

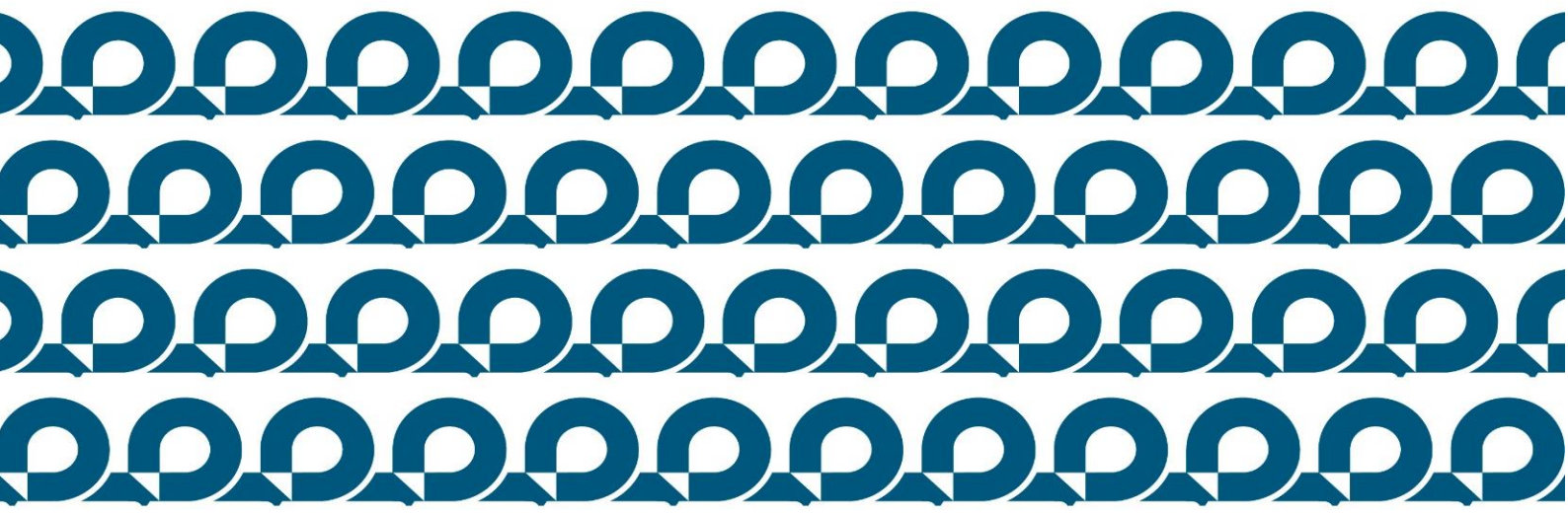


## DISCLOSURE OF ENVIRONMENTAL IMPACTS TRANSPARENCY IN SUSTAINABILITY PROGRAMME

Rúa José Fernández López s/n  
36320 Chapela. Redondela. Pontevedra [Spain]  
Phone +34 986 818 100 [www.nuevapescanova.com](http://www.nuevapescanova.com)

---

NUEVA PESCANOVA SL. Registro Mercantil Pontevedra - folio 40, libro 4054, inscripción 1ª, hoja PO-58757 - NIF ES B94123908



## DISCLOSURE OF ENVIRONMENTAL IMPACTS

### TRANSPARENCY IN SUSTAINABILITY PROGRAMME

#### TABLE OF CONTENTS

PREAMBLE.....	4
<b>1. DEPENDENCE ON NATURE .....</b>	<b>4</b>
<b>2. IMPACTS ON BIODIVERSITY.....</b>	<b>5</b>
2.1 ENVIRONMENTAL IMPACT AND BIODIVERSITY STUDIES PREPARED BY INDEPENDENT ENTITIES.....	5
2.2 PROMARISCO (ECUADOR).....	5
2.3 CAMANICA (NICARAGUA).....	6
2.4 NOVAGUATEMALA (GUATEMALA).....	7
2.5 NOVAPERÚ (PERÚ).....	8
2.6 IMPACTOS POSITIVOS GENERADOS POR PROYECTOS DE CONSERVACIÓN.....	9
2.7 ASSESSMENT OF POSITIVE IMPACTS ON SHOREBIRDS .....	9
2.8 CERTIFIED FISHERIES.....	10
2.9 FISHERY IMPROVEMENT PROJECTS.....	10
2.10 FISHING GEARS AND IMPACTS OF GHOST FISHING.....	11
2.11 IMPACTS ON SEABIRDS .....	12
2.12 OTHER IMPACTS OF FISHING ACTIVITIES .....	12
<b>3. LAND AND SEA USE CHANGE.....</b>	<b>12</b>
3.1 LAND USE CHANGE .....	12
3.1.1 Studies to evaluate the change in land use prepared by independent entities	13
3.1.2 PROMARISCO (Ecuador)	13
3.1.3 CAMANICA (Nicaragua)	14
3.1.4 NOVAGUATEMALA (Guatemala)	14
3.2 LOW IMPACT FISHING GEAR ON THE SEA FLOOR .....	15
<b>4. DEPLETION OF NON-RENEWABLE NATURAL RESOURCES.....</b>	<b>16</b>
4.1 MATERIALS.....	16
4.2 FOSSIL FUELS.....	16
<b>5. RATIONAL USE OF WATER.....</b>	<b>17</b>
5.1 CONSUMPTIVE USE OF WATER.....	17
5.2 WATER STRESS WITH SPATIAL DIFFERENTIATION.....	17

6.	EMISSION OF GREENHOUSE GASES .....	18
7.	WASTE MANAGEMENT .....	18
7.1	HAZARDOUS WASTE .....	18
7.2	NON-HAZARDOUS WASTE.....	19
8.	EMISSION OF OZONE-DEPLETING SUBSTANCES.....	19
9.	OTHER ASPECTS OF POLLUTION .....	19
10.	SENSITIVITY TO CLIMATE CHANGE.....	19
11.	ENVIRONMENTAL PREPAREDNESS AND RESPONSE TO EMERGENCIES.....	20
12.	SOCIAL IMPACT – COMMUNITY RELATIONSHIP STRATEGY.....	20
12.1	EXTERNAL COMMUNICATIONS.....	20
12.2	GRIEVANCE MECHANISM.....	21
	ANNEX: SUMMARY TABLES OF IMPACTS .....	22

## DISCLOSURE OF ENVIRONMENTAL IMPACTS

### TRANSPARENCY IN SUSTAINABILITY PROGRAMME

#### PREAMBLE

---

**Sustainable development** and **responsible action** are essential aspects of the business culture of the Nueva Pescanova Group. These two traits are decisive for the fulfilment of our commitments to the environment and society since the activities carried out by the Group are extractive (fishing), productive (aquaculture) and consumptive (seafood products transformation and processing) which imply the exploitation of ecosystem goods and services. It is, therefore, our duty to ensure that we conduct our operations responsibly and rationally.

In our [Corporate Environmental Responsibility Policy](#), we had already set the objective of formally establishing the commitments and guiding principles for the fishing, aquaculture, industrial and commercial activities of the Nueva Pescanova Group, which ensure the respect for the environment, with actions that favour the sustainable management of natural resources, responsible management of water, energy and materials, as well as the conservation of biodiversity and the fight against climate change.

#### 1. DEPENDENCE ON NATURE

---

We acknowledge that we all must contribute to building the necessary resilience so that natural processes can ensure the continuity of human activities. We depend on the contributions of nature, or ecosystem services, and biodiversity. This natural capital is the basis of our operation, and it is only logical that it is our priority.

We transform natural biological and mineral resources, water, and energy into food products in convenient formats, under excellent conservation conditions, of high quality and with a food safety guarantee. This is our dependence on the services offered by marine and coastal ecosystems, mainly. The productivity of the oceans and aquaculture pools, water quality, coastal protection and the ideal nursery conditions for fishing species provided by mangroves, among many other essential functions for the proper functioning of marine and terrestrial trophic chains, its interactions with the atmosphere, the production of oxygen and the absorption of CO<sub>2</sub>. We are integral parts of the system, and we are committed to helping to reduce the impacts of our activity, to mitigate legacy problems from the past, to regenerate lost quality and promote a positive effect around us.

We had already identified in our [Corporate Sustainability Policy](#) that the intrinsic value of the natural resources used must always be transferred to the final product responsibly offered to the consumer, maximizing the efficiency of the processes to guarantee the sustainability of those activities.

## 2. IMPACTS ON BIODIVERSITY

---

### 2.1 ENVIRONMENTAL IMPACT AND BIODIVERSITY STUDIES PREPARED BY INDEPENDENT ENTITIES

- ENVIRONMENTAL IMPACT STUDY ON BIODIVERSITY, GENERATED BY THE OPERATIONS OF THE SHRIMP FARMS: MARFRISCO, SANTA CECILIA, QUIÑONEZ AND BELLAVISTA OF THE GRUPO PROMARISCO S.A., Ecuador. June 2019, 41pp.
- UPDATE OF THE ENVIRONMENTAL IMPACT STUDY ON BIODIVERSITY, GENERATED BY THE ACTIVITIES OF THE SHRIMP FARMS: BELLAVISTA, MARFRISCO, QUIÑONEZ AND SANTA CECILIA, OF THE PROMARISCO S.A. GROUP, Ecuador. February 2022, 203 pp.
- BIODIVERSITY ASSESSMENT, EMPRESA CAMARONES DE NICARAGUA, S.A. – SHRIMP FARMS OF BLOCK I, DOS AGUAS GRANDES COMPLEX I, II, SAN JOSE I, II, III, AGRIMARSA I, II, III, IV. Puerto Morazán, Department of Chinandega, Nicaragua. June 2019, 138 pp.
- BIODIVERSITY ASSESSMENT, EMPRESA CAMARONES DE NICARAGUA, S.A. – BLOCK II SHRIMP FARMS, PLAYA GRANDE AND EL SEMILLAL, Nicaragua. July 2019, 136 pp.
- BIODIVERSITY ASSESSMENT, EMPRESA CAMARONES DE NICARAGUA, S.A. – BLOCK III SHRIMP FARMS, LAS ROSAS I, II, III, SAN MARINO I, II, III, MAROTA I, II, CAMANICA, Nicaragua. July 2019, 137 pp.
- ASSESSMENT OF THE ENVIRONMENTAL IMPACT ON BIODIVERSITY (B-EIA). NOVAGUATEMALA S.A., IXTÁN SHRIMP FARM, Municipality of Champerico, Department of Retalhuleu, Guatemala. June 2021, 88 pp.
- PLAN FOR MONITORING AND ENVIRONMENTAL SURVEILLANCE OF LA GRANJA MARINA DE INSUIÑA, S.L. IN XOVE, LUGO. Annual Report during the Exploitation and Operation phase 2021. February 2022, 55 pp.
- SEMI-DETAILED ENVIRONMENTAL IMPACT STUDY (EIA-SD) OF THE PROJECT “INSTALLATION OF A PLANT FOR FREEZING HYDROBIOLOGICAL PRODUCTS OF 8,800 t/day”. Chilca, Lima. June 2021. 250 pp.

### 2.2 PROMARISCO (ECUADOR)

We have conducted an Environmental Impact Study on Biodiversity (EIAB) to learn about and manage potential environmental impacts more responsibly, with a special focus on biodiversity, mangroves, and other natural habitats. Committed to the conservation of mangroves and biodiversity, and in compliance with applicable regulations and aquaculture sustainability standards we have adhered to, we have implemented Reforestation Plans to reforest 82.99 ha of mangroves in the Gulf of Guayaquil region since 2011. Complying with the requirements of the most recent sustainable aquaculture certifications, in 2021 we have started an additional Reforestation Plan, with a duration of 10 years until meeting the compensation of the area determined by certification (6.31 ha/year).

