SOCIOENVIRONMENTAL INDICATORS OF FISHERMEN FROM LAGOA DE CIMA AND MARSAXLOKK VILLAGE

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1 Introduction

The environmental, social and economic complexity experienced by traditional communities, more precisely by fishermen, has been aggravated with the lack of basic sanitation, housing and health services. Generally, the areas occupied by these groups are spaces which have been used for generations and, at times, find themselves in precarious conditions concerning the previously mentioned basic services.

According to Rios (2016), one of the interferences on the way of life of fishing communities is real estate speculation in the coastal zone, encouraged by expansion programs of the urban-industrial model and stimulated by state governments in Brazil.

In Brazil, the National Environmental Policy defines as guiding principles, for environmental demands, the rationalization of the use of the soil, subsoil and air, the payment and inspection of the use of environmental resources, protection of ecosystems, with the preservation of representative areas, control and zoning of potential or effectively polluting activities, incentives to the study and research of technologies, directed to rational use and protection of environmental resources, monitoring of the state of environmental quality, recovery of degraded areas, protection of areas threated by degradation and environmental education at all teaching levels, including education of the community, aiming at qualifying it to actively engage in the defense of the environment, with the promotion of socioenvironmental aspects (BRAZIL, 1981).

According to Leff (2002), the panorama of theoretical, social and political conflict on nature and society causes the emergence of a new environmental reasoning, based on interdisciplinarity of socioenvironmentalism, which proposes to reformulate a concept of integrated environmental management, a vision on the process of production of scientific knowledge with other spheres of human creation and intervention, in the spaces of material and symbolic exchange.

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To think ab out socioenvironmental management means to understand that socioenvironmentalism is the development not only of the sustainability of ecosystems, ecological species e processes, but also social and cultural sustainability of specific collectivities such as, for instance, traditional populations. The former refers to sustainability based on biodiversity and the latter refers to the question of recognition of the subject, in the Legal State, of the social diversity existing in Brazil (SANTOS, 2005). However, in order to establish management procedures, it is necessary to conduct a diagnosis of the situation in which the environment finds itself.

Martins (2004) defines socioenvironmental diagnosis, as a tool capable of knowing the environmental heritage of a community providing the definition of qualitative and quantitative information for a reality and reveals its historical specificity in addition to reflecting the relationship between society and the environment. They must be established systemically, considering the interactions between the social, economic, environmental and cultural elements of reality. This mapping allows us to assess environmental quality and life quality, and the establishment of sustainability indicators.

According to Sánches (2009), a practical way to describe the future behavior of the environment affected is through conveniently chosen environmental indicators. They are increasingly used in environmental planning and management and are useful in several sections of impact studies, such as, for instance, in the diagnosis, estimate of impacts and monitoring of resources, seeking to prevent depletion.

In the municipality of Campos dos Goytacazes - RJ (Brazil), as well as in the village of Marsaxlook (Republic of Malta), there are fishermen communities, which live from subsistence, and their families present discrepant socioenvironmental conditions.

Accordingly, the objective of this research is to promote a comparison between socioenvironmental indicators pertaining to a group of fishermen living the environmental protection area of Lagoa de Cima, in the municipality of Campos dos Goytacazes (RJ/Brazil), and also makes a correlation with another group of fishermen living in Marsaxlokk, a village located in the Republic of Malta, an island situated in the European portion of the Mediterranean.

2 Methodology

2.1 *Delimitation of the Study Areas*

2.1.1 Fishermen of Campos dos Goytacazes

The first activities were conducted in the APA [Environmental Protection Area] of Lagoa de Cima, which is inserted in the drainage basin of Imbé River and Lagoa de Cima, covers a large portion of the mountainous region of north of the state of Rio de Janeiro, covering the municipalities of Santa Maria Madalena, Trajano de Morais and Campos dos Goytacazes, where for the latter it totals an area of 860 km^2.

