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Manual on Best Fishing practices for Small-Scale and Recreational Fishers of Karaburun-Sazani MPA

In the frame of the Project
"MPA NETWORKS PROJECT"
**Support MPA Effectiveness through strong and
connected networks in the Mediterranean"**



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PREFACE

In the framework of implementing the project “MPA NETWORKS project-Support MPA effectiveness through strong and connected networks in the Mediterranean”, through participatory approach, it was developed a manual on best fishing practices for fishing practitioners, which would be useful for MPA and fisheries managers, artisanal and sport fishers, or any other fishery stakeholder, while them will use it to find a balance between biodiversity conservation and profitable fishery. This manual include lots of information about the recreational and artisanal fisheries (with interest for the MPA of Karaburun-Sazani administrate). Furthermore, based on the national legislation on fisheries, in this manual are included the seasons of fishing for commercial species, the relative species prohibited catch dimensions, permitted fishing equipment and the protected species by the laws of the Republic of Albania. This manual was prepared by Professor Rigers BAKIU (subcontracted by Flag Pine to Albanian Center for Environmental Protection and Sustainable Development).

INTRODUCTION



Marine protected areas (MPAs) are the most widely promoted spatially explicit conservation tool and policy solution to address many of the well-documented problems of marine habitat degradation and overfishing (Caveen et al., 2013). However, marine

environments are highly complex and MPAs are found to vary significantly in their effectiveness. Many studies indicate that, when properly designed, funded, enforced, organized and managed, MPAs are able to provide a series of ecological benefits within their borders (namely the ‘reserve effect’) (Di Franco et al., 2018; Edgar et al., 2014; Giakoumi et al., 2017; Gill et al., 2017; Scianna et al., 2019), which can potentially lead to positive socio-economic effects in nearby areas (Di Franco et al., 2016; Hattam et al., 2014; Kerwath et al., 2013; Sala et al., 2013). However, there remains some debate as research has also shown that MPAs can be both an ecological success and a social failure (Chaigneau and Brown, 2016; Christie, 2004; Hogg et al., 2019). There remains considerable controversy over what makes MPAs successful and how they should be governed (Bown et al., 2013; Chuenpagdee et al., 2013; Jentoft et al., 2007; Jones et al., 2011). MPAs can be viewed as complex social-ecological systems where humans and nature overlap and interact. When MPAs are created human activities and behaviours are directly curtailed or regulated, which can affect nearby communities and lead to local opposition – mostly represented by the fishers. MPA conservation problems need to be examined hand-in-hand with social factors, including local livelihoods, values, interests and perceptions (Voyer et al., 2012).

Global targets (Aichi targets), agreed under the Convention on Biological Diversity (CBD) to have 10% of global coastal and marine areas protected by 2020, have resulted in a large expansion of MPAs, and currently MPAs are expected to achieve an increasing set of conservation, social and economic objectives (Edgar et al., 2014; Watson, Dudley, Segar, & Hockings, 2014; Gruby et al., 2017; Ban et al., 2017; Gill et al., 2017). Concern is growing worldwide that the focus on MPAs expansion, solely to reach Aichi targets, is actually undermining effective conservation (Barnes, Glew, Wyborn, & Craigie, 2018; Giglio et al., 2018; Magris & Pressey, 2018). Not uncommonly, MPAs fail to reach their full potential (Edgar et al., 2014) and the relative lack of success and effectiveness of past MPAs raises doubts about what these management measures can achieve (Mora et al., 2006). Despite the wide variability of MPA types, they usually directly impact, and are impacted by, the

fishing activity, which is typically the most relevant extractive activity to manage when establishing an MPA (Charles & Wilson, 2009; Horta e Costa et al., 2016; Mascia, Claus, & Naidoo, 2010; Pita, Pierce, Theodossiou, & Macpherson, 2011).

Those who depend heavily on resources for their livelihoods, like fishers, have a lot at stake (Buanes, Jentoft, Karlsen, Maurstad, & Soreng, 2004; Mascia et al., 2010; Mikalsen & Jentoft, 2001) and besides being worried and skeptical about MPAs, they may also, and many times do, boycott implementation and violate rules (Charles & Wilson, 2009; Suman, Shivalani, & Milon, 1999). The Aichi target will further increase the number of MPAs with consequences to the fishing industry. In this best practice manual are provided all the regulations to follow in order to improve the management of small-scale and recreational fisheries close to the MPA of Karaburun-Sazani, with a particular interest on biodiversity and habitat protection for the future generations.

ARTISANAL AND RECREATIONAL FISHERIES



Defining small-scale and artisanal fisheries is a challenge as the terms have been used for decades by fishery politicians and administrators, legal officers, biologists, economists,

sociologists, engineers, fishers, nongovernmental organizations and the media to represent different points of view and socio-economic dimensions in different national contexts. Trying to combine all the characteristic dimensions of these fisheries, the FAO

Glossary indicates that artisanal fisheries are "*traditional fisheries involving fishing households (as opposed to commercial companies), using relatively small amount of capital and energy, relatively small fishing vessels (if any), making short fishing trips, close to shore, mainly for local consumption. In practice, definition varies between countries, e.g. from gleaning or a one-man canoe in poor developing countries, to more than 20-m. trawlers, seiners, or long-liners in developed ones. Artisanal fisheries can be subsistence or commercial fisheries, providing for local consumption or export. They are sometimes referred to as small-scale fisheries*

".

While small-scale and artisanal fisheries clearly differ from industrial and recreational fisheries, the subtle distinctions between them are hard to pin down. The FAO Glossary tends to equate "artisanal" with "small-scale". From a technological point of view, however, these are connected but have somewhat different concepts related, on the one hand, to the size of the fishing unit (the scale) and, on the other hand, to the relative level of technology (or "artisanality") expressed as the capital investment / man-on-board.

The term "*small-scale fisheries*" is more frequently used by Anglophones. For technologists it automatically implies a relatively small vessel size and sometimes has the added connotation of low levels of technology and capital investment per fisher. A nine-meter fibreglass lobster fishing boat in the USA, for example, would be "small-scale", but might well be fairly "hightech" - that is, equipped with an inboard diesel motor, VHF radio, GPS, sonar, emergency immersion suits and an inflatable liferaft. By contrast, a seven-metre wooden rowboat fishing herring with a gillnet in a coastal inlet in the same country would also be "small-scale", though much more "artisanal" and with a far lower capital investment per fisher.

