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*Full Length Research Paper*

# **The implementation of public policies as a mechanism for the development of human talent and the fishery sectors of Ecuador**

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**This study aims to identify and analyze the implementation and application of public policies applied for the Development of the Artisanal Fishing Sector of Ecuador, through the implementation of projects established by Ecuadorian governmental organizations such as the Ministry of Production and Competitiveness (MIPRO) Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP); National Institute of Fisheries (INP), Institute of Public Works Contracting Service (ISECOB), among others, with the purpose of analyzing the incidence of the application of the public policies of the Ecuadorian government in the human talent and in the areas surrounding the artisanal fishing ports of Ecuador, based on the application of the laws and regulations established in the Constitution of the Republic of Ecuador, the National Plan for Good Living, the Code of Production in order to influence the change of the productive matrix of Ecuador. This research was based on analyzing how the human talent and the development of the sectors adacentes to the artisanal fishing ports of Ecuador, considering that the Ecuadorian government through the denominated Ecuadorian Artisanal Fishing Revolution, has contributed to the repotenciación and improvement of the main artisanal fishing ports as well as rules and regulations for the sector as a state policy and to support local development and the change of the country's productive matrix. The methodology applied in this work was initially to**

identify the public policies for the development of the Ecuadorian artisanal fishing sector, using a questionnaire structured and validated through the expert method and with the aid of bibliographic material related to the subject, followed by interviews with the presidents of the associations of the main artisanal fishing ports of Ecuador that have been favored with development projects by governmental organizations based on the analysis of the data obtained. Secondary data were collected through a survey administered to 392 fishermen in the five main artisanal fishing ports of Ecuador, Puerto Aconcito and Santa Rosa in the province of Santa Elena, Puerto Jaramijo and San Mateo in the province of Manabí and Puerto La Poza of the Province of Esmeraldas, which have been restructured thus improving the fishing facilities by the government of the citizens' revolution. As a result of this research, it is concluded that the projects implemented aim to contribute to the process of training the human talent of the artisanal fishing sector of Ecuador through the implementation of public policies for the local development of the sectors bordering artisanal fishing ports of Ecuador, with a view to the construction of an empowered human talent, in order to pretend that these artisanal fishing ports remain as a place possessing a local potential that favors artisanal fishing activity, thus translating into social, economic wealth and cultural development for Ecuadorian artisanal fishermen, thus improving the access of fishery products and by products to national and international markets for the benefit of artisanal fishermen's associations, through the implementation of appropriate organizational systems, market conditions, production systems, associative processes, technical labor training, legal structures, thus giving a global strengthening of the artisanal fishing sector of Ecuador.

**Keywords:** Public policies, human talent. Local development, artisanal fishing sector, Ecuador

## INTRODUCTION

The framework of the project is the Action Plan for Artisanal Fisheries of the Subsecretariat for Fisheries Resources, which is part of the National Development Plan of the Fisheries Sub-sector for 2007-2017 of the Government of Ecuador (GOEC) and financed in large Part by the IDB through the Coastal Artisanal Fisheries Support Project.

The objective of this work is to identify and analyze the public policies applied to the artisanal fishing sector of Ecuador between 2007 and 2017, through the projects established by the governmental organizations of the Government of Citizen Revolution in Ecuador. Specifically, the objective is to analyze the human capital of the main artisanal fishing ports of Ecuador, compared to the projects carried out on the basis of the so-called Fishing Revolution, with the improvement and repowering of artisanal fishing ports by the change of the matrix Productive in the country and the application of the new code of production and national plan of good living that are linked to artisanal fishing proposed by public policies.

The policies of the Fisheries Revolution in Ecuador began in 2007 with the objective of developing the fishing activities in the country's artisanal sector in an appropriate way. These policies were promoted by the Undersecretary of Fisheries of Ecuador, belonging to the Ministry of Agriculture, Livestock, Aquaculture and Fisheries.

Throughout the decade from 2007 to 2017, the main objective of the Fisheries Revolution was to support the modernization of the national fisheries sector. To this end, among other strategies, it implemented, as of 2012, Assistance to Artisanal Fisheries Project (PROPESCAR)

with the support of the World Bank, the United Nations Industrial Development Organization (OPI), the Ministry of Agriculture, Livestock, Aquaculture and Fisheries. Foresight study for the productive chain of the fishing industry in the region of the Pacific coast in South America. Among PROSPECAR's main objectives were "to modernize artisanal fishing activity in order to promote the insertion of fishery products into the market in order to facilitate and enable artisanal fishermen to sell their products in a better competitive environment [...] (2007, page 25), and to modify fishing techniques and technologies used by artisanal fishers through development policies.

