

SPAMI periodic review report

SPAMI name : Mar Menor and Oriental Mediterranean zone of the Region of Murcia coast

Review type : Ordinary Review

Review year : 2024

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Section I: FEATURES PROVIDING A VALUE - ADDED TO THE AREA
(Section B4 of the Annex I, and other obligatory for a SPAMI, and Art . 6 and 7 of the Protocol))

1. MEDITERRANEAN VALUE OF THE SPAMI

	<u>Score</u>
<p>1.1. The SPAMI still fulfils at least one of the criteria related to the regional Mediterranean value as presented in the SPA/BD Protocol's Annex I.</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	1
<p><u>Rationale for the note</u></p> <p>The SPAMI fulfills the criteria a, b, c, d, e and f.</p> <p>There are 5 natural habitat types of Community interest (including 7 priority natural habitat types). There are 26 species included in Annex II of the Protocol: 7 birds, 5 sea plants, 13 marine invertebrates, 2 fishes, 2 reptiles, 2 mammals.</p> <p>The site fulfills the criteria of Uniqueness: Islas Hormigas are set of islands of rocky structure of great verticality that constitute the easternmost point where emerge the level of massive and recrystallized dolomitic limestones that appears in the vicinity of Cabo de Palos belonging to the Triassic age. Due to his oceanographic characteristics of temperature and salinity, its waters are similar to the continental shelf between Cabo de La Nao and Cabo de Gata, suffering marked influences from the stations and the Atlantic waters coming from the Strait of Gibraltar.</p> <p>The site fulfills the criteria of Natural representativeness: This protected area presents marine habitats and plant communities representative of the different ecosystems that integrate this maritime-terrestrial space. The seabeds habitats of the marine reserve constitute a good sample of the well-preserved Mediterranean coast and seabeds.</p> <p>Diversity: Much of the ecological and landscape peculiarity of the marine reserve has its origin in its geological diversity, with a predominance of volcanic substrates, and in its oceanographic characteristics. It contains a high number of marine habitats such as the Posidonia oceanica meadows, coralligenous rock, and several species of fishes with commercial interest like Epinephelus marginatus, Dentex dentex, Seriola dumerilii, etc.</p> <p>The site fulfills the criteria of Presence of habitats that are critical for endangered species: The rocky and sandy bottoms and the diversity of their vegetal colonization constitute the support of a great faunistic richness, with presence of many species of importance for the Mediterranean. The Hormiga island counts with a small population of Patella feruttinea and houses an important nesting point for the Paiño (Hydrobates pelagicus). The Posidonia meadows represents one of the main habitats for the endangered species Pinna nobilis.</p> <p>The site fulfills the criteria of cultural representativeness: Particularly noteworthy is the traditional way of life of the population dedicated to sustainable artisanal fishing in the area.</p> <p>For the Mar Menor sector, it would not meet criterion D as consequence of the eutrophic crises of 2016 and 2019.</p>	

	<u>Score</u>
<p>1.2. Level of adverse changes occurred during the evaluation period for the</p>	2

habitats and species considered as natural features in the SPAMI presentation report submitted for the inclusion of the area in the SPAMI List.

Rating scale

- Significant changes : 0
- Moderate changes : 1
- Slight changes : 2
- No adverse change : 3

Rationale for the note

During this period, relevant changes in both directions have happened in the site, especially in the lagoon. Mar Menor lagoon has suffered two contamination episodes (a eutrophic crises in 2016 and a DANA in 2019) and a hypoxia event in 2021. The main impacts around the site:

- Disposal of chemical fertilizer coming from irrigated lands around the area.
- Disposal of urban wastes in some areas due to torrential rain episodes or DANA and the high phreatic level.
- Disposal from desalination plant.

The Mar Menor has been affected by disturbances caused by human activity, resulting in the loss of its natural character as a saltwater lagoon, including massive fish die-offs following the eutrophic crisis of 2016. This is highlighted in the *Report on the Ecological State of the Mar Menor (First Quarter of 2024)*, which states:

“After the ecosystem collapse during the dystrophic crisis of 2016, the Mar Menor lost its self-regulation mechanisms, which were only restored when water inflows ceased. This recovery was reflected not only in lower nutrient levels in the water but also in the stabilization of fluctuations across all trophic state indicators. The DANA of 2019 caused a new imbalance, but thanks to the reestablishment of homeostatic mechanisms, recovery was faster than in the previous crisis. The first quarter of 2024 shows an ecosystem that continues to exhibit homeorhetic capacities, maintaining low levels of nutrients and chlorophyll despite ongoing discharges of water and nutrients from the surrounding basin. These discharges, however, keep the ecosystem in an unstable equilibrium with a permanent risk of new crises when factors such as high temperatures, low salinity, water column stratification, and alterations in the N:P ratio converge.”

Despite everything, recent years have shown an improvement in water quality and an increase in biodiversity:

“A slight reduction in nutrient inflows, and more importantly, the recovery of the Mar Menor's communities and its homeostatic and self-regulation capacities, have allowed chlorophyll and turbidity levels to remain low, except during episodes of torrential or frequent rainfall. This recovery is consolidating water transparency, with average Secchi disk visibility ranging between 3.5 and 4.5 meters. As of March 20, 2024, the average surface chlorophyll-a concentration was 0.7 mg/l.” *Report on the Ecological State of the Mar Menor. First Quarter of 2024.*

The *Report on the Ecological State of the Mar Menor (First Quarter of 2024)* is attached.

<https://canalmarmenor.carm.es/wp-content/uploads/Informe-situacion-Mar-Menor-primer-trimetre-de-2024.pdf>.

