

Conservation or Cultivation?

Legal Framework for the Development of Salmon Aquaculture in Protected Areas





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LEGAL DEPARTMENT / TERRAM FOUNDATION

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Abbreviations Used

AAA:	Appropriate Areas for the Exercise of Aquaculture
AMCP-MU:	Multi-Use Protected Coastal Marine Areas
CONAF:	National Forestry Corporation
DIA:	Environmental Impact Statement
EIA:	Environmental Impact Study
IUCN:	International Union for the Conservation of Nature
LBGMA:	General Environmental Foundations Law
LGPA:	General Fishery and Aquaculture Law
MMA:	Ministry of the Environment
RAMA:	Environmental Regulations for Aquaculture
RSEIA:	Environmental Impact Assessment System Regulations
S.D.:	Supreme Decree
SEA:	Environmental Assessment Service
SEIA:	Environmental Impact Assessment System
SERNAPESCA:	National Fishery and Aquaculture Service
SNASPE:	National System of State-Protected Areas
SUBPESCA:	Under-Secretary's Office for Fishery and Aquaculture
ZUBC:	Coastline Use Zoning





I. Introduction

During recent decades, aquaculture, and particularly salmon farming, have seen an uncharacteristically rapid consolidation as one of the most important and most profitable economic activities in the country¹, representing the activity with the second highest exports at the national level², led only by mining, and making Chile the second largest salmon producing country in the world after Norway³. Given the special geographic and oceanographic characteristics of the southern part of Chile, and specifically the regions of Los Lagos, Aysén and –more recently– Magallanes, practically all national salmon production has been concentrated there, corresponding to 99.7% of production in 2017⁴. In terms of salmon aquaculture concessions, and based on information obtained from the Map Viewer of the Under-Secretary’s Office for Fishery and Aquaculture (SUBPESCA), as of January 2020, just these three regions alone had 1,388 concessions of this type granted and 245 being processed⁵.

Table 1. Salmon aquaculture concessions granted, with technical project approved and being processed, in the Regions of Los Lagos, Aysén, and Magallanes, as of January 2020.

	LOS LAGOS	AYSÉN	MAGALLANES	TOTAL
Granted	537	724	127	1,388
Technical project approved	9	12	10	31
Being processed	17	51	177	245
TOTAL	563	787	314	1,664

Source: Created by the authors based on information available on the SUBPESCA Map Viewer.

- 1 In 2018, the salmon industry saw record exports of US \$5.157 billion, driven by an increase in prices and in production, according to a report by PULSO. This is salmon's moment, and its shares are in the limelight on the stock exchange amidst million-dollar acquisitions (February 5, 2019). Retrieved from: <https://www.latercera.com/pulso/noticia/este-momento-del-salmon-las-acciones-brillan-medio-las-millonarias-adquisiciones-sector/516381/> (January 2020).
- 2 DIARIO FINANCIERO. Contra la corriente: salmón bate récord y se consolida como segundo producto exportado de Chile (September 11, 2019). Retrieved from: <https://www.df.cl/noticias/economia-y-politica/comercio-exterior/contra-la-corriente-salmon-bate-record-y-se-consolida-como-segundo/2019-09-11/113426.html> (January 2020).
- 3 MULTIEXPORT FOODS. 2018 Annual Report. p. 32. Available at: http://www.cmfchile.cl/sitio/aplic/serdoc/ver_sgd.php?s567=004216f4d3d29a2d26f0c44c5acc806VFdwQmVFOVVRVEJOUkVFeFQxUk5NMDVSUFQwPQ==&secuencia=-1&t=1554752521 (January 2020).
- 4 TERRAM FOUNDATION. Antecedentes económicos de la industria salmonera en Chile. Cartilla Informativa No. 2 [online]. Available at: https://www.terram.cl/descargar/recursos_naturales/salmonicultura/cartilla/Antecedentes-economicos-de-la-industria-salmonera-en-Chile.pdf (January 2020).
- 5 In the case of concessions being processed in the regions of Los Lagos and Aysén, since 2010, through Law No. 20,434 and others that followed, these are subject to a “moratorium,” meaning a temporary suspension of the entry of new fish aquaculture concessions applications in Appropriate Areas for Aquaculture (AAA) effective in 2010, in order to achieve a better spatial organization of the activity (in both cases, extended to April 8, 2020 by virtue of Law No. 20,285 of 2015). In the particular case of the Region of Magallanes and Chilean Antarctica, while it does not have a current moratorium, through Exempt Resolution No. 3264/2016 the Under-Secretary’s Office for Fishery and Aquaculture (SUBPESCA) declared all AAA sectors established in this region and active as of the date of said resolution as unavailable for new salmon farming concessions applications (October 28, 2016).



Coincidentally with this reality, the Regions of Los Lagos, Aysén, and Magallanes are precisely where, paradoxically, the greatest amount of surface area protected by the National System of State-Protected Areas (SNASPE) is concentrated, representing 90.7% of all state-protected areas. While initially this high percentage was exceedingly due to geopolitical reasons for the purpose of neutralizing borderline conflicts⁶, it has recently been solidified by successive creations, expansions, and reclassifications of protected areas during recent years as part of implementing the so-called “Route of Parks of the Chilean Patagonia.” The relevance of the protected areas in the Chilean Patagonia for SNASPE can be seen by the fact that it accounts for practically half (43) of the total SNASPE units (105), while 58.3% of the total surface area of the three regions cited is protected through one of its protection statutes.

Table 2. Number of SNASPE protected areas in the Regions of Los Lagos, Aysén, and Magallanes as of January 2020.

	NATIONAL PARKS	NATIONAL RESERVES	NATURAL MONUMENTS	TOTAL
Los Lagos	7	3	2	12 (1,406,382 ha.)
Aysén	7	8	2	17 (4,585,270 ha)
Magallanes	7	3	4	14 (10,889,034 ha)
TOTAL	21	14	8	43 (16,880,687 ha)

Source: Created by the authors based on information provided by CONAF as of August 2019 through the Transparency Portal and the provisions of different creation decrees.

It should be noted that, while the large majority of these SNASPE protection figures or categories is made up of land space, some also contain coastal-maritime portions within their limits. This is the case, for example, in the Las Guaitecas National Reserve, the Isla Magdalena National Park, the Laguna San Rafael National Park, the Alberto D’Agostini National Park, and the Bernardo O’Higgins National Park. What is more, in the particular case of the recently created Kawésqar National Reserve⁷, in the Region of Magallanes and Chilean Antarctica, it exclusively covers the maritime space that used to form part of the perimeter of the former Alacalufes Forestry Reserve. The above explanation is relevant because, as this document will address, the administrative practice based on weak and permissive

6 ALVAREZ G., Gabriela. El Lugar de los Parques Nacionales en la Representación de una Patagonia Turística: Discusión y Habilitación del Paisaje Patagónico Durante el Siglo XX. Magallania [online]. 2014, Vol. 42, No. 1. p. 61. Available at: https://scielo.conicyt.cl/scielo.php?script=sci_arttext&pid=S0718-22442014000100004&Ing=es&nrm=iso (January 2020).

7 S.D. No. 6/2018 of the Ministry of National Assets, which releases the Alacalufes Forestry Reserve and creates the Kawésqar National Park and Kawésqar National Reserve, in the Region of Magallanes and Chilean Antarctica.

regulation on this matter, has favored the granting of aquaculture concessions, specifically salmon farming, in sectors that are adjacent to, or even inside, these coastal-maritime zones, and which threaten these protected areas given the known impacts of the Chilean salmon industry⁸.

On the other hand, during the last decade, different protected marine areas have been created in the southernmost regions, including the “Pitipalena-Añihue” and “Tortel” Multi-Use Protected Coastal Marine Areas (AMCP-MU) in the Region of Aysén (created by virtue of S.D. No. 13/2015 and 18/2018, both of the Ministry of the Environment); and the “Diego Ramírez Islands and Drake Passage” Marine Park and the “Seno Almirantazgo” AMCP-MU in the Region of Magallanes and Chilean Antarctica (created by virtue of S.D. No. 9/2018 and 11/2019, both of the Ministry of the Environment), all of which have entailed a significant increase in the marine surface declared to be under protection to safeguard zones of high ecological value for conserving the marine biodiversity of the Chilean Patagonia.

In light of this scenario, the present document is aimed at presenting, from a critical approach, the legal framework of protection under which aquaculture and salmon farming activities are currently being developed, particularly in national protected terrestrial and marine areas, with special emphasis on those in the Regions of Los Lagos, Aysén, and Magallanes. Considering the above, it will first address the existing regulations on this matter, thereby proposing a systematization of related standards by type of protected area, and the interpretation given to these by the Comptroller General of the Republic (CGR) in its different rulings. Then, it will review the location and/or relocation status of salmon aquaculture concessions within the waters of the Kawésqar National Reserve as an irregular case of violation of current regulations, and will end with a presentation of the conclusions and certain recommendations on this topic.

