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## Improvement of the manual of cost standards and procedures for entities in the fishing industry



Perfeccionamiento del manual de normas y procedimientos de costos para entidades de la industria pesquera

Aprimoramento do manual de padrões e procedimentos de custos para entidades do setor pesqueiro

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### ABSTRACT

Cost manuals are basic instruments in the systems of organization and standardization of processes in productive enterprises. They are essential tools for cost control, decision making, definition of standards and performance evaluation. The objective of the research developed is to improve the

manual of cost norms and procedures of the La Coloma Industrial Fishing Company, from the inclusion of its main cost elements, vouchers of operations, budget systems, procedures for the elaboration of cards, methods for the calculation and distribution of indirect costs, sets, by-products, ullages, wastes and analysis of variations; for this purpose, general methods of theoretical and empirical levels were used, which allowed characterizing and deepening in the essential particularities of the object of research, contributing, from its practical application to improve efficiency and business effectiveness, reduce errors, increase the levels of accounting control and supervision, regulatory compliance, reducing negative deviations in efficiency and volume, and contributing to an adequate allocation of costs, supporting the decision-making processes derived from the tools associated with management accounting and ultimately allowing the reduction of expenses and the increase of the company's aggregate profit margins from the adequate application of the principle of association of income and expenses.

**Keywords:** procedures; manual; costs; management accounting.

## RESUMEN

Los manuales de costos son instrumentos básicos en los sistemas de organización y estandarización de procesos en las empresas productivas. Son herramientas esenciales en el control de los costos, toma de decisiones, definición de estándares y evaluación de desempeño. El objetivo de la investigación desarrollada es perfeccionar el manual de normas y procedimientos de costo de la Empresa Pesquera Industrial La Coloma, a partir de la inclusión de sus principales elementos de costo, comprobantes de operaciones, sistemas de presupuesto, procedimientos para la elaboración de fichas, métodos para el cálculo y distribución de costos indirectos, conjuntos, subproductos, mermas, desperdicios y análisis de variaciones; para ello se utilizaron métodos generales de niveles teóricos y empíricos, lo que permitió caracterizar y profundizar en las particularidades esenciales del objeto de investigación, contribuyendo, desde su aplicación práctica a mejorar la eficiencia y efectividad empresarial, reducir errores, incrementar los niveles de control y supervisión contable, el cumplimiento normativo, disminuyendo desviaciones negativas en eficiencia y volumen, y contribuyendo a una adecuada asignación de los costos, apoyando los procesos de toma de decisiones derivadas de las herramientas asociadas a la contabilidad gerencial y permitiendo en

última instancia la reducción de gastos y el incremento de los márgenes de utilidad agregada de la empresa a partir de la adecuada aplicación del principio de asociación de ingresos y gastos.

**Palabras clave:** procedimientos; manual; costos; contabilidad gerencial.

## RESUMO

Manuais de custos são instrumentos básicos nos sistemas de organização e padronização de processos em empresas produtivas. São ferramentas essenciais para o controle de custos, a tomada de decisões, a definição de padrões e a avaliação de desempenho. O objetivo desta pesquisa é refinar o manual de padrões e procedimentos de custos da Empresa Pesqueira Industrial La Coloma, incluindo seus principais elementos de custo, receitas operacionais, sistemas orçamentários, procedimentos para a elaboração de planilhas de custos, métodos de cálculo e distribuição de custos indiretos, montagens, subprodutos, perdas, desperdícios e análise de variância. Para tanto, foram utilizados métodos gerais, tanto teóricos quanto empíricos, que permitiram caracterizar e aprofundar as especificidades essenciais do objeto de pesquisa. Por meio da aplicação prática, esses métodos contribuem para melhorar a eficiência e a eficácia empresarial, reduzir erros, aumentar os níveis de controle e supervisão contábil, garantir a conformidade regulatória, reduzir desvios negativos de eficiência e volume e contribuir para a alocação adequada de custos. Eles apoiam os processos de tomada de decisão derivados de ferramentas de contabilidade gerencial, permitindo, em última análise, a redução de despesas e o aumento das margens de lucro agregadas da empresa por meio da aplicação adequada do princípio de casamento de receitas e despesas.

