.8%, competitiveness dimension with 56.4% and productivity dimension with 64.8% respectively.

Table 5. Levels of the dimensions of the strategic plans in the fisheries sector of Chimbote, 2020.

LEVELS	Political and legal dimension		Organizational cultural dimension		Knowledge and innovation dimension		Competitiveness dimension		Productivity dimension	
	f	%	f	%	f	%	f	%	f	%
Bad	49	29.7	47	28.5	51	30.9	47	28.5	42	25.5
Regular	96	58.2	93	56.4	102	61.8	93	56.4	107	64.8
Good	20	12.1	25	15.1	12	7.3	25	15.1	16	9.7
TOTAL	165	100	165	100	165	100	165	100	165	100

Table 6 shows that 61.8% of entrepreneurs and leaders of the fishing sector in Chimbote consider a regularly efficient level of production processes, while 29.7% consider a deficient level and 8.5% an efficient level. Therefore, it is identified that the local

economy of the families of the Simbal District has a regularly efficient predominant level.

Table 6. Levels of production processes in the fishing sector of Chimbote, 2020.

LEVELS	Production processes	
	f	%
Deficient	49	29.7
Regularly efficient	102	61.8
Efficient	14	8.5
TOTAL	165	100

In Table 7 it is observed that the level that prevails in the dimensions of the production processes is the regularly efficient level, in the percentages described below: extraction of raw materials with 60.6%, production costs with 55.2%, planning and control of production with 61.2% and maintenance of equipment with 56.4%.

Table 7. Levels of the dimensions of production processes in the fishing sector of Chimbote, 2020.

LEVELS	Extraction of raw materials		Production costs		Production planning and control		Equipment maintenance	
	f	%	f	%	f	%	f	%
Deficient	49	29.7	49	29.7	48	29.1	51	30.9
Regularly efficient	100	60.6	91	55.2	101	61.2	93	56.4
Efficient	16	9.7	25	15.1	16	9.7	21	12.7
TOTAL	165	100	165	100	165	100	165	100

Table 8 shows that 60.6% of entrepreneurs and leaders of the fishing sector of Chimbote consider that the strategic plans are regular and the production processes in the extraction of raw materials are regularly efficient; being the correlation coefficient of Spearman Rho = 0.867 (high degree of correlation and positive), with level of significance p = 0.000 less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve the production processes in the extraction of raw materials in the fishing sector of Chimbote, 2020.

Table 8. Cross table of strategic plans and production processes in the extraction of raw materials in the fishing sector of Chimbote, 2020.

			EXTRACTION OF RAW MATERIALS			Total
			Deficient	Regularly efficient	Efficient	
STRATEGIC PLANS	Bad	N	45	0	0	45
		%	27,3%	0,0%	0,0%	27,3%
	Regular	N	4	100	0	104
		%	2,4%	60,6%	0,0%	63,0%
	Good	N	0	0	16	16
		%	0,0%	0,0%	9,7%	9,7%
Total		N	49	100	16	165
		%	29,7%	60,6%	9,7%	100,0%

Correlations

			Strategic plans	Extraction of raw materials
Spearman's Rho	Strategic plans	Correlation coefficient	1,000	,867**
		Sig. (bilateral)	.	,000
		N	165	165

**. The correlation is significant at level 0.01 (bilateral).

Table 9 shows that 55.2% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and production costs of production processes are regularly efficient; being the Correlation Coefficient of Spearman Rho = 0.885 (moderate degree of correlation and positive), with significance level p = 0.000 less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve the production costs of the production processes in the fishing sector of Chimbote, 2020.

Table 9. Cross table of strategic plans and production costs of production processes in the chimbote fisheries sector, 2020.