In order to consolidate this practice, the repotenciación and application of the five main artisanal ports of Ecuador is achieved, and that by applying this change in the fishing communities, it would be possible to use new productive processes that would result in greater fishing production and an improvement of the quality of life of Ecuadorian artisanal fishermen.

Other researchers have criticized these policies for fisheries extension because they have historically failed to address local demands, since they deny traditional cultures in fisheries, considering them "backward", so that endogenous skills and knowledge were not taken into account and Peculiar to each fishing community. In this sense, Tauk-Santos and Callou (1995) refer to:

It is that little was known (and little was considered) the cultural aspects of the populations involved with artisanal fishing. The way fishermen cataloged their daily life, their

learning, knowledge and dissemination of this knowledge in the family and social fisheries context were not considered as fundamental variables in the development of government development projects. This factor, on the contrary, was perceived as an impediment to the intended development: fisherman's "ignorance", "laziness", technical "helplessness" and "pessimism" were terms incorporated into the extensionist vocabulary (Tauk and Callou 1995, 43).

Since 2008, the Subsecretariat of Fisheries Resources of the Ministry of Agriculture, Livestock, Aquaculture and Fisheries has initiated the preliminary studies that have served as a basis for planning a Network of Ports and Artisanal Fisheries Facilities throughout Ecuador's coastal profile, with the Purpose of contributing to the improvement, competitiveness, sustainability and economic development of artisanal fishing communities in Ecuador; Reaching the final designs of the five main fishing ports and 16 of the 23 Handicraft Fishing Facilities along the Ecuadorian coast.

In this perspective, the Undersecretariat of Fisheries Resources of the Ministry of Agriculture, Livestock, Aquaculture and Fisheries, conceives its Structural Political Project of Fishing Revolution, which is also concerned with repairing the nation's historical debt with workers in the sector, specifically for artisanal fishermen, whose general objective is: To promote and support local sustainable development initiatives involving fishing and aquaculture activities or related to them, considering the family of the artisanal fisherman, the family farmer and their organizations, with a view to social inclusion and Improving the quality of life of fishing and aquaculture communities, adopting the principles of conservation, environmental management and responsible aquaculture and fisheries. (MAGAP 2007.)

The Action Plan for Artisanal Fisheries in Ecuador, prepared by the Ministry of Agriculture, Livestock, Aquaculture and Fisheries proposes four strategic lines:

1. Fisheries management to ensure that a sustainable activity is being carried out that conserves the marine resources and their ecosystems.
2. Control and monitoring that is effective, efficient and transparent to reduce fishing infractions.
3. Integral fisheries research that addresses specific needs in the different coastal regions.
4. Improvement of socio-economic indicators in artisanal fishing communities.

The artisanal fishermen in Ecuador are not a homogeneous group but a group of diverse groups both for geographical reasons, income or the activity that each one develops. This characteristic directly affects the informality that occurs in the sector, because a significant

percentage of the artisanal fishermen registered in the register of craft fishermen, are not affiliated to the different forms of organization; in addition, the sector turns out to be a sum of labor and employment against crisis situations in other productive activities, implying that a significant number of people carry out the activity without being formally enrolled in it. Pazmiño, G. (2016)

## THEORETICAL ANALYSIS

### Public politics

Public Policies can be understood as the privileged scope of the "pact" between State and society. A new role of the State, in the sense of making it more agile and organizer. Here we can rescue the sense of participation between these two actors, but the ultimate goal of benefit to society is how we will see later a point that is often forgotten, hence the failure of many public policies (Rodríguez L 2015).

The Public Policies are "the set of activities of the institutions of government, acting directly or through agents, and that are directed to have a determined influence on the life of the citizens". Pallares F, 2008 points out: public policies should be considered as a "decision process", a set of decisions that are carried out over a period of time. Martinelli, J, 2002, when mentioning this persuasion about the population does not comment on whether it is positive or negative, but we can say that welfare sometimes is questioned in a restrictive policy or taxation for example, certainly achieving this behavioral modification. Although most public policies have a direct impact on the welfare of the population.