The term "*artisanal fisheries*" is often used in French and Spanish-speaking areas to mean relatively low levels of technology, sometimes paired with low levels of organization and

industrialization, but with little reference to size. A twenty-meter open-deck Senegalese fishing canoe, for example, with a crew of 18, a half-kilometre of purse seine, an eight tonne fish capacity and one 40 HP outboard motor is considered "artisanal", but is certainly not "small-scale".

A range of fishing methods also considered small-scale/ artisanal, but requiring no vessel, exists at the graph's starting point where the boat size is zero and the level of technology is lowest. These include beach seines, various cast and lift nets, fishing by hook and line from shore, fish traps and weirs (large and small), and manual harvesting (seaweed, bivalves, crabs, etc.) in coastal zones.

Anyway, it is important to note that commercial and recreational fishing can have similar ecological consequences on fished populations (Lewin et al. 2006). Such consequences range from direct impacts on the exploited species (e.g. truncation of the natural age and size structure, loss of genetic variability and evolutionary changes) to impacts on the aquatic ecosystem itself (changes in trophic cascades and trait-mediated effects). The issues that have led to global fishery concerns (e.g. bycatch and catch-and-release, fisheries-induced selection and trophic changes) are similar in the commercial and recreational fishery sectors (Cooke et al. 2018).

The coastal marine environment of the Mediterranean Sea, and particularly that of MPAs, is facing increased levels of disturbance by recreational activities, including fisheries, which overshadows the impacts of commercial fisheries (e.g. Badalamenti et al. 2000; Lloret & Riera 2008). Recreational and artisanal (professional) sectors often compete for limited coastal resources and therefore coastal management plans need to incorporate both sectors, for which an understanding of the human and fishery dimensions of each is needed. Despite numerous studies on artisanal fisheries in Mediterranean coastal waters (e.g. Stergiou et al. 1996, 2002; Colloca et al. 2004; Gordoa 2009; Morales-Nin et al. 2010), the studies on recreational fisheries are lacking in comparison to artisanal fisheries. In the Mediterranean Sea, artisanal fisheries are characterized as commercial fishers operating

in small boats, exploiting areas near the coast, using a large number of gears and techniques (which change seasonally), typically manned by a single or a pair of fishermen and targeting a high diversity of species (Guillou & Crespi 1999; Colloca et al. 2004; Gómez et al. 2006). These fisheries have historically been a major source of food, employment and economic benefits to the inhabitants of Mediterranean coastal villages.

Although small-scale fishing is still important for some communities (about 80% of the Mediterranean fleet is made of small vessels measuring less than 12 m in length; European Commission 2018), this type of fishery is declining in many parts of the Mediterranean (Guillou & Crespi 1999; Colloca et al. 2004; Gómez et al. 2006). Recreational fishing (RF) in the Mediterranean is a popular outdoor activity in coastal areas, where an increasing number of local inhabitants and tourists fish for pleasure and have a large impact on the local and regional economies (Morales-Nin et al. 2005; Lloret et al. 2008; Cerdà et al. 2010; Font & Lloret 2011).

In general, RF can be defined as a non-commercial (i.e. not for sale, barter, or trade) subset of capture/harvest fisheries; motivated by catching fish for fun, pleasure, or sport. More formally, Cacaud (2005) defined RF as “all types of fishing activities including sport fishing activities undertaken by any individual, with or without a boat, for leisure purposes, and does not involve the selling of fish or other aquatic organisms”. This definition further assumes that RF activities are not motivated by a dependence on fish for food. Within this broad definition, one may further categorize RF into amateur, tourism, and sport/competition recreational fishing; each having their own associated goals and defined as follows:

Amateur fishing, for the purposes of this review, is defined as unorganized hobby fishing. Unorganized in the sense that it is not associated with specific events or competitions. Catches from amateur fishing are either released (catch & release) or are retained for private consumption.

Sport fishing is described as “an organised activity involving free competition between fishermen to catch the largest fish of certain species, the largest number of specimens or the largest total weight depending on the rules of each particular competition” (SFITUM, 2004).

Tourism fishing can be understood as a fishing activity carried out by a third party who organizes a fishing expedition for tourists. Tourism fishing can be conducted by commercial fishermen (*pescaturismo*) or by recreational fishing professionals (“charter”); one main difference being the type of the boat used (commercial fishing boat vs. leisure boat). The aim of charter fishing is mainly to fish; whereas, with the concept of *pescaturismo*, the purpose is not only fishing but also to practice snorkelling, to eat on board fish cooked in a traditional way and just enjoy a day on a boat in middle of the sea.

In addition to the goal-based classification of RF provided above, RF may also be categorized by the location and tools used in the activity. In marine RF, one observes four basic groupings: *pêche à pied*, shore-based, boat-based and underwater fishing; with multiple further sub-divisions (as presented in Figure 1).