			PRODUCTION COSTS			Total
			Deficient	Regularly efficient	Efficient	
STRATEGIC PLANS	Bad	N	45	0	0	45
		%	27,3%	0,0%	0,0%	27,3%
	Regular	N	4	91	9	104
		%	2,4%	55,2%	5,5%	63,0%
	Good	N	0	0	16	16
		%	0,0%	0,0%	9,7%	9,7%
Total		N	49	91	25	165
		%	29,7%	55,2%	15,2%	100,0%

Correlations

			Strategic plans	Production costs
Spearman's Rho	Strategic plans	Correlation coefficient	1,000	,885**
		Sig. (bilateral)	.	,000
		N	165	165

**. The correlation is significant at level 0.01 (bilateral).

Table 10 shows that 60.6% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and the planning and control of production processes is regularly efficient; being the correlation coefficient of Spearman Rho = 0.802 (high degree of correlation and positive), with level of significance p = 0.000 less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve the planning and control of production processes in the fishing sector of Chimbote, 2020.

Table 10. Cross table of strategic plans and planning and control of production processes in the fishing sector of Chimbote, 2020.

			PRODUCTION PLANNING AND CONTROL			Total
			Deficient	Regularly efficient	Efficient	
STRATEGIC PLANS	Bad	N	44	1	0	45
		%	26,7%	0,6%	0,0%	27,3%
	Regular	N	4	100	0	104
		%	2,4%	60,6%	0,0%	63,0%
	Good	N	0	0	16	16
		%	0,0%	0,0%	9,7%	9,7%
Total		N	48	101	16	165
		%	29,1%	61,2%	9,7%	100,0%

Correlations

			Strategic plans	Production planning and control
Spearman's Rho	Strategic plans	Correlation coefficient	1,000	,802**
		Sig. (bilateral)	.	,000
		N	165	165

**. The correlation is significant at level 0.01 (bilateral).

Table 11 shows that 47.3% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and production processes through equipment maintenance are regularly efficient; being the Spearman Rho correlation coefficient = 0.822 (high degree of correlation and positive), with significance level p = 0.000 less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve production processes through the maintenance of equipment in the fishing sector of Chimbote, 2020.

Table 11. Cross table of strategic plans and production processes through the maintenance of equipment in the fishing sector of Chimbote, 2020.

			EQUIPMENT MAINTENANCE			Total
			Deficient	Regularly efficient	Efficient	
STRATEGIC PLANS	Bad	N	32	13	0	45
		%	19,4%	7,9%	0,0%	27,3%
	Regular	N	19	78	7	104
		%	11,5%	47,3%	4,2%	63,0%
	Good	N	0	2	14	16
		%	0,0%	1,2%	8,5%	9,7%
Total		N	51	93	21	165
		%	30,9%	56,4%	12,7%	100,0%

Correlations

			Strategic plans	Equipment maintenance
Spearman's Rho	Strategic plans	Correlation coefficient	1,000	,822**
		Sig. (bilateral)	.	,000
		N	165	165

**. The correlation is significant at level 0.01 (bilateral).

DISCUSSION

Both aquaculture and fisheries constitute the most important productive and economic activities that provide prosperity and well-being in the world. Thus, in the last five decades, the worldwide supply of marine products has been destined for the consumption of human beings, thus surpassing the statistics in relation to population growth worldwide. This sector also provides income and livelihoods either indirectly or directly to a large percentage of the world's population. And, it should be considered that, over the years, there is an increase in the world population which results in a need to provide more jobs and food, which makes the fishing industry have a much greater demand that it is prepared to provide. Meanwhile, consumers in retail and wholesale markets around the world demand that they be provided with good quality products and that their extraction does not cause environmental damage. That is why the fisheries and aquaculture sectors must create means to develop their diversification, as well as the implementation of mechanisms and certifications that allow them to guarantee the effectiveness of such.

