

## **PROJECT: DESIGN OF THE NEW ADDED VALUE STREAM FOR CANNED ANCHOVY PROCESSING AIMED TO REDUCE HUNGER AND MALNUTRITION ISSUES IN PERU**

**BACKGROUND:** Peru is the world's largest exporter of animal protein. At the same time, it faces serious hunger and malnutrition problems within its population. Peru owns the anchovy fish which is the most abundant fishing resource all the world over. However, currently, Peruvian people do not use it for its own feeding.

### **THE PROBLEM**

Canned anchovy produced in the country, fail to capture the consumer's confidence, preference and loyalty because they lack the generally accepted seafood quality requirements. Deficiencies are due to Non-Conformance of processes and procedures on the most risky CCP-Critical Control Points along the Added Value Stream.

### **IDENTIFIED NON CONFORMITIES**

Identified non-conformities are as follows:

- Use of non-selective fishing net (By-catch of juveniles)
- Inefficient handling of fish on boat deck.
- Inefficient boarding of fish into the fish hold.
- Lack of a conservation method (No cold chain at all).
- Deterioration of raw material during unloading at the dock.
- Inefficient transport of raw material from dock to facility.
- Lack of fish canning quality standards within canning process.

### **DEFINED CORRECTIVE ACTIONS**

- Design of a selective fishing net for anchovy.
- Design of processes for net setting and collection.
- Design of process for catch loading into fish hold.
- Design of an efficient conservation system (cold chain).
- Design of process for fish discharge in the dock.
- Design of process for boat ice replenishing in the dock.
- Design of process for fish transportation. Dock to Plant.
- Design of exclusive metal packaging formats and labels.
- Implementation of ISO Standards 9001, 14001 and 45001.
- Implementation of GFSI's Standard BRC Issue 8.
- Implementation of FAO's Best Catching Practices Guide.

### **PROBLEM SOLUTION**

Project's Team has already finished a detailed pre-design for the entire Supply Chain for Canned Anchovy. Team has applied disruptive innovation approaches in order to implement a long lasting solution for solving of problem. Project will introduce new quality concepts based on ISO's Process Management Approach.

Project's Team aims to change Peruvian fisherman mind from a quantitative to a qualitative concept for anchovy, since it is fully recognized as an edible and highly nutritious fish.

Project's Team has already performed a Root Cause Analysis over all of identified Non-Conformities. Conclusions have allowed us to make a detailed definition of Corrective Actions.

## **PROJECT'S OBJECTIVES**

Demonstrate operational feasibility to:

- 1. Obtaining of International Food Quality Certification BRC-British Retail Consortium - Issue 8 for the new canned anchovy product.**
- 2. Guarantee product's quality, safety and legality in order to capture consumer's confidence, preference and loyalty.**
- 3. Design of the New Supply Chain Management System for Peruvian Canned Anchovy oriented to human consumption in Peru and overseas.**
- 4. Implementation of an Integrated Management System in order to operate Standards ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018.**
- 5. Introduction of the certified quality product within Governmental Food Programs in order to promote its consumption among domestic population facing hunger, malnutrition and anaemia conditions.**

## **STRENGTHS AND WEAKNESSES**

- **Strengths.** Project will contract small artisanal fishing boats. These boats already exist and currently operate within the Peruvian anchovy fishery.
- **Project could be also implemented over an existing processing facility which should meet required features.**
- **Project will create up to ten disruptive innovations along the Added Value Stream. It will create positive impacts on food security, malnutrition fight, women labor, technology application, environmental defense and economic fields.**
- **Weakness.** Despite preliminary economic and financial figures show a Project's high profitability potential it still lacks a sponsor for funding staff payroll and general expenses during the execution of feasibility study.

## **PROJECT TEAM EXPERIENCE**

Project's Team has extensive experience in the field of fishing for direct human consumption in Peru and abroad. Some references of this experience are as follow:

- 1. Project: "Teach Me to Fish" - Finalist in the 2017 FISH20 Competition for Sustainable Fishing. Project Team was invited to expose it at Stanford University. Palo Alto. California. USA. 2017.**
- 2. Project: "Técnicas de Pesca" 2001-2004. Performed under contract for implementation and operation of a frozen fish facility located in La Esperanza. Fresh & Frozen seafood producers for domestic and export markets. Top quality frozen bait suppliers for the high-seas tuna fleet operating on the South Eastern Pacific Ocean waters.**

**3. Project: "Harvesting for Future" - Finalist of the Development Marketplace Competition - World Bank 2005. Project Team was invited to expose it at WB Headquarter in Washington. D.C. USA.**

**4. Project: "Cooperativa de Pescadores José Olaya" - Huarmey. Project funded by USAID-FONDAM Perú. Winner of the 2004 Sustainable Fishing Competition. Project's Team performed design, implementation, training to beneficiaries and launching of the Centro de Acopio y Expendio Pesquero. CAE José Olaya.**

#### **FUNDING REQUIREMENT**

**The Project Work Team requires financial support to take the project to Feasibility Study category at execution design level. The estimated time is ten calendar months. Required funding is Seventy Thousand American Dollars US\$ 70,000.00 Funding calendar will follow work advancement of the feasibility study.**

#### **CONTACT INFORMATION**

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