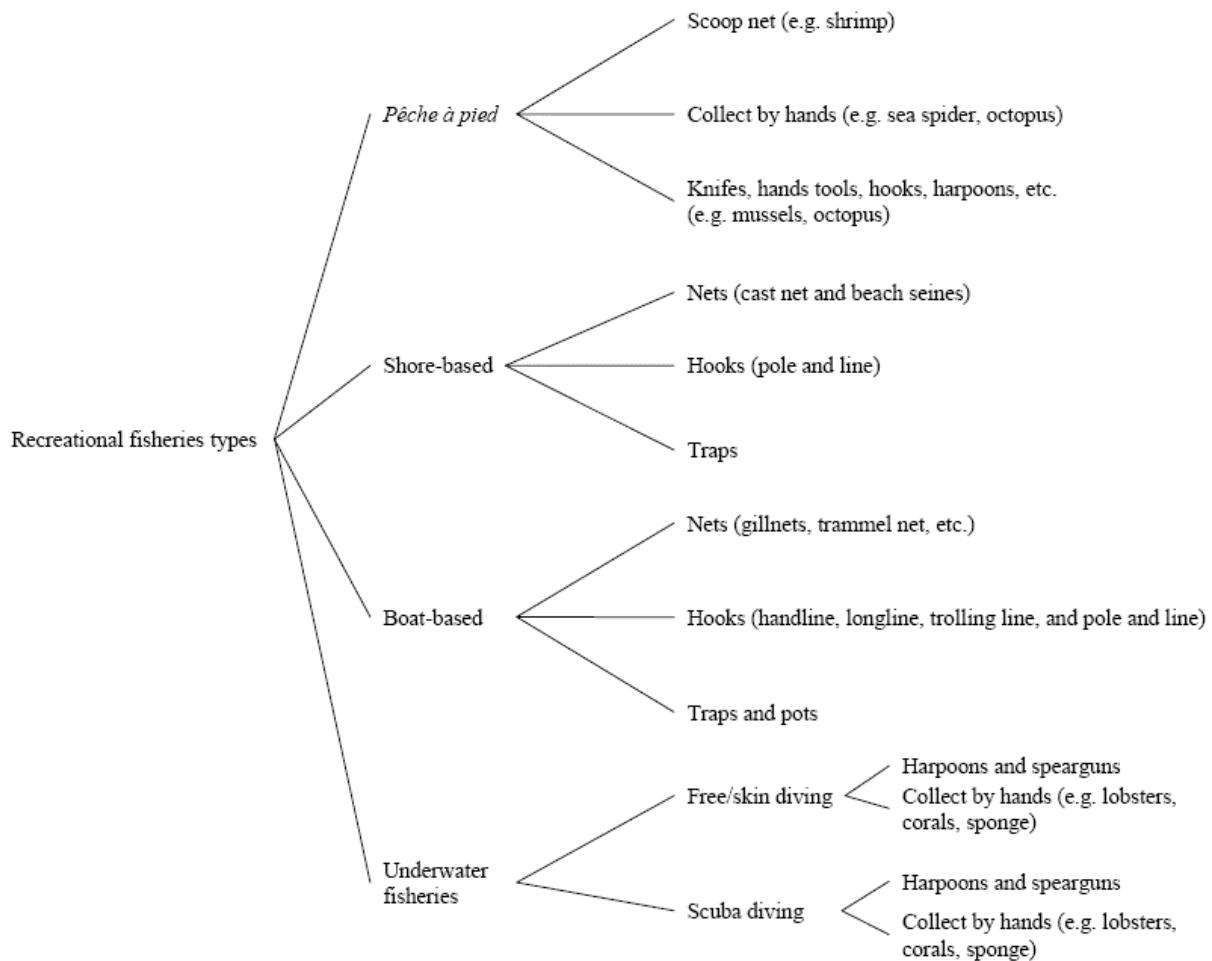


Figure 1. Marine recreational fisheries categorization in the Mediterranean countries.

Recreational fishing is defined as the “**fishing of aquatic animals (mainly fish) that doesn’t constitute the individual’s primary resource to meet basic nutrition needs and are not generally sold or otherwise traded on export, domestic or black markets.**” RF operate within a competitive sphere among commercial fisheries, which may harvest from the same stock. RF can provide diverse revenues and opportunities; with a widely promoted catch and release policy within this sector, RF allows for a multiplication of value per fish actually harvested.

Mismanagement of RF can cause several conservation issues, including: high stock exploitation, selective harvest of ‘trophy fish’ (and therefore shifts in population structure), habitat destruction, unwanted catch and release mortality/disease, introduction of non-native species and disturbance of the environment. With these concerns, it is therefore necessary to orient the RF sector towards environmental sustainability on an international level, through various means such as the licensing of anglers and boats, establishing closed seasons and developing size and bag limits.

On the Albanian national level, the first law on fisheries is represented by the Law on Fishery and Aquaculture, N. 7908, dated on 05.04.1995, which was repealed by the Law on Fisheries N. 64 and dated on 2012. In the first law, two categories of fishing activities are stated in the law, which are represented by the professional fishing (according to the law definition) means the fishing for economical purposes and the sport fishing – the fishing for recreational and entertainment purposes.

In the actual (2019) law “Law on Fisheries”, the article 28 (the types of fishing activities) states that the fishing activities are categorized as follows:

- a) **Commercial fisheries** (in Albanian language: peshkim tregtar);
- b) **Recreational-entertainment fisheries** (in Albanian language: peshkim çlodhës-argëtues);
- c) **Scientific studies purpose fisheries** (in Albanian language: peshkim për qëllime studimore dhe shkencore), where the commercial fisheries is further sub-categorised (in the Article 29, types of the commercial fisheries) into
 - 1) **Professional Commercial Fisheries** (in Albanian language: Peshkim Tregetar Profesional) and
 - 2) **Commercial Artisanal Fisheries** (or Small-Scale Fisheries; in Albanian language: Peshkim Tregetar Artizanal)

In the integrated version of the Law on Fisheries (including the amendments n. 29/2013, n. 80/2017 and n. 4 /2019) there is another definition of the Commercial

Artisanal Fisheries (in Article 4): “**Commercial Artisanal Fisheries or Coastal Artisanal Fisheries**” is a commercial fisheries category, which is developed by fishing vessels with a length of less than 12 meter (m), which never use bottom fishing gears, with or without wheel, towed pelagic fishing gears with wheel or couple of pelagic fishing instruments, twin fishing nets with wheel and hydraulic fishing cages.

According to the updated Law on Fisheries (law nr. 4/2019, date 07.02.2019) regarding the coastal artisanal fisheries, it is stated that **with the aim of having the right to exploit the fishing resources, the coastal artisanal fishing vessels should be included in one of the organizations types**, as determined in the point 1 of the **article 58** (please see below), with the main aim of coordinating and managing the artisanal/ small scale fisheries. These organizations could be excluded or included in the frame of broader organizations, which are operating at the national or regional level.

Application for fishing authorization, according to the point 1 of Article 30, of this law, is conducted in accordance with the management plan of the relative area.

Fishing organizations, types and membership - Article 58

1. The fishing organizations are private juridical persons, which are created based on private initiatives, in accordance with the law into power and these can be organized like one of the types:
 - a) Production organizations;
 - b) Fishing management organizations;
 - c) Cooperatives; and
 - d) Other forms/types of organization and management.

2. The fishing organizations exert its action in accordance with the rights and obligations predicted in the respective statute, which is approved by the organization general assembly, according to the requirements of the law in power.
3. The members of the fishing organization are owners/ or members (*not* owners) of the fishing vessels, relative to the place where it is taking place the fishing activity.