The sector dedicated to the fishery, is one of the sectors dedicated to the production of food products of animal origin that its growth is the fastest compared to the other animal species and, in the next decade, the total production of aquaculture and capture fisheries will show a significant increase that will be reflected in the rates that will exceed the consumption of pig meat, of cattle and poultry. From this point of view, the countries that supply aquaculture and fisheries resources, such as Peru, must aim to improve their production processes, distribution channels, product quality, and in the same way be able to guarantee that food safety meets the highest quality standards. Being fundamental the elaboration of a strategic analysis of the sector dedicated to the fishing of our country, which must be oriented to carry out an accurate internal diagnosis of the financial, technological, human, commercial and productive resources of the sector, as well as the external diagnosis, which come from the context itself and that can affect the viability and possibilities and of the same; so it is of the utmost importance to determine the critical points and immediate and mediate strategies to be applied according to what has been evaluated. On the other hand, it is necessary that today the different measures that are applied in relation to fisheries management, are characterized by being inefficient and insufficient, since their application does not lead to a significant decrease in the indiscriminate exploitation of marine resources. With this vision of the discouraging context through which the fishery passes in the region, it is that in Peru there is an excessive extraction of anchovy, causing a result that has caused the decrease of the biomass of anchovy, making it a highly vulnerable spice, increasingly narrowing the number of beneficiaries of its extraction. In the field of fisheries in Peru, it has been guided by a monospecific approach, which is aimed at carrying out the processes of extraction of the anchovy species for the elaboration of the product consisting of fishmeal whose final destination will be the manufacture of food products for poultry and swine animals from Asia and Europe.

The strategic plans in the sector aim to harmonize economic activity by promoting the functioning of markets and improving productivity, competitiveness, inclusive economic growth and sustainable development, through the interaction and participation of all sectors, promoting a favorable climate for business and thus taking advantage of emerging commercial windows. Given that the fishing sector has had an evolutionary growth, it is considered an activity with a promising and favorable future for economic growth and that contributes to the reduction of poverty and is presented as an inclusive labor alternative. Based on the above, the statistical results of this study have been obtained, which account for the current reality presented by the fishing sector in the city of Chimbote in relation to the Strategic Plans and the productive processes that are developed, taking into account that this activity is the main activity developed by the city. In relation to the hypotheses, it is evident in Table 3 that 60.6% of the entrepreneurs and leaders of the fishing sector of Chimbote consider that the strategic plans are regular and the production processes are regularly efficient; being the correlation coefficient of Spearman Rho = 0.958 (high degree of correlation and positive), with level of significance $p = 0.000$ less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve the productive processes in the fishing sector of

Chimbote, 2020. These results must be compared with those found by Monteza (2020) and that lead him to conclude that fisheries management plans do not grant socioeconomic benefits to the participating artisanal fishermen. In the case of the Gulf of Arauco management plan, gross income was reduced, and in the case of the COMPEB and Juliana management plan, income increased. However, in the last two cases, this is possibly a matter of the overexploitation of the species involved in each plan. That said, the fishing of benthic resources is not sustainable, which means that there are no economic incentives to conserve them on the part of users and want to be part of the measure.

In addition, they must also be compared with those of Melgar and Yovera (2019), who find in their study that the level of compliance with the strategic plan of the Peruvian fishing sector obtained 83% presenting an average level of compliance with respect to the goal scheduled in the period from 2012 to 2016. It should be added that the theory selected to support the results of the research is the theory of restrictions, the same one that proposes a process to manage improvement efforts and eliminate the restrictions in their process that prevent having the productive capacity and earning more money. The implementation of the theory of constraints and the proposed process, allows a continuous supervision and constant monitoring of the process that is analyzed and not move away from the main approach that was proposed, allowing to obtain results such as reduction of lead time, that is, how time passes from the point where a certain process begins until it ends, as well as the reduction of inventories, the improvement in the fulfillment of delivery dates, increase in net profits, increase in sales and other benefits that can be perceived (University of Antioquia, 2000).