Similarly, the salinity in the lagoon has reached its higher values in 2024 since 2017 (*Report on the Ecological State of the Mar Menor (Third Quarter of 2024)*) https://canalmarmenor.carm.es/wp-content/uploads/UMU-Informe_SMM_octubre_2024_30-10.pdf

Also, oxygen is also increasing, even since 2019 (IEO, Informe de actualización de resultados del programa de seguimiento del estado del Mar Menor (octubre 2024)) https://www.miteco.gob.es/content/dam/miteco/es/ministerio/planes-estrategias/mar-menor/Informe_IEO_OCTUBRE24_BELICH.pdf

In relation to the *Cymodocea nodosa* meadows, the Spanish Institute of Oceanography is finalizing a mapping of this species in the Mar Menor lagoon, and there is a slight increase since the 2016 minimum.

Considering the lagoon's environmental challenges—including the DANA event in 2019 and the hypoxia event in 2021—and its subsequent recovery trend (in many key parameters, as salinity or oxygen) thanks to the significant efforts undertaken by the management authorities and a very clear commitment to continue tackling existing pressures and expected threats, the expanded SPAMI boundaries (and the marine site's stability), and the SPAMI evaluation scoring system, slight adverse changes can be assessed across the entire protected area.

Score

3

1.3. Are the objectives, set out in the original SPAMI application for designation, actively pursued?

Rating scale

No : 0
 Only some of them : 1
 Yes for most of them : 2
 Yes for all of them : 3

Rationale for the note

The site still maintains the considerations for which it was included in the SPAMI List. The presence of typically Mediterranean habitats in a good state of conservation and of endemic or endangered species, and the existence of different elements of educational, scientific and aesthetic interest. So, all of the objectives established in the original SPAMI application for the designation have been actively pursued, through the effective application of the management plan.

Article 4.3 of Decree No. 259/2019, of October 10, declaring Special Areas of Conservation (ZEC) and approving the Integrated Management Plan for the Protected Areas of the Mar Menor and the Mediterranean Coastal Strip of the Region of Murcia:

The Integrated Management Plan for the protected areas of the Mar Menor and the Mediterranean coastal strip of the Region of Murcia Mediterranean coastal strip of the Region of Murcia responds to the requirements for the planning, protection, conservation and for the planning, protection, conservation and management of the following natural spaces natural areas:*

a) *The Special Area of conservation (SAC) declared in Article 1:*

- Salinas y Arenales de San Pedro del Pinatar (ES0000175).
- Espacios Abiertos e Islas del Mar Menor (ES6200006).
- Islas e Isletes del Litoral Mediterráneo (ES6200007).
- Franja Litoral Sumergida de la Región de Murcia (ES6200029).
- Mar Menor (ES6200030).
- Cabezo Gordo (ES6200013).

b) *The Special Protection Area for Birds (SPAB) referred to in article 2.1:*

- Salinas y Arenales de San Pedro del Pinatar (ES0000175)
- Isla Grosa (ES0000200)
- Islas Hormigas (ES0000256)
- Mar Menor (ES0000260)
- Isla de Cueva de Lobos (ES0000270)
- Isla de las Palomas (ES0000271)

c) *The Wildlife Protection Areas, referred to in article 2.2:*

In accordance with Article 22 of Law 7/1995, of April 21, on Wild Fauna of the Region of Murcia, the territorial scope of the SPAs referred to in the previous section and the territorial scope of the ZEC of Cabezo Gordo, as stated in Article 1, are designated as Areas of Wildlife Protection.

d) *The Regional Park of the Salinas y Arenales de San Pedro del Pinatar, declared in the third additional provision, paragraph a).4 of its section one, of the Law 4/1992.*

e) *The Protected Landscape of the Cabezo Gordo and the Protected Landscape of the Islands and Islets of the Islets of the Mediterranean Coast, declared in article 3.*

f) *The Protected Landscapes of the Open Spaces and Islands of the Mar Menor, declared in the third additional provision, section two, of Law 4/1992.*

g) *The Wetland of International Importance (RAMSAR) of the Mar Menor.*

h) The Specially Protected Area of Mediterranean Importance (SPAMI) of the Mar Menor Area and the eastern Mediterranean coastal area.

**Decree No. 259/2019, of October 10, declaring Special Areas of Conservation (ZEC) and approving the Integrated Management Plan for the Protected Areas of the Mar Menor and the Mediterranean Coastal Strip of the Region of Murcia is attached.*

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2. LEGAL AND INSTITUTIONAL ARRANGEMENTS

	<u>Score</u>
2.1. The legal status of the SPAMI (with reference to its legal status at the date of the previous evaluation report).	2

<p><u>Rating scale</u></p> <p>Significant negative change in the legal status of the SPAMI : 0</p> <p>Slight negative change in the legal status of the SPAMI : 1</p> <p>The SPAMI has maintained or improved its legal status : 2</p>	
<p><u>Rationale for the note</u></p> <p>In the initial evaluation the surface of SPAMI was 27,503 ha.</p> <p>After reviewing the situation of the protected areas within the scope of the Integral Management Plan, and given the overlapping between different given the overlap between different figures of protection, it is proposed the correction of its limits to make them coincide with the delimitation of the ZEPA "Mar Menor", the Regional Park "Salinas to make them coincide with the delimitation of the ZEPA "Mar Menor", ZEC "Arenales de San Pedro del Pinatar" and the ZEC 'Submerged Coastal Strip of the Region of Murcia'. These adjustments represent a net extension of 898.99 ha.</p> <p>The currently extension is 28.402,42 ha.</p>	

	Score
<p>2.2. Are competencies and responsibilities clearly defined in the texts governing the area?</p> <p><u>Rating scale</u></p> <p>Competencies and responsibilities are not clearly defined : 0</p> <p>The definition of competencies and responsibilities needs slight improvements : 1</p> <p>The SPAMI has clearly defined competencies and responsibilities : 2</p>	2
<p><u>Rationale for the note</u></p> <p>The competences and responsibilities are clearly defined in the section on conservation and management measures (point 13):</p> <ul style="list-style-type: none"> -Coastline Demarcation of the State (State Administration). -The competent department for environmental matters (Regional Administration). -Municipalities (Local Administration). <p><i>*Decree No. 259/2019, of October 10, declaring Special Areas of Conservation (ZEC) and approving the Integrated Management Plan for the Protected Areas of the Mar Menor and the Mediterranean Coastal Strip of the Region of Murcia is attached.</i></p> <p>chrome-extension://efaidnbmninnibpcjpcglclefindmkaj/https://www.borm.es/services/anuncio/ano/2019/numero/6450/pdf?id=780567</p>	