Another update about the Law on Fisheries (law nr. 4/2019, date 07.02.2019), regarding the Artisanal Fisheries Management Organisation, it is stated as follows:

Objectives of the Coastal Artisanal Fisheries Management Organisation

1. The **organizations of coastal artisanal fisheries** are organized in one of the forms predicted in the law and **their objectives are listed below:**
 - a) Draft and apply a management plan about the sources and water categories, while having present the local specificities, with the help of the scientific research, in accordance to the law in power and the interests of the other fishers' categories or groups of interests, which are present on the coast. Furthermore, **these organizations supervise if the standards of self-regulations comply with all the previously mentioned issues;**
 - b) These organizations **realize activities for protecting the sources and related to the monitoring**, while providing tasks to employees for reaching this aim.
 - c) Promote initiatives, which aims the **conflicts solving with other fishing activities** in the relative area;
 - ç) **Develop supporting structures on the land for production activities** (small fish markets, collecting centers for conserving the relative products, fishing vessels landing etc.);
 - d) **Promote initiatives for increasing the quality level of the catches** by the organization members. The management plan, according to the point 1, is approved by the Minister.

In this manual is included all the relative parts of the national legislation about the recreational/sport fishing and related activities.

According to regulation No 1 date 29.03.2005 - for application of the legislation on fishery and aquaculture are reported the articles about recreational/sport fishing:

Licenses of sport fishing – Article 61

1. The licenses of sport/recreational fishing by fishing boats (according to article 23 of the law) may be given to sport fishing associations or to interested persons, who satisfy the above mentioned criteria in point 3 of this article, in these regulation.
2. A sport fishing license, issued on the basis of the above mentioned point (1), may authorize the exercising of sport fishing with more than one fishing boats. In this case has to be specified in the license:
 - a. The maximal number of the fishing boats authorized to exercise this activity.
 - b. The maximal number of fishing days to be exercised by every fishing boat during the year.
 - c. The maximal number of persons boarded in each fishing boat during the exercising of sport fishing.
3. Associations or organizations authorized to exercise sport/recreational fishing on the basis of the respective license issued by the ministry, are obliged:
 - a. to present in the directorate the document for every fishing boat that mean to use for sport fishing;
 - b. to provide with a copy of the legislation on sport fishing for every fishing boat they have and is authorized to exercise this activity;

- c. to present the certificates of driver qualifications for sailing means which they will exercise in sport fishing;
 - d. to present statistical data of their catches during sportive fish exercising for each boat.
4. In every case a sport-fishing license determines the area where this activity will be exercised.
5. **It is prohibited the trade of water organisms catches during sport fishing.**

Equipment allowed in sport fishing – Article 62

Sport fishing is allowed to be exercised only **with hooks, fish rod and sea guns**. For under water **fishing by gun is allowed only mask and tube**.

Prohibitions in sport fishing – Article 63

- 1. in sport fishing:
 - a. it is **not allowed to use more than five hooks** (fishing poles) for a fisherman **in the sea** water and three hooks (fishing poles) in other waters different from marine waters;
 - b. it is **not allowed to use a form of fishing with light sources, except of a hand light or lamp for underwater fishing**;
 - c. **In the sailing means is not allowed any kind of fishing equipment or net used in professional fishing** or using of bottom trawl net, surrounding nets, drags, gathering nets and single gillnets, **set long lines for migratory fish species**.
 - d. It is **not allowed** for fishing using of **harpoons** in all water categories.
 - e. It is **not allowed** to fish during the day a quantity of **more than three kg** fish for every fisherman, **except the cases when the weight of a single sample exceeds this limit**:

f. It is **not allowed** the fishing of **mollusks, crustacean and other kinds**, which are prohibited from the by law acts issued from ministry.

2. All the prohibitions foreseen for professional fishing also apply to sport fishing.

In the updated Law on Fisheries (law nr. 4/2019, date 07.02.2019) regarding the recreational fisheries are included these articles:

Recreational fisheries – Article 38

1. The recreational fisheries consist on fishing/collecting of a determined quantity of fish and other aquatic organisms by using permitted instruments and equipment for the recreational fisheries, which never aims selling/exchanging or marketing the caught fish.
2. In no cases and for no reason, the recreational fishing activities should not influence, obstacle, put in risk or create difficulties for the commercial fisheries.

Categories of recreational fisheries – Article 39

The recreational fisheries is subdivided in three particular categories, as follows:

- a) *Amateur fisheries*, free time fishing activity, with hooks and other gears, non-commercial fishing, not-organized and linked to events or determined competitions, without sailing vessels.
- b) *Sport fishing*, organized fishing, which includes free competitions between the fishers for catching the biggest individual (of fish) of several species, highest number of individuals or highest general weight in relation to the particular competitions determined regulations.

c) *Touristic fishing*, fishing performed by the professional fishers or professional recreational fishers, who are considered as third party, which is responsible for organizing fisheries expedition.

Authorization for recreational fisheries – Article 40

1. The local community members and/or foreigners (different nationality) who are active on recreational fisheries, except those who involved in the sport fishing are provided with the authorization for fishing.
2. **Type, maximal number of authorizations** for each village/municipality/national region, during the solar year, together with the **criteria** to meet for providing/getting the authorization for fishing is determined by the **Minister of the Ministry of Agriculture and Rural Development**.
3. For the **amateur fishing**, the institution responsible for the **verification of the criteria** for providing the authorization are represented by the **local administrate authority**.
4. The **criteria, which should be meet by a sailing vessel** in order to be considered as touristic vessel is determined by the classifying authority – determined by the respective legislation.
5. The **authorization for amateur fishing** is provided by the competent local administrate authority.
6. The **authorization for touristic fishing** is provided by the **Ministry or any other authorized entity**.
7. **It is exempted from point 6 of this article**, the authorizations for amateur fishing activities in the inner waters, which have been previously declared as co-management areas, **(authorizations) which are provided by the organizations responsible for the co-management**.

Type of authorization for the amateur and touristic fishing – Article 41

1. Authorization for amateur fishing can be short term or long-term authorization.
2. Authorization for touristic fishing is short-term authorization.
3. Authorization is considered as long-term one, when the validity is extended along a solar year, from the time of release. The right for applying to get the authorization for amateur fishing is exclusively toward the Albanian or foreign citizens, who are members of the national associations of recreational fisheries.
4. Authorization is considered as short-term on, when the validity is extended along a time period no longer than 30 days. This time period starts from the releasing date of the authorization.
5. The foreign citizens have the right to apply and provided only with the short term authorization.