8 These impacts include, for example, the organic enrichment of the given aquatic environment due to an increase in nutrient load (primarily phosphorous and nitrogen), which enter through non-ingested feed and salmon feces, thus reducing the availability of oxygen in the water column and sediment under and around the cage-rafts, the release of chemotherapeutic agents (antibiotics and anti-parasitics) and scale inhibitor or anti-fouling substances, salmon escapes, as well as the effect on the area’s landscape value, among other things.





II. Legal Framework for the Development of Aquaculture Practices in Coastal and Marine Protected Areas

As is well-known, in order to safeguard biodiversity, support the preservation of nature and conserve the environmental heritage, the State protects and manages public protected areas through SNASPE, as determined by Article 34 of Law No. 19,300 on General Environmental Foundations (LBGMA)⁹. This system, historically managed by the National Forestry Corporation (CONAF) –and which will continue to do so until the creation of the so-called Biodiversity and Protected Areas Service (SBAP)–, was first established by Law No. 18,362 of 1984. Although this law never went into effect, SNASPE is understood to be composed of the management categories established by the regulation, which are: i) Virgin Region Reserves (non-existent in Chile); ii) National Parks; iii) Natural Monuments; and iv) National and Forestry Reserves. It should also be noted that different provisions of the LBGMA also include Marine Parks and Reserves within SNASPE (both categories under the oversight of the National Fishery Service or SERNAPESCA), although traditionally the institutionalism and policy makers on the matter have considered them outside of said system¹⁰.

Within this context, it can be seen that the regulations that make up the legal framework for the development of aquaculture activities in the protected areas mentioned are not only scarce but, moreover, far from being organically ordered, and are dispersed both inside and outside the General Fishery and Aquaculture Law (LGPA) itself; therefore, the Comptroller General of the Republic has played a key role in their interpretation, setting an interesting administrative jurisprudence. In an unprecedented effort to systematize these regulations, their reading shows that the legislation imposes a differentiated legal framework for both protected terrestrial and protected marine areas in terms of the development of aquaculture activities. Thus, in the terrestrial areas, it distinguishes between the development of these activities inside and those in adjacent or nearby sectors, and in the marine areas between the development of activities in Marine Parks and Marine Reserves, on the one hand, and in AMCP-MU, on the other.

9 Article 34 LBGMA. The State will manage a National System of Protected Wildlife Areas, which will include marine parks and reserves, in order to ensure biodiversity, support the preservation of nature, and conserve the environmental heritage. The administration and oversight of the State's National System of Protected Wildlife Areas will correspond to the Biodiversity and Protected Areas Service.

10 Likewise, it has been understood that SNASPE does not include Nature Sanctuaries, Wetlands of International Importance or Ramsar Sites, Multi-Use Protected Coastal Marine Areas (AMCP-MU), among many other management categories established by different regulations.



A. PROTECTED TERRESTRIAL AREAS

a) Aquaculture inside protected terrestrial areas

a.1. General rule applicable to SNASPE protected areas

Currently, the exercise of aquaculture activities and, by extension, the development of salmon farming in particular, is, as a general rule, prohibited inside the protected areas included in SNASPE, for applications to new aquaculture concessions or the relocation of a previous concession in the regions wherever possible. The key regulation on this matter is Article 158 of the LGPA, whose Section 1 prescribes: “Lake, river, and maritime zones that form part of the National System of State-Protected Wildlife Areas will be excluded from all extractive fishery and aquaculture activities¹¹.” This provision must necessarily be read in conjunction with Article 36 of the LBGMA, effective since 1994, which clarifies ahead of time which zones are understood as “forming part” of these protected areas, indicating as such “the portions of sea, beach lands, ocean beaches, lakes, lagoons, glaciers, reservoirs, waterways, marshes, and other wetlands located within their perimeter.”

This has also been the understanding of the Comptroller General of the Republic itself, which in ruling No. 38,429/2013 not only recognized the impossibility of developing aquaculture activities in lake, river, or maritime zones located within the perimeter of National Parks, but was also explicit in indicating that the sectors to which the abovementioned Article 36 of the LBGMA refers must include National Parks –as well as, it must be added, all other SNASPE protected areas– created not only after said regulation went into effect (1994), but also those created beforehand, as it is a provision of public law that, as such, has governed since its publication in the Official Gazette and contains no exceptions to its application¹². In other words, for the Comptroller, the lake, river, or maritime zones located inside the perimeter of the SNASPE protected areas were automatically included within the latter by the provisions of Article 36 of the LBGMA and not by virtue of the administrative act that created them (creation decree)¹³.

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- 11 In the case of national parks, this provision is consistent with what is established in the Washington Convention, which was signed and ratified by Chile in 1967, particularly Article III, which prohibits exploiting the “riches” existing therein for commercial purposes. The same also happens in the case of the natural monument category, which the abovementioned international instrument, in Article I, No. 3, treats as “inviolable except to perform duly authorized scientific research or government inspections.”
- 12 This ruling No. 38,429/2013 is also important as it recognizes that while Law No. 18,362, which creates the public CONAF and regulates SNASPE, never went into effect, it is possible to recognize the existence of the latter given that, since 2009, the Budget Law assigns resources to CONAF for the coordinated administration of the protected areas placed within its control.
- 13 SCHLEEF GUERRA, Felipe. ¿Se puede intervenir en las áreas silvestres protegidas del Estado? Una aproximación al contexto chileno a partir del dictamen N° 38.429 de la Contraloría General de la República. *Revista Justicia Ambiental*, FIMA [online]. 2015, Year VII, No. 7. p. 199. Available at: <http://www.fima.cl/site/wp-content/uploads/2016/04/libro-fima-interior-y-tapas-bbb.pdf> (January 2020).



It should be noted that, as a reaction to the ruling by the Comptroller General of the Republic, in September 2014, SUBPESCA rejected 232 applications for aquaculture concessions presented within the limits of the Alberto D’Agostini and Bernardo O’Higgins National Parks, in the Region of Magallanes and Chilean Antarctica, via Exempt Resolution No. 2379/2014¹⁴. However, inside the Alberto D’Agostini National Park, 19 salmon farming concessions remained and still remain today that had previously –and, in our opinion, illegally– been granted, all owned by the company Nova Austral S.A.¹⁵, many of which are currently in the process of relocation, paradoxically, to the waters where the Kawésqar National Reserve is now located¹⁶, which will be addressed in Section III of the present document.

Based on the ruling by the Comptroller, Law No. 20,825 of 2015 added an Article 5 bis to Law No. 20,434, which, among other things, established a preference applicable to relocation requests for aquaculture concessions located inside the maritime waters of national parks. This preference lasted until the end of a 4-year period from the date of publication of said Law No. 20,825 (April 7, 2015)¹⁷, and consequently lost the possibility for it to be enforced on April 7, 2019. On the other hand, under this context, Exempt Decree No. 554/2019¹⁸ of the Undersecretary's Office for the Armed Forces (SSFFAA) recently released different sectors within the limits of the Bernardo O’Higgins and Alberto D’Agostini Parks from the list of Appropriate Areas for the Exercise of Aquaculture (AAA).

14 Available at: http://www.subpesca.cl/portal/615/articles-84896_documento.pdf (January 2020).

15 LA PRENSA AUSTRAL. 19 concesiones acuícolas activas en parques nacionales serán relocalizadas el próximo año (August 27, 2014). Retrieved from: <https://laprensaaustral.cl/archivo/19-concesiones-acuicolas-activas-en-parques-nacionales-seran-rel/> (January 2020).

16 AQUA. Nova Austral presenta declaraciones de impacto ambiental para relocalizar concesiones (June 12, 2019). Retrieved from: <http://www.aqua.cl/2019/06/12/nova-austral-presenta-declaraciones-de-impacto-ambiental-para-relocalizar-concesiones/> (January 2020).

17 Article 5 of Law No. 20,825.

18 Available at: <https://www.diariooficial.interior.gob.cl/publicaciones/2019/10/02/42467/01/1660789.pdf> (January 2020).



Figure 1. Salmon aquaculture concessions granted inside the Alberto D'Agostini National Park as of January 2020



Source: Created by the authors based on information obtained from the Ministry of the Environment's National Registry of Protected Areas and the SUBPESCA Map Viewer.



a.2. National and Forestry Reserves as an exception to the general rule

While the original text of the current LGPA Article 158 –previously composed of a single section– constituted a rule that did not recognize any exceptions¹⁹, Law No. 19,800 of 2002, specifically aimed at substituting said article, made an exception to the original exclusion regime for National and Forestry Reserves²⁰. So it was that said legal modification added two new sections to Article 158 of the LGPA, whose current Section 2 establishes the following immediately after proscribing the development of aquaculture activities inside the SNASPE protected areas: “Nevertheless, in the maritime zones²¹ that form part of the National and Forestry Reserves, these activities may be performed.” Additionally, Section 3 reads as follows: “Upon authorization by the competent authorities, the use of terrestrial portions that form part of these reserves may be used to complement the maritime aquaculture activities.”