	Score
	2

<p>2.3. Does the area have a management body, endowed with sufficient powers?</p> <p><u>Rating scale</u></p> <p>No management body, or the management body is not endowed with sufficient powers : 0</p> <p>The management body is not fully dedicated to the SPAMI : 1</p> <p>The SPAMI has a fully dedicated management body and sufficient powers to implement the conservation measures : 2</p>	
<p><u>Rationale for the note</u></p> <p>Autonomous Community of the Region of Murcia - General Directorate of the Natural Environment assumes responsibility for the management and conservation of the SPAMI.</p> <p>Ministry of Agriculture, Fisheries and Food is responsible for marine reserves.</p> <p>Ministry of Ecological Transition is responsible for marine SPA, in the easternmost part of the site.</p>	

3. MANAGEMENT AND AVAILABILITY OF RESOURCES

	<u>Score</u>
<p>3.1. Does the SPAMI have a management plan?</p> <p><u>Rating scale</u></p> <p>No management plan : 0</p> <p>The level of implementation of the management plan is assessed as “insufficient” : 1</p> <p>The management plan is not officially adopted but its implementation is assessed as “adequate” : 2</p> <p>The management plan is officially adopted and adequately implemented : 3</p>	3

Rationale for the note

The management plan was approved through the Decree No. 259/2019, of October 10, declaring Special Areas of Conservation (ZEC) and approving the Integrated Management Plan for the Protected Areas of the Mar Menor and the Mediterranean Coastal Strip of the Region of Murcia is attached.

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In relation to the implementation, there is a team of 5 technicians dedicated to the compliance with the management plan in the SPAMI (Execution of projects, monitoring programs, and report preparation) and a body of environmental agents dedicated to monitoring, controlling activities, and enforcing sanctions.

After the approval of the management plan, the following was approved:

-Law 3/2020, of July 27, on the recovery and protection of the Mar Menor.

“The purpose of this law is the protection, recovery, development, and revaluation of the biological, environmental, economic, social, and cultural wealth of the Mar Menor, as well as the coordination of the various public policies assigned to the Autonomous Community of the Region of Murcia that impact the Mar Menor, to ensure that their implementation is carried out in an integrated and sustainable manner”.

<chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.boe.es/buscar/pdf/2020/BOE-A-2020-9793-consolidado.pdf>

-Decree No. 42/2021, of March 31, approving the 'Integrated Coastal Zone Management Strategy of the Socio-Ecological System of the Mar Menor and its Surroundings.

The Strategy sets as its mission:

“To achieve a management model in the public sphere of action adapted to the special characteristics of the area, in close inter-administrative cooperation, inspired by governance principles and committed to citizen participation”.

<chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://sitmurcia.carm.es/documents/13454/23299500/EGIZC+SSEMM/caa39127-cbe3-46f5-b230-dc502f5756f7>

The adequate implementation of the management plan can be observed comparing the budget initially considered in the document (21.9 M€) and the budget that has been spent, over 270 M€ by the Ministry for the Ecological Transition and the Regional Gov. ([PLAN-ACCION-MAR-MENOR-2024-para-digital.pdf](#) and [240415 IA MAPMM Mzo.pdf](#)).

Score	
<p>3.2. Assess the adequacy of the management plan taking into account the SPAMI objectives and the requirements set out in article 7 of the Protocole ASP/DB and Section 8.2.3 of the Annotated Format (AF).</p> <p><u>Rating scale</u></p> <p>Low : 0</p> <p>Medium : 1</p> <p>Good : 2</p> <p>Excellent : 3</p>	<p>2</p>

Rationale for the note

The Integrated Management Plan for the protected areas of the Mar Menor and the Mediterranean coastal strip of the Region of Murcia Mediterranean coastal strip of the Region of Murcia responds to the requirements for the planning, protection, conservation and for the planning, protection, conservation and management of the SPAMI.

In section 11 of the management plan, two types of objectives are established:

-General objectives (GO): These define the ideal final state to be achieved concerning the ecological integrity of the protected areas of the Mar Menor and the Mediterranean Coastal Strip of the Region of Murcia, and the **conservation status of their habitat types and species**.

-Operational objectives (OO): These aim to achieve the general objectives, taking into account existing resources, available knowledge and technology, as well as the local socioeconomic situation. Operational objectives can be achieved through conservation or management actions, regulations, or the application of guidelines. The guidelines, and especially the regulations, form the preventive mechanisms of the Plan.

Among the operational objectives, the following stand out:

GO.3. Establish measures to improve the conservation status of habitats and species.

OO.3.1. *Improve and adapt the habitats of the key species of the Integrated Management Plan.*

OO.3.2. *Recover and/or restore, where applicable, the habitats of community interest in the protected areas of the Natura 2000 network, especially the key elements of the Integrated Management Plan.*

OO.3.3. *Adopt measures to prevent or minimize impacts on the habitats and species within the scope of the Integrated Management Plan.*

OO.3.4. *Reduce eutrophication and pollution."*

In sections 12 and 13 of the management plan, **the zoning and the conservation and management measures are established**, respectively.