Statistically, it has been obtained that in table 4 it is observed that 63% of the entrepreneurs and leaders of the fishing sector of Chimbote consider a regular level of strategic plans, while 27.3% consider a bad level and 9.7% a good level. Consequently, it is identified that the strategic plans in the chimbote fisheries sector have a predominantly regular level. These results are related to what was found by Pazmiño, et al. (2017), who conclude in their study that the projects implemented seek to contribute to the process of training human talent in the artisanal fishing sector through the implementation of public policies for the local development of the nearby sectors of the artisanal fishing ports of Ecuador. Likewise, table 5 shows that the level that prevails in the dimensions of the variable strategic plans is the regular level, in the percentages described below: legal political dimension with 58.2%, organizational cultural dimension with 56.4%, knowledge and innovation dimension with 61.8%, competitiveness dimension with 56.4% and productivity dimension with 64.8% respectively. In this regard, Brito, et al. (2020), in their research carried out in Brazil, conclude that public policies at the federal level and the migration of fisheries of the Lutjanus purpure use snapper from the Panulirusspp lobster. from the Brazilian Northeast to the region were the actions that most impacted fishing activity in Bragança, which experienced its peak in terms of structuring between 1990 and 2005.

Also, table 6 shows that 61.8% of entrepreneurs and leaders of the fishing sector of Chimbote consider a regularly efficient level of production processes, while 29.7% consider a deficient level and 8.5% an efficient level. Therefore, it is identified that the local economy of the families of the Simbal District has a predominantly efficient level. On these results, we must add what was found by Canales, et al. (2017), their study concludes by determining that the fish oil industry and fishmeal processing has a significant potential in terms of increasing income for the country, since this industry has a series of competitive and comparative advantages. Despite this, there is a notable need to focus on the proper development of these products to ensure their positioning in new markets, and from this take advantage of the different opportunities that may be pertinently identified, which will generate a neutralization of possible threats, being that the main destination for these products in question, it is the Chinese market. The Asian country represents a very significant opportunity to create commercial ties in the future, through bilateral trade agreements that contribute to Peru becoming the most important supplier of fish oil and fishmeal. The figures released in the study support its development and tendency to become a beneficial food source for health.

Similarly, table 7 shows that the level that prevails in the dimensions of the production processes is the regularly efficient level, in the percentages described below: extraction of raw materials with 60.6%, production costs with 55.2%, planning and control of production with 61.2% and maintenance of equipment with 56.4%. It is worth adding to this, what Portuondo (1990) argues about production processes, when he affirms that the production process is that system of actions that are dynamically interrelated and directed to the conversion of certain components. A production process is determined by the actions that arise in a planned manner and cause a transformation or change of objects, materials or systems, concluding with the obtaining of a final product. Regarding the specific hypotheses, table 9 shows that 60.6% of the entrepreneurs and leaders of the fishing sector of Chimbote consider that the strategic plans are regular and the productive processes in the extraction of raw materials are regularly efficient; being the correlation coefficient of Spearman Rho = 0.867 (high degree of correlation and positive), with a significance level $p = 0.000$ less than 1% ($p < 0.01$), it is verified that the strategic plans significantly improve the production processes in the extraction of raw materials in the fishing sector of Chimbote, 2020. These results are related to what Alegría, et. al. (2017), who in their research conclude by determining that there is a marked impact on the demand at the local level for direct human consumption, which requires, because it has this nature, that the products offered have an excellent quality, highlights the importance of having a strategic location to carry out trade, as well as the execution of free trade agreements to encourage the entry of Peruvian products into new markets and contribute to the current exchange based on the traceability of fishery products in international markets.

Table 9 shows that 55.2% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and production costs of production processes are

regularly efficient; being the correlation coefficient of Spearman Rho = 0.885 (moderate degree of correlation and positive), with level of significance p = 0.000 less than 1% (p < 0.01), it is verified that the strategic plans significantly improve the production costs of the productive processes in the fishing sector of Chimbote, 2020. In this regard, it is pertinent to add what was found by Pazmiño (2016), who concluded with the determination that an adequate Organizational Behavior positively affects the substantial increase in Efficiency in the development of the production chain of the sector dedicated to Artisanal White Fishing of Ecuador according to the Crombach method applied there is a correlation index of 95.4%.