All the farms (total area 3,529.8 ha) work in semi-intensive production of a single endemic shrimp species (*Penaeus vannamei*), without genetically modified organisms, without the use of antibiotics, rather using probiotics, with no consumptive use of water, and daily control of the quality of the ponds water (dissolved oxygen levels, temperature, turbidity, colour, etc.). The company's activity does not involve the introduction of invasive species that would pose a high risk to the local flora and fauna.

The closest protected areas to PROMARISCO farms correspond to the Ecological Reserve, Churute mangroves (Fauna Production Reserve), El Salado mangroves, Wildlife Refuge, and El Morro mangroves; It is worth mentioning that these areas are located at distances between 14 km and 40 km.

- Marfrisco Farm: 1,429.72 ha of aquaculture production area; Flora: 28.88 ha of mangrove (in the buffer area), mainly *Conocarpus erectus* and *Laguncularia racemosa* with medium diversity index including *Rhizophora mangle* (red mangrove), *Avicennia germinans* (black mangrove), *Laguncularia racemosa* (white mangrove), *Conocarpus erectus* (button mangrove), *Salicornia fruticosa*, *Ipomoea carnea*, *Croton* sp.; The mangrove species are in the category '(NT) Near Threatened' of the International Union for Conservation of Nature (IUCN) Red List; Intervened area: 33.77 ha; Fauna: 19 species of avifauna, 7 mammals, 12 estuarine fauna and 6 herpetofauna, all classified as '(LC) Least Concern' on the IUCN Red List, except for *Crocodylus acutus* (coastal crocodile or lizard) classified as '(VU) Vulnerable'.
- Bellavista Farm: 672 ha of aquaculture production area; Flora: 65.99 ha of mangrove (in the buffer area), mainly *Conocarpus erectus* and *Rhizophora mangle*, medium diversity index; Mangrove species are in the '(NT) Near Threatened' category of the IUCN Red List; Intervened area: 12.89 ha; Fauna: 21 bird species, 10 mammals, 9 estuarine fauna and 3 herpetofauna, all classified as 'Least Concern (LC)' on the IUCN Red List, except 2 'No information'.
- Quiñonez Farm: 1,126.97 ha of aquaculture production area. Flora: 39.61 ha of mangrove (in the buffer area), mainly *Conocarpus erectus* and *Rhizophora mangle* with medium diversity index including *Rhizophora mangle* (red mangrove), *Avicennia germinans* (black mangrove), *Laguncularia racemosa* (white mangrove), *Conocarpus erectus* (button mangrove), *Ipomoea carnea*, *Croton* sp.; Mangrove species are in the category '(NT) Near Threatened' of the IUCN Red List; Intervened area: 65.26 ha; Fauna: 22 species of avifauna, 10 mammals, 9 estuarine fauna and 3 herpetofauna, all classified as '(LC) Least Concern' on the IUCN Red List, except 8 'Not Registered'
- Santa Cecilia Farm: 301.13 ha of aquaculture production area; Flora: mangrove 28.59 ha (in the buffer area), mainly *Conocarpus erectus* and *Rhizophora mangle* with a medium diversity index including *Rhizophora mangle* (red mangrove), *Laguncularia racemosa* (white mangrove), *Conocarpus erectus* (button mangrove), *Salicornia fruticosa*, *Ipomoea carnea*, *Croton* sp.; The mangrove species are in the category '(NT) Near Threatened' of the IUCN Red List; Intervened area: 12.09 ha; Fauna: 21 species of avifauna, 10 mammals, 9 estuarine fauna and 2 herpetofauna, all classified as '(LC) Least Concern' on the IUCN Red List, except 4 '(NE) Not Evaluated' and 1 'Not Recorded'.

From the study, it is concluded that, except for *Crocodylus acutus*, no species have been found that are threatened or in danger of extinction; however, training has been delivered to neighbouring communities on the handling and management of this species. The company must maintain the buffer area, but it is emphasized that, since the company does not use toxic chemicals and antibiotics, there is no harm to the flora and fauna of the mangrove.

In response, a specific procedure for the management of vulnerable or endangered species has been implemented, specifically targeting the handling and management of the only vulnerable species (*Crocodylus acutus*). The commitment to the protection of mangrove areas has led to the development and implementation of a biodiversity action plan (BAP).

### 2.3 CAMANICA (NICARAGUA)

Of the 19 vannamei shrimp aquaculture farms in CAMANICA (Nicaragua), only 2 are located in protected areas or special conservation areas, specifically in the Conservation and Productive Diversification area of the Delta del Estero Real Nature Reserve.

According to the Management Plan of the Delta del Estero Real Nature Reserve, approved by the Ministry of Environment and Natural Resources, the area of the Natural Reserve is 84,759.82 hectares. The El Semillal and Playa Grande shrimp farms have been legally built before the designation of the protected area and have a total of 1,155.64 ha, representing 1.8% in relation to the dimension of the protected area, a number that is well below the critical value of 25% according to the IUCN. The Management Plan of the Delta del Estero Real Nature Reserve establishes specific regulations for management zones to be able to carry out shrimp farming.

The biodiversity study has characterized the floristic composition and the diversity of the wild fauna of the Mangrove Forest and its connectivity with the Dry-Deciduous Forest present in the areas near the CAMANICA aquaculture farms.

The monitoring of the productive zones and indirect influence areas of the CAMANICA farms has revealed the presence of 72 species of vertebrate fauna: 54 species of birds (mainly herons and migratory shorebirds), 6 reptiles (mainly geckos and iguanas), 11 fish (mainly bass) and 1 mammal (raccoon). According to CITES<sup>1</sup> criteria, there are 2 species in appendix I (*Falco peregrinus* and *Amazona auropalliata*), 4 bird species in appendix II (*Pandion heliaetus*, *Buteogallus anthracinus*, *Aratinga canicularis* and *Brotojeris jugularis*); 1 reptile species in appendices II (*Iguana iguana*) and one reptile in appendix I (*Crocodylus acutus*). From the IUCN red list, only one vulnerable (VU) wildlife species, *Crocodylus acutus*, is threatened with extinction due to population decline and habitat degradation. Also, 9 bird species under indefinite ban, 2 reptiles under partial ban (*Iguana iguana*, *Ctenosauria similis*) and one reptile under indefinite ban (*Crocodylus acutus*) were identified.

Due to its ecological importance and habitat connectivity, additional monitoring of the dry-deciduous forest attached to the CAMANICA farms was carried out. 21 families of arboreal flora and 34 species of vertebrates (25 species of birds, 5 species of mammals and 5 species of reptiles) were identified. 13 species present a certain degree of vulnerability; 7 bird species are in a national ban (four in CITES appendix); 2 mammals in national bans (one in CITES appendix); 4 reptiles in CITES list and 3 species are in a national ban.

Additionally, an important 1,851 ha of biological corridors and connectivity areas have been estimated, close to 45% of the total area occupied by CAMANICA (4,143.4 ha).

Regarding flora monitoring, the entire aquaculture production area is surrounded by mangrove forest, they are an ecosystem that does not present a great diversity, it is dominated by four halophyte species (from more abundance to less: *Rhizophora mangle*, *Avicennia germinans*, *Avicennia bicolor* and *Laguncularia racemosa*). According to the national legislation, mangrove is under an indefinite ban (Law No. 585, Ban on the Cutting, Use and Marketing of Forest Resources, published in La Gaceta No. 120 of June 21, 2006).

In the areas identified with the most degradation, where *Rhizophora mangle* has disappeared and the detachment of the edges of the estuary is observed due to the lack of stilt roots that serve as support and retention, there is occasional sedimentation in the tributary estuaries of the CAMANICA farms. To mitigate this impact, the company is increasing its efforts in reforestation and restoration plans with *Rhizophora* in these areas.

## 2.4 NOVAGUATEMALA (GUATEMALA)

The 366-ha farm is not established in protected areas or adjacent to protected areas, and the occupied spaces were not established in critical habitats for the species in the area. The closest protected area is the Mangrove Ecological Reserve, which is a private nature reserve located in Champerico, 3.3 km from the Ixtán farm, without any type of interference in its management.

---

<sup>1</sup> Convention on International Trade in Endangered Species of Wild Fauna and Flora CITES (Appendix I: Species in danger of extinction; Appendix II: Species that are not necessarily in danger of extinction, but whose trade must be controlled to avoid use incompatible with their survival; Appendix III: This Appendix includes species that are protected in at least one country, which has requested the assistance of other CITES Parties to control their trade): <https://cites.org/>

The farm was originally established in a terrestrial ecosystem of dry forest plains, agricultural land with dry forest vegetation, and mangrove patches in the Ixtán and Espíndola estuaries.

Currently, the main ecosystems present on the site include dry tropical savannah, mangrove forests, and floodplains. The mangrove forest is of the riparian type and presents woody plant formations with a dense and well-defined structure. Mangroves are considered the most productive ecosystems and the starting point of the trophic chain. Mangroves are important for being a refuge and nesting site for resident birds, they are home to threatened species, and they provide the conditions for the proper development of juvenile stages of various marine species.

The evaluation of the species found in the surroundings of the farms includes:

- **FLORA:** 16 species all listed as '(LC) Least Concern' by the IUCN, 4 of them (mangroves) are listed as Index 2 on the red list of Guatemala (CONAP<sup>2</sup> Indices).
- **FAUNA:** 5 are mammals, one is listed as near threatened by IUCN, 2 listed in CITES appendix I and 1 in appendix III, 2 in index 2 and 2 in index 3 CONAP; 6 reptiles of these 3 classified as Vulnerable and one endangered according to the IUCN, 4 in Appendix I and 2 in Appendix II CITES, 3 Index 2 and 3 Index 3 CONAP; 121 birds, 1 listed as Vulnerable, 1 Endangered and 4 Near Threatened by the IUCN, 1 in Appendix I, 9 in Appendix II and 1 in Appendix III CITES, 2 in Index 2 and 18 in Index 3 CONAP. These species of fauna are not seen on the farm; however, awareness was raised among the farm staff to respect and protect all wild species.

The farm is surrounded by natural vegetation with mangroves in estuaries and dry forests on plains, giving a buffer zone with a width greater than 25 meters, allowing the movement of species in the perimeter of the farm.

Although the production system has been established on degraded soils previously covered by dry forest, the impact on biodiversity is minimal since few species are usually present in the area due to the scarce vegetation present, however, the activities of shrimp farming can put biodiversity in the surrounding areas at risk if good management practices are not implemented, particularly nutrient loads management in effluents that could negatively impact native species in the estuaries. To minimize the negative impacts of farmed shrimp production, Ixtán implements good management practices in compliance with the regulations of government agencies and the requirements of aquaculture sustainability standards for *vannamei* shrimp farming.

The *Penaeus vannamei* shrimp is native to the Pacific, therefore it is not an introduction of non-native species; however, good production practices are applied to prevent and monitor shrimp escapes from production ponds into the environment. In addition, due to the location of the farm, the distance from the coast and the natural and artificial barriers, there is no danger of massive shrimp escapes, since the productive ponds are kept at adequate heights and the tides do not reach the levels of the perimeter dikes by the action of the barrier that exists in these perimeters.

## 2.5 NOVAPERÚ (PERÚ)

NOVAPERU (Peru) has built and started up a new plant for the primary processing and freezing of fishing products in 2022, with ca. 15,350 m<sup>2</sup> of total implantation area and a capacity for 13,000 t/year. Its operations consist of the reception of fish species, such as Chilean jack mackerel, Pacific chub mackerel, bonito, mahi-mahi, Peruvian silverside, jumbo squid, and its evisceration and cutting, packaging, and freezing.

NOVAPERU has required the preparation of an environmental impact study (EIA), in compliance with the industry's national regulations and environmental licensing. The plant has been implemented in an industrial

---

<sup>2</sup> Consejo Nacional de Áreas Protegidas (CONAP), or National Council of Protected Areas, is the highest management and coordination body of the Guatemalan System of Protected Areas: <https://conap.gob.gt/>. Risk categories: Index 1. Critically Endangered (PC); Index 2. Endangered (EP); Index 3. Vulnerable (VU).



park (INDUPARK) already designated and approved, located in the Chilca industrial park, Chilca district, Cañete province, Lima department, in Peru, subject to prior environmental evaluations and approvals in what concerns the impacts on fauna and flora, landscape, archaeological, social, etc.