Public Policies have to do with people's access to goods and services, consist precisely of rules and actions that aim to solve and respond to the multiplicity of needs, interests and preferences of groups and individuals that make up a society. This is what is generally known as "adding demands", so that in the end, the solutions found allow people and groups to coexist despite their differences. (Rodríguez, L. 2015).

### Local Development

On local development, Jesus (2003) states that this should be:

A process that mobilizes people and institutions seeking the transformation of the economy and local society, creating job opportunities and income, overcoming difficulties to improve the living conditions of the local population. [...] it is a localized and concerted effort (Jesus, 2003).

Jara 2011, considers that to establish local development processes, it is extremely important to stimulate social

**Table 1.** Number of Artisanal Fishermen Registered in the Main Artisanal Fishing Ports of Ecuador

Province	Port	No. of Boats	No. of Artisanal Fishermen
Santa Elena	Anconcito	500	1.900
Santa Elena	Santa Rosa	1.000	3.900
Manabí	Jaramijo	700	2.500
Manabí	San Mateo	700	2.900
Esmeraldas	La Poza	900	3.000
<b>Total</b>	<b>5</b>	<b>3.800</b>	<b>14.200</b>

Source: Ministry of Agriculture, Livestock, Aquaculture and Fisheries. - Sub secretariat of Fisheries of Ecuador.

and human capital through the implementation of policies oriented by equity and satisfaction of human needs, respect for natural resources, and That allow the empowerment of social actors.

Taking into account that human capital under the bias of empirical skills and knowledge was not historically considered by the public policies for the development of artisanal fisheries, it seemed to be relevant as the focus of analysis of this research that type of capital in the elaboration and Implementation of the current public policies of fishing extension oriented to the local development.

Jara (2001) states that "investing in human capital, in 'development agents' - women and men who are educated, motivated and capable of leading change processes - represents an indispensable strategy for achieving a sustainable society.

### Human Talent

Nowadays, the areas of Human Resources, also called Human Talent, Human Management or Human Capital, have acquired a special force, opening their way as strategic areas for the business. The reason, they are the most important competitive advantage. By not finding ways to excel in innovative products and services, people become the key.

Within the strategic processes, which generate changes are: the development of competency models, the maintenance of profiles with up to date and current competencies, the pursuit of climate improvement and organizational culture, and social responsibility through programs aimed at Family Business Responsible (EFR), the permanent organizational design to respond to the onslaught of the environment, the philosophy of leadership and coaching and the new systems of flexible and variable compensation that allow a balance between the efforts of companies and the compensation of results and management of people.

Tools such as training remain an important element in tackling issues of concern to leaders today, such as the war for talent. It is frustrating to hunt for exceptional

professionals in the hands of the competition, eager for a scarce resource, trained and ready to give results.

The ideal is to have an area of Human Capital that is the closest ally of the business, have leaders with the sensitivity and awareness of the importance of people in the organization, have friendly relations, generate development, growth and learning In the people who are part of their culture, who are able to train other leaders, who seek to build a healthier, more just and more balanced society. (Villegas, L. 2012).

### METHODOLOGY

The methodological strategy used for the development of this work was initially to identify public policies for the development of artisanal fisheries in Ecuador between 2007 and 2017. Five in depth interviews were then conducted with the representatives of the various fishermen's organizations crafts of the five main artisanal fishing ports promoted by the Governments of the Citizen Revolution in Ecuador: Port La Poza in the Province of Esmeraldas, ports Jaramijo and San Mateo in the Province of Manabí and the ports of Aconcito and Santa Rosa in the Province of Santa Elena, in order to know the events and activities that cannot be directly observed.

In addition, in order to identify the needs of fishermen and stakeholders involved in this activity, artisanal fishermen from the artisanal ports of La Poza in the province of Esmeraldas were surveyed; San Mateo and Jaramijo in the Province of Manabí and Anconcito and Santa Rosa in the Province of Santa Elena, the indicators were: technological level, credit, identification of the support institutions and marketing strategies used so far, which participated or participated In artisanal fisheries projects, developed by governmental organizations.

These interviews and questionnaires aimed to subsidize a field of empirical data that help analyze human capital during the execution of projects in the localities of artisanal fishermen and how these policies of technological innovation are incorporated into the daily lives of these fishermen.