**Palavras-chave:** procedimentos; manual; custos; contabilidade gerencial.

## INTRODUCTION

The Cost Standards and Procedures Manuals are working tools based on the accounting interpretation of activities related to costs and productive activity; they fulfill, among others, the objective of providing useful information for economic accountants and managers in general. Their correct implementation allows the control of resources and provide reliable and timely information for the decision-making process (Díaz Pando et al., 2021), representing documents that serve as a guide to

standardize the accounting activities of an organization (Vivanco Vergara, 2017); as well as to establish fundamental administrative control mechanisms that indicate policies and processes for the optimal development and accounting records (Loayza Añazco & Jaramillo Cevallos, 2023).

These work instruments can be perceived as an intellectual production of the person who elaborates them; consolidating themselves as fundamental tools for the preservation of organizational knowledge and dynamic repositories of financial information. They include accounts, subaccounts, cost centers and expense items that describe the activity of a company, allowing to establish a better control of resources, as well as laws, rules, resolutions and information policies that systematically and coherently contribute to the achievement of the expected goals of efficiency and effectiveness.

In recent years, the need to improve the manuals of cost standards and procedures with fair characteristics to the operations and activities of the specific productive systems of the different organizations has expanded, allowing the consolidation of financial information at the enterprise level (Díaz Pando et al., 2021), promoting within the framework of research a new approach oriented to the systematization of the fundamental processes of cost within the particularities of the productive flows of fishing activities. Currently, the search for efficiency at the enterprise level has contributed to the continuous redesign of manuals of norms, procedures and accounting policies necessary to build a reliable financial system (Palacio Duarte et al., 2023), being considered in the framework of this article as a basic element in the search for and convenient identification of competitive advantages in enterprises focused on the secondary production sector.

In Cuba, the need to implement cost procedure manuals in state sector enterprises has become evident, based on the accounting policies issued by the Cuban state and endorsed by the Ministry of Finance and Prices, the governing body of these policies. It should be taken into account that they go beyond a planning, accumulation, calculation and timely analysis of costs; these constitute the basis for the formation of sales prices of the products obtained in the industrial process.

In the particular case of La Coloma Industrial Fishing Company, it has five extractive Base Business Units (UEB) whose mission is the capture of shelf species such as lobster, tuna, scales, among others, and their subsequent transfer to the Industry Base Business Unit, which is responsible for their industrial processing and commercialization in the national and international market in more than 200 assortments (Hernández Pérez et al., 2023).

The above leads to conduct an initial exploratory study to its cost system, which allowed to identify the existence of limitations in its manual of standards and procedures, which lacks a convenient description of accounting procedures for planning, accumulation, calculation and timely analysis of costs, system of vouchers of operations, cost elements, calculation basis for the distribution of indirect costs, limitations in the apportionment of the result of variations between actual and predetermined costs of extractive production, as well as limitations in the costing of joint productions and the absence of methodological guidelines for the analysis of deviations in efficiency, prices and volume.

The problem associated to the present study is considered of great actuality in the Cuban context because it constitutes a proposal oriented to the improvement of a work tool that would support the operational decision-making processes, as well as the search for a progression of the efficiency parameters in the productive processes of goods oriented to exports, import substitution and with a marked relevance within the social structure of the area where it is located.

The above limitations also show contradictions in the current accounting practice and the desired state of the cost system of the entity's extractive and industrial productions; all this allows to propose as the base research objective of the article: to improve the manual of cost norms and procedures of the La Coloma Industrial Fishing Company by including the main cost elements, operation vouchers, budget systems, procedures for the elaboration of cards, methods for the calculation and distribution of indirect costs, joint costs, by-products, wastes and analysis of their variations.

## **MATERIALS AND METHODS**

Theoretical and empirical methods were used for the development of the research. Among the theoretical methods used is the historical-logical one, oriented to the study of the trends and historical evolution of management accounting in general, its systems of accumulation, calculation, distribution, allocation and analysis of variations and elements, as well as the manuals of standards and procedures as specific managerial instruments, allowing to identify the techniques that with greater criterion could represent the characteristics of the productive flow of the entity. Modeling as a method made it possible to make the necessary abstractions conducive to perfecting the manual of rules and cost procedures at La Coloma Industrial Fishing Company for capture and industrial processing activities, and the systemic-structural method used to conceive the structural components

in the functional design of the manuals of instructions and cost procedures, taking as references the characteristics of the productive processes and fundamental cost elements associated with the capture and industrial processing processes in the fishing activity. The logical procedures used were analysis-synthesis, abstraction-induction and deduction.