The EIA of the NOVAPERU plant has identified and quantified the environmental and socioeconomic impacts generated by construction, operation and maintenance, and abandonment activities, indicating the standard need to implement a management plan that monitors and reports the impacts generated in these phases. No significant environmental risks or impacts have been identified. The most relevant in the operation phase is the management of waste and industrial effluents, for which mitigation measures were defined and implemented. Other aspects include air quality, environmental noise, health and safety, and management plans for facilities of this type, as a response to accidents, and contingencies, among others.

## 2.6 IMPACTOS POSITIVOS GENERADOS POR PROYECTOS DE CONSERVACIÓN

In response to the environmental risks identified in the environmental and biodiversity impact studies attributed to aquaculture activities, we have launched mitigation and compensation projects.

The iguana conservation project (*Iguana iguana* species) includes breeding in farms located in the facilities of CAMANICA (Nicaragua) for the subsequent release of hatchlings into the wild in collaboration with volunteers from schools and local authorities in an alliance with the Ministry of the Environment and Natural Resources (MARENA). In the last year, 300 individuals have been released, reaching 1,800 since the start of the project in 2016. This species is identified as potentially affected by the activity of shrimp farms. For that reason, we are committed to largely compensating for the potential risk to the conservation of the species.

We also developed a project for the repopulation of sea turtles (black parlama species, or Olive Ridley, *Lepidochelys olivacea*) in Guatemala. With this initiative, we help the conservation of the species since it is classified as 'Vulnerable' on the IUCN Red List. The project has the collaboration of volunteers, schools, and local authorities, and more than 2,000 sea turtles have been released since the start of the program in 2009.

Mangroves are formations of facultative halophytic plants, established in the intertidal zone. They border bays, coastal lagoons, estuaries, deltas, and river mouths. The red mangrove plantation project (*Rhizophora mangle* species) carried out by PROMARISCO (Ecuador) and CAMANICA (Nicaragua) is integrated into our [Environmental Compensation Programme](#) for its role in compensating GHG emissions and maintaining aquatic biodiversity. We have planted a total of 42,000 mangrove propagules in the last 2 years in Ecuador and Nicaragua, and we maintain some 1,200 ha of mangrove.

## 2.7 ASSESSMENT OF POSITIVE IMPACTS ON SHOREBIRDS

Relevant studies prepared by third parties:

- RESULTS OF THE FIRST TRINATIONAL SIMULTANEOUS COUNT OF SHOREBIRDS IN SHRIMP FARMS IN THE GULF OF FONSECA: El Salvador – Honduras – Nicaragua. Manomet/WHSRN, SalvaNatura, Honduran Ornithological Association (ASHO), Quetzalli Nicaragua. March 2021, 14 pp.
- GENERAL LIST OF BIRDS IN THE CAMANICA SHRIMP FARM. Quetzalli Nicaragua, Honduran Ornithological Association (ASHO), Chinandega, Nicaragua. Version 1, September 2022, 6 pp.

CAMANICA in Nicaragua has collaborated in the study of the importance of shrimp farms for shorebirds, a tri-national study in the Gulf of Fonseca, carried out in Nicaragua, El Salvador, and Honduras. The study has analysed the abundance and species richness of aquatic and shorebirds in areas of shrimp farming activity.

Waterbirds (aquatic birds) are ecologically dependent on wetlands, occupying them permanently or temporarily to cover a certain stage of their life cycle, while shorebirds, in many cases long-distance migratory species, often depend on a few stopover, reproduction, and wintering sites. Shrimp farms offer the conditions

required to feed and regain strength for their demanding migrations. The contribution to this study helps to understand how to mitigate the risks of impacting these species and their habits, contribute to their conservation, and maintain the biodiversity in our geographic scope.

## 2.8 CERTIFIED FISHERIES

Through our '[Pescanova Blue' Sustainability Programme](#) we examine the evidence of the sustainable origin of our fisheries. Globally, for all the Group's fishing operations in Namibia, Argentina, Mozambique, and Angola, we report the catches of main, secondary, and accessory species (bycatch), fishing areas, fishing gear and evidence of exploitation and sustainability status of the fisheries where we operate. We estimate the impact on accessory species at 1.4% of the total 57,628.0 t captured. This information is published annually in the Sustainability Progress Report<sup>3</sup>.

The Cape hake fishery in Namibia is certified by the Marine Stewardship Council (MSC) international sustainable fishing standard.

Through the Namibian Hake Association (client of the MSC certification in the Cape hake fishery in Namibia, and of which we are partners) we have actively collaborated in the follow-up audits and the previous work of analysis and documentation of the fishing operations of the trawling fleet of our Namibian subsidiary, NOVANAM. From these works, the audit team has reported fishing resources inventories and catches and has identified the impacts on main and secondary species, endangered, threatened, and protected (ETP) species and on the ecosystem. The reports are public<sup>4</sup> and show compliance with good practices applied to fishing by the fleets involved:

- Impacts under MSC Principle 1 (**Sustainability of the stock**: *Fisheries must operate in a way that allows fishing to continue indefinitely, without overexploiting the resource*). "The Namibian stock assessment suggests that rebuilding is continuing on track and the rebuilding plan is being followed. (...) Neither the surveys nor the fishery data give rise to any cause for concern."
- Impacts under MSC Principle 2 (**Ecosystem impacts**: *Fishing operations need to be managed to maintain the structure, productivity, function, and diversity of the ecosystem upon which the fishery depends, including other species and habitats*): ETP ("Seabird bycatch (...) remains the principal area of concern (...) concerning ETP species"). For habitats, (...) the client group has made progress in developing a program for benthic survey identification and has implemented this").

## 2.9 FISHERY IMPROVEMENT PROJECTS

Fishery Improvement Projects (FIPs) are multi-stakeholder platforms to address environmental challenges in a fishery. These projects apply a stepwise approach to enhance the sustainability of a fishery, encouraging harvesting to continue, while continual improvements are achieved, and use the power of the private sector to incentivize positive changes towards sustainability in the fishery, making these changes last through policy change.

Participating in a FIP qualifies as evidence of sustainability in our '[Pescanova Blue' Sustainability Programme](#)<sup>5</sup>, whose purpose is to ensure that our food products are indeed sustainable.

---

<sup>3</sup> GNPVA 2022. 2022 PROGRESS REPORT ON SUSTAINABILITY GOALS. Available at:

<https://www.nuevapescanova.com/en/engagement/corporate-social-responsibility/transparency/>

<sup>4</sup> Namibia hake trawl and longline fishery (MSC-F-31487), <https://fisheries.msc.org/en/fisheries/namibia-hake-trawl-and-longline-fishery/@assessments>

<sup>5</sup> Nuestro programa de sostenibilidad 'Pescanova Blue': [www.pescanovablue.com](http://www.pescanovablue.com)

Our direct participation in fishery improvement projects (FIPs) is visible on the public platform Fishery Progress.org<sup>6</sup>, and recapped as follows:

- Argentina offshore red shrimp (*Pleoticus muelleri*), bottom trawl; Stage 4; Progress: A; Estado: Active; FIP type: Comprehensive. <https://fisheryprogress.org/fip-profile/argentina-offshore-red-shrimp-bottom-trawl>; ETP species indicator: Strengthen the collection of data on the interactions of the fishery with these species. Habitat Indicator: Quantitative information is suitable for estimating the types and distribution of major habitats and the spatial attributes and consequences of major habitats. Ecosystem indicator: Adequate information to understand key elements of the ecosystem and the main functions of the ecosystem components.
- Peru mahi-mahi (*Coryphaena hippurus*), longline; Stage 4; Progress: A; Status: Active; FIP type: Comprehensive. <https://fisheryprogress.org/fip-profile/peru-mahi-mahi-longline-wwf>; ETP species indicator: An on-board electronic monitoring system is proposed to obtain information on the interaction of the fishery with these species and measure their impact. Crews are being trained on the correct handling and release of ETP species. Habitat and ecosystem indicators: The proposed electronic monitoring system can also record the position of possible lost fishing gear and measure the impact on ecosystems.
- Argentina Patagonian toothfish (*Dissostichus eleginoides*), bottom trawl; Stage 4; Progress: A; Status: Active; FIP type: Comprehensive. <https://fisheryprogress.org/fip-profile/argentina-patagonian-toothfish-bottom-trawl>; A training workshop was organized on onboard data recording practices in aspects related to habitat interaction with fishing gear and ETP species, and a preliminary report on interaction data with birds and marine mammals, and interactions between fishing gear and the bottom. Through a descriptive analysis of the catches of by-catch species, it has been concluded that three of the four species are underexploited and above their optimal biomass levels in recent years, which would indicate that these species are likely to be within biological limits. A research campaign will be carried out in 2023 with benthos sampling to help identify the species that interact with the fishery.
- Argentine shortfin squid (*Illex argentinus*), jig; Stage 1; Progress: N/A; Status: Active; FIP type: Prospective. <https://fisheryprogress.org/fip-profile/argentina-shortfin-squid-jig>; We participate in this prospective FIP through the Argentine Chamber of Jigger Fishing Vessels Shipowners (CAPA, in Spanish) of which we are members.

## 2.10 FISHING GEARS AND IMPACTS OF GHOST FISHING

The fishing gear we use is one of those that generate the lowest risk for ghost fishing (mortality caused by lost nets) quantified at 6 points out of 25 maximum by the [Global Ghost Gear Initiative](#).

Proper management of the use of fishing trawls, with a system that allows equipment traceability, stock management, transparent identification of losses, and responsible disposal among the technical solutions available in each country, contributes to the fight against ghost fishing caused by abandoned, lost, or otherwise discarded fishing gear (ALDFG) and marine littering. In this topic, the Nueva Pescanova Group adopts the good practices of the United Nations Environment Program (UNEP) and the FAO, both as manufacturers of fishing gear and as their users.

---

<sup>6</sup> Fishery Improvement Project Progress Tracking Database & Tools: <https://fisheryprogress.org/>

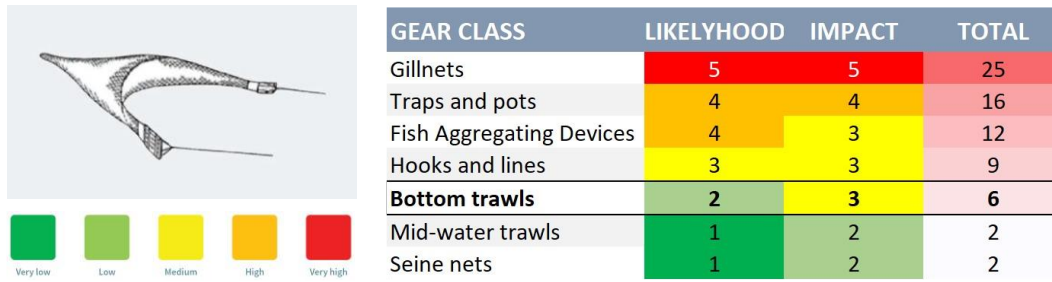


Figure 1. Subjective risk score of different gear to contribute to ghost fishing (ALDFG), based on the gear's susceptibility to loss and the impact of its loss or abandonment (Source: Global Ghost Gear Initiative, GGGI).

## 2.11 IMPACTS ON SEABIRDS

Fishing can generate an accidental direct impact on some seabirds. Aware of this potential impact, we have been pioneers in the design and implementation of tori lines (bird-scaring lines) on our fishing vessels to avoid such events.

This equipment has been installed on all our vessels with a high number of interactions with sea birds and for which the risk of incidents is greater, as is the case of Argentina trawl fisheries (installed in 13 trawlers, 100% of the ARGENOVA fleet of this type) and Namibia (installed on 9 trawlers, 100% of the active NOVANAM fleet).