In this regard, it should be noted that the “Washington Convention,” signed and ratified by Chile in 1967, defines national reserves as “regions established for the conservation and utilization, under official surveillance, of the natural riches, where the flora and fauna will be given all protection compatible with the purposes for which these reserves were created.” In light of the regulatory changes indicated above, one aspect of this definition that is worth looking at is the possibility that it considers the “utilization, under official surveillance, of the natural riches” existing in this protected area category. In this regard, the Dictionary of the Royal Spanish Academy defines natural as “belonging or related to nature or in accordance with the quality or property of things,” but is also defined as “native to a place.” This not only implies that the activity to be performed in the National Reserve must be compatible with the purposes of its conservation, and which must be previously defined in the creation decree and/or the respective management plan, but also must be related to its own resources, native if you will, found therein. Therefore, as salmon are exotic species –that is, foreign to the natural ecosystem– and are also introduced and raised through an intensive production system²², the possibility of developing salmon farming within National Reserves is at least questionable, in both environmental and legal terms, as it does not constitute, in the strictest sense, the “utilization of natural riches” of those protected areas.

19 In fact, in the original text of the LGPA, Article 158 only specified that: “Lake, river, and maritime zones that form part of the National System of State-Protected Wildlife Areas according to Law No. 18,362, shall be excluded from all extractive fishery and aquaculture activity.”

20 This law began as a Parliamentary Motion filed by the now deceased senator Antonio Horvath Kiss, on June 7, 1995, and its initial objective was to substitute the expression “lake, river, and maritime” in Article 158 for “lake and river,” so as to enable the development of any aquaculture activities, in general, in the maritime zones within SNASPE protected areas.

21 It should be noted that, unlike the general prohibition of Section 1 of Article 158 of the LGPA, which refers to “lake, river, and maritime zones,” this Section 2 allows for the development of extractive fishing activities and aquaculture only in the “maritime zones” that form part of the National and Forestry Reserves, appearing to exclude said activities from lake and river zones. However, this scope lacks greater relevance in terms of aquaculture activities, since the ratification of Law No. 20,434 of 2010, which modified the LGPA specifically in terms of aquaculture, eliminated the possibility of establishing appropriate areas for aquaculture in lakes (Article 1 No. 5 letter a), as well as the possibility of establishing them in rivers was restricted only to navigable rivers and for the development of extensive aquaculture (Article 1 No. 5 letter b).

22 Article 2 letter s) of the Environmental Regulations for Aquaculture (“RAMA,” contained in S.D. No. 320/2001 of MINECON) defines intensive production system as the “cultivation of hydrobiological resources whose food is primarily based on anthropically supplied diets and/or the fertilization of the waters in which it is carried out.”

Despite the setback implied by this modification in terms of conservation, it is true that the possibility of developing aquaculture activities in maritime zones that form part of the National and Forestry Reserves is not without restrictions. In accordance with the requirements of Article 67 of the LGPA²³, these activities must be necessarily preceded by the establishment of an AAA²⁴ in the maritime zone that forms part of the respective National and Forestry Reserve. But beyond this, which constitutes the minimum prerequisite for developing all aquaculture activities, it must be submitted to the Environmental Impact Assessment System (SEIA), and specifically the Environmental Impact Study (EIA), in conformity²⁵ with Article 11 letter d) LBGMA, due to its “location or proximity to (...) protected areas.” This is with the understanding that these aquaculture activities must be submitted to the SEIA not only in terms of the project typology expressly listed in Article 10 letter n) LBGMA²⁶ in relation to No. 3 letter n) RSEIA, but also due to the fact that they would be performed inside an area that has been placed under official protection, as in the case of a National Reserve, in accordance with letter p) of the same article.

The requirement that aquaculture activities to be developed in maritime zones that form part of National and Forestry Reserves must be submitted to the SEIA by way of an EIA had already been outlined by the Comptroller General of the Republic for the first time in ruling No. 28,757/2007, and recently reiterated in ruling No. 83,278/2016. In this last pronouncement, the comptroller went even further to state that the development of these activities in the abovementioned protected areas “may only be authorized if the activity is compatible with the environmental purposes by virtue of which these spaces are under official protection, and for which they must consider what is established in the regulations that govern those reserves, in the administrative act that creates them [creation decree] and in the respective management plan.” This true analysis²⁷ of the compatibility of the aquaculture activity –or of any other– with the conservation objectives of the National or Forestry Reserve where it would be developed, logically requires that they be previously and explicitly defined. This is otherwise implicit in the “Washington Convention’s”

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- 23 Article 67 paragraph 1 of the LGPA. In the areas of ocean beaches, public beach lands, water and seabed portions, and rocks, both inside and outside of bays, and in rivers that can be navigated by vessels of over one hundred tons, established as appropriate for the exercise of aquaculture, by a group or groups of hydrobiological species, by one or more supreme decrees issued by the Ministry of National Defense, there shall be aquaculture concessions for aquaculture activities, that will only be governed by the provisions of this title and its regulations.
- 24 The AAAs are geographic zones that, by decree of the Ministry of National Defense, are deemed to be appropriate or suitable for said purpose (without the exclusion of any other possible uses of the area). To establish an AAA, the law orders it must especially consider the existence of hydrobiological resources or aptitudes for production, as well as protection of the environment.
- 25 Likewise, it could easily be sustained that all salmon farming projects meet the circumstances of letter b) and e) of Article 11 of the LBGMA, that is, the generation of “significant adverse effects on the quantity and quality of renewable natural resources, including soil, water and air” as well as the “significant alteration, in terms of magnitude or duration, of the landscape or touristic value of an area,” respectively, circumstances that up to now have not been considered by the SEA in its requirements for the presentation of an EIA for these types of projects.
- 26 Article 10 of the LBGMA. The projects or activities that could cause environmental impact, in any of their phases, and which must be presented to the environmental impact assessment procedure, are the following: n) intensive exploitation projects, farming and processing plants of hydrobiological resources.
- 27 The first authority called to perform this true compatibility analysis shall be CONAF as the administrator of SNASPE protected areas, which must be formalized in the respective pronouncement or sectoral report that it should issue during the instruction phase of the environmental impact assessment procedure.



definition of National Reserves, as “where the flora and fauna will be given all protection compatible with the purposes for which these reserves were created.”

Contrary to the criteria applied by SUBPESCA²⁸, this document sustains that the previous reasoning should necessarily lead to the conclusion that the development of aquaculture activities should not be admissible in those National or Forestry Reserves that lack a management plan duly approved by CONAF, based on which this activities may undergo an analysis of their compatibility analysis with the conservation objectives of these protected areas. In this sense, it should be noted that, among the aspects that every protected area management plan must contain, there are some especially relevant ones like the zone of influence, conservation objectives, management objectives, potential threats, analysis of use and zoning²⁹, and this last one conditions the activities that may be developed within their perimeters³⁰.

In other respects, the management plan requirement in the proposed sense is not only reasonable, but also entirely coherent with the requirements derived from the precautionary principle, inherent to Environmental Law and which the LGPA establishes in Articles 1B and 1C for fulfillment of the environmental objective of the LGPA –which is “the conservation and sustainable use of hydrobiological resources”–, in accordance with which Article 158 should necessarily be interpreted and applied. Under this interpretation, the reasonable application of this provision and principle should necessarily lead to an abstention from administrative action –expressed, in this case, in the granting of aquaculture concessions– when, where lacking sufficient, scientific information –in this case, information that could be contained in the respective protected area management plan–, this action entails a risk to environmental conservation.

In fact, in this same vein, different laws have recognized the importance of having a management plan that has been approved prior to the development of new activities inside the respective protected area, which requires the adoption of a systematic interpretation of the application regulations. Such is the case, for example, of Law No. 20,423, known as the “Tourism Law,” whose Article 18 final section establishes: “State-Protected Wildlife Areas may not be disturbed or given in concession to the private sector without the respective management plans.” Although it never went into effect, this same spirit is followed by Law No. 18,362 which creates SNASPE, and establishes in Article 32, Section 1: “In management

28 In the particular case of the Las Guaitecas Forestry Reserve, SUBPESCA indicated that: “For all other purposes, the LGPA expressly enables the exercise of aquaculture in National Reserves. For this same reason, the [protected area] management plan is not required beforehand, and protection is given by submitting projects in particular to the Environmental Impact Assessment System in accordance with the regulations on this matter,” in AQUA. Gobierno defiende ordenamiento territorial de la salmonicultura en Aysén (August 12, 2016). Retrieved from: <http://www.aqua.cl/2016/08/12/gobierno-defiende-ordenamiento-territorial-de-la-salmonicultura-en-aysen/#> (January 2020).