The empirical methods applied were the documentary review that includes the manual of norms and procedures of the cost system to be improved, Resolution No. 235 and 294 of the Ministry of Finance and Prices and Norm No. 12 Management Cost. Participatory observation was incorporated, which allowed to verify through direct and systematic perception the current state of use of the cost manual to be modified, as well as surveys and structured and unstructured interviews to the accounting professionals and technicians of the functional direction of the company's economy, the Industries UEB, the Extractive UEBs, as well as part of the board of directors of the company, these were developed with the objective of characterizing the current state of the object of study and identifying the main shortcomings, components to be improved and needs to be satisfied through a process of improvement or redesign of the manual of rules and procedures of the cost system in the entity.

## RESULTS AND DISCUSSION

Cost accounting has traditionally been evaluated as an expert factor on the analysis, estimation and behavior of costs in an economic organization (Suárez Tirado, 2013), being considered a technical branch of general accounting with elements and accounting operations oriented to favor the processes of calculation, accumulation, classification and distribution of costs and expenses of an entity (Molina Cedeño et al., 2019), a system that establishes the methodological bases to identify, quantify and evaluate the costs incurred in business operations, serving as an axis for the optimization of economic management. Cost accounting aims to describe changes in industrial production processes, being considered a core part of management accounting (Chacón et al., 2017); which allows setting prices, knowing profit margins, accumulating cost data to determine the unit cost of the manufactured product, supporting decision making, contributing to the control of manufacturing operations, planning operations of manufacturing and production control, operating as an integrated system that combines quantitative accuracy, operational control and sustainable strategy.

Cost systems have always been focused on a basic objective, which is the determination of costs, representing a special accounting system (Casanova Villalba et al., 2021), which allows the accumulation and classification of costs, including costs of raw materials and materials, direct salary and indirect production costs, orienting them logically towards the production of goods and services, modern cost systems are structured as a set of interrelated components oriented to assess how costs and expenses impact the economic stability and sustainability of organizations (Karagiorgos et al., 2022), using standardized forms, chronological records, accumulation systems by centers and analytical reports. They also currently merge digital models (e-forms), automated subsidiary ledgers and real-time management reports into automated workflows. In summary, these systems are widely recognized as the set of accounting records and calculation procedures that allow the determination of unit production costs, developing essential tools to improve operational processes while reducing potential negative deviations (Diavastis, 2025). In order to elaborate a costing system, it is necessary to take into consideration different stages that allow an organized, in-depth work to be carried out, guaranteeing its quality.

Six well-defined stages can be considered:

1. Study and evaluation of the regulations in force.
2. Study and evaluation of the technical-organizational and productive characteristics of the entity.
3. Analysis of the particularities of the current planning, registration, calculation and cost analysis.
4. Elaboration of the design of each subsystem.
5. Integration of the subsystems and elaboration of the cost system proposal of the company.
6. Analysis of the results of the implementation of the system.

Considering contemporary procedure manuals as primary documents, they constitute the accounting normative basis of economic units (Lanza González et al., 2019), as instruments, they have evolved into integrated control systems, designed to align expectations between managers and operatives through protocols that unify the management of human, material and financial resources. In this sense, they are standardization instruments that document operational flows, internal controls and financial policies, in order to optimize resource management, ensure the integrity of the operation and reduce operational risks; which allows prescribing the accounting treatment of each of the

material accounts that make up the financial statements, having significant implications in the financial evaluation of the short, medium and long term strategies of organizations (Peña Rivera & Fernández Cuervo, 2020), which are essential concepts associated with the object of study developed in the article.

### **Basic characteristics of the cost system of La Coloma Industrial Fishing Company and its manual of rules and instructions**

The above concepts were taken into account in the study, establishing an exploratory analysis that allowed locating the cost system used in the entity as an absorption cost system, using, according to the form of concentration of costs, both work orders and by processes and a standard method associated with its accumulation process.

The entity's cost planning process uses the normative method, through expense budgets by area of responsibility, developing two of its essential planning instruments, the system of operational budgets and predetermined unit costs. The records of costs and expenses in the entity are made through control accounts, broken down by cost centers and expense groupings, the calculation of costs is made using the groupings of expenses conceptualized within the items established for the determination of the actual unit costs of production. Costing serves as the basis for product pricing, and the analysis of costs in the entity is based primarily on the evaluation of the behavior of expenses and their deviations.

Finally, the entity's cost standards and procedures manual is based on the administrative and operational activities of the organization's functional and support processes, with some of the fundamental objectives in its preparation being the standardization of the different accounting processes of the organization, the comprehensive analysis of its procedures, the assumption of a prescriptive nature and the establishment of action limits, with the definition of these elements laying the foundations for the diagnosis of the entity's cost system and specifically the assessment of its standards and procedures manual.