Located at 28 kilometers from the urban center of the municipality of Campos dos Goytacazes RJ, it is supplied by the convergence of the Urubu, Imbé Rivers and some

streams which, together, result in a drainage area of 986 km², creating an artificial lake measuring 14,95 km² of area and 18 km circumference (BIDEGAIN e*t al,* 2002).

The Association of Professional and Craft Fishermen of Lagoa de Cima was created in August 2007. It is an entity established based on the organization of wharfage; i.e., a bureaucratic instance whose function is to intermediate relations between fishermen and the Colony, concerning the legal rights of fishermen (COSTA, 2008). However, there are fishermen who are not registered and live off independent subsistence fishing.

In addition to fishing, the lagoon is used for nautical sports, leisure/recreation and also for direct use by the population who do not have access to treated water.

2.1.2 Fishermen from Malta (Marsaxlokk)

The Republic of Malta, whose capital is Valletta, is an archipelago comprised of three islands; i.e., Malta, Gozo and Comino and is located south of the European continent, in the Mediterranean Sea.

Because it is a geographically small island, with estimated population of 400 thousand inhabitants, the Country exploits tourism as one of its economic sources. To meet the demands of the population, part of the inputs for basic consumption are imported from neighboring countries, however, there are small agricultural nuclei, and concentrated exploitation of fish, which is an integral part of the national economy and gastronomy.

Marsaxlokk, which is the purpose of this research/investigation, is a fishermen's village, located in the southeast region of the island of Malta, an area which concentrates the largest portion of the fishing community of the Country.

2.2 *Technical Procedures*

The socioenvironmental aspects were diagnosed based on the recognition of the profile of the dwellers, through semi-structured interviews conducted with the use of a form, divided into questions related to the water supply system, management of solid waste, sewage collection and treatment, quality of the water which they use and responsibility for the management of its natural resources. Additionally, questions were asked about the presence of vectors which transmit disease, types of use of the water and those responsible for the management of water resources.

In the research, the semi-structured interview model, was used, which, according to Padua (2004) is that conducted when the researcher organizes a set of questions on the topic being studied, but allows, and at times encourages, the interviewee to speak freely about subjects which arise, as the main topic unfolds.

There were selected, randomly, for the interviews, 28 fishermen, living in the Environmental Protection Area of Lagoa de Cima and 28 dwellers of Marsaxlokk. The collection of data in Lagoa de Cima was conducted between September and November, 2017, and, with the fishermen of Marsaxlokk, it was conducted between December 2017 and February 2018.

2.2.1 Statistical Statement

The sample was determined using sampling methodology by intentional judgment or convenience, in which the researcher/investigator selects, on purpose, a group of elements, which will constitute the scope of the research. Once determined, the researcher focuses on the group of those whose opinion he is interested in learning (PAVAN, 2015).

For Carmo and Ferreira (2008) convenience sampling is applied to a group of individuals or volunteers available, however, caution must be applied in the judgment of the results without making a generalization.

To analyze the data, answers from the forms applied were used, applying simple descriptive statistics. With the help of the software Excel, the data were organized on electronic spreadsheets, graphically plotted and converted in tables, to better represent the results.

The data relative to garbage collection, water supply and sewage collection and types of uses are represented by tables, while the results of the other questions are referenced in the text, as descriptive results.

3 Rsults and discussions

The process of demarcation of indicators is complex, not only because it reduces the notion of quality which is being adopted as reference for evaluation, but also due to management difficulties, especially when researching diversified objects, generally located in social research, a field in which initiatives are implemented in education (BRITO et al, 2019).

Thus, when asked on the garbage collection system, it was found that 64.29% of interviewees, who live in the area of Lagoa de Cima, consider garbage collection to be very poor (Table 1).