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We can not consider the management plan as excellent, as it's missing some of the most relevant cultural aspects, like the wind mills and the mining legacy. These goods are protected and restored by the Regional Gov. using complementary tools ([Plan director Molinos de Viento - Patrimonio Cultural Region de Murcia](#) or [Actualización Catálogo BIC Sierra Minera - Patrimonio Cultural Region de Murcia](#))

	Score
<p>3.3. Assess the adequacy of the human resources available to the SPAMI.</p> <p><u>Rating scale</u></p> <p>Very low/Insufficient : 0</p> <p>Low : 1</p> <p>Adequate : 2</p> <p>Excellent : 3</p>	3
<p><u>Rationale for the note</u></p> <p>There are 11 technicians from the Directorate-General for the Mar Menor, who are dedicated to managing projects and coordinating various conservation, monitoring, and recovery actions for the lagoon.</p> <p>There are currently 5 technicians in charge of the management of the SPAMI.</p> <p>There is a staff of 8 technicians in the Marine Reserve.</p>	
	Score
<p>3.4. Assess the adequacy of the financial and material means available to the</p>	2

<p style="text-align: center;">SPAMI</p> <p><u>Rating scale</u></p> <p>Very low : 0</p> <p>Low : 1</p> <p>Adequate : 2</p> <p>Excellent : 3</p>	
<p><u>Rationale for the note</u></p> <p>Regarding financial resources, the budget allocated to the SPAMI is included in the management plan. The adequate implementation of the management plan can be observed comparing the budget initially considered in the document (21.9 M€) and the budget that has been spent, over 270 M€ by the Ministry for the Ecological Transition and the Regional Gov. (PLAN-ACCION-MAR-MENOR-2024-para-digital.pdf and 240415_IA_MAPMM Mzo.pdf).</p> <p>There is an specific capacity-building programme in the Regional Park “Salinas y Arenales de San Pedro del Pinatar” and a Visitor Center too. There are also many other material means that are available to the staff (office, visitor center, information points, surveillance equipment, educational material, etc.).</p>	

	Score
<p>3.5. Does the area have a monitoring programme?</p> <p><u>Rating scale</u></p> <p>No monitoring programme : 0</p> <p>The level of implementation of the monitoring programme is assessed as “insufficient” : 1</p> <p>The monitoring programme needs improvement to cover other parameters that are significant for the SPAMI : 2</p> <p>The monitoring programme is adequately implemented and allows the assessment of the state and evolution of the area, as well as the effectiveness of protection and management measures : 3</p>	<p>3</p>

Rationale for the note

The monitoring programs also collaborate with the following entities:

- IMIDA (Murcian Institute of Agricultural and Environmental Research and Development).
- University of Murcia.
- Polytechnic University of Cartagena.
- Spanish Institute of Oceanography.

Monitoring in the SPAMI is carried out through:

- Fauna and flora monitoring programs for the Region of Murcia (Dirección General de Patrimonio Natural y Acción Climática)

Biological monitoring program for threatened fauna species.

https://murcianatural.carm.es/web/guest/fauna1/-/journal_content/56_INSTANCE_0Mbi/14/822529?verTodos=publicaciones

Program for the conservation of endangered wild flora:

https://murcianatural.carm.es/web/guest/publicaciones/-/journal_content/56/14/7189584

-Monitoring of the fartet (*Aphanius iberus*) in the Salinas de San Pedro del Pinatar and in the Salinas de Marchamalo.

-LIFE SALINAS (Regional Park Las Salinas de San Pedro del Pinatar):

Larus audouinii: Before the start of the Project, the population of *Larus audouinii* in the Salinas de San Pedro del Pinatar showed a regressive trend, from the maximum concentration of 836 nesting pairs in 2014, the population had been reduced to 180 pairs in 2018, while in 2022 a total of 498 pairs had bred.

Habitat 1510* and 2250*: Increase of vegetal coverage by revegetation with autochthonous species (habitat 1510* and 2250*) to contribute to halt erosion. Results: 16,361 plants were introduced of 24 species for 44 plots in 2 hectares.

-Currently, from the University of Murcia and under the framework of the GuitarProtect Project funded by the ThinkInAzul program, a monitoring of these species and other species of rays and sharks has been initiated through sightings reported by citizens. Also, given the relevance of the ZEPIM as the only known distribution area of the common guitar in the western Mediterranean, this project is carrying out a study of its spatial ecology by means of acoustic telemetry to define with higher resolution those areas and stations particularly important for the species in the area.

-POSIMUR 2023 (Regional Government and University of Murcia).

-Study of the State of Fish Fauna Indicator of Shallow Areas, Improvement of Information, and Application in the Drafting of Projects in the Submerged Zone of the Mar Menor (Regional Government and University of Murcia).

-Monitoring of Parameters:

Salinity, Oxygen, Chlorophyll, Temperature, Transparency, Turbidity, Flow of the Watershed Draining into the Mar Menor, Flow of the Rambla del Albuñón, Flow of the Watershed Draining into the Mar Menor and Nutrients at the Mouth of the Rambla del Albuñón.

<https://canalmarmenor.carm.es/monitorizacion/monitorizacion-de-parametros/>

For the Marine Reserve, there are these monitoring programmes:

- Census of fishing species and catches
- Monitoring of habitats and singular species (*Pinna* sp), including potential alien species detection.
- Monitoring of *Pinna* sp.: installation, monitoring and removal of *Pinna* sp. larval collectors. If any specimen is found, it is transferred to Research Center in San Pedro del Pinatar. Collectors are installed in spring (April-May) and removed after summer (October-November)

Data collection and analysis of physic-chemical parameters: Temperature, Oxygen, Conductivity, Salinity and Turbidity.

	Score
<p>3.6. Is there a feedback mechanism that establishes an explicit link between the monitoring results and the management objectives, and which allows adaptation of protection and management measures?</p> <p><u>Rating scale</u></p>	1

<p>Low : 0</p> <p>Medium : 1</p> <p>Good : 2</p>	
<p><u>Rationale for the note</u></p> <p>There are various feedback mechanisms:</p> <ul style="list-style-type: none"> • Annual Report of the Regional Park of the Salinas de San Pedro del Pinatar • To date, four compliance reports for Article 17 of the Habitats Directive have been prepared and submitted, covering the periods 1994-2000, 2001-2006, 2006-2012 and 2013-2018. • MANAGEMENT REPORT OF THE Protected Areas of the Mar Menor and Mediterranean Coastal Strip of the Region of Murcia (2021) • Monitoring report of Integrated Coastal Zone Management Strategy for the Mar Menor and its Surroundings • The scientific committee is essential for transferring the results of the monitoring program to support management decision-making. <p>In Spain, and according to EU guidelines, management plans have to be updated if there are relevant changes in the conservation objectives. If an ecological feature which is relevant for the site needs an increase in the management intensity this should deliver a new plan. That's why we should consider it as medium.</p>	