29 CONAF. Manual para la Planificación del Manejo de las Áreas Protegidas del SNASPE. Santiago, Chile, 2017. PP. 25 and 95. Available online at: http://www.conaf.cl/wp-content/files_mf/1515526054CONAF_2017_MANUALPARALPLANIFICACI%C3%93NDELASAREASPROTEGIDASDELASPE_BajaResoluci%C3%B3n.pdf (January 2020).

30 In fact, the zoning of protected areas is understood as a process to establish the types and levels of use permitted within the protected area, which must be compatible i) with its conservation objectives; ii) in and of itself; and iii) with the management of the respective unit; and this process is guided, among other things, by the precautionary principle, in *Ibid.* PP. 116-117.



units, no works, programs or activities may be performed other than those included in the respective management plans.”

In that regard, despite the fact that the foregoing are minimum requirements to be met for the development of aquaculture activities inside National and Forestry Reserves, it is true that, in practice, and not on few occasions, they have been openly and blatantly disregarded both by the holders of salmon farming concessions as well as environmental institutionalism itself. In addition to the case of Kawésqar National Reserve, which will be discussed in greater detail in Section III of the present document, one paradigmatic example of the above is represented by the situation of the Las Guaitecas Forestry Reserve, which, while created in 1938 by Decree No. 2612/1938 of the former Ministry of Lands and Colonization, and modified by successive decrees³¹, to date lacks any management plan approved by CONAF and, for this reason, no conservation objectives or permitted types and levels of use inside the reserve (zoning) have been established.

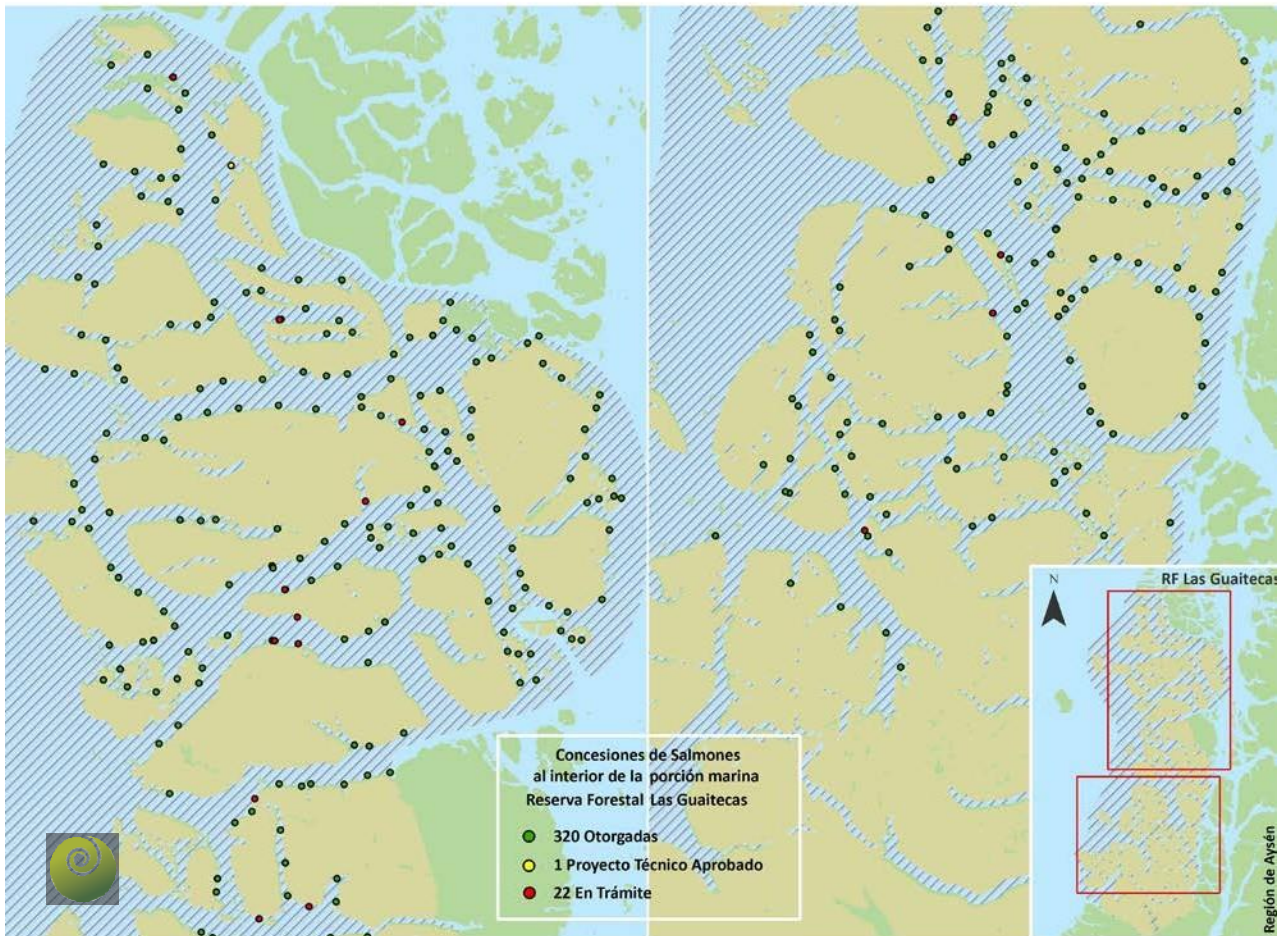
In 1994 and 1996, the now non-existent Undersecretary of the Marines established an AAA for the first time ever inside the Las Guaitecas Forestry Reserve³². At which time, numerous salmon farming concessions began to be granted and, consequentially, projects were authorized for cultivation in the marine portion of the same, despite the fact that, legally, the possibility of developing aquaculture activities in maritime, lake, and river zones that form part of National and Forestry Reserves, at that time, was already proscribed. In spite of the fact that, as mentioned, said Forestry Reserve still has no management plan approved by CONAF, there are 320 salmon farming concessions granted to date within its marine portion, all approved environmentally via Environmental Impact Statements (DIAs), under circumstances that, given their location in a protected area (letter d of Article 11 of the LBGMA), required as a minimum for entry to the SEIA, the presentation of an EIA, thus indicating a serious violation of the applicable regulations on this matter.

31 Supreme decrees No. 536/1941 of the Ministry of Lands and Colonization and No. 420/1983 of the Ministry of National Assets.

32 S.D. No. 359/1994, which establishes Appropriate Areas for the Exercise of Aquaculture in the 11th Region of Aysén del General Carlos Ibáñez del Campo and No. 350/1996, which establishes Appropriate Areas for the Exercise of Aquaculture in the 11th Region (Las Guaitecas Archipiélago de Los Chonos National Reserve), both by the Ministry of National Defense.



Figure 2. Salmon aquaculture concessions granted, with technical project approved and being processed, located in the maritime portion of the Las Guaitecas Forestry Reserve as of January 2020.



Source: Created by the authors based on information available in the Ministry of National Assets Registry System and on the SUBPESCA Map Viewer.



b) Aquaculture in areas adjacent to or nearby protected terrestrial areas

Since 2010, the LGPA refers exclusively to the case of intensive or extensive farming projects for exotic hydrobiological species (like salmon) to be located in protected terrestrial areas bordering the ocean (that is, adjacent or immediately next to the ocean), which was incorporated by Law No. 20,434, which was precisely aimed at modifying this law in the specific area of aquaculture regulation. In this regard, Article 67, Section 8 of the LGPA determines that the development of this activity, as it refers to exotic hydrobiological species, will be restricted when the Coastline Use Zoning (ZUBC)³³ is applied to establish a minimum marine strip of protection with respect to these protected terrestrial areas, thus becoming obligatory legal content of the respective ZUBC³⁴. In light of the above, this standard appears to be extremely relevant for two major reasons:

1. While the ZUBC initially constitutes a non-binding instrument by simply establishing preferential (and non-exclusive) uses, by virtue of the provision in question, it is the law itself (LGPA) that grants true binding force in terms of the establishment of the respective minimum marine strip³⁵, by considering the aquaculture –whether intensive or extensive– of exotic hydrobiological species (like salmon farming) an excluded use in the maritime space referred to therein;
2. As opposed to the abovementioned Article 158 of the LGPA, the provision in question is not solely restricted to the SNASPE protected areas, but rather, by not explicitly distinguishing, it must be understood as referring to all protected terrestrial areas bordering the ocean, whether or not they are included in this system (for example, a Nature Sanctuary or Protected National Asset), such that theoretically any of them must have said minimum marine strip.