Table 1. Garbage collection indicators

Lagoa de Cima	Fi	%	Marsaxlokk	Fi	%
Very poor	18	64,29	Very poor	2	7,14
Poor	4	14,29	Poor	1	3,57
Average	1	3,57	Average	3	10,71
Good	2	7,14	Good	2	7,14
Very good	3	10,71	Very good	20	71,43
∑	28	100,00	∑	28	100,00

Source: Own preparation, 2018

This result Very Poor 18 Fi, 64.29% may be associated with the logistical system of waste collection of the municipality, having in view that Lagoa de Cima is located at 28 km from the central region, and, according to the Environmental Office of the municipality, hinders transition of collecting vehicles. However, the municipality is adjusting the system, considering what was established by the National Waste Policy (BRAZIL, 2010). Additionally, it was found that the population is not concerned with and/or does not know the possible problems that solid wastes may cause to health. It was found in field research, that part of the dwellers dispose of their wastes in the Lagoon, use public spaces for final disposal, creating an open-sky dumping ground, and some of them have the habit of burning their wastes.

According to Zaro et al (2015), inappropriate management of wastes in the environment can become a source of contamination of the soil and water resources. Linked to this, some agricultural crops, animals and the biota may be affected. Thus, the world has faced problems regarding the quantity of solid wastes inadequately disposed of, and these can expand as a result of populational agglomeration in urban areas, lack of supply of basic sanitation services in rural areas, among other factors, by the reduction of areas used as landfills.

For Rodrigues (2009), the environmental dimension emphasized that the population devote itself to seeking new ways of thinking and acting, individually and collectively, with the new forms of production which ensure sustainability. Also, new values become necessary, where education plays an important role.

In Marsaxlokk, it was found that 71.43% of interviewees affirmed that garbage collection is very good, and only 7.14% consider it very poor. It was noticed in the region that, in addition to there not being a geared environmental education system, it is obvious that the population was instructed and is concerned with managing its own waste. It is assumed that one of the reasons which explains the effectiveness of the collection system lies in the size of the smaller geographic area, which facilitates monitoring of the services provided to the population, in addition to the logistic system of garbage collection being distributed by regions. Additionally, the fact that it is a small island ends up hindering the availability of areas, for final disposal or refuse. To this effect, dwellers are sensitive to reuse/recycle part of the waste, especially organic waste.

With respect to the supply of drinking water, it is established in the Federal Constitution of 1988 that "the municipalities shall organize and provide, directly or under the concession or permission regime, public services of local interest [...], which are essential". Additionally, service providers must provide treated water following the parameters of potability established by Consolidation Ordinance No. 5/2017 of the Health Ministry, regardless of the water collection system.

According to the data of the Brazilian National Health Foundation [*Fundação Nacional da Saúde*] – FUNASA (2016), 66.6% of domiciles located in rural areas, collect untreated water. Such fact may contribute to the increase in the risk of the occurrence of water transmitted diseases, such as diarrhea, amebiasis, ascariasis, schistosomiasis, cholera, giardiasis, taeniasis and dysenteries.

It should be recalled that, in Brazil, water transmitted diseases are responsible, for approximately 65% of hospitalizations and are associated, most of the time, to precarious sanitation conditions (BRAZIL, 2005).

When asked about water supply, 71.43% of interviewees, who live in Lagoa de Cima, consider the service very poor, while 3.57% consider it average. Among the interviewees, only one person answered that it was average; this was because he was informed that there is supply by water truck, to his home. Most of the interviewees informed that they use ground water (tubular well) and/or collect water straight from the lagoon, for use in their domiciles. It was found *in loco*, that there is no water supply system across the region. In some cases, it was found that there was water collection from wells located less than 1 meter from the cesspit of the family unit. On another occasion, it was found that water was collected from the lagoon, at the same point from where the sanitary waste was disposed of.

According to Moura *et al* (2009), the finding of coliforms is an indicative parameter of the possible existence of pathogenic microorganisms, which may be responsible for water transmitted diseases.