### **Diagnosis of the cost manual in force at La Coloma Industrial Fishing Company**

In order to develop the process of improvement of the cost standards and procedures manual of La Coloma Industrial Fishing Company, a leading company in the national fishing industry, the



methodology developed by Vallejos Díaz (2008) is assumed, which is divided into two systems of major activities, the first one oriented to the diagnosis of the cost system and the entity's standards and procedures manual, and the second one that guides its improvement process, the diagnostic process being made up of the following activities:

- Stage 1. Determination of information needs.
- Stage 2. Definition of information sources.
- Stage 3. Design of the formats for information collection.
- Step 4. Data collection, analysis and processing of information.

The main results associated with the activities that are part of the diagnostic stage of the study are presented below.

### **Stage 1. Determination of information needs**

The objective of this stage was to know the regularities associated with the entity's cost system and procedures manual, as well as the information needs derived from these subsystems in its extractive, industrial and general management units, identifying them as elements used in the entity's cost planning:

1. Analysis of the behavior of the cost standards.
2. Historical series.
3. Capacity utilization.
4. Quantification of reduction measures that can be applied.

The entity's cost manual includes guidelines associated with the analysis of production volume, time losses due to stoppages, breakages and deviations in technological discipline, evolution of the behavior of the start-up of new capacities, analysis of the consumption of materials, fuels and energy, analysis of the salary fund and of the measures that allow an increase in the efficiency of labor resources, which support the operational planning processes and the design of cost and price sheets.

Within the process of accumulation of costs, the entity's manual establishes above all specific primary documents and the logical flow of information comprising the collection, classification and accounting of information that develops in a given economic period.

Costing in the entity aims to ensure the analysis of the efficiency of production and services, facilitating the adoption of timely measures to correct deviations from the planned cost and increase the efficiency of the entities, contribute to the correct substantiation of the plan indicators and facilitate the analysis in the formation of prices.

The manual defines as the main guiding documents for the entity's cost calculation: projections and accounting policies for the development of the business sector as of December 2020, associated with the improvement of the cost system, standard No. 12 Accounting Management, status of management accounting and degree of updating of the company's cost system manual, and organizational requirements of the entity (technological standards, organization of production and technological flows).

## **Stage 2. Definition of information sources**

To analyze the entity's cost system and its accounting procedure manual, primary and secondary information sources were used, taking as the reference the regulatory framework in force for fishing activity, policies, standards, and regularities for the development and implementation of the cost systems, accounting specific standard No. 12 Accounting Management, Costs accounting manual (Resolution No. 54/2005 of Finances and Prices Ministry), Agreement No. 8301 dated January 26, 2018, of the Council of Ministers, in its paragraph one, numeral 8, which establishes among the specific functions of this Ministry that of establishing the accounting and cost policy for all sectors of the economy and the governmental accounting system, Resolution No. 235/2005, which puts into effect the Cuban Financial Reporting Standards, Resolution No. 1038 /2018 of the Ministry of Finance and Prices, Resolution No. 397/2018 of the Ministry of Finance and Prices and the Procedures Manual of the Costing System issued on August 25, 2016 of the Accounting Directorate belonging to the Food Industry Business Group.

As a complement, primary sources are used and the measurement method is applied through interviews and surveys. The individual interview was conducted with the objective of knowing the main advances and limitations that exist in the national context for the management process of accounting policies associated with the improvement of the manual of cost standards and procedures. Company managers were interviewed and surveyed, as well as technicians and specialists in the areas of economy, human resources, technology and quality, as well as specialists from the Provincial Directorate of Finance and Prices of Pinar del Río.

### **Stage 3. Design of the data collection formats**

For the elaboration and application of surveys and interviews, the following tasks were structured:

(1) Determination of the objectives of the surveys and interviews, (2) Elaboration of the questionnaire, (3) Establishment of criteria for the selection of the sample to be applied, (4) Application of the surveys and interviews and (5) Evaluation and interpretation of the information collected.

### **Stage 4. Data collection, analysis and information processing**

The purpose of the data collection, analysis and information processing stage is to gather all the information related to the entity's cost system, allowing to define strengths and weaknesses associated with the planning, accumulation, calculation and analysis of costs, which may represent opportunities to generate relevant information to support the decision-making processes to reduce costs, improve profitability and optimize operational efficiency: (1) experience of at least 5 years in management, (2) decision-making capacity on behalf of their entity, (3) willingness, commitment and honesty, (4) communication and participative leadership skills and (5) different levels of subordination.