The number of artisanal fishermen registered in Ecuador is approximately 14,200 according to the Ministry of Agriculture, Livestock, Aquaculture and Fisheries, through the Ecuadorian Fisheries under Secretariat. In order to determine the size of the sample, the probabilistic sampling method was used; the sample was taken proportionally to the percentage of the number of artisanal fishermen in each of the mentioned ports, being the applied sample value of 392. (National Fisheries Institute of Ecuador INP 2014).

Subsequently, responses were coded according to the following topics: number of fishermen, fishermen, fishing permits, degree of informality, relationship with Municipal Governments, infrastructure, commercialization, trade union organization, conflict between actors, conflict with other actors by Use of the beach, perception of the role of the State, relation with the fishing resource, requested aid for development. The descriptive SWOT analysis was used to detect the strengths, opportunities, weaknesses and threats of the sector, to begin working with a development proposal for the artisan sector.

The questionnaire was composed of 10 questions organized in: general sociodemographic information, employment status, information on the fishing sector, commercialization, work organization, associativity, income and general opinion.

The questionnaire, prior to its application, was subjected to a validation of content using the technique of expert judgment that included the participation of a technical team of 7 people. subsequently, a pilot survey was applied to a representative sample of the population of interest, in order to refine the questionnaire before its final application.

Finally, the data were analyzed through descriptive statistics, and hypothesis test tests that allowed us to account for the published policies related to the development of the skills of the artisanal fishermen of the main artisanal ports of Ecuador.

## RESULTS

Management Model for the Development of the Artisanal Fishing Sector of Ecuador applied in the Government of the Citizen Revolution between the years 2007/2017.

The Management Model applied for the development of the Artisanal Fishing Sector of Ecuador applied in the Government of the Citizen Revolution years 2007/2017, aims to change the current reality of the operation, management and commercialization of fishing, as well as guaranteeing the ordering of the fishing sector, with the use of a modern infrastructure to provide all the facilities for supplies (ice, fuel and others) and landing of the fish, in a hygienic way, complying with the international standards of safety and sanity that guarantee food security. (MAGAP 2007)

The reconstruction, modification and expansion of the five main artisanal fishing ports of Ecuador, these constitute a work of port infrastructure and complementary services, which seek to satisfy all the needs of the artisanal fishing sector of Ecuador and its surrounding areas; where fiber and wet type boats have docks and protected areas for the supply of fuel, ice and other supplies necessary for their activity; as well as the service of disembarkation of the fishing with cranes or of manual form, scales that guarantee the fair weight, besides areas for eviscerated, storage of fishery in warehouses, direct sale of the fish in premises of sale of seafood, commercial premises, patios of food sales, workshops for maintenance and repair of its engines and boats, where all these services are complemented by the presence of state institutions that carry out checks and authorizations for this fishing activity.

## PUBLIC POLICIES FOR THE REVOLUTION OF THE CRAFT AND HUMAN CAPITAL FISHERIES SECTOR FOR LOCAL DEVELOPMENT IN ECUADOR

In order to identify and analyze public policies for the development of the artisanal fisheries sector, the aim was to delimit the nature, thematic content and its segment, that is to say, the reach of the beneficiaries of these public policies, as defended Teixeira. E (2002), which in the end are the artisanal fishermen of Ecuador.

In their studies, Drummond (2005) concluded that, historically, public policies did not cover the perspective of civil society participation in the discussion, formulation and execution of public policies, and affirmed that these policies were carried out vertically, without participation of beneficiaries, artisanal fishermen.

In this way, all this process of political and social participation of the social actors results in the empowerment of this population and the strengthening of human capital, making them: table to intervene in the choice, formulation, implementation, control governmental policies and attitudes that combine advocacy and rights creation with socio economic proposals in the context of technological change and competitive markets.

## CHARACTERIZATION FISHING INDUSTRY OF ECUADOR

Fishing in Ecuador has a really great socio-economic importance, both in terms of income, since in many coastal populations it is an important source, as in the supply of the domestic market; in fact artisanal fishing is the main source of fresh produce for the domestic market.

The apparent consumption is of 7.2 Kg / person / year. Traditional artisanal catches, estimated at between 30,000 and 50,000 MT / year, would contribute about 50% of the fishery products consumed internally, such as fresh produce and industrial fishing, the other 50%, mainly as canned products.