From the 28 interviewees in Marsaxlokk, 71.43% consider the water supply very good. The expressive result is an answer to the fact that the region has a water supply system working regularly. It should be recalled that all the fresh water used in Malta is collected from the Mediterranean, forcing service providers, in their treatment water stations, to work with inverse osmosis type technology, for desalting (Table 2). Although they are satisfied with the water supply, it was found that the water has an unpleasant "flavor", when compared to Brazilian drinking water.

Table 2. Water Supply Indicators

Lagoa de Cima	Fi	%	Marsaxlokk	Fi	%
Very poor	20	71,43	Very poor	1	3,57
Poor	6	21,43	Poor	1	3,57
Average	1	3,57	Average	2	7,14
Good	0	0,00	Good	4	14,29
Very good	0	0,00	Very good	20	71,43
∑	27	96,43	∑	28	100,00

Source: own preparation, 2018

As well as the supply of drinking water, sewage collection is the responsibility of Brazilian municipalities, following the precepts of the Brazilian Federal Constitution and the National Basic Sanitation Plan – Law No. 11.445/2007. Except for cases where there is no sewage collection network, there can be a unit collection system (cesspit/filter/sinkhole). It was found that 92.86% of interviewees residing in Lagoa de Cima consider the sewage collection system very poor. The result may be associated with the fact that there is no collection network in the location. Some dwellers, in fact, dispose of their waste straight into the lagoon. Part of the dwellers also informed that they have a rudimentary cesspit, which is different from the septic tank, which should be used.

According to Ávila (2005), the septic tanks are anaerobic biological reactors, in which chemical reactions occur, with the intervention of microorganisms. The latter participate actively in the reduction of organic matter. In these septic tanks, sewage is treated in the absence of free oxygen (anaerobic environment); there is the composition of an anaerobic biomass (anaerobic sludge) and the formation of biogas, which is basically comprised of methane and carbonic gas.

In Brazil, the deficit of water and sewage services is more accentuated in areas of low-income populations, who experience greater public health issues. This deficit evidences characteristics of inequality, from interregional, family income and domicile location aspects. According to data from the National Research of Sampling of Domiciles [*Pesquisa Nacional por Amostragem de Domicílios*] (PNAD) of 2015, supply by networks, which is more adequate from a health viewpoint, is greater in the south and southeast regions, among samples of population of high income and from urban areas. On the other hand, the assessment of the population covered, only identifies if the domicile was linked to the water distribution network, not supplying information on the quality and continuity of supply (GALVÃO, 2009).

According to the Brazilian Institute of Geography and Statistics [*Instituto Brasileiro de Geografia e Estatística*] – IBGE (2016) in a study conducted in 2009, only 25% of the Brazilian population, living the countryside, has access to the collection network or domestic sewage treatment network.

For Von Sperling (2007), waterbodies are in continuous interaction with the other environmental compartments. The quality of water of a water system (River of lake) varies according to natural phenomena (periods of drought and rain, fluctuation of the level of Rivers and lakes, typology of the marginal soil) and anthropic activities developed, in the drainage area of the water basin. Thus, everything that happens in the drainage area of a water basin will reflect on fluctuations in the quality of the water of the receiving waterbody. The water dilutes and makes soluble practically all the substances, acting as a connection vehicle between the land and water environments. On the other hand, waterbodies, especially larger ones, have self-purifying capacity, allowing, thus, restoration of the water balance, through essentially natural mechanisms.

In Marsaxlokk, 89.29% of the interviewees consider the sewage collection system very good. Malta is considered one of the countries that invest the most on sewage collection and treatment in Europe. According to the 2011 balneability report of the European Commission, 97.7% of the country's beaches are fit for bathing, an index which can represent the effectiveness of the sewage collection system (Table 3). Additionally, there is concern with the maintenance of the beaches, as they are part of the national travel itinerary, and thus contribute to the economy. It was found that the interviewees of Marsaxlock were environmentally sensitive; they demonstrated to be well guided to proper use of the environment. Consistently with this, they knew the risks of disposing of sewage *in natura*. Some of them also reported that the problem with respect to sanitation in the country is associated to immigrants, who, in certain circumstances, have a culture different from that of the local population and cause disorder in the region.