In any case, it should be noted that SUBPESCA has been emphatic in sustaining, under a questionable interpretation, that the requirement contained in Article 67, Section 8 of the LGPA would strictly be applied in the case of terrestrial areas bordering the ocean, and not applicable to those protected areas that, as in the case of the Las Guaitecas Forestry Reserve, contain marine portions within their perimeter, which would not be included within the legal supposition³⁶.

33 In general terms, the ZUBC has been defined as an instrument that “has the objective of ordering the uses of coastal land, ensuring compatibility among the different interests, and planning its uses, through a process that includes citizen participation,” according to PRECHT, Alejandra, REYES, Sonia, & SALAMANCA, Carola. *El ordenamiento territorial en Chile*. Santiago, Chile: Ediciones UC, 2016. p. 70.

34 Article 67, Section 8 of the LGPA reads as follows: “In cases where the protected terrestrial areas border the ocean, the zoning of the coastline must establish a minimum marine strip of protection to exclude the development of intensive or extensive farming of exotic hydrobiological species.”

35 This character is also expressed in the same Article 67 in its final paragraph, which prescribes that: “From the date of publication of the supreme decree that establishes the zoning, new aquaculture concessions may not be granted in sectors whose use has been defined as incompatible with said activity.”

36 AQUA. Gobierno defiende ordenamiento territorial de la salmonicultura en Aysén (12 de agosto de 2016). Retrieved from: <http://www.aqua.cl/2016/08/12/gobierno-defiende-ordenamiento-territorial-de-la-salmonicultura-en-aysen/#> (January 2020).

Notwithstanding these assessments, and despite how valuable this provision may appear at first, it is true that, in practice, it has become absolutely ineffective in fulfilling its purpose of excluding the development of salmon farming in areas near or adjacent to protected terrestrial areas bordering the ocean, which is based on at least two big problems that have until now hindered its real application:

- 1 The law does not establish the minimum obligatory distance to be considered by said marine strip, nor does it provide any scientific criteria or parameter for its determination –such as, for example, the approximate radius of dispersion of chemicals and antibiotics in the marine environment, current meter variables, etc.–, which is entirely at the discretion of the zoning authority. As the Regional Governments, through their Regional Planning and Development Division (DIPLADE)³⁷, are responsible for proposing the ZUBC project proposal for the respective region³⁸, they should precisely be the ones to initially establish said minimum marine strip and determine its size, and this work must consider and, certainly, apply the precautionary principle and the ecosystemic approach established in the LGPA³⁹.
- 2 The operativity of this standard is conditioned by the establishment of a ZUBC in the respective region, which, as it is recognized in a document that is generally indicative and laid out within an infra-legal standard –as the National Policy on Coastline Uses (PNUBC)–, has definitively lacked, in terms of a spatial planning document, the sufficient hierarchy to fulfill the purpose assigned to it by the latter⁴⁰. Among other factors, this aspect has contributed to the fact that, to date, there are only two macro-zoning processes that have been fully processed: in the Aysén Region (2004)⁴¹ and in the Coquimbo Region (2005)⁴², while the conclusion of the remaining regional zoning has been pending for several years now.

Therefore, in practical terms, the requirement provided by Article 67, Section 8 of the LGPA to establish the abovementioned minimum marine strip has not been, up to now, more than dead letter, which is explained not only by the non-existence of a large part of regional zonings, but also by the fact that the only ones concluded to date –for the regions of Aysén and Coquimbo– were passed prior to the inclusion of

37 Created as of 2018 by virtue of Law No. 21,074 on the strengthening of the country's regionalization, which, among other laws, introduced modifications to DFL No. 1-19,175/2005, which merges, coordinates, systematizes, and updates Law No. 19,175, the Constitutional Organic Law on Regional Government and Administration.

38 Article 17 letter a) final section and 36 letter p) DFL No. 1/2018, which establishes the merged, coordinated, systematized, and updated text of Law No. 19,175, the Constitutional Organic Law on Regional Government and Administration.

39 Articles 1 B and 1 C letters b) and c) of the LGPA.

40 PAREDES, Christian, & MARTÍNEZ, Ignacio. La regulación ambiental aplicable a la salmonicultura y los principios jurídico-ambientales que la inspiran [online]. Análisis de Políticas Públicas No. 69 (August 2018). Terram Foundation. p. 33. Available at: https://www.terram.cl/descargar/recursos_naturales/salmonicultura/app_-_analisis_de_politicas_publicas/APP-69-La-regulacion-ambiental-de-la-salmonicultura-y-los-principios-juridico-ambientales-que-la-inspiran.pdf (January 2020).

41 S.D. No. 153/2004 of the Ministry of National Defense, Undersecretary of the Marines, which declares the coastline spaces of the 11th Region of Aysén del General Carlos Ibáñez del Campo as areas of specific preferential uses.

42 S.D. No. 518/2005 of the Ministry of National Defense, Undersecretary of the Marines, which declares the coastline spaces of the 4th Region of Coquimbo as areas of specific preferential uses.

this provision in the text of the LGPA (by Law No. 20,434 of 2010), such that said minimum marine strip, for temporal reasons, is not considered as such in either one.

In any case, it should be noted that the ZUBC of the Aysén Region, approved by S.D. No. 153/2004 of the Ministry of National Defense, does contain an express provision in the sense of excluding the development of aquaculture activities in the areas near to or adjacent to National Parks –which, in the context of this zoning, are included under the category of “preferential zones for tourism”–, according to Article 4.1 letter A No. 6, which reads: “Aquaculture concessions must maintain a minimum distance of 3,000 meters from National Parks in the Aysén Region” (equivalent to approximately 1.6 nautical miles). As this minimum distance is essentially a minimum marine strip of protection or exclusion of aquaculture activities, we estimate that it could be sustained that the provision in question, initially merely indicative, is in itself binding by virtue of Article 67, Section 8 of the LGPA –a rule of public law that, as such, governs “*in actum*”–; therefore, it must be necessarily respected by the administrative authority when ruling on the granting of new aquaculture concessions in sectors near or adjacent to National Parks in the Aysén Region⁴³.

However, while it would be optimal to fully comply with Article 67, Section 8 of the LGPA in the establishment of the respective minimum marine strip, this is, of course, independent of the need for all aquaculture activities to submit themselves to the SEIA according to Article 10 letter n) of the LBGMA, when they have the annual production levels and/or farming surface area specified in Article 3 letter n) of the RSEIA. As mentioned previously with respect to the development of aquaculture inside National and Forestry Reserves, all activities of this type that meet the parameters specified in the RSEIA and wish to be located in sectors near or adjacent to protected terrestrial areas, must apply to the SEIA, specifically via an EIA, based on the circumstances indicated in Article 11 letter d) of the LBGMA, with respect to its “location in or near to (...) protected areas.”

Although the law is clear in this sense, it is true that in practice and, as presented above, this requirement in reality is far from being met, as there are numerous salmon farms located less than one nautical mile from protected terrestrial areas, whose environmental impacts were assessed based on mere DIAs⁴⁴. This is no small matter, considering that this entry way to the SEIA, unlike the EIAs, does not consider mitigation, repair or compensation measures to be implemented, does not generally have a citizen participation phase (which is merely facultative for the environmental authority), nor does it require the obligation of considering the synergistic effects or impacts generated, which, in fact, are seen as inherent to concessions groupings according to the coordinated health management to which they are obligatorily subject. Additionally, this scenario is further complicated by the fact that the Comptroller General of the Republic, in rulings No. 34,811/2017 and 3,727/2019, in

43 As mentioned, the entry of new aquaculture concessions applications is currently suspended in the Aysén Region until April 8, 2020, regardless of the species to be farmed (Article 5 of Law No. 20,583, modified by Law No. 20,825).

44 According to data provided by the “project search engine” on the website of the Environmental Assessment Service (SEA), only 7 salmon farming projects to date have been assessed through an EIA, all located in the Aysén Region.



sum, has determined that the application of the RCA review mechanism (considered in Article 25 quin. of the LBGMA) does not apply in the case of projects or activities assessed environmentally through DIAs.

B. PROTECTED MARINE AREAS

a) Aquaculture in Marine Parks and Marine Reserves

Both Marine Parks and Marine Reserves are protected marine areas considered and defined by the LGPA, which are differentiated according to their object of protection and the possibility of performing extractive activities within their perimeter. “Marine Parks” are defined by the LGPA as “specific and demarcated areas (...) used to preserve ecological units of interest for science, and to protect areas that ensure the maintenance and diversity of hydrobiological species, as well as those associated with their habitat” (Article 3 letter d) LGPA). “Marine Reserves,” on the other hand, are defined by the LGPA as “areas of protection of hydrobiological resources for the purpose of protecting areas of reproduction, fishing grounds, and managed repopulation areas” (Article 2 No. 42 of the LGPA). According to the same law, the former does not allow any type of activity, except for those authorized for the purposes of observation, research, or study, whereas the latter permits extractive activities, but only for transitory periods, and upon a well-founded resolution by the Under-Secretary’s Office for Fishery and Aquaculture (SUBPESCA).