In addition, fishing companies are forced to have their products in the domestic market, to a certain extent, to improve the level of food for people. (Fisheries and Fisheries Development Act, Art. 39).

The fishing sector is structured in industrial fishing and artisanal fishing and in turn subdivided into different types of fisheries.

Industrial fishing is dedicated to small pelagic fish, white fishing and a modern fleet dedicated to large pelagic fish, all of them with encircled art; with trawls there is a fleet dedicated to shrimp. The boats have sizes ranging from a few meters to modern tuna vessels.

In the artisanal fishery the range of catches is very wide and the boats are all small, the bigger ones of about 10-12m, being in many cases supported by bigger boats for their displacement and conservation of the catches.

Ecuador recognizes international biodiversity and other environmental protection conventions and recently developed guidelines and concepts, such as the Code of Conduct for Responsible Fisheries (FAO, 1995), as an obligatory reference for the management and management of fisheries

### **Artisanal Fishing in Ecuador**

Within artisanal fishing in Ecuador we can distinguish between the artisanal maritime fishing of the continent and that practiced in the Galapagos Islands, as well as the fishing of continental freshwater waters.

The maritime artisanal fisheries of the continent are divided into three fisheries: harvesting, artisanal coastal fisheries and artisanal oceanic fisheries, coastal waters being considered as extending from the coastline to about 70 or 80 nautical miles.

We see how the artisanal fishing of Ecuador has a great variability, as well as regarding the distance to the coast or in its interior, in each fishing cove of the north to the south of the coast.

In Ecuador, the number of fishing ports (ports) is estimated at 176. At present, a fishing census is being carried out. At the time of the consultations, Fenacopec was completed in 44% of the fishing coves, with the number of vessels Of 35,686 and that of fishermen of 46,700 and estimated that at the end of this census the number of craft will be around 66,000 and the number of artisanal fishers will be approximately 120,000. The 2003 "Ordinance Plan for Fisheries and Aquaculture in Ecuador" was estimated at 138 cleats, 56,068 artisanal fishermen and 15,494 artisanal vessels in the continental zone and 1,000 fishermen with more than 500 vessels in Galapagos.

They are described here from the management of the coastal resources and the management of the fishing, to the different fishing gear, the boats used and the species that are captured.

Ecuador has a long tradition of managing coastal resources that reaches its climax with the Coastal Resources Management Program, making coastal uses compatible with fisheries, tourism, mangroves and wetlands and giving them a sustainability approach. Likewise, in order to achieve the sustainability of the fishery, its management is necessary by imposing closures, zoning and other legislation.

Almost all fishing gear in this sector are passive gear, using mainly the longline and the gill, and to a lesser extent the trammel. Being the boats from where the art, increasingly, of polyester reinforced with glass fiber, being also canoes, bongos, rafts, boats, pangs and boats, with which a great variety of species are captured, about 300, divided into pelagic grids, which are often exported, demersal fish and shrimp, and to a lesser extent small pelagic fish.

### **Artisanal Fisheries Policy of Ecuador**

In Ecuador, important work has been done in the field of integrated coastal management since 1981, one of the definitions used in this work is the one written by kench and archer in 1993: "Integrated Coastal Management (ICM) is a dynamic process through which decisions are made for the employment, development and protection of coastal areas and resources with a view to achieving goals established in cooperation with user groups and national, regional and local authorities.

Integrated coastal management recognizes the distinctive character of the coastal zone itself a valuable resource for present and future generations, this integrated coastal has several purposes: it analyzes the implications of development, conflicting uses and interrelations between physical processes and human activities, and promotes linkages and harmonization between coastal and oceanic activities of the sectors.

And that tries to solve problems like some of the ones exposed in the Plan of Ordering of the Fisheries and the Aquaculture of Ecuador: "the fishing and collection in estuarine areas, especially of shells and crabs, present variable levels of overexploitation in the different localities to along the coast. Added to this problem are others that affect fisheries and are of a social and environmental nature, such as the reduction of mangrove ecosystems, disorderly occupation of the coastal border and the impact of pollution on the main estuaries, which are problems whose treatment is fundamentally cross-sectoral."