Obligations by the authorization for recreational fisheries – Article 42

1. Authorization for recreational fisheries is used only for the authorized person (namely authorized).
2. The holder of the authorization, during the conducting of the recreational fisheries activities is obliged to keep with him/her-self the corresponding authorization and let it show to the authorized persons in accordance to this law, upon request.

The fee for getting the authorization for recreational fisheries – Article 43

1. In order to be provided with the authorization for recreational fisheries should be payed the determined fee.

2. Depending from the relative fishing activities, the fees are determined with a common order by the Ministers of the Ministry of Agriculture and Rural Development and the Ministry of Finance, respectively.

Fishing gears/equipment/instruments used for recreational fisheries (*changed in point 1 of the law n. 4/2019, date 07.02.2019*) – Article 44

1. Instruments/equipment/gears used for recreational fisheries and the way of providing with authorization is determined with an order/directive by Minister of Ministry of Agriculture and Rural Development.
2. Minister determines even the maximal quantity of fish, which the authorization holder, for that type of fishing could fish during a day (24 hours).

Prohibitions in the recreational fisheries – Article 45

During the conducting of the recreational fisheries activities, it is forbidden:

- a) to fish from the sunset up to sunrise;
- b) to fish with spear gun by the persons under 16 years old;
- c) to sell the fish caught by conducting this fishing activities.

Inspection of the authorizations for recreational fisheries – Article 46

The national association of recreational fisheries (with local branches along the territory), the competent authority at local level and the Fisheries Inspectorate coordinate the work for inspecting/monitoring the proper realization of the relative conditions as stated in the authorization for recreational fisheries.

Monitoring of the recreational fisheries – Article 47

1. All the **protecting and management measures**, which are applied for the **commercial fisheries** in the sea and inner waters, are **equally applied to the recreational fisheries**.
2. The **Ministry of Agriculture and Rural Development** is responsible for putting into action the measures for **monitoring/inspecting the recreational fisheries** in all the territory of the Republic of Albania.
3. The data emerged during the inspections are stored in a specific database.
4. The **Ministry of Agriculture and Rural Development**, if **notes (during the evaluation)** that the impact coming from the recreational fisheries is considerable, after the consulting with **(consultative and scientific commission in the Ministry) KKKSHTE**, can **decide the application of particular measures** regarding the **authorizations and the declared fishing catches**.

MPA, FISHERIES AND BIODIVERSITY



In order to create and promote the sustainable fishing activities in Karaburuni-Sazani MPA, it is essential that professional fishers and future generation's fishers have

sufficient knowledge regarding regulations and the law on fisheries, which are summarized in Table 1 and 2.

Table 1. List of national legislation about sustainable fisheries relevant for the MPA of Karaburun-Sazani.

National legislation	Year	Objectives and implication relevant to the PA management
Law No. 64/2012, dated 31.05.2012, "On Fisheries"	2012	Regulates fisheries, its management, provides protection for marine life and internal waters, and regulates "fishing protected areas"
Regulation No 1, dated 29.03.2005, "For application of the legislation on fishery and aquaculture"	2005	Prohibits fishing around river mouths, fishing and aquaculture in the outer part of Karaburuni (up to 1 nm or up to 50 m depth), trawl and pelagic trail nets in Vlora bay, fishing in the lagoon channels
Regulation No. 8, dated 11.11.2009, "Concerning management measures for the sustainable exploitation of fishery resources in the Sea"	2009	Prohibits use of bottom gears within 3 nm from the coast or up to 50 m depth, towed gears within 1.5 nm from the coast, hydraulic dredges 0.3 nm from the coast, and gillnets/purse seine 300 m from the coast

Table 2. Summary of areas protected from fishing articles and regulations.

Regulations and Articles	Areas protected from fishing	Map legend	Area (km ²)	% of territorial waters
Reg. No. 1, 2005: Art. 43/2	Buffer zone with 2 km radius from mouth of Buna River and 1 km radius from the mouth of other Albanian rivers where the	River mouths	18,40	0,31%

	fishing is prohibited			
Reg. No. 1, 2005: Art. 43/3/j	Buffer zone in the distance of 1 NM shoreline or 50 m isobaths, outer part of Karaburuni shore from Kepi i Gjuhezes until Rruget e Bardha	Total fishing ban	6,50	0,11%
Reg. No. 1, 2005: Art. 44/1	Vlora Bay – limited on the north from the basic line of the Bay of Karaburun up to Treport		No use of trail nets (trawl or pelagic)	
Reg. No. 1, 2005: Art. 45/1	buffer zone with 2 km radius from the mouth of sea lagoon communication channels	Lagoon channels	45,00	0,76%
Reg. No. 8, 2009: Art. 12/1	3 nautical miles or till the 50 m isobaths buffer zone of the coast where the use of bottom gears is prohibited	No use of bottom gears	1599,60	26,87%
Reg. No. 8, 2009: Art. 12/2	buffer zone 1.5 miles from shoreline where there use of towed gears is prohibited	No use of towed gears	1077,00	18,09%
Reg. No. 8, 2009: Art. 12/2	buffer zone of 0,3 nautical miles from shoreline where the use of hydraulic dredges is prohibited	No use of hydraulic dredges	220,00	3,69%
Reg. No. 8, 2009: Art. 12/3	300 m buffer zone from shore line where fishing of every kind gillnets and	No use of gillnets/purse seine	143,00	2,40%

	purse seine is prohibited			
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Furthermore, below are integrated all the relevant articles from the regulations and the updated Law on Fishery, which aims to develop sustainable fisheries in the MPA. According to the *regulation No 1 date 29.03.2005 - for application of the legislation on fishery and aquaculture, in the chapter VII are included all the Prohibitions in Fishing:*

Areas protected from fishing - Article 43

1. In protected waters areas (marine and inland waters) is prohibited to exercise every activity that could damage environmental characteristics preservation of such areas and/or future initiatives of their proclaiming.

Particularly, is prohibited:

- a. Fishing, gathering and damaging of animal and plant species as well as mineral & archeological values excavation;
- b. Using trawling gears, other encircling nets in a distance of 1 (one) marine mile from protecting area border.
- c. Transformation of geophysics habitats, water chemical and hydro biological characteristics.
- d. Publicities activity meanings;
- e. Weapons introduction, explosive and deleterious matter and whatsoever fish falling in ruin stuff.
- f. Sailing by engine means;
- g. Every garbage (solid or liquid ones) throwing;

...