We have actively collaborated with the Albatross Task Force (ATF) expert group, led by the NGO BirdLife International and the Royal Society for the Protection of Birds (RSPB), and supported by the Namibian Nature Foundation, to refine the design and deployment of tori lines as a seabird bycatch mitigation measure. The goal is to improve their effectiveness in reducing seabird incidences with seabirds in Namibia – the scientific literature published by the ATF<sup>7</sup> reports an effective reduction of up to 80% of seabird mortality due to the use of tori lines in the trawl fleet and up to 98% in the longline fleet.

According to the ATF, 2 of the 5 seabird species identified in the study are classified as vulnerable or threatened on the IUCN red list, so these mitigation measures and their results are highly relevant to our effort to protect biodiversity.

## 2.12 OTHER IMPACTS OF FISHING ACTIVITIES

We collaborate with NGOs (like SFP, CeDePesca, WWF, GGGI, and AvesArgentinas) and research groups in marine biology. Within the scope of our annual internal audits, we consult the Namibian Dolphin Project initiative of the scientific organization Sea Search, to find out about their risk assessment and the evolution of fishing interactions, especially of our fleet, in populations of whales, dolphins, fur seals and turtles. Their information indicates zero accidents and interactions with cetaceans and turtles. All incidents with fur seals are reported in logbooks, declared to the authorities, and the records are checked against the fishing observers' obtained on board our fleets.

## 3. LAND AND SEA USE CHANGE

### 3.1 LAND USE CHANGE

All our aquaculture operations have buffer areas, management plans, and risk mitigation identified by the corresponding studies. Although we do not identify a significant risk of impacts due to the use of land or sea, nor of modification, in type or extension, of that use, we consider it essential to promote the maintenance,

<sup>7</sup> Da Rocha et al. 2021. Reduction in seabird mortality in Namibian fisheries following the introduction of bycatch regulation. *Biol. Conserv.*, 253: <https://doi.org/10.1016/j.biocon.2020.108915>

regeneration, and expansion of areas of high potential for biodiversity, both to compensate or restore the passive occupation of formerly wild areas, and to contribute positively to the recovery of local and global biodiversity. In this way, we clearly align ourselves with the nature-positive concept of the UNEP Convention on Biological Diversity (CBD)<sup>8</sup> and the World Business Council for Sustainable Development (WBCSD)<sup>9</sup>. We want to maintain the current mangrove reforestation and endemic forest plantation programmes in the areas of influence of our aquaculture activities, which we report in progress reports, and continue promoting knowledge of the risks of these through relevant studies.

Land use changes, or the conversion of ecosystems, throughout the time of implementation and operation of the aquaculture production (vannamei shrimp farming), are critical aspects for the generation of impacts on biodiversity.

### 3.1.1 Studies to evaluate the change in land use prepared by independent entities

- ANALYSIS OF LAND USE CHANGE, CAMARONES DE NICARAGUA, S.A. OF THE NUEVA PESCANOVA GROUP – ZONE 1 SHRIMP FARMS – AGRIMARSA I, II, III and IV, DOS AGUAS I and II, SAN JOSE II and III. Nicaragua, April 2020, 28 pp.
- ANALYSIS OF LAND USE CHANGE, CAMARONES DE NICARAGUA, S.A. OF THE NUEVA PESCANOVA GROUP – SHRIMP FARM IN ZONE 2 – PLAYA GRANDE. Nicaragua, April 2020, 15 pp.
- ANALYSIS OF LAND USE CHANGE, CAMARONES DE NICARAGUA, S.A. OF THE NUEVA PESCANOVA GROUP – ZONE 3 SHRIMP FARMS – MAROTA I and II, LAS ROSAS I and II. Nicaragua, April 2020, 20 pp.
- FINAL REPORT ON CO<sub>2</sub> QUANTIFICATION – Forest plantations and mangrove forest, according to INTE/ISO 14064-1:2006. Municipality of Puerto Morazán, Chinandega, Nicaragua. March 2022, 16pp.
- VALUATION OF BIOLOGICAL ASSETS – RIGHTS OVER BIOLOGICAL ASSETS CONSISTING OF A TEAK (*Tectona grandis*) FOREST PLANTATION. CAMARONES DE NICARAGUA, S.A. (CAMANICA), Chinandega, Puerto Morazán, Nicaragua. August 2019, 24pp.

### 3.1.2 PROMARISCO (Ecuador)

In the buffer zone, or the 25-meter-wide strip around the farms, a total mangrove ecosystem area of 163.1 ha and an intervened area of 124 ha have been quantified.

The use of water is non-consumptive, it does not affect the bodies receiving the discharges and, therefore, it does not affect the plankton or the macroorganisms that inhabit those receiving areas, as demonstrated by the plankton and the water quality analyses at the entrance and discharge points for the water from the productive system.

The passive use of mangroves and other coastal-estuarine plant formations, that is, there is no extractive use of the mangrove resource or its associated biotic resources, is to provide protection for shrimp farms that border the estuaries against coastal edge erosion from tidal flow. In addition, it provides use as buffer zones, and does not interfere at all with shrimp production or with the operations in the intertidal zone from where artisanal fishermen extract biological resources such as molluscs and crustaceans.

---

<sup>8</sup> CBD 2020. First draft of the post-2020 Global Biodiversity Framework: <https://www.cbd.int/doc/c/abb5/591f/2e46096d3f0330b08ce87a45/wg2020-03-03-en.pdf>

<sup>9</sup> WBCSD et al. 2021. A Nature-Positive World: The Global Goal for Nature: <https://www.wbcsd.org/download/file/11960>

PROMARISCO is committed to the protection and conservation of the mangrove ecosystem, complying with the current Organic Environmental Law, also assuming its reforestation and restoration programmes for the intervened areas, carrying out regular mangrove planting campaigns.

These aquaculture farms have maintained their exploitation status and the same operational system of shrimp production for more than 20 years, and has not presented natural, physical, chemical or any other type of risks. The PROMARISCO company has not projected any type of activity that generates potential impacts or expansion of the production system, and no risks of any kind are foreseen if the current production system is maintained and there are no expansion plans or potential impacts due to alteration of the shrimp production system.

### **3.1.3 CAMANICA (Nicaragua)**

We acknowledge the proximity to ecosystems with important biological richness, such as wetlands and mangroves, and in some areas of great marine productivity. However, in the analyses performed, we have not identified a significant risk of affecting these environments. Except for two farms that are located in the Conservation and Productive Diversification Zone of the Delta del Estero Real Nature Reserve, Nicaragua, we have not identified occupation or proximity to land, coastal, or marine special protection areas, after checking databases of protected areas, of high biodiversity or of critical value for conservation of IUCN, UNESCO and Ramsar.

In the case of the implantation areas in the Delta del Estero Real Nature Reserve, Nicaragua, and recognizing that the mangrove areas in that Reserve house an important biological wealth, with a significant provision of ecosystem services from which the local populations benefit, its area has not been modified for several decades. Furthermore, we comply with the applicable laws and regulations for forest protection and conservation of natural areas and wildlife, and the organic laws for the development and control of the development of aquaculture and fishing, whose verification is required for the award and maintenance of current aquaculture sustainability certifications (such as ASC and BAP).

The land use change analysis studies carried out on the farms of our company CAMANICA (Nicaragua) have characterized and quantified the land use at three different moments in time and history of the operation: 1985 (ex-ante period), 1999 (to assess the impact of the implementation of the operation, prior to the current shrimp activity and different from it), and 2020 (to assess the accumulated impact of CAMANICA's activity). Changes in land use have been estimated in the following types of ecosystems: dry forest, mangrove, young mangrove, mixed vegetation, sandbank, water, and aquaculture pond areas.

From the analysis, the large changes in land use correspond to the original conversion of sandbanks into, mainly, monoculture agriculture and later, already by CAMANICA, of flooded areas and canals into aquaculture ponds. However, conversions of the mangrove ecosystem are also verified in flooded areas (in the period prior to CAMANICA) and, later, in aquaculture pond area. As a conclusion of these studies, and as a final balance of land use conversion, it has been determined that CAMANICA would have to restore close to 200 ha of mangrove, or 4.8% of the total area of CAMANICA's farms, which is estimated at 4,143.4 ha.

Action plans have been developed to respond to these conclusions.

Already in March 2022, in an analysis of the positive impacts of the interventions carried out, areas of vegetation cover have been characterized, and we have estimated a total of 1,022.98 ha of mangrove and 126 ha of teak forest plantation.

### **3.1.4 NOVAGUATEMALA (Guatemala)**

The multitemporal analysis of land use change indicates that before the establishment of the Ixtán farm in NOVAGUATEMALA, the construction site had agricultural soils and dry forest vegetation, with some mangrove patches.

As a conclusion of the land use change analysis, it is determined that between its implementation in 1986 and 2020 there was a loss of 2.5 ha of mangrove, which was not eliminated to establish production ponds but rather because of managing drainage channels in the perimeter of the farm, for which the company needs to implement compensation plans for mangrove conversion, reforesting 2.5 ha corresponding to the affected area.

Actions are implemented to reforest 2.5 ha of mangroves in the Ixtán and Espíndola estuaries. For this, the areas to be reforested will be identified, georeferencing the reforestation sites, and with the support of the school 'Centro Experimental del Pacífico' (CEPAC), volunteer reforestation days will be organized to help mangrove plantation until the 2.5 ha are completed.

Of the 366 hectares of implantation area, 89.6 hectares were covered by water until 2020 with grow-out ponds and nurseries. In 2021, the cultivation system has been modified to smaller production ponds with the new tanks and sedimentation ponds occupying a total of 19 ha, representing a 79% reduction in the land use footprint.

### 3.2 LOW IMPACT FISHING GEAR ON THE SEA FLOOR

Bottom trawling provides around 25% of the world's marine catch and contributes significantly to the world's food supply and livelihoods. Trawling is often described as a destructive fishing practice. Indeed, in areas of high incidence and persistence, it is one of the most intense anthropogenic direct physical disturbances on seabed habitats. However, scientific studies<sup>10</sup> show that the seabed is healthy when trawling is managed sustainably.

The Cape hake fishing ground in Namibia (FAO zone 47) has been certified by the Marine Stewardship Council (MSC) sustainable fishing standard since November 2020, being managed sustainably. In the same scientific study, impacts on benthic organisms on the seabed are presented by estimating a relative benthic status indicator (RBS), with a range between 0 (totally depleted) and 1 (without trawling), in which our bottom trawling operation in Namibia would score at 0.87 (reads as "seabed habitat corresponds to 87% of its non-trawled state"). In contrast, the average indicator for the European seabed is <0.7. Their results also show that otter trawls produce the lowest penetration depth in sedimentary habitats (1.1-2.0 cm) and have the lowest rate of biotic depletion (0.047-0.115) corresponding to the proportional reduction per pass of the trawl.

We use different fishing gear (wide vertical opening net, semi-pelagic net, demersal net), but they all have in common the minimum impact on the seabed, backed by the MSC certification, which ensures the minimization of environmental impact (its principle 2) so that other species and habitats within the ecosystem remain healthy.

In addition, the seabed in Namibia where we fish is mostly sandy with little or no marine vegetation, and we avoid meeting rocky sites. All contact with the seabed generates a loss of energy efficiency and a safety risk and is therefore undesirable. We have implemented strict fisheries responsibility policies with clear indications to avoid encounters with vulnerable marine ecosystems (sponge fields, deep-sea corals, etc.), and therefore we understand that we do not generate significant seabed use impacts that may cause it to change.