	<u>Score</u>
<p>3.7. Is the management plan effectively implemented?</p> <p><u>Rating scale</u></p> <p>Low : 0</p> <p>Medium : 1</p> <p>Good : 2</p> <p>Excellent : 3</p>	<p>3</p>
<p><u>Rationale for the note</u></p> <p>Management plan is effectively implemented. It can be found on</p> <p>https://canalmarmenor.carm.es/wp-content/uploads/Resumen-Ejecutivo-Mar-Menor-Septiembre-2023-V19.pdf</p> <p>The management plan for the Marine Reserve is established through the Orden APM/660/2017, de 30 de junio, por la que se regula la reserva marina de Cabo de Palos-Islas Hormigas, y se define su delimitación y usos permitidos. (https://www.boe.es/buscar/act.php?id=BOE-A-2017-8146) and it has been effectively implemented, as it's mainly based on regulations, which are enforced through the personnel.</p> <p>Over 70% of the actions outlined in the management plan have already been executed.</p> <p>The budget allocated by the management plan amounts to €3,652,616 annually. In 2024, the regional government's investment in the Mar Menor area alone was €68,370,792.</p>	

	<u>Score</u>
<p>3.8. Have any concrete conservation measures, activities and actions been implemented?</p> <p><u>Rating scale</u></p>	<p>2</p>

Low : 0
 Medium : 1
 Good : 2
 Excellent : 3

Rationale for the note

- Resolution of September 7, 2023, of the Maritime Captaincy of Cartagena, which prohibits the anchoring of ships and boats in four areas of the Mar Menor for the protection of the common naacre (*Pinna nobilis*). It establishes that the anchoring of ships in these areas can have a negative cumulative impact on the common naacre. <https://www.borm.es/services/anuncio/ano/2023/numero/5926/pdf?id=822304> Four zones are established where anchoring of boats is not allowed:
 - Polygon delimited around Perdiguera Island.
 - Polygon delimited around Baron's Island or Mayor
 - Punta del Galán - Pedruchillo.
 - Matas Gordas.
- Active marine surveillance in the Isla Grosa and Islote Farallón during three months in the summer time: Decree No. 259/2019 approves the Comprehensive Management Plan for the protected areas of the Mar Menor and the Mediterranean coast of the Region of Murcia. A Priority Conservation Area (PCA) that corresponds to the 300 m of the submerged strip around both islands, and a Fauna Reserve Area (FRA) which are the ones emerged or the land parts. They establish the following uses and restrictions about the disturbance of protected wild fauna:
 - Navigation:
 - Permitted in the period from September 1 to December 31 in the PCA (300 m). Sailing speed must be less than 5 knots. Outside this period, navigation within the Priority Conservation Area is prohibited, except for authorized activities.
 - If a diving boat (with an alpha flag) is moored to its buoy (red), a minimum safety distance of 50 m must be kept around it (RD 550/20).
 - Anchoring:
 - Permitted outside the Priority Conservation Area (more than 300 m from the islands).
 - The nocturnal presence of boats inside the PCA is not allowed.
 - Scuba diving:
 - Permitted, prior authorization by the Regional Ministry in charge of the natural environment.
 - Tourist boats:
 - Permitted prior authorization by the General Directorate for Natural Environment:
 - From August 10 to December 31 → Navigation within the entire PCA is allowed (speed 5 knots).
 - From January 1st to August 9th → Navigation inside PCA – except to enter your mooring buoy for the shortest distance is prohibited.

It is allowed to approach the cliffs on Grosa (100 m) and Farallón at 100 m.□□

Wild reserve:

Landing is prohibited throughout the year, except for authorized activities.

Cabo de Palos-Isla Hormigas is a Marine Reserve of Fishing Interest located in the Region of Murcia since 1995. It is a rectangular-shaped Mediterranean marine reserve of 1,931 hectares next to the coast of Cabo de Palos.

The integral reserve of maximum protection is located around the islets of Las Hormigas, reaching depths of more than 50 metres. There is an alternation of maerl and sandy seabeds and *Posidonia oceanica* meadows.

It is a passage area for pelagic species. This reserve is aimed at the regeneration of the target resources of the most traditional fishing activity in the area.

Nowadays, the external water are regulated by:

Orden APM/660/2017, de 30 de junio, por la que se regula la reserva marina de Cabo de Palos-Islands Hormigas, y se define su delimitación y usos permitidos.

For professional fishing vessel, there is an authorization list. It is regulated by:

Resolución de 27 de septiembre de 2023, de la Secretaría General de Pesca, por la que se actualiza el censo de embarcaciones autorizadas a ejercer la pesca marítima profesional en la reserva marina del entorno de Cabo de Palos-Islands Hormigas.

Section II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA

4. THREATS AND SURROUNDING CONTEXT

4.1. Assess the level of threats within the site to the ecological, biological, aesthetic and cultural values of the area (B4.a Annex I).

Under section 4.1, questions are asked in two parts: part a) enquiring on the existence of threats within the site, and part b) asking about the response made to mitigate such threats. If the answer to part a) is “no threats”, part b) is not applicable. Whereas, when threats are reported under part a), part b) should be answered. The score achieved in response to part b) is considered as a bonus and has no impact on the score evaluation and consequently the result of the review.