Integrated coastal management projects have been in Ecuador since 1986, with the first phase of the Coastal Resources Management Program (PMRC) that lasted until 2002. The first period included USAID's non-

reimbursable economic contributions and technical support from the University of Rhode Island, the second period of this first phase was made with a loan from the Inter American Development Bank (IDB)

The general objective of the PMRC is to improve and expand integrated coastal management, supporting the progressive transfer at the local level, of competencies for management and management in the coastal zone and thus contribute to the sustainable use of coastal resources and to the improvement of quality of life of the local communities of the continental coastal strip of Ecuador.

The main topics that have been analyzed are: fishing, tourism, mangroves, environmental pollution, mariculture, mangroves and wetlands, natural disaster management, environmental sanitation, agricultural production and watersheds.

Fisheries management is of vital importance for the conservation of resources, this will determine the sustainability and as a consequence the maintenance of the jobs that provide and with it the livelihood of families dependent on these resources, the contribution of wealth and consumption of fish at acceptable prices.

The "Ordering Plan for Fisheries and Aquaculture of Ecuador" (hereinafter "Plan de Ordenamiento") is the frame of reference for the management of bio aquatic resources. The Subsecretaría de Recursos Esquies is responsible for its execution, incrementally, and to propose to the National Fisheries Development Council updates thereof.

In the fisheries law one of the most conflicting points is the one that distinguishes between artisanal and industrial fishing, article 21 says literally:

- a) Craft, when it is carried out by independent fishermen or organized in cooperatives or associations, which make fishing their habitual way of life or use it for domestic consumption, using small hand crafts and small boats;
- b) Industrial, when it is carried out with boats equipped with major gears and pursues commercial or processing purposes.

It also gives us the references of the organisms in charge of the construction permits, security installations and some others. For construction and repair, a favorable report will be required from the General Directorate of Fisheries, after processing in the Directorate of Merchant Marine and Littoral, now National Directorate of Aquatic Spaces (DIRNEA). And the port captaincies are in charge of demanding all the elements and facilities necessary for safety, comfort and hygiene and also that sufficient food is available for a longer time than the scheduled fishing operation.

Other laws that affect fishing are:

- Environmental Management Act (RO 245, July 30, 1999)
- Law of Special Regime for the Conservation and Sustainable Development of the Province of Galapagos (RO No. 278, March 18, 1998).
- Investment Promotion and Guarantees Act (No. 46, RO 219, December 19, 1997).
- Export Facilitation Law (No. 56, RO 341, December 22, 1989)

### Fishing Sector Zoning

For the zoning according to the project of the plan of order dedicated to this, the interests at stake, ecological conditions, populations of species in exploitation and their intensity, social, economic and legal factors, as well as the requirements for the fulfillment of the objectives.

The zoning carried out by the competent organisms comprises three main zones from the continental coastal profile that goes from the coastal profile to the distance of a mile that arrives from there to the 8 miles and the rest. (Always nautical miles).

Ministerial Agreement No. 080 states that the area within 8 miles is an exclusive reserve area for artisanal fishermen.

Article 3 of this Agreement provides that within the fishing zone reserved exclusively for artisanal fishermen, the fishing fleet may carry out fishing operations, subject to the Fisheries Act and its regulations. With what is the only industrial fleet that can work in this area.

The area from one mile to the coastal profile is a reserve for the production of bio-aquatic species, where all fishing activity was banned (Ministerial Agreement No. 03 316); Ministerial Agreement No. 134 amended the previous Agreement since the artisanal fisheries sector raised on several occasions its modification.

Therefore in this zone it is allowed: (Article 2)

- The collection, extraction or manual capture of crustaceans and mollusks by traditional artisanal fishermen.
- The use of traditional artisanal fishing gear such as anchor, hand line.
- Sport fishing with hand line and / or fishing rod
- Catching of oysters or other mollusks by lung diving. \ Sports diving, non-extractive.
- Sports diving, extractive in APNEA or lung.
- Extraction of existing resources under all fishing modalities, for scientific purposes only

### Vedas and Regulations on Sizes, Species and Arts

The prohibition is a form, within the management, to conserve the resource, leaving to fish mainly in the time

of reproduction of the species, obtaining that the reproduction is successful and increase of this way the biomass of the resource, being greater the benefits so much Economic, social and environmental issues.

Article 43 of the Fisheries Law states that it is an obligation for natural or legal persons to "comply with regulations on size, closure periods and other provisions related to the protection of resources, management of the same and the technique, hygiene and quality of production "; As well as "to use the equipment or systems advised by the technique to avoid the environmental contamination". In this same sense, the Code of the Maritime Police in its Art. 105 say "fishing of species in their corresponding season of prohibition (...) is prohibited".