Table 3. Sewage collection indicators

Lagoa de Cima	Fi	%	Marsaxlokk	Fi	%
Very poor	26	92,86	Very poor	0	0,00
Poor	2	7,14	Poor	0	0,00
Average	0	0,00	Average	1	3,57
Good	0	0,00	Good	2	7,14
Very good	0	0,00	Very good	25	89,29
∑	28	100,00	∑	28	100,00

Source: own preparation, 2018

Environmental questions are topics diffused both in the scientific field and professional practice. The educational process is fundamental in the change of attitude by people, in relation to natural preservation. When public policies were evaluated, it was considered necessary to pay attention to environmental conditions, given the precariousness of governmental services. (PEDRINI et al, 2010).

The interviews were geared to the population who live from fishing; the results found both from fishermen from Lagoa de Cima and from fishermen from Marsxlokk, relative to the use of water resources were similar, as it can be noted from Table 4.

Table 4. Indicators of use of water resources

Lagoa de Cima	Fi	%	Marsaxlokk	Fi	%
Subsistence Fishing	23	82,14	Subsistence Fishing	26	92,86
Sports Fishing	4	14,29	Sports Fishing	1	3,57
Leisure	1	3,57	Leisure	1	3,57
Does not use	0	0,00	Does not use	0	0,00
∑	28	100,00	∑	28	100,00

Source: own preparation, 2018

In Lagoa de Cima 82.14% of interviewees answered that they use the waterbody for subsistence fishing. None of the interviewees informed that he did not use it. According to Santos et al (2017), Lagoa de Cima is an ecosystem of significant ecological and also economic value, especially for dwellers from that region, who live from fishing and tourism exploitation, more precisely in the summer season, when people leave urban centers bound to the APA, to practice sports, bathe and fraternize with friends and family members. A similar result was found in Marsaxllok, where 92.86% of interviewees answered that they use the Mediterranean also for fishing and subsistence. In both locations, it was found that fishing occurs in different periods, and with different equipment. In Lagoa de Cima, it was noted that part of the fishermen use the technique of cast net and fishing rod;

they do not necessarily use boats to have access to the points of capturing the species. In Marsarxlokk, on the other hand, fishermen use boats to take a position in the open sea, which, according to them, is the most appropriate location to capture the species which fetch the best market value. The capture /fishing generally occurs through drag nets. However, some fishermen use specific equipment (fishing rods) to capture smaller fish, which do not stay in the nets. Generally, these smaller species are consumed the fishermen's families and are not traded.

According to the Brazilian Fishing Ministry, Brazil has 1,084 million fishermen, who contribute to the annual production of 765 thousand tons (2013) of fish. The Brazilian population could be even larger, having in view that the bad packaging and lack of basic care with transportation cause loss between 20% and 25%. The government intends to increase fishing production, from 765 thousand tones to 1 million tons per year by 2020, and from Water Culture, from 707 thousand tons per year to 2 million tons per year, in the same period (BRAZIL, 2017).

When asked about the presence of disease transmitting vectors in the regions, 82.14% of interviewees, dwelling in the area surrounding Lagoa de Cima, informed that the presence of mosquitoes, cockroaches and rats is frequent, especially in the areas nearby the waterbody. When analyzing the data relative to garbage collection (Table 1) and sewage treatment (Table 3), one finds that services are not being made available in that location. This factor may be responsible for the presence of such vectors.

According to Pignatti (2004), the dissemination of dengue in Brazilian cities occurs, on the one hand, due to disorderly population growth and increase of inequality among individuals, which generates other problems, such as lack of basic sanitation. On the other, the physical-natural conditions, resulting from factors related to climate change, atmospheric pollution, loss of biodiversity; water, air and soil degradation have significantly impacted the population's heath.