Therefore, contrary to what happens with protected terrestrial areas, the exercise of aquaculture activities and, by extension, the development of salmon farming in particular, is absolutely proscribed both inside and in sectors near or adjacent to Marine Parks and Reserves. In this regard, and as a rule that recognizes no exceptions, Article 67, Section 7 of the LGPA indicates: “Intensive or extensive farming of exotic hydrobiological species [like salmon] shall maintain a minimum distance of 1.5 nautical miles from Marine Parks and Marine Reserves.” This same provision is also reiterated by Article 13 bis of the Environmental Regulations for Aquaculture (S.D. No. 320/2001, “RAMA”), which, in a differentiated manner, refers to the minimum distances to be maintained by farms with both intensive and extensive production systems:

- **Farms with intensive production systems**⁴⁵ (such as salmon): must maintain a minimum distance of 2,778 meters (1.5 nautical miles) from the abovementioned protected marine areas.
- **Farms with extensive production systems**⁴⁶ (such as mussels): must maintain a minimum distance of 400 meters (0.2 nautical miles) from the abovementioned protected marine areas⁴⁷.

45 RAMA defines intensive production system as the “cultivation of hydrobiological resources whose food is primarily based on anthropically supplied diets and/or the fertilization of the waters in which it is carried out” (Article 2 letter s RAMA).

46 RAMA defines extensive production system as the “cultivation of hydrobiological resources that feed naturally or with limited human intervention” (Article 2 letter r RAMA).

47 The explanation of this shorter distance with respect to that required for farms with intensive production systems is based on the lower potential environmental impact caused by extensive aquaculture.

From the perspective of environmental conservation, the rule contained in Article 67, Section 7 of the LGPA, although brief, is valuable in at least two aspects: on the one hand, because it excludes aquaculture activities for exotic hydrobiological species not only in Marine Parks and adjacent sectors, but also in Marine Reserves, despite the fact that, as mentioned above, the latter have a weaker protection status than the former. On the other hand, because the minimum distance established by this regulation is determined by law in both its existence and its extension, which impedes the inclusion of technical regulatory problems related to the minimum marine strip of protection or exclusion in the case of protected terrestrial areas bordering the ocean.

b) Aquaculture in Multi-Use Protected Coastal Marine Areas (AMCP-MU)

While AMCP-MUs are not legally defined⁴⁸, based on the description of these protected areas by the International Union for the Conservation of Nature (IUCN), the Ministry of the Environment has defined them as “spaces that include portions of water and seabed, rocks, beaches and public beach lands, flora and fauna, historical and cultural resources that the law or other efficient means place on reserve to protect all or part of the area so demarcated”⁴⁹, equivalent to category VI of the IUCN (“protected area with sustainable use of natural resources”)⁵⁰. In the Chilean Patagonia, four AMCP-MUs have been constituted to date: “Pitipalena-Añihue” and “Tortel” in the Aysén Region, created by virtue of S.D. No. 13/2015 and 18/2018, both of the Ministry of the Environment; and “Francisco Coloane” (which also includes the Marine Park by the same name) and “Seno Almirantazgo” in the Region of Magallanes and Chilean Antarctica (created by virtue of S.D. No. 276/2003 of the Ministry of National Defense and 11/2018 of the Ministry of the Environment⁵¹).

Regarding the development of aquaculture activities within their perimeter, the Comptroller General of the Republic has also issued a pronouncement, indicating in ruling No. 77,778/2013, that as AMCP-MUs are not a category included in SNASPE, the prohibition established in Article 158 of the LGPA cannot be applied to them, such that fishing and aquaculture activities may be performed therein. Nevertheless, in the same ruling, this control entity specifies that, while these activities can, by principle, be performed in an AMCP-MU, this is only possible when they are compatible with the “purposes of environmental conservation” considered at the time

48 The only reference to AMCP-MUs in the national regulations is in Articles 70 letter c) and 71 letter c), both of the LBGMA, in terms of the functions and attributions of the Ministry of the Environment and the Ministers’ Council for Sustainability, respectively.

49 SIERRALTA, Leonel, et al. (ed.). *Las áreas protegidas de Chile. Antecedentes, Institucionalidad, Estadísticas y Desafíos*. División de Recursos Naturales Renovables y Biodiversidad, Ministerio del Medio Ambiente. Santiago, 2011. p. 12. Available at: <http://bibliotecadigital.ciren.cl/bitstream/handle/123456789/6990/HUM2-0008.pdf?sequence=1&isAllowed=y> (January 2020).

50 According to the IUCN, the primary objective of this management category is “to protect natural ecosystems and use natural resources sustainably, when conservation and sustainable use can mutually benefit from each other,” where the sustainable use of such natural, non-industrial resources is designed as “a means to achieve the conservation of nature,” according to DUDLEY, Nigel. *Guidelines for applying the IUCN protected area management categories to marine protected areas*. Gland, Switzerland: IUCN, 2008. p. 27. Available at: <https://portals.iucn.org/library/efiles/documents/PAPS-016-Es.pdf> (January 2020).

51 Although not strictly belonging to the land traditionally identified as the “Chilean Patagonia,” the “Lafken Mapu Lahual” AMCP-MU may also be mentioned, which was created by S.D. No. 517/2005 of the Ministry of National Defense, located in the north of the Los Lagos Region, along the coast of Osorno.



when these areas were declared to be under official protection. These purposes are closely related to the so-called “protection objectives” specified for each AMCP-MU in its respective creation decree, whose effective protection, in practice, is brought to reality through the implementation of concrete actions that have been previously defined in its “management plan.”

The problem, however, is that, as revealed at the time by the Comptroller General of the Republic in its Auditing Report No. 825/2018⁵², published on July 5, 2019, no AMCP-MU has, at least as of January 2020, a management instrument that defines its administration and provides guidance with respect to the activities to be developed therein, in accordance with the objectives leading to its creation. In terms of the AMCP-MUs found in the Chilean Patagonia, this problem not only affects the most recently created “Seno Almirantazgo” and “Tortel” (created in 2018), but also the other two “Francisco Coloane” and “Pitipalena-Añihue,” created in 2003 and 2014, respectively, both of which are included, among others, in the abovementioned Final Report No. 825/2018. In fact, particularly with respect to the development of aquaculture activities in AMCP-MUs, SUBPESCA reported to the comptroller that, as of the audit date (September 2018), “no assessments have been performed in this sense, because the aquaculture activities that are carried out in these areas have been operating since before they were declared AMCP-MUs”⁵³.

Finally, it should be noted that, in accordance with the recent criteria of the IUCN, found in the second edition of the document “Guidelines for applying the IUCN protected area management categories to marine protected areas” of 2019, the development of industrial fishing and industrial-scale aquaculture activities is absolutely incompatible with environmental conservation, regardless of the management category of the respective protected area (I to VI), and only the development of small-scale aquaculture activities is appropriate in the category V or VI protected areas.

52 Final Report No. 825/2018 on actions developed by the National Fishery and Aquaculture Service, regarding the surveillance, administration, and control of protected marine areas. Available at: <https://www.contraloria.cl/pdfbuscador/auditoria/8fcf9bca52d203a41026d1372fc37a19/html> (January 2020).

53 Ibid. p. 45.



Figure 3. Matrix of marine activities considered appropriate for each management category of the IUCN

ACTIVITIES	Ia	Ib	II	III	IV	V	VI
Research: non-extractive	Y*	Y	Y	Y	Y	Y	Y
Non-extractive traditional use	Y*	Y	Y	Y	Y	Y	Y
Restoration/improvement for conservation (e.g. control of invasive species, reintroduction of coral)	Y	Y	Y	Y	Y	Y	Y
Traditional fishing/gathering according to cultural tradition and use	N	Y*	Y	Y	Y	Y	Y
Non-extractive recreation (e.g. scuba diving)	N	Y	Y	Y	Y	Y	Y
Large-scale and high-intensity tourism	N	N	Y	Y	Y	Y	Y
Navigation (unless inevitable under international maritime law)	N	N	N*	N*	Y	Y	Y
Research: extractive	N*	N*	N*	N*	Y	Y	Y
Renewable energy generation	N	N	N	N	Y	Y	Y
Restoration/improvement for other purposes (e.g. beach restocking, adding fish, artificial reefs)	N	N	N	N	Y	Y	Y
Fishing/gathering: recreational (sustainable)	N	N	N	N	*	Y	Y
Fishing/gathering: local fishing (sustainable)	N	N	N	N	*	Y	Y
Industrial fishing, industrial-scale aquaculture	N	N	N	N	N	N	N
Small-scale aquaculture	N	N	N	N	*	Y	Y
Infrastructure works (e.g. marines, ports, dredges)	N	N	N	N	*	Y	Y
Dumping of untreated waste	N	N	N	N	N	N*	N*
Mining, extraction of gas and oil (in and under marine soil)	N	N	N	N	N	N	N
Inhabitation	N	N	N	N	N	Y	N

CODES:

No	N
Not usually, unless special circumstances apply	N*
Yes	Y
Yes, because there is no other alternative, but special approval is required	Y*
Variable: it depends on whether the activity can be managed in a way that is compatible with the objectives of the Protected Marine Areas	*

Source: Own translation of “Matrix of marine activities that may be appropriate for each IUCN management category” in DAY, J., et al. *Guidelines for applying the IUCN protected area management categories to marine protected areas*.