---

<sup>10</sup> Pitcher et al. 2022. Trawl impacts on the relative status of biotic communities of seabed sedimentary habitats in 24 regions worldwide. *PNAS* 119:2, 11 pp.: <https://doi.org/10.1073/pnas.2109449119>

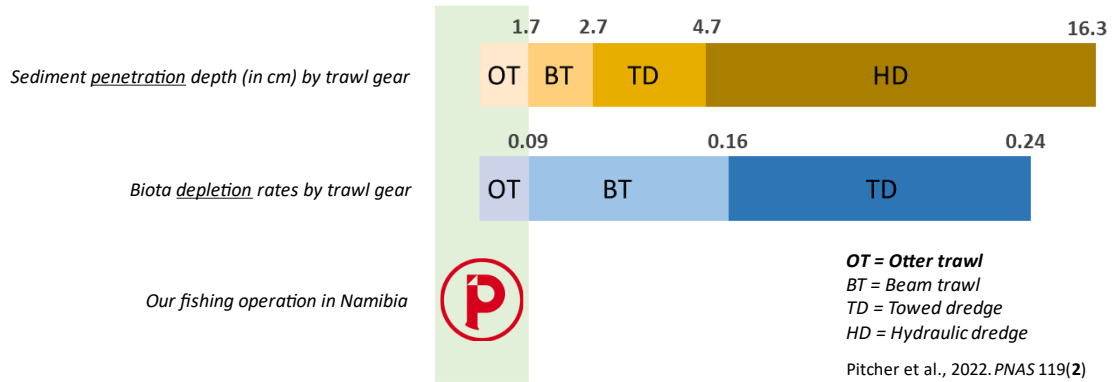


Figure 2. Relative impact of bottom trawling gear. Parameters analysed: potential impact due to penetration of the gear into bottom sediments and depletion of benthic biota, according to results of published scientific studies (Pitcher et al., 2022).

## 4. DEPLETION OF NON-RENEWABLE NATURAL RESOURCES

(data referring to the period from April 2021 to March 2022)

### 4.1 MATERIALS

We see the consumption of materials as an indirect indicator of the impact on the depletion of non-renewable natural resources:

- MAIN RAW MATERIALS (e.g., fish, crustaceans, molluscs/cephalopods, vegetables, etc.): 291,775.9 t
- AUXILIARY RAW MATERIALS or INGREDIENTS (e.g., additives, oils and fats, flour, spices and seasonings, eggs, others): 18,781.1 t
- PACKAGING OF PLASTIC, POREX, METAL, GLASS (e.g., bags, boxes, lids, trays, film, sheets, etc.): 7,459.9 t
- PACKAGING OF PAPER, CARDBOARD, WOOD (e.g., boxes, master boxes, trays, labels, pallets, etc.): 12,289.1 t

We identify, classify, and quantify the materials used in our operations globally and for each geography and activity. The absolute or relative KPIs we generate are used to optimize the management of the materials use in each case and to establish management objectives and improvement goals.

### 4.2 FOSSIL FUELS

We consider the consumption of energy from non-renewable sources, in the form of fuels, as an indirect indicator of the impact on the availability of fossil mineral natural resources:

- DIESEL: 53,128.4 m<sup>3</sup>
- GASOLINE: 1,061.1 m<sup>3</sup>
- NATURAL GAS: ≈3,481.3 t
- LPG: 794.6 t
- PROPANE: 82.5 t
- FUEL OIL: 8.7 t



## 5. RATIONAL USE OF WATER

### 5.1 CONSUMPTIVE USE OF WATER

We consider water consumption to be an indirect indicator of the impact on the availability of the resource in the state of quality appropriate to other concurrent uses:

- Surface water, including water from wetlands, rivers, lakes, and oceans: 2,716,619.8 m<sup>3</sup> (period from April 2021 to March 2022).

### 5.2 WATER STRESS WITH SPATIAL DIFFERENTIATION

We have analysed how water consumption by type of source in our companies and activities may affect water availability now and in future scenarios, following the methodology proposed by the World Resources Institute (WRI) and its Aqueeduct™ water risk assessment tool 3.0.

We have selected the water stress index to quantify the risk associated with water consumption by source (according to the GRI 303-3 classification) in our operations annually, and the present and future reference scenarios (2030 and 2040) (business as usual, optimistic, and pessimistic).

We have assessed the risk of specific impacts on the use of the resource: decrease in the water table (higher consumption may indicate unsustainable levels of groundwater extraction), seasonal variability (temporal spikes may indicate unsustainable demands), and reference water depletion (greater impact on local water supply and reduced water availability).

Source: WRI 2019. Aqueeduct™ Water Risk Atlas (Aqueeduct 3.0)

Country	Location	Facility type	Water use	Stress index by scenario						GRI 303-1: Water withdrawal by source a.2021-m.2022				Impacts of groundwater consumption on:				
				Baseline	Future: BAU		Future: optimistic		Future: pessimistic		Surface water	Groundwater	Rainwater	Municipal water	Groundwater table decline	Seasonal variability	Baseline water depletion	
					2030	2040	2030	2040	2030	2040								
Argentina	Puerto Deseado	Primary processing	Industrial and fleet	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	29.4			63.1	Insignificant	Low-Medium (0.33-0.66)	Arid and low water use	
Ecuador	Duran	Processing plant	Industrial	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	695,397.0	196,937.0	1,400.0		Insignificant	Medium-High (0.66-1.00)	Low-Medium (5-25%)	
Ecuador	Guayaquil islands	Shrimp farms	Shrimp ponds	Low-Medium (10-20%)	Medium-High (20-40%)	Medium-High (20-40%)	Medium-High (20-40%)	Medium-High (20-40%)	Medium-High (20-40%)	Medium-High (20-40%)	pond water	8,030.0		31,087.6		Insignificant	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
France	Lorient	Processing plant	Industrial	Medium-High (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)				83,581.4		Insignificant	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
France	Boulogne-sur-Mer	Processing plant	Industrial	Medium-High (20-40%)	High (40-80%)	High (40-80%)	High (40-80%)	High (40-80%)	High (40-80%)	High (40-80%)				27,250.3		Low-Medium (0-2 cm/y)	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
Guatemala	Champerico	Processing plant	Industrial	Medium-High (20-40%)	Low (<10%)	Low-Medium (10-20%)	Low (<10%)	Low-Medium (10-20%)	Low (<10%)	Low-Medium (10-20%)		238,560.0				Insignificant	Medium-High (0.66-1.00)	Low-Medium (5-25%)
Guatemala	Champerico	Shrimp farms	Shrimp tanks	Medium-High (20-40%)	Low (<10%)	Low-Medium (10-20%)	Low (<10%)	Low-Medium (10-20%)	Low (<10%)	Low-Medium (10-20%)	pond water	912.0				Insignificant	Medium-High (0.66-1.00)	Low-Medium (5-25%)
Ireland	Cork	Primary processing	Industrial	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	n/a	n/a	n/a	n/a		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Mozambique	Beira	Shipyard	Industrial and fleet	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)			167.2	16,260.0		Insignificant	Medium-High (0.66-1.00)	Low (<5%)
Namibia	Lüderitz	Processing plant	Industrial	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	Arid and low water use	desalinated seawater			255,436.0		Insignificant	High (1.00-1.33)	Arid and low water use
Namibia	Walvis Bay	Processing plant	Industrial	Medium-High (20-40%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	desalinated seawater			126,619.0		Low-Medium (0-2 cm/y)	High (1.00-1.33)	Medium-High (25-50%)
Nicaragua	Chinandega	Processing plant	Industrial	Low (<10%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)	Low-Medium (10-20%)		413,435.0		56,329.0		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Nicaragua	Estero Real	Shrimp farms	Shrimp ponds	Low-Medium (10-20%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	10,016.0 + pond water	39,295.0		44,409.6		Insignificant	Medium-High (0.66-1.00)	Low-Medium (5-25%)
Peru	Lima District	Processing plant	Industrial	Low (<10%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)		9,776.0				Insignificant	Medium-High (0.66-1.00)	Low (<5%)
Spain	Porriño	Processing plant	Industrial	Medium-High (20-40%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)		70,132.0		3,426.0		Insignificant	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
Spain	Chapela, Vigo	Processing plant	Industrial	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)		92,512.0		104,064.2		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Spain	Catarroja, Valencia	Processing plant	Industrial	Low-Medium (10-20%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)		21,324.0		8,891.0		Insignificant	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
Spain	Paterna	Processing plant	Industrial	Low-Medium (10-20%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)	Extremely high (>80%)		33,997.0		33,997.0		Insignificant	Low-Medium (0.33-0.66)	Low-Medium (5-25%)
Spain	Arteixo	Processing plant	Industrial	Low-Medium (10-20%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)				114,149.0		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Spain	Mougás	Hatchery	Turbot farming	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	production tank water	2,059.0		273.0		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Spain	Xove	Turbot farms	Turbot farming	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	production tank water			8,040.0		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)
Spain	Xove	R&D	Research tanks	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	Low (<10%)	production tank water			2,478.0		Insignificant	Low-Medium (0.33-0.66)	Low (<5%)

Figure 3. Water consumption and spatially differentiated impact based on water stress in each geography (GNPVA, 2022)<sup>11</sup>.

<sup>11</sup> GNPVA 2022. 2022 PROGRESS REPORT ON SUSTAINABILITY GOALS. Available at: <https://www.nuevapescanova.com/en/engagement/corporate-social-responsibility/transparency/>

## 6. EMISSION OF GREENHOUSE GASES

The calculation of the carbon footprint of each company of the Group represents a potential impact on global warming, based on the global warming potential (GWP) of each greenhouse gas (GHG) emitted. In the cause-effect cascade of this impact category, we identify the carbon footprint as the metric for the contribution to climate change and its impacts (these are not quantified).

The methodology, sources, calculations, and report are externally validated through independent verification of the non-financial information (EINF) status report published annually by the Nueva Pescanova Group in compliance with the national law 11/2018. From April 2021 to March 2022, the total carbon footprint of the Nueva Pescanova Group has been estimated at 344,707 tCO<sub>2</sub>eq for a material affluence of 205,972 t of final products, with the global KPI of the Group's activity being 1.67 tCO<sub>2</sub>eq/t<sub>PROD</sub>. More information in the EINF 2021/22 (GNPVA, 2022)<sup>12</sup>.

The geographical differentiation, by activity and by company, is useful to calibrate the reduction plans and the implementation of the measures within the decarbonization and compensation plans, but it does not allow the resulting impacts to be geographically differentiated, since the associated impact (global warming) has a global scope.

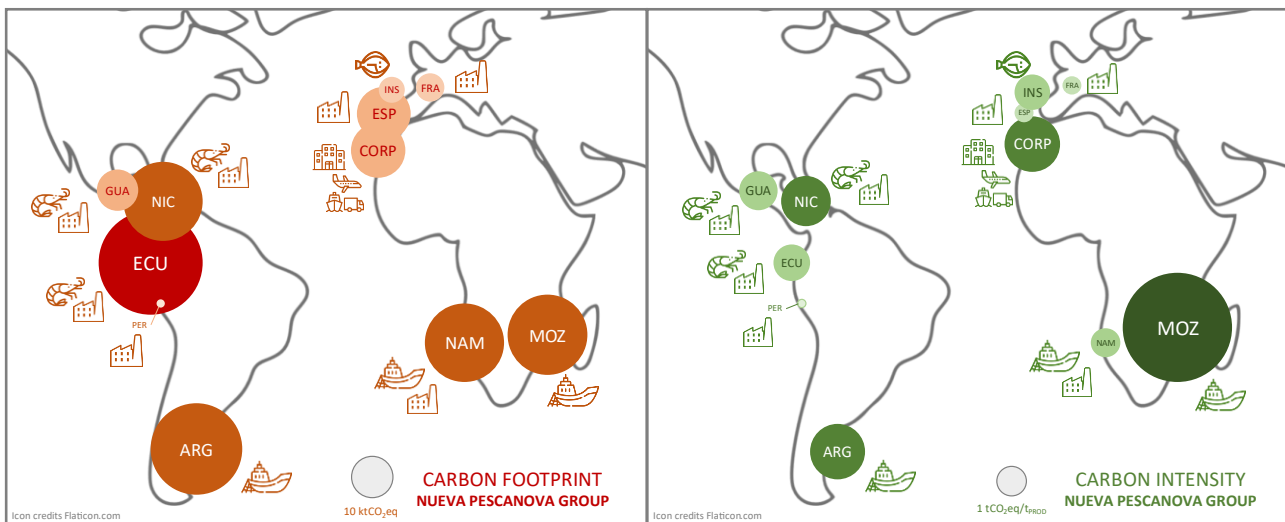


Figure 4. Geographical distribution of each company's carbon footprint and carbon intensity in the Nueva Pescanova Group. Source: (EINF, information with independent verification).