Additionally, flying insects, such as flies, especially, the domestic Fly, and species belong to the Calliphoridae, Sarcophagidae families, primarily, are associated in the spread of pathogens, transporting them by mechanical means (paws, wings, abdomen, antennae), regurgitated material or in the feces. This association is potentialized due to the capacity of flies to travel long distances (between 10 and 15 km in 24 hours) (PILEGGI et al, 2003; BRAZIL, 2006), and being of medical-health interest, due to the high degree of synanthropy, which makes it possible to classify them as potential vectors of bacteria and parasites in areas nearby those of final disposal of solid wastes, and in the home environment (ROITMAN; TRAVASSOS; AZEVEDO, 1987).

In compensation, it was found that in Marsaxlokk 82.14% of the interviewees informed that the presence of vectors was not frequent; however, it was found the existence of a species of Blattaria (Sea cockroach), which lives on rocks. In some cases, when the family unit is located very close to the sea, it is common to find this species, especially in the kitchen of homes. The efficiency of the garbage collection system and sanitary sewage treatment can contribute to better sanitation indexes, and thus, may remove the possibility of the existence of transmitting vectors.

In spite of the provision of basic sanitation services and infrastructure being the

responsibility of the government authorities, for effective public management, the participation of society, from preparation until execution of public policies is important.

During the interviews, the interviewees were asked about responsibility for the management of sanitation services and water resources. It was found that 46.43% of the fishermen of Lagoa de Cima consider that the government authorities are responsible and only 5% associate this responsibility to both, combining actions by the government authorities and dwellers. It was notices that, among the interviewees, there is disbelief in the government authorities' actions.

Additionally, lack of guidance, specifically related to aspect inherent to environmental education, was found. Some interviewees added that the government authorities make many proposals during electoral campaign time, which are never executed. A different result was found in Marsaxlokk, as 71.43% of the interviewees affirmed that the responsibility belongs both to the government authorities and dwellers. Some interviewees informed that the government authorities is active, conducts educational, orientation campaigns and also proposes environmental educational activities in schools. However, they emphasized that because it is a country where there is tourist exploitation, especially in the Sumner, there is a certain complexity in the management, having in view the presence of tourists from several places in the world, with different cultures and orientation.

For Turolla (2002), the sanitation sector is organized largely in the world in the form of public and local management. Several developed countries were capable of achieving almost absolute universalization, under this model, although a trend can be found, in favor of greater participation of private initiative. In the contemporary world, private initiative predominates in only two countries – namely France and England – which are indicated as two different models of partnership between the public and private sectors. In countries still distant from universalization, therefore, with a horizon of heavy investments to be made, the format of management, entirely based on public systems, is more problematic. In most cases, the same countries face tax restrictions, which become an additional obstacle for the necessary requirements to be made. This is the scenario of Brazil, a country which, additionally, faces the challenge of low efficiency and high losses in the systems in operation.

4 Conclusions

It is initially concluded that both from the environmental and social viewpoint, the importance of guidance with respect to sanitation guidelines (waste collection, water supply and sewage treatment) is necessary, reflecting directly in the results found.

The results point to a possible discrepancy among the regions studied. While in Lagoa de Cima, unhealthy conditions were found, with socioenvironmental indexes disagreeing with the necessary health parameters and with what the national legislation requires.

When the same aspects in Marsaxlokk were evaluated, there were found indicators pointing to better quality of life. This is due to greater collective participation (greater interlacing between the government authorities and society), credibility by the population

in its political representatives and educational actions. This can be an indicator which provides for a healthier environment for fishermen and their family members. Additionally, socioeducational/guidance actions inherent to environmental education, presented by the government authorities, both in the community and in schools reflect the quality found in the results of this research/investigation.