Second edition. Gland, Switzerland: IUCN, 2019. p. 31.





III. The Case of the Kawésqar National Reserve in the Region of Magallanes

Within the framework of the project “Route of Parks of the Chilean Patagonia,” on January 30, 2019, S.D. No. 6/2018 of the Ministry of National Assets⁵⁴ was published in the Official Gazette, releasing the former Alacalufes Forestry Reserve, and creating the Kawésqar National Park and Kawésqar National Reserve, in the Region of Magallanes and Chilean Antarctica. According to the respective creation decree, this park only contains land surface area –as well as lakes and rivers located within its perimeter–, excluding the surrounding maritime waters; meanwhile, the national reserve covers the maritime space that used to form part of the perimeter of the former Alacalufes Forestry Reserve, which stretches across 2,628,429.2 hectares.

Figure 4. Salmon aquaculture concessions granted, with technical project approved and being processed, located in the maritime space of the Kawésqar National Reserve as of January 2020.



Source: Created by the authors based on information available on the SUBPESCA Map Viewer and in the Ministry of the Environment's Protected Areas Registry.

54 Available at: <https://www.diariooficial.interior.gob.cl/publicaciones/2019/01/30/42267/01/1537812.pdf> (January 2020).



According to data provided by the SUBPESCA Map Viewer, in the maritime space within the current Kawésqar National Reserve –previously located within the perimeter of the former Alacalufes Forestry Reserve –, there are to date 57 salmon farming concessions granted, 2 with technical project approved and 130 being processed, falling within different AAA demarcated by Exempt Decree No. 3451/2016 of the Ministry of National Defense. It is under this context that, according to the information available through the project search engine on the website of the Environmental Assessment Service (SEA), as of the day following the publication of said creation decree, and to date, different salmon farming projects located within the maritime space of the Kawésqar National Reserve have continued to enter and be admitted to the SEIA⁵⁵.

Table 3. List of salmonid farming projects to be located inside the Kawésqar National Reserve admitted for processing in the SEIA after its creation as of January 2020*

PROJECT NAME	COMPANY	ENTRY DATE	DATE OF ADMISSIBILITY (NOTIFICATION)	MAXIMUM PRODUCTION PER CYCLE	NUMBER OF CAGE RAFTS
Merger and relocation of Clarence 8 salmonid farm	Nova Austral	January 7, 2020	January 14, 2020	5,000 tons	20 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 9 salmonid farm	Nova Austral	January 03, 2020	January 10, 2020	2,000 tons	8 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 7 salmonid farm	Nova Austral	January 03, 2020	January 10, 2020	5,800 tons	20 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 1 salmonid farm	Nova Austral	January 03, 2020	January 10, 2020	7,900 tons	20 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 2 salmonid farm	Nova Austral	January 03, 2020	January 08, 2020	7,900 tons	22 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 5 salmonid farm	Nova Austral	January 03, 2020	January 08, 2020	4,350 tons	8 cage-rafts measuring 40 x 40 x 20 mts.
Seno Galvarino salmonid fattening farms	Acuícola Cordillera (Australis Seafoods)	November 22, 2019	November 26, 2019	5,500 tons	20 cage-rafts measuring 40 x 40 x 19 mts.
Sur Islotes Beytía salmonid farm (Application No. 214121001)	Cultivos Otway (Multiexport Foods)	November 6, 2019	November 13, 2019	5,000 tons	24 cage-rafts measuring 30 x 30 x 20 mts.
Merger and relocation of Clarence 4 salmonid farm	Nova Austral	June 8, 2019	June 11, 2019	11,000 tons	24 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 6 salmonid farm	Nova Austral	April 12, 2019	April 22, 2019	10,000 tons	20 cage-rafts measuring 40 x 40 x 20 mts.
Merger and relocation of Clarence 14 salmonid farm	Nova Austral	April 10, 2019	April 16, 2019	10,000 tons	20 cage-rafts measuring 40 x 40 x 20 mts.
Golfo Xaultegua salmon fattening farm	Inversiones Pelicano XII	February 13, 2019	February 19, 2019	9,600 tons	48 cage-rafts measuring 30 x 30 x 15 mts.
Esterio Pérez de Arce salmonid fattening farm	Acuícola Cordillera (Australis Seafoods)	January 24, 2019	January 31, 2019	6,000 tons	16 cage-rafts measuring 40 x 40 x 15 mts.
Ensenada Colo Colo salmonid fattening farm	Acuícola Cordillera (Australis Seafoods)	January 29, 2019	January 31, 2019	7,000 tons	20 cage-rafts measuring 40 x 40 x 15 mts.
				97,050 tons	290 cage-rafts

* Many of these projects were deserted during their first application, but later reentered the SEIA.

Source: Created by the authors based on information obtained from the project search engine available on the SEA website (www.sea.gob.cl)

55 It should be noted that many of these projects are mergers and voluntary relocations of salmon farming concessions owned by the company Nova Austral that are currently located, paradoxically, both inside the Alberto D'Agostini National Park and in the Puerto Natales corridor, to be transferred to the Clarence Island sector, within the National Reserve by the same name, as proposed by SUBPESCA itself.



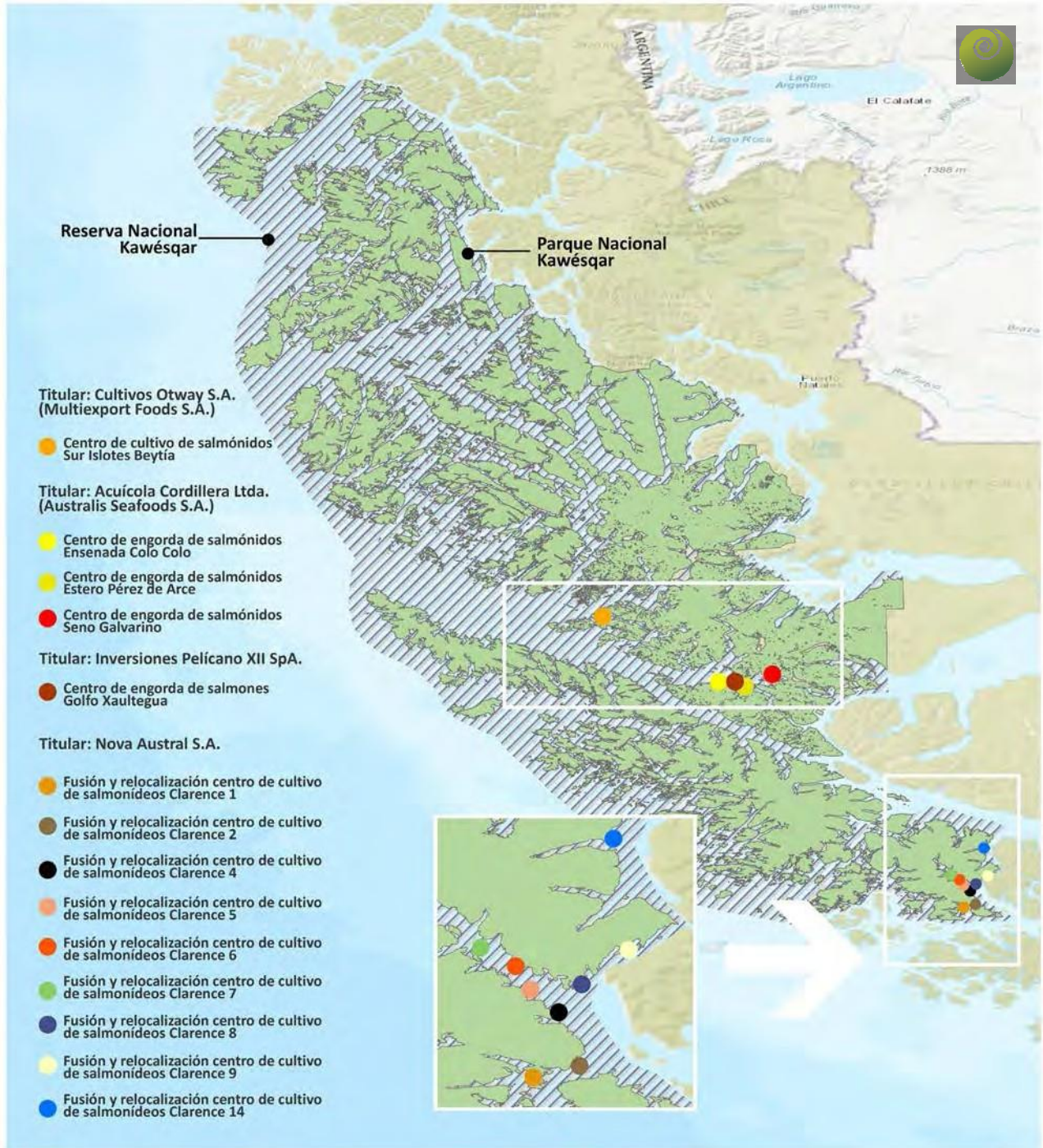
All salmon farming projects mentioned have in common the fact that they have been entered into the SEIA and definitively admitted for processing by the SEA after the publication of the creation decree for the Kawésqar National Reserve by way of a mere DIA. This was done under circumstances where, as mentioned above, in Article 11 letter d) of the LBGMA, also specified in Article 8 RSEIA, it is clear that the presentation of an EIA is required for projects or activities to be “located in or near (...) protected areas,” as occurs in this case. For this reason, the admissibility of these projects granted by the SEA is legally questionable, given that according to Article 14 ter of the LBGMA, one of the aspects that must be strictly verified by the assessment entity when ruling on the admissibility of a project submitted is, in addition to the project type, the assessment procedure to which it is subject, so that there are no administrative errors when admitting and processing the same.