## 7. WASTE MANAGEMENT

(data referring to the period from April 2021 to March 2022)

### 7.1 HAZARDOUS WASTE

We do not deposit hazardous waste in landfills.

<sup>12</sup> GNPVA 2022. REPORT ON THE NON-FINANCIAL STATEMENT OF NUEVA PESCANOVA, S.L., AND ITS GROUP COMPANIES, FOR THE YEAR ENDED MARCH 31, 2022. Available at: [https://www.nuevapescanova.com/nuevapescanova/wp-content/uploads/2022/09/EN\\_EINF\\_MAR\\_2022\\_GNPVA.pdf](https://www.nuevapescanova.com/nuevapescanova/wp-content/uploads/2022/09/EN_EINF_MAR_2022_GNPVA.pdf)

## 7.2 NON-HAZARDOUS WASTE

Waste management is intended to optimize recycling, composting, and circular economy according to the treatment and management capacities in each of the 17 countries where our companies of the Group operate. The fractions that are not recoverable and that are disposed to landfills generate a variable and unquantified impact, apart from their quantity: 9,375.3 t. This fraction may generate a GHG emission that we estimate at 5,500.0 tCO<sub>2</sub>-eq (GNPVA, 2023)<sup>13</sup>.

Recovery in circular solutions, for fishmeal, transformation for animal feed, soil fertilizer: 13,474.3 t.

It is worth noting the following solutions for by-products:

- To produce animal feed from Patagonian toothfish skins and heads from the Puerto Deseado Industrial Centre of ARGENNOVA (Argentina), shrimp shells and heads in PROMARISCO (Ecuador) and CAMANICA (Nicaragua), bones, skins and fish rejected at both NOVANAM centres (Namibia), as well as various organic by-products at the Arteixo, Chapela and Porriño Industrial Centres (Spain).
- To produce fertilizer for soil improvement from toothfish skin and heads at the Puerto Deseado Industrial Centre of ARGENNOVA, and shrimp shells and heads at the Boulogne-sur-Mer Industrial Centre of NUEVA PESCANOVA FRANCE (France).
- To produce biofuel from shrimp shells and heads at the Lorient Industrial Centre (France) of NUEVA PESCANOVA FRANCE

## 8. EMISSION OF OZONE-DEPLETING SUBSTANCES

The emission of ozone-depleting substances (ODS) (GRI 305-6) is exclusively chlorodifluoromethane (refrigerant gas HCFC-22 or R-22) and dichlorofluoroethane (solvent, cleaning agent for refrigeration systems HCFC-141b or R-141b) and is estimated at 1.77 tCFC-11eq.

## 9. OTHER ASPECTS OF POLLUTION

In the environmental management exercises of the Group's industrial centres and in the materiality analysis, considering fishing, aquaculture and processing activities, the generation of noise or vibrations and light pollution are not identified as relevant, being minimized through the adoption of the corresponding mitigating measures.

Atmospheric emissions of nitrogen oxides (NO<sub>x</sub>), sulphur oxides (SO<sub>x</sub>) and other significant air emissions (GRI 305-7) are not considered significant with regard to the Group's activities.

## 10. SENSITIVITY TO CLIMATE CHANGE

Globally, and for each company of the Group, we identify the degree of exposure of operations and infrastructures to physical risks due to their exposure (high, moderate, low, or negligible) to acute climatic risks and extreme weather events, such as floods, extreme heat waves, droughts, or chronic, such as increased precipitation patterns, cyclones, tsunamis. Consequently, we consider the most relevant climatic risks within the risk matrices, and we create the necessary plans for their mitigation for the scope of our entire value chain.

<sup>13</sup> GNPVA 2022. REPORT ON THE NON-FINANCIAL STATEMENT OF NUEVA PESCANOVA, S.L., AND ITS GROUP COMPANIES, FOR THE YEAR ENDED MARCH 31, 2022. Available at: [https://www.nuevapescanova.com/nuevapescanova/wp-content/uploads/2022/09/EN\\_EINF\\_MAR\\_2022\\_GNPVA.pdf](https://www.nuevapescanova.com/nuevapescanova/wp-content/uploads/2022/09/EN_EINF_MAR_2022_GNPVA.pdf)

Knowing the exposure to specific risks in each geography allow us to calibrate our adaptation potential to climate change, associating it with the most appropriate mitigation measures, and to better understand the resilience of the operations.

## 11. ENVIRONMENTAL PREPAREDNESS AND RESPONSE TO EMERGENCIES

---

We ensure that the appropriate plans duly identify the most probable risks that may have severe consequences for operations, including, among others, fires, explosions, floods or other accidental or deliberate events, due to action or inaction, that may generate leaks or spills of fluids, gases, or polluting materials with direct or indirect physical consequences on the habitats or species in the vicinity of the facilities. Meteorological and climatic risks and other natural disasters, such as earthquakes, are also considered.

The same plans identify and map the external information and emergency support institutions that will be used in case of emergency. Likewise, the maintenance plans of the pertinent systems and the training programs and drills are included. Details are included for the material resources available for emergency response at the facilities, the means of communication available, the procedure in case of evacuation of medical emergencies, equipment and neighbouring communities, procedures for consultation and identification of emergency scenarios, external communication channels, and development of shared resources and collective community response systems.

## 12. SOCIAL IMPACT – COMMUNITY RELATIONSHIP STRATEGY

---

Main studies prepared by independent entities:

- PARTICIPATORY EVALUATION OF THE SOCIAL IMPACT OF THE OPERATION OF THE BELLAVISTA, SANTA CECILIA AND QUIÑONEZ SHRIMP FARMS OF THE PROMARISCO S.A. GROUP. January 2019, 33pp.
- EVALUATION OF PARTICIPATORY SOCIAL IMPACT, EMPRESA CAMARONES DE NICARAGUA, S. A. (CAMANICA). DOS AGUAS GRANDE I and II, SAN JOSE I, II, III and AGRIMARSA I, II, III, IV SHRIMP FARM COMPLEXES. Puerto Morazán-Tonalá, Department of Chinandega. June 2019, 96 pp.
- PARTICIPATORY SOCIAL IMPACT ASSESSMENT EIS-P, EMPRESA CAMARONES DE NICARAGUA, S.A. (CAMANICA). PLAYA GRANDE SHRIMP FARMS - EL SEMILLAL. Community of El Limonal, Palacios, Quebrada Honda and Cuatro Esquinas de Amayo-Municipality of Puerto Morazán, Department of Chinandega. June 2019, 112 pp.
- EVALUATION OF PARTICIPATORY SOCIAL IMPACT, EMPRESA CAMARONES DE NICARAGUA, S.A. (CAMANICA). SHRIMP FARMS BLOCK III, LAS ROSAS I, II, III, SAN MARINO I, II, III, MAROTA I, II. Buena Vista Community, El Congo, El Viejo Municipality, Department of Chinandega. July 2019, 93 pp.
- NAMIBIAN HAKE FISHERY CERTIFICATE HOLDER FORCED AND CHILD LABOR POLICIES, PRACTICES AND MEASURES. CONTROL UNION. April 2019, 10pp.

### 12.1 EXTERNAL COMMUNICATIONS

The Group implements a procedure for handling external communications that includes methods to: i) receive and record external communications from the public; ii) analyse and evaluate the issues raised in those communications and determine how to address them; iii) provide the corresponding answers, follow up and document them, and iv) adjust the management programme, as appropriate.

## 12.2 GRIEVANCE MECHANISM

The Company has implemented a Conflict Resolution Policy, through which it has committed to maintaining good relations with neighbouring communities in the countries where we operate, and dialogue being a primary instrument for conflict resolution; In addition, we have implemented OUR COMPLIANCE CHANNEL, which is a communication tool through which any natural person (whether or not they are a Group professional) can safely and confidentially (even anonymously) contact the Compliance Unit to raise Queries or Complaints. The Compliance Channel is accessible through:

<https://www.nuevapescanova.com/en/engagement/corporate-social-responsibility/integrity/>

## ANNEX: SUMMARY TABLES OF IMPACTS

IDENTIFICATION	COMPANY	PROMARISCO	CAMANICA	NOVAGUATEMALA	INSUIÑA	
	COUNTRY	Ecuador	Nicaragua	Guatemala	INSUIÑA XOVE	INSUIÑA MOUGÁS
ACTIVITY	Aquaculture farming: Whiteleg shrimp ( <i>Penaeus vannamei</i> )	Aquaculture farming: Whiteleg shrimp ( <i>Penaeus vannamei</i> )	Aquaculture farming: Whiteleg shrimp ( <i>Penaeus vannamei</i> )	Aquaculture farming: Whiteleg shrimp ( <i>Penaeus vannamei</i> )	Aquaculture farming: Turbot ( <i>Scophthalmus maximus</i> )	Aquaculture nursery: Turbot ( <i>Scophthalmus maximus</i> )
OWN PRODUCTION OR CONTROLLED OPERATIONS	LOCATION	Guayaquil, Guayas Total production area: 3,529.8 ha Marfrisco Farm: 1,429.72 ha Bellavista Farm: 672 ha Quiñonez Farm: 1,126.97 ha Santa Cecilia Farm: 301.13 ha	Chinandega Total ponds area: 4,143.4 ha	Champerico, Retalhuleu Total implantation area: 366 ha Total ponds area: 19 ha	Xove, Lugo. Total implantation area: 16.8 ha. Production area: 6 ha.	Mougás, Oia. Total implantation area: ca. 0.6 ha.
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	No proximity to biodiversity hotspots. The closest protected areas are at distances of 14 km and 40 km.	The El Semillal and Playa Grande farms (1,155.64 ha) are located in the Estero Real Delta Nature Reserve (1.8% in protected area).	3.3 km away from mangrove protected area. No impact on biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.
	MITIGATION PLAN	Yes, resulting from the BEIA. A specific procedure has been implemented for the management of vulnerable or endangered species, specifically aimed at the management of the only vulnerable species ( <i>Crocodylus acutus</i> ).	Yes, resulting from the BEIA. Implementation of reforestation and restoration plans with <i>Rhizophora</i> in the intervened areas.	Yes, resulting from the BEIA. Implementation of a reforestation program for 2.5 ha of mangroves in the Ixtán and Espindola estuaries.	Yes, resulting from the EIA and surveillance plan. Measures to protect water and riverbeds, soil protection, waste management and landscape integration.	N/A
	NATURE DEPENDENCY (Nature's Contributions to People (NCP))	Mangrove ecosystem services: provisioning (productivity and biological resources), regulating (floods, storms, erosion control), habitat (breeding, spawning and nursery habitat for fish species; biodiversity), and cultural services (recreation, aesthetic). Other benefits: primary production, carbon sequestration, land use, water as culture medium and freshwater.	Mangrove ecosystem services: provisioning (productivity and biological resources), regulating (floods, storms, erosion control), habitat (breeding, spawning and nursery habitat for fish species; biodiversity), and cultural services (recreation, aesthetic). Other benefits: primary production, carbon sequestration, land use, water as culture medium and freshwater.	Mangrove ecosystem services: provisioning (productivity and biological resources), regulating (floods, storms, erosion control), habitat (breeding, spawning and nursery habitat for fish species; biodiversity), and cultural services (recreation, aesthetic). Other benefits: primary production, carbon sequestration, land use, water as culture medium and freshwater.	As the operation is on tanks on land, main nature dependency is on water quality, land use and solar energy.	As the operation is on tanks on land, main nature dependency is on water quality and land use.
	LAND USE CHANGES	N/A	Changes in land use in the types of occupation: dry forest, mangrove swamp, young mangrove swamp, mixed vegetation, sandbank, water, and aquaculture pond areas.	Modification of 89.6 hectares of grow-out ponds and nurseries in 2020 to 19 ha as of 2021, due to a change in the production system (79% reduction in the land use footprint).	Agricultural land and marshes converted to constructed area (ca. 60%)	N/A
	COMPENSATION MEASURES	Mangrove reforestation.	Mangrove reforestation to compensate for 200 ha of mangrove, as per BEIA; Maintaining 1,023 ha of mangrove and 126 ha of teak forest; Plant nursery (30,000 plants/yr); Iguanas conservation project (300 ind/yr).	Mangrove reforestation to compensate for 2.5 ha, as per BEIA; Caoba and Cedrus reforestation; sea turtle conservation project (150-200 ind/yr).	Successful integration in surrounding area, ensuring landscape continuity, buffer zones and ecological corridors.	N/A