### **Analysis of the results of the primary information sources**

The objective of the application of surveys and interviews within the study was associated with identifying areas for improvement and optimization in the process of cost determination and control, as well as the need for standardization of basic accounting procedures to improve the construction of relevant management information associated with decision-making processes. The survey designed in the study was applied to 36 people, considering among the selection criteria: years of experience, occupation, functions performed, and distribution among the main activities that make up its productive processes, among them the general director of the company, 6 functional directors, 20 specialists and 9 technicians of the activities of economy, human resources, technology and quality, presenting a work experience that ranged between 5 and 42 years, representing a sample that exceeds 68% of the economic teams of the entity, and 87% of its board of directors.

The survey was oriented to know the experience that the respondents had in cost accounting, the use of the cost procedures manual, importance in the standardization of accounting processes,

information needs, and the relevance that a process of improvement of the manual of standards and procedures would have for this accounting subsystem. The main results obtained were that cost accounting is considered an essential area within the entity's information systems (more than 70% of the respondents answered that they had used specific sections of the entity's cost standards and procedures manual), agreeing in all cases on the need to improve in this instrument the methods for the construction of the entity's cost information, with most of the employees recognizing that cost information was very significant in the operational and strategic decision-making processes, as well as in performance evaluation.

The objective of the unstructured interviews was to define the relevance for managers and specialists of the entity of the development of activities to improve the cost system and its procedures manual in the construction of relevant information in the decision-making processes, as well as its main areas for improvement. The general director, 3 functional directors, and 8 specialists of the functional direction of economy participated in the survey, with work experience ranging between 5 and 12 years, and presenting as main results:

- 100 % of the interviewees have knowledge about cost accounting.
- 89 % of the interviewees are familiar with the processes that make up cost accounting.
- 88 % of the interviewees consider that to some extent there are limitations in the basic processes of cost accounting.
- 91 % of the interviewees expressed that the result of the costs per product is a very relevant aspect for the entity's decision-making process.
- 97 % of the interviewees responded affirmatively that the improvement of the information generated by the cost system would be a variable that would generate significant growth in the entity's efficiency levels.

### **Analysis of the results of the secondary information sources**

The analysis of the sources of secondary information within the study allowed to specify the set of practical elements associated to the research to comply with its proposed general objective, identifying documents and researches with the purpose of evaluating the indicators that make it possible to know the regularities of the accounting policies associated to the cost system of Empresa Pesquera Industrial la Coloma. Taking as reference the specific norm No. 12 Accounting Management to define the calculation of production costs in the entity, it takes as reference material, labor,

financial and service expenses associated to the elaboration of the different assortments, using the aggregation of expenses from the obligatory elements, raw materials and materials, fuels and lubricants, energy, personnel expenses, depreciation and amortization, other monetary expenses and transfers.

Cost planning in the entity is oriented to the development of projections of the indispensable expenses to obtain the cost of the capture of the different species later transferred to the industrial process, using for cost planning the preparation of annual economic plans, establishing efficiency indicators of the economic-productive activities of the entity, and for specific areas and in the formation of prices and tariffs in the industrial production or service rendered to third parties, using for the planning of costs and expenses the normative method, expense budget, and unit costs and method, influencing the composition of its operational and financial budgets. The following is an analysis of the main elements that make up the processes of accumulation, calculation and analysis of costs, representing the logical flow of information associated with this accounting subsystem.

### **Accumulation of costs**

The accumulation of costs in the entity focuses on the organized collection of cost data, accounting for actual expenses by accounts, cost centers, elements and sub-elements. The company's cost systems in general terms present systems by standard processes. Using as main process accounts: 700- Main Production in Process, 702- Extractive Production of Platform in Process, 710- Other Production and/or Services in Process, 716- Repair and/or Maintenance of Vessels in Process, 725- Own Production for Input, 726- Capital Repairs with Own Means, and 731- Indirect Production Expenses.

The main expense accounts used are: 810- Cost of Production Sold, 812- Variation between Actual and Predetermined Cost, 818- Distribution and Selling Expenses, 822- General Expenses, 835- Financial Expenses, and 855- Other Taxes, Fees and Contributions. The basic primary documents used are tide receipts, work orders, internal transfers, output vouchers, reception reports, cost sheets, pre-payrolls, payrolls, purchase and sales invoices, and reception reports, among others.