- j. Is prohibited every fishing & aquaculture activity in outside part of Karaburuni shore from Kepi i Gjuhezes until rruget e Bardha (Palase) in the distance of 1 marine mile shoreline or 50 m isobate in the case when this depth could be in smaller distance.
- k. The Ministry Agriculture and Rural Development collaborates with Environment Ministry, based on the studies of water biodiversity, marine and inland waters, approves and proclaims new fishing protected areas.
- l. The Ministry of Agriculture and Rural Development collaborates with Environment Ministry **with aim of transforming the fishing protected areas to the Marine Parks/ Inland Water Parks.**

Trawl and pelagic fishing - Article 44

- 1. Is prohibited Fishing with trail net (trawl and pelagic)/ or similar with them in shallow area in the distance less than 3 marine mile from shoreline or in 40 m isobate in the case when this depth could be in smaller distance.
- 2. **Is prohibited Fishing with trail net (trawl and pelagic)/ or similar with them on the *Posidonia oceanica* yard or marine fanerogames.**
- 3. **Is prohibited using for fish of every kind of nets by circulating in the distance less than 300 m from the shoreline or in 40 isobate when this depth could be in smaller distance.**
- 4. **It is prohibited to fish with trail net (trawl or pelagic) in the Vlora Bay (limited on the north from the basic line of the Bay of Karaburun up to Treport).**

Prohibited fishing - Article 48

- 1. It is forbidden to fish, carry in board, to transit on the boat/ship, purposed landing and trading, in every period, area with whatever means and tools the following species:

- Sharks – *Cetorhinus maximus*, *Carcharodon carcharias*.

- Lopa e detit – *Mobula mobular*.

- Date mussel – *Lithophaga lithophaga*.

2. It is forbidden to **fish in every period, area and with whatever means or tools the sea mammals** (dolphins, whales, seals, etc).

5. Is forbidden bottom trawl/ sailing fixed nets using in fishing of species:

- White tunas (*Thunnus alalunga*),

- Red tunas (*Thunnus thynnus*),

- Lance fish (*Xiphias gladius*),

- Sharks (*Hexanchus griseus*, *Cetorhinus maximus*, *Alopiidae*; *Carcharhinidae*; *Sphyrnidae*; *Isuridae*; *Lamnidae*).

6. Is forbidden fishing by bottom trawl and trailing dredge in area more than 1000 m depth.

7. Is forbidden using for fish and carried on board of long lines by hooks of less than 10 cm length and less than 4, 5 cm width for such fishing boats that use pallangare/long-lines and lands or carry in board a certain quantity of lance fish (*Xiphias gladius*) more than 20% of live fish catches.

8. *Is forbidden using of driftnets for big pelagic fishing.*

9. Is forbidden fishing with **pelagic long lines from October 1 until January 31** of species: white tunas (*Thunnus alalunga*), Red tunas (*Thunnus thynnus*), lance fish (*Xiphias gladius*), sharks (*Hexanchus griseus*, *Cetorhinus maximus*, *Alopiidae*; *Carcharhinidae*; *Sphyrnidae*; *Isuridae*; *Lamnidae*).

The prohibition to fish some kinds in certain periods and areas Article 49

It is forbidden to fish by every fishing gears and means, carrying on a board, transition on a boat, purposed landing of following species in the respective periods and areas:

...

8. Fishery Directorate determine by a special order the timetable of bivalve mollusk fishing.
9. Is forbidden fishing activity of the **bivalve mollusks during Saturdays and Sunday, official holidays**, all over the year.
10. Is forbidden in longer period, **within beach areas**, in particular cases, **vongole and cardium** fishing **from May to September**.

Measuring of water organisms dimensions - Article 50

1. The length of the fish is measured from the **top of the head** (by closed mouth) to the **lobe longest extremity** or of the tale (**caudal**) when this does not consist on two lobes.
2. The length of the crustaceans is measured from the beginning of the eye (*carapace*) to the posterior extremity of the body, including the tale.
3. The dimensions of the bivalve mussels refer to the maximal length or to the maximal diameter of their shell.

The minimal dimensions of the water organisms - Article 51

1. It is forbidden to fish and to sell water organisms with dimensions less than the following for every separate kind:

a. Fish

- European hake, *Merluccius merluccius* 20 cm
- Blue whiting, *Micromesistius* spp., 20 cm

- Triglidae, *Trisopterus* spp., *Gaidropsarus* spp., 20 cm
- Seabass, *Dicentrarchus labrax* 25 cm
- Mullet, *Mugil* spp., *Liza* spp., *Chelon* spp 20 cm
- Seabream, *Sparus aurata* 20 cm
- Red Porgy, *Pagrus pagrus* 20 cm
- Seabream, *Diplodus* spp. 15 cm
- Common Pandora, *Pagellus* spp., 12 cm
- Dentex, *Dentex* spp. 25 cm
- Bogue, *Boops boops* 10 cm
- Salema, *Sarpa salpa* 12 cm
- Striped mullet, *Mullus* spp. 11 cm
- Grouper, Wreck fish, *Epinephelus* spp., *Polyprion* spp. 45 cm
- Sciaenidae, *Sciaena* spp., *Umbrina* spp. 25 cm
- Atlantic horse, *Trachurus* spp. 12 cm
- Amberjack, *Seriola* spp 30 cm
- Leerfish, *Lichia amia* 30 cm
- Atlantic mackerel, *Scomber* spp. 20 cm
- Atlantic bonito, *Sarda sarda* 30 cm
- European pilchard, *Sardina pilchardus* 10 cm
- Anchovy, *Engraulis encrasicholus* 10 cm
- Sardinella, *Sardinella aurita* 12 cm
- European sprat, *Sprattus sprattus* 10 cm
- Picarel, *Spicara* spp 8 cm
- Atlantic bluefin tuna, *Thunnus thynnus* 70 cm
- Albacore, *Thunnus alalunga* 40 cm
- Little tunny, *Euthynnus alletteratus* 30 cm
- Broadbill swordfish, *Xiphias gladius* 100 cm
- Smoothhound, *Mustelus* spp. 30 cm