	SPECIES POPULATIONS PRESENT OR AFFECTED	As identified in BEIA: Several plant species, mangrove NT; Several species of avifauna, mammals, estuarine fauna, and herpetofauna, all LC. 1 crocodile species VU	As identified in BEIA: Mangrove species, all protected; Several species of avifauna (2 CITES I, 4 CITES II), mammals (1 CITES), estuarine fauna, and herpetofauna (1 CITES I, 1 CITES II, 4 protected, 1 VU),	Mangroves: CONAP 2. Mammals: 1 threatened IUCN, 2 CITES I, 1 CITES III, 2 CONAP 2, 2 CONAP 3; Reptiles: 3 VU and 1 IN IUCN, 4 CITES I and 2 CITES II, 3 CONAP 2 and 3 CONAP 3; Birds: 1 IUCN VU, 9 CITES II and 1 CITES III, 2 CONAP 2 and 18 CONAP 3, but none in the farms area.	Avifauna species identified for monitoring: <i>Larus spp.</i> , <i>Egretta garzetta</i> , <i>Anas platyrhynchos</i> , <i>Fulica atra</i> , <i>Gallinula chloropus</i> , <i>Calidris alpina</i> , <i>Phalacrocorax carbo</i> , and estuarine fauna. Low biodiversity of fauna and flora.	N/A
	CONSERVATION STATUS	Mangrove species classified as NT. Crocodile species <i>Crocodylus acutus</i> classified as VU	9 avifauna species protected, 2 reptiles protected (iguanas), 1 reptile ( <i>Crocodylus acutus</i> ) as VU.	CONAP protected mangroves, mammal, and reptile species on various lists. Birds are not present in the implantation area.	N/A	N/A
	PLAN FOR NET-POSITIVE IMPACT ON THREATENED SPECIES	Reforestation and mangrove restoration.	Iguanas conservation and repopulation project; crocodile protection and handling procedure; collaboration in shorebirds impacts study.	Mangrove reforestation programme. Biosecurity measures.	Improved water circulation in neighbour canals and water lines regularization has renewed the marshland.	N/A
UPSTREAM OPERATIONS	TYPE OF OPERATION	Shrimp feed production.	Shrimp feed production.	Shrimp feed production.	Turbot feed production.	N/A
	AGENT	Feed producers.	Feed producers.	Feed producers.	Feed producers.	N/A
	LOCATION	International.	International.	International.	International.	N/A
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.	N/A
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	Dispersed and international sourcing of feed ingredients (FM, FO, Soy, Palm oil, others).	Dispersed and international sourcing of feed ingredients (FM, FO, Soy, Palm oil, others).	Dispersed and international sourcing of feed ingredients (FM, FO, Soy, Palm oil, others).	Dispersed and international sourcing of feed ingredients (FM, FO, Soy, Palm oil, others).	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	Impacts on source fisheries, their certifications and status, are verified and reported annually. Agriculture-based ingredients must be sourced responsibly, deforestation-free.	Impacts on source fisheries, their certifications and status, are verified and reported annually. Agriculture-based ingredients must be sourced responsibly, deforestation-free.	Impacts on source fisheries, their certifications and status, are verified and reported annually. Agriculture-based ingredients must be sourced responsibly, deforestation-free.	Impacts on source fisheries, their certifications and status, are verified and reported annually. Agriculture-based ingredients must be sourced responsibly, deforestation-free.	N/A
	CONSERVATION STATUS	As reported by feed suppliers on the sustainability reports: ingredients' sources known, certified source fisheries and deforestation-free.	As reported by feed suppliers on the sustainability reports: ingredients' sources known, certified source fisheries and deforestation-free.	As reported by feed suppliers on the sustainability reports: ingredients' sources known, certified source fisheries and deforestation-free.	As reported by feed suppliers on the sustainability reports: ingredients' sources known, certified source fisheries and deforestation-free.	N/A
DOWNSTREAM BUSINESS RELATIONSHIPS	TYPE OF OPERATION	May include seafood processing (cooking, peeling, packaging); Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	May include seafood processing (cooking, peeling, packaging); Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	May include seafood processing (cooking, packaging); Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	Transport and distribution for commercialization; may include export to international markets.	Turbot grow-out.
	AGENT	May include peeling in NOVAGUATEMALA, cooking and packaging in CI ARTEIXO, Spain; PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	May include peeling in NOVAGUATEMALA, cooking and packaging in CI ARTEIXO, Spain; PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	May include cooking and packaging in CI ARTEIXO, Spain; PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	INSUIÑA Xove (Group's company).



LOCATION	May include peeling in NOVAGUATEMALA, cooking and packaging in CI ARTEIXO, Spain (PESCANOVA ESPAÑA). Then sold to international markets.	May include cooking and packaging in CI ARTEIXO, Spain (PESCANOVA ESPAÑA). Then sold to international markets.	May include peeling in NOVAGUATEMALA, cooking and packaging in CI ARTEIXO, Spain (PESCANOVA ESPAÑA). Then sold to international markets.	Mostly national market, may include international markets.	Xove, Lugo.
NATURE DEPENDENCY Nature's Contributions to People (NCP)	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	N/A	N/A
PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	N/A	N/A
SPECIES POPULATIONS PRESENT OR AFFECTED	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	N/A	N/A
CONSERVATION STATUS	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	See NOVAGUATEMALA and CI ARTEIXO of NUEVA PESCANOVA ESPAÑA; N/A for all distribution and commercial activities.	N/A	N/A

IDENTIFICATION	COMPANY	NOVANAM			ARGENOVA	PESCAMAR	
		FISHING FLEET	SKELETON COAST TRAWLING (LÜDERITZ NOVANAM'S PLANT)	DEEP OCEAN PROCESSORS (WALVIS BAY NOVANAM'S PLANT)			
	COUNTRY	Namibia	Namibia	Namibia	Argentina	Mozambique	
	ACTIVITY	Fishing fleet (demersal trawling), target species Cape hake ( <i>Merluccius capensis</i> , <i>Merluccius paradoxus</i> ) and seafood primary processing (transformation) plant.	Seafood primary processing (transformation) plant.	Seafood primary processing (transformation) plant.	Fishing fleet, main target species Argentine red shrimp ( <i>Pleoticus muelleri</i> ), and seafood primary processing (transformation) plant.	Fishing fleet (shrimp trawler vessels)	
	LOCATION	Fishing fleet (FAO 47): 9 trawlers (2 freezers and 7 wet-fish).	Lüderitz, Karas region.	Walvis Bay, Erongo region.	Fishing fleet (FAO 41): 16 vessels (12 beam trawlers, 2 jiggers, 1 otter trawler, 1 longliner; Puerto Deseado: Transformation (cleaning and cutting) plant)	Beira, Sofala; FAO 51.	
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	
OWN PRODUCTION OR CONTROLLED OPERATIONS	MITIGATION PLAN	The Cape hake fishery is MSC-certified. Environmental Impacts are evaluated in their annual audits; ETP species identified: Kingklip ( <i>Genypterus capensis</i> ), Roughsnout grenadier ( <i>Trachyrinchus scabrus</i> ), Smalltooth grenadier ( <i>Nezumia micronychodon</i> ), Hollowsnout grenadier ( <i>Coelorinchus caelorinchus</i> ), Jellyfish ( <i>Chrysaora</i> spp.), African softnose skate ( <i>Bathyraja smithii</i> ), Biscuit skate ( <i>Raja straeleni</i> ), White-chinned petrel ( <i>Procellaria aequinoctialis</i> ), Yellow-nosed albatross ( <i>Thalassarche chlororhynchos</i> ), Cape gannet ( <i>Morus capensis</i> ), Sooty shearwater ( <i>Ardenna grisea</i> ).		N/A	N/A	Impacts on ETP species, habitat and ecosystem are identified and mitigated within the FIP action plan.	N/A
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	Main dependency is biological productivity which is conditioning biomass harvesting. Marine ecosystems services: biogeochemical cycling, biological productivity, habitat, and refuge, recreational and cultural. Other benefits: marine biodiversity, land use, carbon sequestration, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Main dependency is biological productivity which is conditioning biomass harvesting. Marine ecosystems services: biogeochemical cycling, biological productivity, habitat, and refuge, recreational and cultural. Other benefits: marine biodiversity, land use, carbon sequestration, and freshwater.	Main dependency is biological productivity which is conditioning biomass harvesting. Marine ecosystems services: biogeochemical cycling, biological productivity, habitat, and refuge, recreational and cultural. Other benefits: marine biodiversity, land use, carbon sequestration, and freshwater	

	LAND USE CHANGES	Seabed impacts due to trawling operations of minor significance, due to responsible practices implemented; Processing plant implanted in desertic area (Lüderitz) and industrial area (Walvis Bay).	Processing plant implanted in desertic area (Lüderitz).	Processing plant implanted in industrial area (Walvis Bay).	N/A	Responsible fishing operations minimize risk of disturbing seabed.
	COMPENSATION MEASURES	Palm trees plantation.	Palm trees plantation.	Palm trees plantation.	N/A	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	ETP species with medium risk category impacts: White-chinned petrel ( <i>Procellaria aequinoctialis</i> ) and Yellow-nosed albatross ( <i>Thalassarche chlororhynchos</i> ).	N/A	N/A	N/A	N/A
	CONSERVATION STATUS	Cape hake is well managed (see MSC and FishSource). Bycatch ca. 2%. Negligible impact on accessory species. Unknown status for these.	N/A	N/A	N/A	N/A
	PLAN FOR NET-POSITIVE IMPACT ON THREATENED SPECIES	Ensure responsible practices, full reporting, and observers on board. Deployment of tori lines during operations, reduces accidents and incidents on 80% (source: ATF).	N/A	N/A	N/A	N/A
UPSTREAM OPERATIONS	TYPE OF OPERATION	No upstream operations.	Vertical integration: processing plant's upstream operations are own fishing fleet.	Vertical integration: processing plant's upstream operations are own fishing fleet.	No upstream operations.	No upstream operations.
	AGENT	N/A	NOVANAM's fishing fleet.	NOVANAM's fishing fleet.	N/A	N/A
	LOCATION	N/A	Namibia, FAO 47.	Namibia, FAO 47.	N/A	N/A
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	N/A	N/A	N/A	N/A	N/A
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	N/A	N/A	N/A	N/A	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	N/A	N/A	N/A	N/A	N/A
	CONSERVATION STATUS	N/A	N/A	N/A	N/A	N/A
DOWNSTREAM BUSINESS RELATIONSHIPS	TYPE OF OPERATION	Vertical integration: Supply to NOVANAM's plant in Lüderitz and Walvis Bay. May include direct export to Spain and international markets.	Vertical integration: Supply to processing plants in Spain and France, or directly to commerce in Spain and international markets.	Vertical integration: Supply to processing plants in Spain and France, or directly to commerce in Spain and international markets.	May include seafood processing (cooking, peeling, packaging); Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	Seafood processing (cooking, peeling, packaging) in ARTEIXO, Spain; Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.
	AGENT	NOVANAM's and PESCANOVA ESPAÑA's processing plants. Commercial activity in Spain and	PESCANOVA ESPAÑA's processing plants. Commercial activity in Spain and international	PESCANOVA ESPAÑA's processing plants. Commercial activity in Spain and international	May include cooking and packaging in CI ARTEIXO, Spain; PESCANOVA ESPAÑA, Spain	May include cooking and packaging in CI ARTEIXO, Spain; PESCANOVA ESPAÑA, Spain