## Costing

The entity's cost calculation is oriented to reasonably estimate the analysis of the expenses incurred in the production of its main assortments, using tables in the stages of production transfers between processes, distribution of joint costs, calculation of global rates, and analysis of deviations and variations.

## Cost analysis

The analysis of costs in the entity is based fundamentally on the evaluation of the behavior of its expenses and deviations; taking into account area, cost center, and elements in order to favor the identification of the causes that originate them and the decision making that lessens their negative effects on the results. For this purpose, the following are developed in the entity: (1) Analysis of variations or deviations of the unit cost and (2) Analysis of variations or deviations by areas and cost centers.

## Assessment of the manual of accounting standards and procedures of the cost system of La Coloma Industrial Fishing Company

The diagnosis concludes with an analysis of the characteristics and limitations associated with the manual of norms and procedures of the entity's cost system, being an instrument that takes as a reference in its design laws, good practices, norms, and national and branch resolutions in force in this matter, conditioned to the particularities of the activities developed by the company in correspondence with its support processes, the company's activities are related to cost centers, activities, areas of responsibility, inventory valuation methods, cost elements, cost items and basic groupings to be used, distribution and application of indirect expenses, distribution bases, specific models and documents for planning, tools for the analysis of costs and expenses, including their methodologies and filing processes. However, the diagnostic study identified a number of shortcomings in the manual, which lay the foundations for its improvement process:

1. Absence of a logical framework to identify the entity's cost subsystems.
2. No standard operating vouchers are presented for its productive units.

3. There are no accounting procedures defined as methodological references for the accrual of expenses for repairs and maintenance of vessels, services to third parties, ice production, boiler services and generators.
4. The accounting treatment that indicates the process of accumulation and distribution towards the production of fishing gear and the accounting treatment of tools and implements is not identified.
5. The accounting procedures associated with capital repairs and investments with own means are not defined.
6. The procedures associated with the preparation and updating of the cost and price sheets by the cost formation method for the entity are not defined.
7. There are no instructions that serve as a methodological guide for the construction of the entity's operational budget system.
8. Expense elements are not updated based on the productive characteristics of the entity.
9. The accounting procedures associated with the transfer of production between production departments based on equivalent production, joint costs, and rates to be applied for the distribution of indirect production expenses are not defined.

### **Improvement of the manual of accounting standards and procedures of the cost system of La Coloma Industrial Fishing Company**

This section is oriented to respond to the main shortcomings defined in the diagnostic stage of the research, which allowed establishing guidelines in the process of redesigning, improving and validating the procedures manual of the entity's cost system, presenting the main results associated with the definition of accounting rules and procedures for the planning, accumulation, calculation and analysis of costs.

For the design of the manual, the criteria of Díaz Pando et al. (2021) are assumed, who define that "The accounting procedures manual should include the information standards and policies that support the information needs within a specific activity to achieve the expected goals of efficiency, effectiveness, productivity and protection in operations". As a fundamental result of the study, the chapters in which the entity's manual was structured, its objectives, as well as the main elements that have been improved in response to the deficiencies identified are presented below.

- I. Introduction
- II. Organizational Structure
- III. Cost Planning
- IV. Cost Accumulation
- V. Costing
- VI. Cost analysis
- VII. Procedures
- VIII. Methodology for models and information
- IX. Bibliography
- X. Annexes

## **Chapter I. Introduction**

The objective of the introductory chapter is to establish the methodological objectives of the manual, which is oriented to generalize among the Basic Business Units, within the permissible limits, the procedures to be applied in: the planning, determination and analysis of production costs, implementing minimum essential models to guarantee the costing of the different productive processes by activities, as well as to contribute to facilitate, at company level, the evaluation on the use of material, labor and financial resources and the determination of sales prices. The scope of this manual is for the specific use of La Coloma Industrial Fishing Company.

The chapter establishes basic definitions associated with cost systems and their theoretical foundations, taking as a reference general cost guidelines, regulations on determination and technical concepts associated with the fishing activity.

The manual includes terms associated with the fishing activity, concepts of extractive activity, platform fishing and industrial activity as concepts associated with the main productions of platform fishing, productive concepts associated with the industrial activity and concepts associated with the production processes for inputs.



## Chapter II. Organizational Structure

The objective of this section is to define the organizational structure of La Coloma Industrial Fishing Company, which defines basic and support activities that serve as a reference for the design of its cost system, defining the company's mission, vision, corporate purpose and organizational structure.