	<u>Score</u>
<p>4.1.1.a. Unregulated exploitation of natural resources (e.g. sand mining, water, timber, living resources) See 5.1.1. in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.1.2. a).</p>	3
<p><u>Rationale for the note</u></p> <p>There is not any unregulated exploitation of natural resources.</p>	

	<u>Score</u>
<p>4.1.1.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the unregulated exploitation of natural resources (e.g. sand mining, water, timber, living resources) See 5.1.1. in AF.</p> <p><u>Rating scale</u></p> <p>No efforts : 0</p> <p>Little efforts : 1</p> <p>Some efforts : 2</p> <p>Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.1.1. a) is “no threats”.)</p>	Not Applicable

	<u>Score</u>
<p>4.1.2.a. Threats to habitats and species (e.g. disturbance, desiccation, pollution, poaching, introduced alien species) See 5.1.2. in AF.</p>	1

<p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.1.3. a).</p>	
<p><u>Rationale for the note</u></p> <p>Two episodes of eutrophic crisis into Mar Menor caused trophic imbalances and increased the demand for oxygen due to the decomposition of organic matter from the seabed.</p> <p>In addition to, torrential rain episodes or DANAs (Isolated High-Level Depressions) that cause the transport and deposition of sediments on seagrass meadows can have significant environmental impacts.</p> <p>Agricultural run-off, the high phreatic level and heavy rains can thus affect affect N and P cycles, causing eutrophication, which is a process where water bodies, including wetlands, experience excessive nutrient enrichment. This leads to a series of negative environmental effects:</p> <p>Algal Blooms: Excess nutrients stimulate the rapid growth of algae and phytoplankton, often forming dense algal blooms. These blooms reduce sunlight penetration, disrupting photosynthesis in submerged aquatic vegetation.</p> <p>Oxygen Depletion (Hypoxia): As algae die and decompose, microorganisms consume large amounts of oxygen, leading to hypoxic (low oxygen) or anoxic (no oxygen) conditions. This harms aquatic organisms, including fish, amphibians, and invertebrates.</p> <p>Biodiversity Loss: Oxygen depletion and reduced sunlight disrupt the ecosystem, leading to the decline or extinction of sensitive plant and animal species. This alters the food web and reduces overall biodiversity.</p> <p>Illegal fishing has a number of negative effects on marine ecosystems, species, and human communities. It often targets threatened species, disrupts food webs and ecological balances. Overfishing of key species, such as predators or herbivores, can lead to cascading effects throughout the ecosystem, including algal blooms or population explosions of certain prey species. For human communities, these practices undermine sustainable fisheries, threaten food security, and reduce the livelihoods of those dependent on marine resources, creating long-term social and economic consequences.</p> <p>Shifts in Vegetation: Eutrophication can favor fast-growing, nutrient-tolerant plant species, such as invasive species, over native ones. This can change the structure and function of wetland ecosystems, and, in the Mar Menor, is the most worrying effect of eutrophication for Cymodocea meadows.</p> <p>Mine tailings: The presence of mine tailings, along with metals and metalloids in the ramblas, represents a concerning but not yet critical environmental issue. Over time, the accumulation of heavy metals such as lead, arsenic, and mercury can have severe ecological impacts, including soil contamination, which disrupts plant growth and microbial activity, and water pollution, which affects aquatic ecosystems and can render water sources unsafe for consumption. Additionally, bioaccumulation of these metals in the food chain can harm wildlife, leading to toxic effects in higher trophic levels, including humans. If not properly managed, the ongoing release of these contaminants may escalate into a critical problem, causing irreversible damage to ecosystems and biodiversity.</p>	

<p>4.1.2.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the threats to habitats and species (e.g. disturbance, desiccation, pollution, poaching, introduced alien species) See 5.1.2. in AF.</p> <p><u>Rating scale</u></p>	<p style="text-align: center;"><u>Score</u></p> <p style="text-align: center;">3</p>
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No efforts : 0
 Little efforts : 1
 Some efforts : 2
 Significant efforts : 3

Rationale for the note

Some measures that have been implemented are:

BANK OF EMBLEMATIC SPECIES OF THE MAR MENOR

Pioneering project in Spain aimed at ensuring the long-term viability of populations of representative species from the habitats of the Mar Menor. This initiative seeks to safeguard key species that are essential for the ecological health and biodiversity of the lagoon and its surrounding ecosystems.

REMOVAL OF PLANT BIOMASS FROM THE MAR MENOR

It aims to protect the ecological state of the Mar Menor and prevent the acceleration of eutrophication by reducing the excess biomass produced by the massive proliferation of algae.

IMPROVEMENT AND RECOVERY OF HABITATS AND BIODIVERSITY IN CARMOLÍ WETLAND AND MARCHAMALO SALT FLATS.

Includes a creation of a new fauna refuge pond for fartet fish, rehabilitation of two existing ponds and maintenance and improvement of the existing canal network (currently in the project phase)

CREATION OF TANKS AND RAINWATER DRAINAGE SYSTEMS

To date, 9 environmental tanks, collectors, and stormwater tanks have been implemented in Playa Honda, runoff basins, and rainwater drainage networks in El Mojón and Ciudad del Aire.

INSTALLATION OF BUOYS IN THE NO-ANCHORING ZONE OF THE MAR MENOR

In the short term, buoys will be installed to delimit the anchoring exclusion zones due to their impact on the noble pen shell (*Pinna nobilis*).

Resolution of September 7, 2023, by the Maritime Captaincy of Cartagena, which prohibits the anchoring of ships and vessels in four areas of the Mar Menor for the protection of the noble pen shell (*Pinna nobilis*).

<chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://canalmarmenor.carm.es/wp-content/uploads/Resolucion-prohibicion-de-fondeo-en-Mar-Menor.pdf>

AGRICULTURAL PLANNING AND MANAGEMENT IN MAR MENOR

The restoration of crops to their natural state or to dry farming has been carried out in accordance with the Mar Menor law, as well as the training of environmental operators. Currently, the new specific action program for the nitrate-vulnerable area of the Campo de Cartagena is under processing.

LIVESTOCK PLANNING AND MANAGEMENT IN MAR MENOR

It includes agreements with fishing guilds to promote sustainable fishing, cleaning of the seabed in the Mar Menor, adapting fishing practices to species protection, and monitoring of engines.