The biological research is carried out by the National Fisheries Institute, which reports its findings online and to the under secretariat of fisheries, which raises it to make a ministerial agreement that imposes the closures if pertinent.

### **Ordinance Proposal**

In order to achieve sustainable fishing, it is necessary to achieve greater efficiency in the methods and techniques of the productive sector. To this end, the "Fishery and Aquaculture Management Plan of Ecuador" proposes "the implementation of agile and transparent procedures to allocate and control the Use of bio-aquatic resources "and" intersect oral consultation to adopt measures to complement fisheries and aquaculture sector decisions on issues that may have negative environmental impacts.

In the Management Plan it is proposed to update the programming of national research to focus on practical objectives of fisheries management, starting with the current condition of each fishery. Defining a comprehensive and participatory programming, taking into account also universities, NGOs, etc.

In order to develop responsible fisheries, concertation's processes must be established to provide practical mechanisms for intersect oral cooperation with public or private entities. Likewise, it is trying to update the assignment of functions of the SRP and the DGP according to the ordering by fisheries and subsectors, the organization of the National Registry of Fisheries and Aquaculture and in the case in which the interests and competences of other entities of the State is about getting a formal mechanism for concerted conservation measures.

The "System of Socioeconomic Indicators of the Artisanal Fishing Sector of the Continental Coast of Ecuador" is currently being implemented. Its objective is to collect and process information from 40,000 families, in addition to socio-economic information, some characteristics of the vessels and other information that will facilitate a better management of the fishing.

In order to solve the conflicts in the sardine and artisanal fleet, the ordinance plan proposes a concertation process that includes: objective knowledge of the characteristics of the conflict, approximation between the actors interested in the solution with local consideration, identification of factors of mutual interest, create a willingness to understand, a commitment to respect the results of the agreement and mechanisms to monitor compliance with the agreement.

The implementation of international conventions is also being carried out through intersect oral coordination mechanisms in the areas of biodiversity, marine pollution, trade and transportation of fishery products, management of highly migratory or shared resources, etc.

### **Human Capital for the Local Development of the Artisanal Fishing Sector of Ecuador**

In this perspective, artisanal fishermen in Ecuador should be able to influence the actions of the agencies that regulate the artisanal fishing sector, through their active participation in their sectors adjacent to artisanal fishing ports.

Such participation would imply that the discussions on the institutional functioning of the fishing ports and their way of acting before the governmental entities provide to the executive members of that organization a support in the process of its actions. In addition, discussions on public policies for small scale fishing in artisanal fishing ports, maintenance of existing projects and possible proposals in future government projects would make these actions increasingly close to local demands.

Considering the importance of human capital, both from the point of view of the investigators on the subject and by the state's own recognition, in promoting this capital in artisanal fisheries, it was observed that, in reality, in the main artisanal fishing ports of Ecuador, investments in human capital are incipient.

Therefore, the project developed by the Ministry of Agriculture, Livestock, Aquaculture and Fisheries (MAGAP) and National Fisheries Institute (INP) of Ecuador, although it used resources to promote aspects of human capital, such as workshops in associativism, cooperatives and small business management, these events seem to have been restricted to taking into account only the perspective of business management. On this, the representatives of the associations of the main fishing ports state that it was limited to promoting such events to publicize the new facilities of these ports and their inauguration, but it does not give a vision to form and encourage small business

In this way, we consider that these actions (courses, workshops, conferences) were insufficient to strengthen the human capital of the artisanal fishing sector of Ecuador and, therefore, insufficient to assist in the implementation of local development processes.



As far as human capital development is concerned, in addition to limited training of fishermen to act in this process, they had a purely entrepreneurial approach, but not process to improve the quality of the fishing industry's production chain.

In this perspective, it must be inferred that the implementation of this project in the artisanal fishing ports of Ecuador did not actually contribute to the strengthening of human capital, but only a specific promotion of this capital, with a view to the operationalization of fishing facilities. Therefore, the fishermen training project is far from the understanding considered in this research of how human capital should be considered and worked, that is, with a view to local development.