Table 10 shows that 60.6% of entrepreneurs and leaders of the fishing sector in Chimbote consider that strategic plans are regular and the planning and control of production processes is regularly efficient; being the correlation coefficient of Spearman Rho = 0.802 (high degree of correlation and positive), with level of significance p = 0.000 less than 1% (p < 0.01), it is verified that the strategic plans significantly improve the planning and control of production processes in the fishing sector of Chimbote, 2020. On these data, those found by González (2018) can be added, he concludes by determining that the development of the fishing activity carried out in the port had a significant impact and this due to the lack of updated port laws and that adjust to the new contexts in the sector; among these regulations we have the Law of National Port Administrative Regime and General Law of Ports. Due to the process of globalization, the fishing trade requires that the port regulations are prone to various changes which are evaluated frequently, in order to consolidate a much better organization and, this can meet the new needs of the system.

Likewise, table 11 shows that 47.3% of entrepreneurs and leaders of the fishing sector of Chimbote consider that strategic plans are regular and production processes through equipment maintenance are regularly efficient; being the correlation coefficient of Spearman Rho = 0.822 (high degree of correlation and positive), with level of significance p = 0.000 less than 1% (p < 0.01), it is verified that the strategic plans significantly improve the production processes through the maintenance of equipment in the fishing sector of Chimbote, 2020. These results can be accompanied by the results of Galán (2018) who is his study in the city of Lambayeque concludes by determining that 81.46% of the interviewees consider that different aspects such as the mission, objectives, vision, methods and budgets, do not have a coherent sense and / or that they know little or very little about these issues; while 13.54% express that the current form of this issue has a coherent meaning with the current context and its relationship with the sustainability of fishing activity

Finally, it should be noted that the fishery is one of the most important economic and productive activities in the region and the world, hence the urgent need to have strategic plans that provide the tools to strengthen this industry, in turn, the promotion of the development and diversification of new offers and, the importance, in addition to designing innovative actions that allow access and achieve permanent positioning in national and international markets. A strategic plan must be proposed to the entire

fishing sector, through a meticulous, articulated, pertinent and joint work to be able to face the challenges represented by the application of processes that accelerate the conversion of our Peru, in a leading country of trade related to fisheries and aquaculture worldwide. The challenge is to become a modern sector dedicated to fisheries, with a diversification of marine products with added value, through coordination with the central and regional government, and through an efficient network related to marketing that favors us in terms of competitive advantages in the internal and external market. The effectiveness of strategic plans depends on the viability of such, and how clearly the activities, programs, projects and action plans are established, the sole purpose that companies can glimpse the future and achieve their goals according to their established function. The development of strategic plans will allow the efficient development of activities related to the fishery, which would lead to the aim of achieving the maximum use of raw materials, promoting high quality production processes, as well as the creation of an ideal fleet for extraction, added to it technical cadres and trained professionals. All this complemented by preservation, which implies respect for resources and scrupulous care of the environment.

CONCLUSIONS

In the region of Chimbote, Peru, it was determined that the strategic plans significantly improve production processes in the fisheries sector. It was identified that strategic plans have a regular level according to 63% of entrepreneurs and leaders in the fishing sector. It was identified that production processes have a regularly efficient level according to 61.8% of entrepreneurs and leaders in the sector. It was determined that the strategic plans significantly improve production processes in the extraction of raw materials in the fisheries sector. It was determined that the strategic plans significantly improve the production costs of the production activities in the fisheries sector. It was determined that the strategic plans significantly improve the planning and control of productive activities in the fisheries sector. It was determined that the strategic plans significantly improve production processes through the maintenance of equipment in the sector.

Consent

As per international standard or university standard, Participants' written consent has been collected and preserved by the author(s).

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