EXHAUSTIVE STUDY OF NOBLE PEN SHELL (*Pinna nobilis*)

The Mediterranean Sea endemic species *Pinna nobilis* is facing a serious threat, a protozoan parasite of unknown origin called *Haplosporidium pinnae*, which has caused the near extinction of the species at the Mediterranean Sea level. Currently, some isolated resistant individuals can be found in coastal waters of the Mediterranean Sea and entire unaffected or partially affected populations in coastal lagoons, lakes and estuaries in Spain, France, Italy and Greece. Within the framework of the project (LIFE INTEMARES, subaction C1.1) an exhaustive study of one of the remaining populations of the species located in the coastal lagoon of the Mar Menor has been carried out, which aims to evaluate its conservation status and determine the viability of the population's recovery. To this end, between 2019 and 2022, 6 field campaigns have been carried out to determine the spatial and bathymetric distribution of the species in the lagoon, its abundance and densities, its growth and size structure, its recruitment capacity, and its genetic structure and diversity.

CONSERVATION PLAN FOR THE NOBLE PEN SHELL (*Pinna nobilis*)

Currently, the conservation plan for the noble pen shell is under development. The national strategy for this species has already been approved.

GOVERNANCE OF THE MAR MENOR

- Mar Menor Council
- Scientific Advisory Committee of the Mar Menor
- Interdepartmental Commission of the Mar Menor
- Communication and Information System of the Mar Menor (Mar Menor Channel)

HYDROLOGICAL-FOREST RESTORATION PLAN FOR THE MAR MENOR BASIN

It is mandatory compliance with Article 19 of the Ley del Mar Menor (Mar Menor Law).

In public consultation for its environmental assessment.

Implementation period: 16 years.

Estimated budget: 273 million euros

Between the mainly actions:

- Restoration, improvement, and diversification of vegetation cover
- Environmental improvement of the drainage network
- Flood control and sediment retention
- Soil remediation and environmental restoration

ENVIRONMENTAL MONITORING AND FOLLOW-UP

-Continuous ecological monitoring and follow-up of the Mar Menor, through a scientific data server (SDS).

<https://canalmarmenor.carm.es/monitorizacion/monitorizacion-de-parametros/>

-Weekly sampling program of flow rates and nutrients.

<https://canalmarmenor.carm.es/monitorizacion/monitorizacion-de-parametros/aforos/>

-Monitoring and control of bathing waters.

<https://canalmarmenor.carm.es/monitorizacion/monitorizacion-de-parametros/calidad-de-aguas-de-bano/>

-Implementation of precision technologies and aquifer control in the irrigation community of the Campo de Cartagena.

HYDRODYNAMIC MODELING

High-resolution hydrodynamic modeling of water exchange between the Mar Menor and the Mediterranean.

FISHING

Fishing regulation for the Mar Menor under development.

It includes agreements with fishing guilds to promote sustainable fishing, cleaning of the seabed in the Mar Menor, adapting fishing practices to species protection, and monitoring of engines.

-The Spanish Oceanographic Institute (state administration) is preparing a new map of the habitats of *Cymodocea nodosa* and *Posidonia oceanica*.

	Score
<p>4.1.3.a. Increase of human impact (e.g. tourism, boats, building, immigration...) See 5.1.3. in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.1.4. a).</p>	1

Rationale for the note

Human Presence: The population around the lagoon has been steadily increasing, even though tourism has not grown as rapidly as in other parts of Spain. This rise in human activity can place pressure on wetlands and marine ecosystems, leading to habitat destruction, water pollution from untreated sewage and agricultural runoff, overfishing, and the introduction of invasive species. Furthermore, urban expansion and infrastructure development disturb delicate ecological balances, while recreational activities often contribute to the degradation of water quality and coastal erosion.

Nautical tourism: Its impact on marine ecosystems can be quite significant, particularly in terms of its effects on biodiversity. Anchoring and boat traffic can damage sensitive habitats such as seagrass beds, which are vital for numerous species. Noise pollution from boats can be a source of discomfort to species such as birds. Overcrowding in popular areas can also lead to habitat degradation and stress on local wildlife, while improper disposal of waste and fuel spills can further harm marine organisms and reduce water quality, threatening the diversity and health of marine ecosystems. To avoid that, there are many initiatives in the SPAMI, led by the Regional Gov. and the MAPA

	<u>Score</u>
<p>4.1.3.b. Efforts undertaken during the evaluation to address/mitigate the increase of human impact (e.g. tourism, boats, building, immigration...) See 5.1.3. in AF.</p> <p><u>Rating scale</u></p> <p>No efforts : 0</p> <p>Little efforts : 1</p> <p>Some efforts : 2</p> <p>Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.1.3. a) is “no threats”.)</p>	3

Rationale for the note

There's an ongoing tender procedure to elaborate the PLAN DE ORDENACIÓN TERRITORIAL DE LA CUENCA VERTIENTE DEL MAR MENOR, which has the following goals:

1. Promote balanced and harmonious development in the region to improve the quality of life for its residents.
2. Ensure the responsible use of land, protect historical and cultural heritage, and manage natural, energy, and environmental resources effectively.
3. Develop policies for planning, protecting, and managing the landscape.
4. Guarantee coordination between government bodies and encourage active participation in land planning to balance public interests. Support and guide important public and private initiatives.
5. Foster social and economic progress by modernizing infrastructure, improving facilities, and regulating land use to boost productivity and attract new investments.

<https://dossier.carm.es/dossier-web/api/entrada/2806339/documento?usuario=jom68v>

Environmental awareness and outreach. New web channel, Open Classroom Mar Menor, and improvements to the San Pedro del Pinatar Salt Flats Visitor Center.

NAUTICAL TOURISM

Anchoring exclusion zones due to the presence of *Pinna nobilis* and *Posidonia oceanica*.

-Navigation regulation by the Maritime Captainty.