This way of implementing the project of the fishing revolution in the main artisanal fishing ports of Ecuador makes it possible to infer that the promotion of human capital in Ecuadorian fisheries has been seen by the organizations only as a complement to the projects analyzed. A minimum requirement for the execution of these extensions public policies.

The valorization of human capital should be stimulated and increasingly incorporated into local development projects, since from the expansion of human capital it is possible not only to increase the productivity of that worker, but it is also possible to reduce poverty, redistribute income and, consequently, establish in society a cultural and socio economic equity.

If we deduce that public policies for the local development of artisanal fisheries do not include human capital, they may be insufficient, as has historically been observed in this work, for the transformation of the socioeconomic reality of a fishing community.

## ANALYSIS OF THE RESULTS

As noted earlier, strengthened human capital arises from investments in the individual's education and training (Moretto, 1997). It is considered again that human capital is strengthened to the extent that people possess skills, competencies and that they have education and motivation in order to lead processes of change, therefore, to reach a sustainable society (Jara, 2001).

Considering Jara's (2001) observations, when he says that human capital should be worked in the perspective of local development, in this case artisanal fishers, as development agents, this study revealed that public policies for the development of Sector has neglected this fundamental aspect to streamline the processes in favor of the local development of a region. In this sense, the fishermen did not take these projects for themselves, that is to say they were not seen as autonomous agents, but almost always passive to the orientations of the public organs.

If we infer that public policies for the local development of artisanal fisheries do not include human capital may be insufficient, as historically has been observed in this work for the transformation of the socio-economic reality of a community of fishermen, as corroborates the argument of Jara (2001) when it defends a systematic development of human capital, in order to promote local development.

## CONCLUSIONS

The projects developed by the Government of the Citizen's Revolution between 2007 and 2017 focused on the strengthening of the Artisanal Fishing Sector of Ecuador, were drawn into strategic planning aimed at strengthening the chain of production of fish from artisanal fishing, we have seen That these projects have not been fully implemented.

With regard to these fully implemented projects, which envisaged the development of artisanal fishing in the main artisanal fishing ports of Ecuador, their objectives were not fully implemented.

Currently, this project of reconstruction of the main artisanal fishing ports is in the terminal phase, lacking the implementation of the fishing port of Santa Rosa, Province of Santa Elena.

Regarding the provision of fishing facilities to the other coves of the Ecuadorian coast, the project was not implemented and would be pending in order to contribute to the strengthening of the entire artisanal fishing sector in Ecuador.

From the point of view of human capital for local development, it was observed that the failure of these projects was detected when public agents relegated the promotion of this dimension of local development only as a means or to achieve the implementation of projects. Thus, human capital was fostered through the provision of workshops, lectures and courses, disregarding the low level of schooling of artisanal fishermen in Ecuador, as well as whether this indicator (low level of schooling) contributed to the non-empowerment of social actors. Make it difficult to establish guidelines for local development.

In addition, another aspect related to the failure of the projects was the fact that the public institutions had not previously attended to the artisanal fishing communities of Ecuador, in their most elementary interests, since the artisanal fishing ports were rebuilt, but no projects were carried out with a view to the education and training of fishermen and their children.

According to the research carried out, it can be said that all the projects aimed at artisanal fishing in Ecuador, implemented in the space between 2007 and 2017, and did not achieve the results expected by Ecuadorian artisanal fishermen themselves.

When the public extensions policies applied to each of the communities near the artisanal fishing ports were analyzed, it was observed that stimulating both the empowerment of fishermen and the development of human capital, as an important dimension to establish processes of local development through The projects implemented were of a rudimentary type, it was also identified that the public policies analyzed still showed verticality in the elaboration and execution of the projects.

Thus, it is of fundamental importance that Ecuadorian artisanal fishermen should be encouraged to empower themselves so that they can identify, evaluate and balance their difficulties with decision-making autonomy, with adequacy and efficiency. We suggest that the Ministry of Agriculture, Livestock, Aquaculture and Ecuador, establish a partnership with the Ministry of Education, through educational, teaching, research and extension institutions, in order to offer jointly specific formal education courses for fishermen from the different places on the Ecuadorian coast that develop fishing craftsmanship.

Thus, by introducing complex public policies such as the one suggested above, human capital will be built and / or perfected for local development in the colonies of fishermen contemplated by these measures, making this human capital, through its endogenous potential, The local improvement of health, education, generation of work and income, having for that the sustainability as parameter.

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