## Chapter III. Cost Planning

The objective of this chapter is to define considerations for the entity's cost and expense planning process, taking as a reference activity levels and productive flows, establishing fundamental instruments for effective cost management. Criteria are defined for the construction of the budget system that facilitate the establishment of guidelines for the cost and expense planning process based on the use of normative methods, expenses by area of responsibility and the calculation of unit costs, assuming as a base instrument for the planning processes the design and updating of cost sheets, which constitute the description in economic terms of the technological processes that support the entity's productive processes.

In the specific case of La Coloma Industrial Fishing Company, methodological guidelines associated with the process of improving the manual were established for the cost sheets to reflect the ton as the base unit of measurement, and for their preparation and updating, statistical and accounting data or certified standards from functional and support departments are used as basic elements:

1. Bases for the determination of input indices, direct labor and payment rates.
2. Models for the calculation of joint costs.
3. Methods for determining and updating global indirect cost rates.
4. Method for the calculation of ratios of aggregate cost elements (fundamental materials, auxiliary materials, fuels and lubricants, energy, salary expenses, depreciation and amortization, maintenance, clothing and footwear, and other monetary expenses).
5. Basis for updating cost and price sheets.
6. Definition of the basic financial information, formats for the construction of the entity's operational budget system, and logical flows of information.

## Chapter IV. Recording of expenses

The purpose of this chapter is to establish general aspects to standardize essential elements of the cost accumulation process in the entity's economic management, which allows for a collection organized by costs, cost centers, accounts, elements and sub-elements, the main elements being revised or incorporated:

1. Updating of cost centers based on a review of the technological structure of the entity's base production processes, as well as their elements and sub-elements.
2. Definition, use and content of the main accounts and sub-accounts associated with the accounting subsystem (700 main production in process, 702 extractive production of platform in process, 710 other production and/or services in process, 716 Repair and/or maintenance of vessels in process, 725 Own production for input, 726 Capital repairs with own means, 731 Indirect production expenses, 810 Costs of production sold, 812 Variation between actual and predetermined cost and 855 Other taxes, fees and contributions).
3. Definition of the main direct materials (fuel, fishing gear, ice, bait, industrial inputs, packaging, packing and own productions for inputs), direct labor (salaries, vacations, incentives, payment systems and regulatory coefficients) and indirect production costs in the entity.
4. Definition of primary documents associated with the accounting of costs, using for their accumulation reception reports, invoices, output vouchers, request for materials, request for material deliveries (model SC 2-07), delivery or return vouchers (model SC 2-08), consumption *chips* for fuel, payroll, pre-payroll and vacation sub-ledgers (models 4-06 Payroll, and 4-07 Vacation sub-ledger), invoices, account statements, petty cash vouchers and adjustments, among others.

This section of the manual also includes the operating vouchers associated with the accumulation of costs and their transfer between base processes and to finished production. It includes standard journal entries with their accounts, subaccounts, elements, cost centers and sub-elements, defining standard vouchers for:

1. Recording of the consumption of raw materials (own production for input).
2. Accumulation of the actual expenses of the period (own production for input, species and ice, extractive production of platform, repairs and maintenance of vessels, auxiliary productions in process, productions in process, and indirect production expenses).
3. Receipt of catches, in-process and finished productions at standard price.
4. Allocation of joint costs, by-products and waste.
5. Transfer of indirect production expenses from the service production cost centers to the species cost centers and to the main production in process.
6. Receipt and transfer received from the Extractive UEBs of catch productions.
7. Reception of inventory in own production for input.
8. Transfers between base processes.
9. Sale of finished productions.
10. Recording of production shrinkage.
11. Adjustments of variations with favorable or unfavorable balances.
12. Transfers of variations.
13. Closing of cost variations.
14. Sales returns and reprocesses.

## Chapter V. Costing

This title of the manual defines principles and rules that support an adequate allocation of costs within the productive structure of the entity, assuming base elements by areas of responsibility and cost centers associated to the productive cycles of capture and industrial processes, incorporating in this section the following elements:

1. Formats and reports for the calculation of equivalent production, transfers between processes and towards finished production (unit movement report, equivalent production, total costs, unit costs and cost allocation).
2. Market value method for the allocation of joint costs, allowing to correlate material costs with income levels that could be generated.
3. Definition of bases for the distribution of the real costs of the different service and production support departments (man and machine hours, direct material consumption, direct salaries, installation area, cubic meters of steam, among others).

4. A methodological guide was defined for the distribution of budgeted indirect production costs and their updating based on aggregate cost and wage elements in the calculation of a global indirect cost rate.
5. Finally, the formats for the analysis of deviations associated with variations in indirect production costs were established.