Finally, it is concluded that knowing the local reality, participating actively in the actions of the government authorities and providing guidance actions, to the population, is fundamental, to build increasingly cohesive environmental citizenship, which may generate indexes increasingly instrumentalized, for the performance by public administrators and even by private initiative. Certainly, these practices impact the health of the environment, which results in better quality of life for populations which interact in each location.

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Original Article

SOCIOENVIRONMENTAL INDICATORS OF FISHERMEN FROM LAGOA DE CIMA AND MARSAXLOKK VILLAGE

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SOCIO-ENVIRONMENTAL INDICATORS OF FISHERMEN IN LAGOA DE CIMA AND VILA DE MARSAXLOKK

***Abstract*:** The influence of socio-environmentalist on the living conditions of the populations, specifically traditional ones, can be an indicator of the quality in which they live. Socio-environmental aspects may diverge when compared between different countries and communities. The objective of this research was analyzing the socioenvironmental indicators of two fishing communities, one in Brazil, located in Lagoa de Cima and Marsaxlokk, located in the Republic of Malta. The research took place first Brazil and subsequently in Malta. Using the statistical methodology of intentional sampling, semistructured interviews were conducted with 28 fishermen from both locations. It was concluded that the influence of socio-environmental aspects reflects the actual situation in which each community lives considering the precariousness of sanitation services. In addition, there was a divergence regarding the credibility of those interviewed from among the public authorities in Brazil, when compared to the rest of Malta.

***Keywords*:** Socioenvironmentalism. Environmental Indicators. Fishermen. Malta.

SOCIOENVIRONMENTAL INDICATORS OF FISHERMEN FROM LAGOA DE CIMA AND MARSAXLOKK VILLAGE

***Resumo*:** A influência do socioambientalismo nas condições de vida das populações, especificamente as tradicionais, pode ser um indicador da qualidade em que vivem as mesmas. Aspectos socioambientais podem divergir se comparados entre regiões, países e comunidades distintas. Esta pesquisa teve como objetivo analisar os indicadores socioambientais de comunidades de pescadores, uma localizada na Lagoa de Cima, no município de Campos dos Goytacazes RJ no Brasil e a outra em Marsaxlokk na República de Malta. A pesquisa ocorreu, no primeiro momento, no Brasil e sequencialmente em Malta. Utilizando o método estatístico, por amostragem intencional, foram realizadas interviews semiestruturadas, com 28 pescadores das localidades. Concluiu-se que a influência dos

aspectos socioambientais reflete a real situação em que vive cada comunidade a considerar à precariedade dos serviços de saneamento. Além disso, percebeu-se uma divergência quanto à credibilidade dos interviewees para com o poder público, no Brasil, quando comparados com os resultados de Malta.

***Palavras chave*:** Socioambientalismo. Indicadores Ambientais. Pescadores. Malta.

INDICADORES SOCIOAMBIENTALES DE LOS PESCADORES EN LA LAGUNA DE CIMA Y DE LA VILA DE MARSAXLOKK

***Resumen*:** La influencia del socioambienalismo en las condiciones de vida de las poblaciones, puede ser un indicador de la calidad en que viven las mismas. Aspectos socioambientales pueden diferir si se comparan entre países y comunidades distintas. Esta investigación tuvo como objetivo analizar los indicadores socioambientales de dos comunidades de pescadores, una en Brasil, ubicada en la Lagoa de Cima, en el municipio de Campos dos Goytacazes RJ y la otra en Marsaxlokk, situada en la República de Malta. Utilizando la metodología estadística por muestreo intencional, se realizaron interviews semiestructuradas con 28 pescadores, de ambas localidades. Se concluyó que la infuencia de los aspectos socioambientales refleja la real situación en que vive cada comunidad a considerar la precariedad de los servicios de saneamiento. Además, se percibió una divergencia en cuanto a la credibildad de los interviewees en el poder público en Brasil, en comparación con los restuldados de Malta.

***Palabras clave*:** Socioambientalismo. Indicadores ambientales. Pescadores Malta.