On the other hand, given the recent creation of the Kawésqar National Reserve, it still does not have a management plan that indicates its environmental conservation objectives (and which must be prepared within 18 months, according to the creation decree), nor are these specified in its creation decree, as opposed to what is happening in the case of the National Park by the same name⁵⁶. So it is then that, in the absence of an express definition of the conservation objectives of the Kawésqar National Reserve, the potential approval of new salmon farming projects inside this protected area is not reasonable and openly disputes the precautionary principle, at least in the sense that it does not first have an approved management plan that expressly defines the abovementioned objectives and determines the possible compatibility of this activity with said objectives.

⁵⁶ In fact, while the same decree in Article IV expressly establishes the objective of general protection and seven specific objectives for the Kawésqar National Park, it omits doing the same for the Kawésqar National Reserve, notwithstanding the fact that, as required by Article II No. 3 of said supreme decree, it must obtain approval of its respective management plan within 18 months after being fully processed, and which must state the area's protection objectives.



Figure 5. Salmonid farming projects to be located inside the Kawésqar National Reserve admitted for processing in the SEIA after its creation as of January 2020.



Source: Created by the authors based on information obtained from the project search engine available on the SEA website (www.sea.gob.cl)





IV. Conclusions and Recommendations

Throughout the present document, the authors have offered a systematized description of the legal framework of protection under which aquaculture and salmon farming activities are currently being developed, particularly in national protected terrestrial and marine areas, with special emphasis on those in the Regions of Los Lagos, Aysén, and Magallanes. Based on the analysis performed, it is possible to sustain that, while the applicable regulations on this matter show characteristics of dispersion and, at times, an inorganic nature, the problems associated with the development of this activity in national protected areas –with the exception of National and Forestry Reserves– do not appear to be based on the quality of sectoral regulation, but rather on the particularly lax interpretation and application by the competent public entities such as SUBPESCA and the SEA.

Effectively, in many cases, administrative practices have even gone against the express regulations, and this is clearly demonstrated in the favorable environmental assessment of salmon farming projects to be located in sectors inside and adjacent to protected areas, without requiring the presentation of an EIA, and the granting of salmon farming concessions within the perimeter of National Parks despite the absolute legal prohibition thereof. In other cases, there is evidence of a simplistic and extremely literal understanding of the applicable regulations by the sectoral authority, which has been seen in the granting of salmon farming concessions inside maritime zones that form part of National and Forestry Reserves located in the southernmost regions, with no consideration whatsoever of the requirements derived from the precautionary principle and ecosystemic approach.

This is related to the fact that many protected areas where aquaculture activities are currently carried out, as is the case of the Las Guaitecas Forestry Reserve in the Aysén Region and the Kawésqar National Reserve in the Magallanes Region, lack a management instrument that defines their conservation objectives, and this is also extended to protected marine areas, particularly the AMCP-MUs mentioned, none of which have a management plan to date. As indicated before, these management instruments are crucial to determining the compatibility of the aquaculture activities to be developed in a specific protected area with the conservation objectives of the same, such that its prior existence should be considered by the sectoral authority as a basic precondition for the performance of activities of this nature.

Based on the foregoing, the Terram Foundation formulates the following recommendations:

- 1 The SEA must follow the law when ruling on the admissibility of salmon farming projects to be located inside or near protected areas, in terms of the form of entry into the SEIA, understanding that in these cases, they must necessarily be entered through an EIA and not through a DIA, especially considering that the former allows for the assessment of the synergistic effects or impacts generated;
- 2 The application of the regulations according to the precautionary principle requires that the protected area necessarily have a management or administration plan, as is the case, prior to the development of aquaculture activities therein –when these are permitted–, and this instrument is determinant for analyzing the compatibility of said activities with the conservation objectives of the respective area;
- 3 The adoption of an ecosystemic approach on this matter should lead to an understanding of the terrestrial and marine portion of the same protected area as part of a single relevant ecosystemic unit, which is important, among other things, for determining the possible effect of aquaculture, and salmon farming activities in particular, on its conservation objectives;
- 4 It is necessary to make progress in terms of approving and/or updating, as is the case, the macro-zonings and micro-zonings of the regions of Los Lagos, Aysén, and Magallanes, which allow for a proper organization of salmon farming, which should at least consider the minimum marine strip of protection or exclusion of the farming of exotic hydrobiological species as protected terrestrial areas bordering the ocean;
- 5 It is advisable to review the provisions related to the development of production activities in protected areas contained both in current regulations and in current bills being debated by Congress, as is the case of the Bill to create the Biodiversity and Protected Areas Service and the National System of Protected Areas (Bulletin No. 9,404-12), in order to match the recent criteria of the IUCN on the activities considered appropriate for each management category, which only include small-scale aquaculture and when the respective category so allows.



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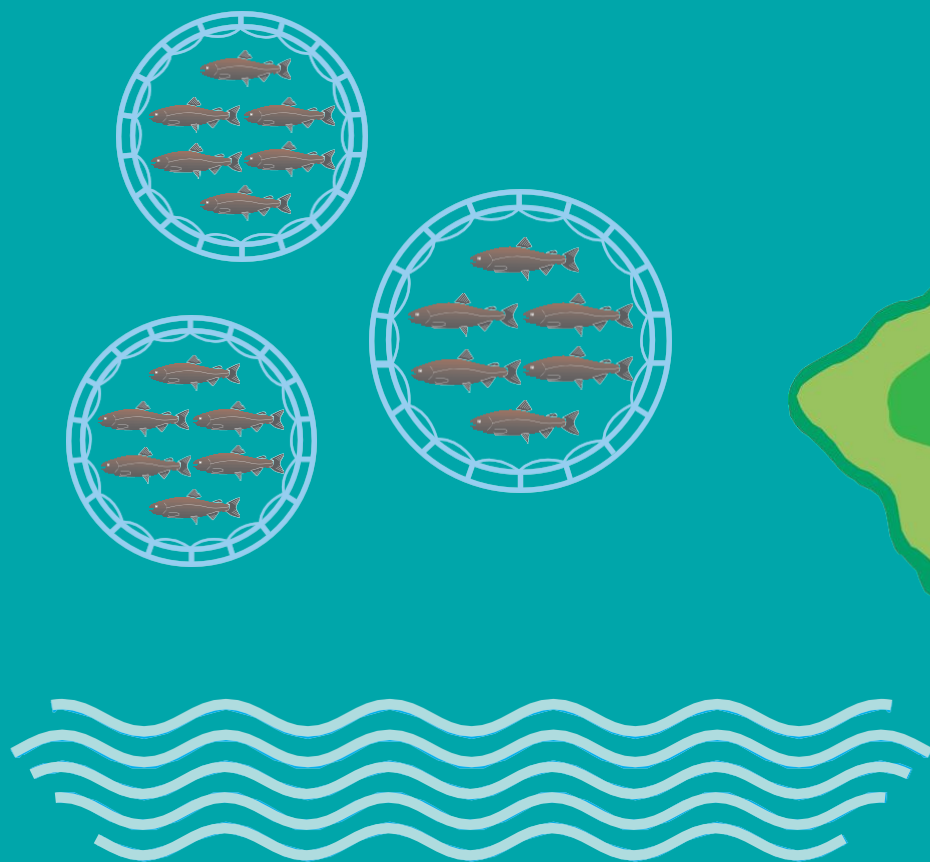
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