## **Chapter VI. Cost analysis**

The purpose of this chapter of the entity's cost procedures manual was to define elements that would serve as a reference to analyze at the end of each period the relative importance and causes of the variations incurred in the entity's costs and expenses. Guidelines were incorporated for their calculation, valuation and interpretation of their results:

1. The analysis of the variations between the standards associated with the files and the actual costs of the entity's productions is recommended.
2. Integral percentages associated with the different expense elements.
3. Assessment of the trends associated with the aggregate components of production costs.
4. Analysis of the expense-activity level relationship.
5. Analysis of the variations of the costs of its fundamental elements in terms of efficiency, price and volume.

## **Chapter VII. Accounting procedures**

Accounting procedures were also added to define expenses for the period, and the correct treatment of ordinary maintenance and capital repairs with transfer to the value of the asset.

## **Chapter VIII: Methodology for the management of information models**

The objective of this chapter is to consolidate the standardization of the system of accounting activities associated with the entity's cost system, favoring the consistency and quality of the information generated, as well as the regulatory compliance, in this section the base documentary flow for the construction of the extractive and industrial production cost information is established, defining as main primary documents:

1. Production orders
2. Cost sheets
3. Time sheets
4. Payrolls and pre-payrolls
5. Supplier invoices
6. Inventory reports: receiving reports, outgoing vouchers, internal transfers
7. Overhead reports
8. Statistical and accounting production records

The redesign of the cost standards and procedures manuals of an industrial company represents a transversal instrument for the development and stability of an organization, allowing to strengthen the general competitiveness of the administrative decision-making process of the entity, an element reinforced by the relevance of managerial accounting in the global economic environment, which plays a fundamental role for companies, by becoming an information system that provides key data and analysis for the selection of strategic and operational alternatives within an organization, significantly facilitating the evaluation of performance, planning and budgeting, the design of internal control instruments and risk assessment.

The article developed is part of the studies aimed at improving the systems of calculation, accumulation, classification and analysis of costs, specifically oriented to the improvement of the manual of standards and procedures of the cost system of La Coloma Industrial Fishing Company, the importance of this manual for the company is to promote the standardization and consistency of processes, which facilitates the comparison and decision making based on data, provides guidelines to identify, measure and control their costs, identifying opportunities for reducing unnecessary expenses, improving the profitability of its products and services, decision making processes and regulatory compliance. It became evident from the exploratory analysis that the entity's manual of standards and procedures did not have specific procedures to standardize accounting procedures that would allow the calculation, accumulation, classification and analysis of its extractive and industrial costs, and were not adjusted to the characteristics of several of its functional and support processes.

The main results of the article are the inclusion of a system of accounting procedures that would facilitate the design of vouchers of standard operations, methodological bases for the updating of

cost sheets and construction of operational budgets, definition of basic primary documents, formats and guides for the management of the transfer between base processes from the equivalent production, allocation of joint costs, distribution of indirect expenses, as well as the establishment of a guide for the analysis of the main variations and deviations associated with the main aggregate components of the cost, all elements that have reinforced the accuracy in the construction of the financial information associated with the entity's cost system, facilitating the performance of tasks in a faster and more efficient manner, bringing the accounting processes in line with the updating of branch and tax regulations, facilitating the detection of deviations and ultimately improving the entity's financial management, its informed decision-making processes and the fulfillment of its operational and strategic objectives. This increases the contribution margins of the most representative by-products of the entity derived from each one of its basic industrial processes, constituting referential elements for the improvement of manuals in the rest of the entities that integrate the conglomerate that conforms the Fishing Group, being necessary to evaluate in each one of the implementation processes, challenges associated to the resistance to change, the need for the design of training programs, as well as the essential processes of redesign and updating necessary to adjust the accounting procedures to the characteristics and particularities of the productive flows.

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## Conflict of interest

Authors declare no conflict of interests.

## Authors' contribution

*Yordanka Díaz Pita* participated in the study design, data collection, analysis and interpretation of results and manuscript preparation.

*Eduardo Rubén Espinosa Rodríguez* participated in the study design, analysis and interpretation of results and manuscript preparation.

*Reinaldo Castaño de Armas* participated in the study design, data collection and interpretation of results.

*Diana Pérez Mollinedo and Nilian Montano Fernández* participated in data collection and interpretation of results.

All the authors reviewed the writing of the manuscript and approve the version finally submitted.



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