	international markets; Shipping, transportation, and distribution agents; Sales points.	markets; Shipping, transportation, and distribution agents; Sales points.	markets; Shipping, transportation, and distribution agents; Sales points.	(Commercial activity); Shipping, transportation, and distribution agents; Sales points.	(Commercial activity); Shipping, transportation, and distribution agents; Sales points.
LOCATION	Spain and international markets.	Spain and international markets.	Spain and international markets.	Spain and international markets.	Spain and international markets.
NATURE DEPENDENCY Nature's Contributions to People (NCP)	See SKELETON COAST TRAWLING and DEEP OCEAN PROCESSORS (NOVANAM's processing plants)	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	N/A	N/A
PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	See SKELETON COAST TRAWLING and DEEP OCEAN PROCESSORS (NOVANAM's processing plants)	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	N/A	N/A
SPECIES POPULATIONS PRESENT OR AFFECTED	See SKELETON COAST TRAWLING and DEEP OCEAN PROCESSORS (NOVANAM's processing plants)	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	N/A	N/A
CONSERVATION STATUS	See SKELETON COAST TRAWLING and DEEP OCEAN PROCESSORS (NOVANAM's processing plants)	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	See PESCANOVA ESPAÑA's industrial centres in Spain. N/A for international markets.	N/A	N/A

IDENTIFICATION	COMPANY	PESCANOVA ESPAÑA				
		CI ARTEIXO	CI CATARROJA	CI CHAPELA	CI PATERNA	CI PORRIÑO
COUNTRY	Spain	Spain	Spain	Spain	Spain	Spain
ACTIVITY	Processing plant (cooking, packaging).	Processing plant (cephalopods and shrimp processing, packaging).	Processing plant (surimi, frozen and chilled).	Processing plant (fish processing, packaging).	Processing plant (prepared fish and cephalopods products, breaded, coated and deep-frozen).	Processing plant (prepared fish and cephalopods products, breaded, coated and deep-frozen).
OWN PRODUCTION OR CONTROLLED OPERATIONS	LOCATION	Arteixo, A Coruña.	Catarroja, Valencia.	Chapela, Pontevedra.	Paterna, Valencia.	O Porriño, Pontevedra.
	PROXIMITY TO BIODIVERSITY HOTSPOTS (In or adjacent to areas important for biodiversity)	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.
	MITIGATION PLAN	Yes, as per environmental management issues identified through the Integrated Environmental Declaration, mainly waste and effluents.	Yes, as per environmental management issues identified through the Integrated Environmental Declaration, mainly waste and effluents.	Yes, as per environmental management issues identified through the Integrated Environmental Declaration, mainly waste and effluents.	Yes, as per environmental management issues identified through the Integrated Environmental Declaration, mainly waste and effluents.	Yes, as per environmental management issues identified through the Integrated Environmental Declaration, mainly waste and effluents.
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.
	LAND USE CHANGES	None. Plant installed in industrial park area.	None. Plant installed in industrial park area.	None. Plant installed in industrial park area.	None. Plant installed in industrial park area.	None. Plant installed in industrial park area.
	COMPENSATION MEASURES	N/A	N/A	N/A	N/A	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	N/A	N/A	N/A	N/A	N/A
	CONSERVATION STATUS	N/A	N/A	N/A	N/A	N/A
	PLAN FOR NET-POSITIVE IMPACT ON THREATENED SPECIES	N/A	N/A	N/A	N/A	N/A
	UPSTREAM OPERATIONS	TYPE OF OPERATION	Vertical integration. Supplied from Group's aquaculture production.	Vertical integration. Supplied from Group's fisheries production.	External fishing companies and seafood suppliers. Also supplied from Group's fisheries production.	Vertical integration. Supplied from Group's aquaculture and fisheries production.
AGENT		PROMARISCO, CAMANICA, NOVAGUATEMALA.	ARGENOVA, NOVAPERU.	External: large international fishing companies. Internal: NOVANAM	Large international fishing companies.	External: large international fishing companies. Internal: NOVANAM
LOCATION		Ecuador, Nicaragua, Guatemala.	Argentina, Peru.	Several countries, mainly USA, Spain, and Namibia.	Several countries, mainly Norway, Iceland, USA, Canada, and Poland.	Several countries, mainly USA, Spain, and Namibia.
NATURE DEPENDENCY Nature's Contributions to People (NCP)		See PROMARISCO, CAMANICA, NOVAGUATEMALA.	See ARGENOVA, NOVAPERU.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services. See also NOVANAM.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services. See also NOVANAM.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services. See also NOVANAM.

	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	See PROMARISCO, CAMANICA, NOVAGUATEMALA.	See ARGENOVA, NOVAPERU.	External suppliers declare no proximity. See also NOVANAM.	External suppliers declare no proximity.	External suppliers declare no proximity. See also NOVANAM.
	SPECIES POPULATIONS PRESENT OR AFFECTED	See PROMARISCO, CAMANICA, NOVAGUATEMALA.	See ARGENOVA, NOVAPERU.	Species affected verified by sustainability standards audits (ETP, habitats, ecosystem)	Species affected verified by sustainability standards audits (ETP, habitats, ecosystem)	Species affected verified by sustainability standards audits (ETP, habitats, ecosystem)
	CONSERVATION STATUS	See PROMARISCO, CAMANICA, NOVAGUATEMALA.	See ARGENOVA, NOVAPERU.	Status verified by sustainability standards audits (ETP, habitats, ecosystem)	Status verified by sustainability standards audits (ETP, habitats, ecosystem)	Status verified by sustainability standards audits (ETP, habitats, ecosystem)
<b>DOWNSTREAM BUSINESS RELATIONSHIPS</b>	TYPE OF OPERATION	Commerce in Spain and export to international markets.	Commerce in Spain and export to international markets.	Commerce in Spain and export to international markets.	Commerce in Spain and export to international markets.	Commerce in Spain and export to international markets.
	AGENT	Shipping, transportation, and distribution agents; Sales points.	Shipping, transportation, and distribution agents; Sales points.	Shipping, transportation, and distribution agents; Sales points.	Shipping, transportation, and distribution agents; Sales points.	Shipping, transportation, and distribution agents; Sales points.
	LOCATION	Spain and international markets.	Spain and international markets.	Spain and international markets.	Spain and international markets.	Spain and international markets.
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	N/A	N/A	N/A	N/A	N/A
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	N/A	N/A	N/A	N/A	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	N/A	N/A	N/A	N/A	N/A
	CONSERVATION STATUS	N/A	N/A	N/A	N/A	N/A

IDENTIFICATION	COMPANY	NUEVA PESCANOVA FRANCE		MARNOVA	NOVAPERU	EIRANOVA
		CI LORIENT	CI BOULOGNE-SUR-MER			
COUNTRY	France	France	France	Angola	Peru	Ireland
ACTIVITY	Processing plant (cooking, packaging).	Processing plant (cephalopods and shrimp processing, packaging).	Processing plant (cephalopods and shrimp processing, packaging).	Fishing fleet	Primary processing (transformation) plant (squid and fish).	Primary processing (transformation) plant (crustaceans).
LOCATION	Lorient, Bretagne.	Boulogne-sur-Mer, Pas-de-Calais.	Boulogne-sur-Mer, Pas-de-Calais.	Lobito, Benguela.	Chilca, Lima; Implantation area: 15,350 m <sup>2</sup>	Castletownbere, Co. Cork
PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.
MITIGATION PLAN	N/A	N/A	N/A	N/A	Yes, as per environmental management issues identified through EIA, mainly waste and effluents.	N/A
NATURE DEPENDENCY Nature's Contributions to People (NCP)	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Land use, freshwater, and solar energy.	Main dependency is biological productivity which is conditioning biomass harvesting. Marine ecosystems services: biogeochemical cycling, biological productivity, habitat, and refuge, recreational and cultural. Other benefits: marine biodiversity, land use, carbon sequestration, and freshwater	Water and land.	Water and land.
LAND USE CHANGES	N/A	N/A	N/A	Responsible fishing operations minimize risk of disturbing seabed.	None. Plant installed in industrial park area.	None. Plant installed in industrial park area.
COMPENSATION MEASURES	N/A	N/A	N/A	N/A	N/A	N/A
SPECIES POPULATIONS PRESENT OR AFFECTED	N/A	N/A	N/A	N/A	N/A	N/A
CONSERVATION STATUS	N/A	N/A	N/A	N/A	N/A	N/A
PLAN FOR NET-POSITIVE IMPACT ON THREATENED SPECIES	N/A	N/A	N/A	N/A	N/A	N/A
TYPE OF OPERATION	Vertical integration. Supplied from Group's aquaculture and fisheries production.	Vertical integration. Supplied from Group's aquaculture and fisheries production.	Vertical integration. Supplied from Group's aquaculture and fisheries production.	No upstream operations.	Fishing (artisanal, and semi-industrial).	Fishing
AGENT	PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	N/A	Local fishermen.	Local fishermen.
LOCATION	Ecuador, Nicaragua, Guatemala, Namibia, Mozambique.	Ecuador, Nicaragua, Guatemala, Namibia, Mozambique.	Ecuador, Nicaragua, Guatemala, Namibia, Mozambique.	N/A	Peru (FAO 87).	Ireland (FAO 27 VII).
NATURE DEPENDENCY Nature's Contributions to People (NCP)	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	N/A	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.	Mainly biological productivity determining biomass harvesting. All other marine ecosystems services.

	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	N/A	No proximity to biodiversity hotspots.	No proximity to biodiversity hotspots.
	SPECIES POPULATIONS PRESENT OR AFFECTED	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	N/A	Impacts on ETP species, habitat and ecosystem are identified and mitigated within the FIP action plan.	N/A
	CONSERVATION STATUS	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	See PROMARISCO, CAMANICA, NOVAGUATEMALA, NOVANAM, PESCAMAR.	N/A	See FIP.	N/A
<b>DOWNSTREAM BUSINESS RELATIONSHIPS</b>	TYPE OF OPERATION	Commerce in France and export to international markets.	Commerce in France and export to international markets.	Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	Seafood processing (cooking, peeling, packaging) in ARTEIXO, Spain; Export to PESCANOVA ESPAÑA for commercialization; Export to international markets.	Seafood processing (cooking, packaging); Export to international markets, and to PESCANOVA ESPAÑA for commercialization.
	AGENT	Shipping, transportation, and distribution agents; Sales points.	Shipping, transportation, and distribution agents; Sales points.	PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	May include cooking, breaded, coated and deep-frozen, and packaging in CI ARTEIXO and CI PORRIÑO, Spain; PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.	May include cooking and packaging; PESCANOVA ESPAÑA, Spain (Commercial activity); Shipping, transportation, and distribution agents; Sales points.
	LOCATION	France and international markets.	France and international markets.	Spain and international markets.	Spain and international markets.	Spain and international markets.
	NATURE DEPENDENCY Nature's Contributions to People (NCP)	N/A	N/A	N/A	N/A	N/A
	PROXIMITY TO BIODIVERSITY HOTSPOTS (in or adjacent to areas important for biodiversity)	N/A	N/A	N/A	N/A	N/A
	SPECIES POPULATIONS PRESENT OR AFFECTED	N/A	N/A	N/A	N/A	N/A
	CONSERVATION STATUS	N/A	N/A	N/A	N/A	N/A