- Sharks, *Squalus* spp, *Scyliorhinus* spp, *Prionace* spp. 40 cm
- Ray, *Raja* spp. 30 cm
- Angel shark, *Squatina* spp. 40 cm
- Electric fish, *Torpedo* spp. 30 cm
- European conger, *Conger conger* 30 cm
- Guitare fish, *Rhinobatos* spp. 30 cm
- Sole, *Solea* spp. 20 cm
- European flounder, *Platichthys flesus* 15 cm
- Bothus spp., *Arnoglossus* spp. 30 cm
- Turbots, *Scophthalmus* spp, *Psetta* spp, *Lepidorhombus* spp. 30 cm
- Silver scabbardfish, *Lepidopus caudatus* 40 cm
- Harpoon fish, *Sphyraena* spp 25 cm
- John dory, *Zeus faber* 15 cm
- Triglidae, *Trigla* spp., *Aspitriglia* spp. 15 cm
- Anglerfish, *Lophius piscatorius* 30 cm
- Sand smelt, *Atherina* spp 8 cm

b. *Crustacean*

- Triple-grooved shrimp, *Panaeus kerathurus* 7 cm
- Red and Blue Shrimp, *Aristeus antennatus* 7 cm
- Red Shrimp, *Aristaemorpha foliacea* 6 cm
- Deep-water pink, *Parapenaeus longirostris* 10 cm
- Norway lobster, *Nephrops norvegicus* 30 cm
- European lobster, *Homarus* spp. 30 cm

c. *Cephalopod mussels*

- Common squid, *Loligo* spp. 25 cm
- Totanet, *Ilex* spp 30 cm
- Cuttlefish, *Sepia officinalis* 20 cm

- Common octopus, *Octopus vulgaris* 0.5 kg

d. ***Bivalve mussels***

- Mussels, *Mytilus galloprovincialis* 5.0 cm
- Striped venus, *Venus gallina* 2.3 cm
- Warty venus, *Venus verrucosa* 2.7 cm
- Wedge clam, *Donax trunculus* 2.2 cm
- Groves carpet shell, *Ruditapes decussatus* 3.6 cm
- Vongola filipine, *Ruditapes semidecussatus* 3.0 cm
- Oysters, *Ostrea spp.* 6.0 cm
- Bicaku, *Solen spp.* 8.0 cm
- Great scallop, *Pecten jacobaeus* 10.0 cm
- Smooth callista, *Challista chione* 6.0 cm

2. Fishes of small dimensions caught by purse seine nets, like sardines, anchovy, papalina and bleak is allowed that in total catch having up to 20 % under minimal respective dimensions (point 1 of this article), but not less than 7 cm in length.

3. In every fish production confection is allowed **a tolerance of bivalve mollusks** with dimensions less from those foreseen, **but not more than 10%**, counted in base of point 1 of this article.

The maximum daily quantities for bivalve mollusks - Article 52

1. The maximal daily catches for fishing boat, according article 53 are determined as follow:

- Striped venus e European prickly cockle in total, *Venus gallina* 600 kg
- Smooth callista, *Challista chione* 500 kg

- Wedge clam, *Donax trunculus* 100 kg
- Horse mussel, scallop in total 300 kg
- Oysters, *Ostrea spp* 100 kg

2. For every professional fisherman equip by license on bivalve mollusks gathering in the sea and coastal lagoons, **it is forbidden to exceed the following daily quantities:**

- Razor clam, *Solen spp.* 10 kg
- Smooth callista, *Challista chione* 50 kg
- Mediterranean scallop, *Pecten jacobeus* 20 kg
- Mussels, *Mytilus galloprovincialis* 80 kg
- Oysters, *Ostrea spp* 30 kg
- Warty venus, *Venus verrucosa* 10 kg
- Wedge clam *Donax trunculus* 50 kg
- Striped venus, *Venus gallina* 40 kg
- Groves carpet shell, *Ruditapes decussatus* 40 kg
- Vongola filipine *Ruditapes semidecussatus* 10 kg

3. The maximal daily quantity determination for every subject will be done in each license in dependence of the resources in each area.

4. The products from aquaculture are excluded from point 1 and 2.

Prohibitions for some fishing forms and equipment - Article 58

1. It is forbidden using for fishing or carried on ship/boat board of the toxic, narcotic, corrosive matter, of substances which in case of their association could cause explosion, of equips that can cause electrical power or explosion.
2. It is forbidden to fish by trawl nets, dredge, etc. in inland waters.

3. It is forbidden to fish by trawl nets, dredge in form of *gabia* in marine and inland waters
4. It is forbidden to put fixed equipment that closes completely or along the river stream to the sea as well as in fresh water flow of lagoons.
5. It is forbidden to gather (fish) bivalve mussels with sailing means of the turbo sifting type.

Furthermore, there is an updated Ordinance under the **Law on Fisheries 2012 (N. 402, date 08/05/2013 concerning Management Measures for the Sustainable Exploitation of Fishery Resources in the Sea)**, which includes the Annex II about the Requirements related to the Fishing Gears (which are not specified if used by SSf or LSF). Below are reported the requirement characteristics of the fixed nets and longlines used along the Albanian coasts by the Albanian Small-Scale fishers.

The fixed nets are represented by the trammel nets and the gill nets, where the maximal **height of a gill net can not be up to 4 meter**, the maximal **height of a trammel net can be up to 10 meter**, while the **deploying of more than 6 000 meters of gill nets or trammel nets for fishing vessels is prohibited** by the Ordinance 402;

while having present that from January 2008 in the case of a single fisher, he/she can not deploy more than 4 000 meter, if are added to him the 1000 m of fixed nets from the secod fisher and other 1000 m from a third fisher.

The net monofilament or net line can not be over 0.5 mm. only the trammel nets with a length of less than 500 m can have a height of 30 m.

It is forbidden to keep on the vessel board or deploying a trammel net with a height > 10m for a length higher than 500 m.

In the case of the bottom combined fixed nets (gill net + trammel net), **the maximal height of the combined fixed net can not be higher than 10 m**, where it is forbidden and it is **prohibited to take on the fishing vessel board more than 2500 m of combined net.**

The diameter of the monofilament or trammel line can not be higher than 0.5 mm. As exception, only the combined bottom fixed nets with length lower than 500 m can have a maximal height of 30 m.

The bottom long-lines are prohibited to be kept on fishing vessel board or deploy, if there are more than **1000 hooks per person**, where the **maximal limit is 5000 hooks on each fishing vessel**.

The only exception is provided to the fishing vessels, which are going for fishing at least **three days**; these fishing vessels can take on the board **a maximal number of 7000 hooks**.

Regarding the pelagic long-lines, it is prohibited to keep on board or deploy more than 2000 hooks per vessels, in case the fishing vessel is targeting Bluefin tuna (*Thunnus thynnus*), when this target species is representing 70% of the total catch after landing and selection process.

- Just a maximal number of 3500 hooks are allowed for fishing vessel, which are targeting during their fishing activities the sword fish (*Xiphias gladius*), when this target species is representing 70% of the total catch after landing and selection process;
- a maximal number of 5000 hooks are allowed for fishing vessel, which are targeting during their fishing activities the albacore (*Thunnus alalunga*), when this target species is representing 70% of the total catch after landing and selection process.
- An exception is provided to the fishing vessels, which can go fishing for more than 2 days. These fishing vessels can take on the board up to the double of normally allowed number of hooks.

Juveniles and other marine organisms are protected under Article 10, which establishes the *minimum size of fish*. Special regulations establish the minimum dimensions of fish and other marine and inland water species, including anadromous and catadromous species,

below which catching, keeping or transiting on board, intentional landing, marketing or consumption are prohibited.

Notwithstanding established sizes, the Minister may allow the catch of juveniles, fish species and other marine organisms unable to reproduce, in a specified period using specific fishing gear, aiming at repopulating for the protection of species and research activity.

Updated prohibitions and limitations in regards of fishing gears, fish species, minimum sizes, etc., are currently under preparation. The proposed minimum sizes are shown in Table 3 below.

Table 3. (N. 402, date 08/05/2013 concerning Management Measures for the Sustainable Exploitation of Fishery Resources in the Sea) which establishes the minimal dimensions of marine organisms (TL - General length; CL - Carapace length).

Species (scientific name)	Albanian Name	English name	minimum size in cm
1. Fish			
<i>Dicentrarchus labrax</i>	Levreku	European seabass	25 cm
<i>Diplodus annularis</i>	Sargu bishtzi	Annular seabream	12 cm
<i>Diplodus puntazzo</i>	Sharan	Sheephead bream	18 cm
<i>Diplodus sargus</i>	Sargu	White seabream	23 cm
<i>Diplodus vulgaris</i>	Sargua	Common two-banded sea bream	18 cm
<i>Engraulis encrasicholus</i> ¹	Acuga	European anchovy	9 cm
<i>Epinephelus</i> spp.	Kerrat	Groupers	45 cm
<i>Lithognathus mormyrus</i>	Murra	Sand steenbras	20 cm
<i>Merluccius merluccius</i> ²	Merluc	European hake	20 cm
<i>Mullus</i> spp.	Barbunët	Striped red mullet	11 cm
<i>Pagellus acarne</i>	Mormuri i eger	Axillary seabream	17 cm

<i>Pagellus bogaraveo</i>	Spalce e kuge	Blackspot seabream	33 cm
<i>Pagellus erythrinus</i>	Spalce e kuge	Common pandora	15 cm
<i>Pagrus pagrus</i>	Pagri	Red porgy	18 cm
<i>Polyprion americanus</i>	Kerr fundi	Atlantic wreckfish	45 cm
<i>Sardina pilchardus</i> ³	Sardelja	European pilchard	11 cm
<i>Scomber</i> spp.	Skumri	Scomber mackerels	18 cm
<i>Solea vulgaris</i>	Gjuhez kanali	Common sole	20 cm
<i>Sparus aurata</i>	Kocja	Gilthead seabream	20 cm
<i>Trachurus</i> spp.	Stavridhët	Jack mackerels	15 cm
2. Crustaceans			
<i>Homarus sgammarius</i>		European lobster	105 mm CL 300 mm TL
<i>Nephrops norvegicus</i>	Skampi	Norway lobster	20 mm CL 70 mm TL
<i>Palinuridae</i>	Aragostat	Spiny lobsters	90 mm CL
<i>Parapeneus longirostris</i>	Karkaleci rozë	Deep-water rose shrimp	20 mm CL
3. Molluscs bivalve			
<i>Pecten jacobeus</i>		Pecten jacobaeus	10 cm
<i>Venerupis</i> spp.		Carpet shells	25 mm
<i>Venus</i> spp.		Venus shells	25 mm

Hake: Even the limit tolerance of 15 percent individuals weight of hake to be including in the length between 15 and 20 cm, this tolerance limit can be respected by fishing vessels in open sea area or in landing area, as well as in first sale fish markets after landings. This limit will be applicable even in each further market transaction at the national and/or international level.

In order to protect certain fish species and other marine organisms, under Article 11, the Council of Ministers may declare protected areas for fishing purposes, aiming to provide favourable conditions for natural reproduction of fish and growth of juveniles and other

marine organisms. The boundaries and designation of marine protected areas for fishing purposes, as well as measures for their protection and development are defined by decision of the Council of Ministers, prior consultation of scientific institutions specialized in fisheries, environment and other interest groups, in accordance with the legislation in force.

Furthermore, the Article 37 of the Law on Fisheries (updated in the law nr 80/2017, date 04.05.2017) states that it is forbidden to fish, keep on the vessel board, do trans boarding, purpose landing and marketing or consume, in any season, area and with any equipment and vessel (point 1), these aquatic organisms (only the marine species are included in this manual):

Corals (*Corallium* spp.);

Sharks - *Cetorhinus maximus*, *Carcharodon carcharias*;

Giant devil ray - *Mobula mobular*;

Date mussel - *Lithophaga lithophaga*;

Sea sponges (*Spongidae*);

Cetaceans (whales, dolphins and seals);

Sea turtles (*Carretta carretta*, *Chelonia mydas* and *Dermochelys coreacea*);

Seabirds.

With a decision by the Council of Ministers to the list are added other species, which have been previously evaluated as endangered.

The fishing vessels captains should immediately release the seabirds, which have been caught accidentally by the fishing gears.

The previously mentioned specimens, which have been caught accidentally by the fishing vessels, should be treated with care on the board of the vessel and released in the water alive and without damaging them.

The fishing vessels captains are not permitted to land the previously mentioned species, except in the cases when these species are included in an approved program for saving and protecting them or in the case when it is required to create the possibility for their curing, when they are injured, after the fishing inspectorate has been informed and before the fishing vessel enters in the port.

All the protected aquatic species are exempted by the point 1, if they are included in the Article 30 of the Law on Aquaculture, nr. 103/2016.

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