<https://canalmarmenor.carm.es/wp-content/uploads/Resolucion-prohibicion-de-fondeo-en-Mar-Menor.pdf>

	<u>Score</u>

<p>4.1.4.a. Conflicts between users or user groups. See 5.1.4. and 6.2 in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.1.5. a).</p>	<p>1</p>
<p><u>Rationale for the note</u></p> <p>Yes, between environmental conservation, tourism, urbanism, agrifood, and fishing sectors.</p>	

<u>Score</u>	
<p>4.1.4.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the conflicts between users or user groups. See 5.1.4. and 6.2 in AF.</p> <p><u>Rating scale</u></p> <p>No efforts : 0</p> <p>Little efforts : 1</p> <p>Some efforts : 2</p> <p>Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.1.4. a) is “no threats”.)</p>	<p>3</p>
<p><u>Rationale for the note</u></p> <p>The Mar Menor law establishes:</p> <p>Article 7. Mar Menor Council</p> <p>The Mar Menor Council is the highest consultative and participatory collegiate body in matters of the comprehensive protection of the Mar Menor, depending on the ministry responsible for environmental matters, whose creation and applicable regime are specifically regulated by this Law.</p> <p>With full respect for the functions assigned to the various bodies of the Regional Administration, it is the responsibility of the Mar Menor Council to be informed about the ecological status of the Mar Menor and its evolution, as well as to assess the various actions necessary for its progressive improvement, contributing, integrating, and expressing social, economic, and local interests, to ensure that a global perspective is taken into account when formulating solutions. The Mar Menor Council may direct initiatives and propose actions to the various bodies with competences in the protection of the Mar Menor.</p> <p>The Council will be informed about strategies, programs, and actions for the protection, conservation, management, and recovery of the Mar Menor, as well as policies applied in the Mar Menor's surrounding area.</p> <p>The functioning of the Mar Menor Council will comply with the basic rules applicable to collegiate bodies established by Law 40/2015, of October 1, on the Legal Regime of the Public Sector.</p> <p>Its composition and the rules complementing its functioning will be determined by a Decree of the Government Council.</p>	

In any case, the composition of the Mar Menor Council will be as follows:

- a) One-third will be representatives of the Regional Administration, the State Administration, and the Municipalities.
- b) One-third will represent the Scientific Advisory Committee of the Mar Menor.
- c) One-third will represent civil society organizations.

Additionally, other participation bodies e instrumentos de comunicacion are established in the Mar Menor Law:

-Scientific Advisory Committee of the Mar Menor.

The Scientific Advisory Committee was created as a working group belonging to the then Ministry of Water, Agriculture, and Environment, through the Order of July 29, 2016, and its subsequent modification on December 30, 2016, with an advisory role and full respect for the functions assigned to the various bodies of the Regional Administration. The committee provides scientific advice on the selection and implementation of actions aimed at improving the ecological status of the Mar Menor, as well as promoting scientific knowledge and applied research related to environmental issues in the lagoon.

Working Groups:

- Working Group: Hydrodynamic
- Working Group: Green Filter and Natural Wetlands
- Working Group: Ecological Status Monitoring and Control
- Working Group: Bathymetry and Sediments
- Working Group: Watershed"

-Interdepartmental Commission of the Mar Menor.

It is the collegiate body responsible for:

- Promoting and coordinating the implementation of transparency measures derived from this law within the Regional Administration.
- Planning the transparency measures to be followed by the various ministries, and monitoring their implementation.
- Issuing instructions and establishing criteria regarding both the implementation of active publicity and the follow-up of the operational planning developed in the area of transparency.
- Reviewing the annual report on compliance with the Transparency Law within the Regional Administration and making observations on it prior to its submission to the Transparency Council.

-Interadministrative Commission of the Mar Menor

It is a coordinating and institutional cooperation body for public policies and actions that affect the Mar Menor, in accordance with the provisions of Article 5 of Law 3/20 of July 27, 2020, on the recovery and protection of the Mar Menor. Its aims are to improve and promote coordination and institutional cooperation of the public policies and actions that affect the Mar Menor among the different administrations involved in its protection and recovery.

Regulations: Resolution of the General Secretariat for the Environment, Universities, Research, and Mar Menor, which announces the publication of the agreement adopted by the Governing Council in the session of January 25, 2024, regarding the creation of the Interadministrative Commission of the Mar Menor as the coordinating and institutional cooperation body for public policies and actions that affect the Mar Menor. (BORM No. 36, 13-02-2024).

<https://www.borm.es/services/anuncio/ano/2024/numero/663/pdf?id=824563>

-Communication and Information System of the Mar Menor (Mar Menor Channel).

Information and citizen assistance service regarding the Mar Menor.

<https://canalmarmenor.carm.es/>

Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually:

As stated in th Natura 2000 SDFs to the sites overlapping the SPAMI site, the main threats happening inside the sites are:

- Changes in grazing regime
- Salt works, including abandonment of saltpans (salinas)
- Paths, tracks, cycling tracks, and thus walking, horseriding and non-motorised vehicles
- Port areas
- Mountaineering, rock climbing, speleology
- Trampling, overuse
- Modification of water flow (tidal & marine currents)
- Silting up

4.2. Assess the level of external threats to the ecological, biological, aesthetic and cultural values of the area (B4.a of the Annex I) and the efforts made to address/mitigate them. See 5.2 in the AF.

Under section 4.2, questions are asked in two parts: part a) enquiring on the existence of external threats, and part b) asking about the response made to mitigate such threats. If the answer to part a) is “no threats”, part b) is not applicable. Whereas, when threats are reported under part a), part b) should be answered. The score achieved in response to part b) is considered a bonus and has no impact on the score evaluation and consequently the result of the review.

	<u>Score</u>
<p>4.2.1.a. Pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1 in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.1.2. a).</p>	<p>0</p>
<p><u>Rationale for the note</u></p> <p>On the one hand, there have been two episodes of eutrophic crisis into Mar Menor that affect habitat and species:</p> <p>In the spring of 2016, the Mar Menor reached a stage of severe eutrophication, where the excess of nutrients caused an explosive growth of unicellular algae, turning the water a greenish color and preventing light from reaching the deeper areas, consequently hindering the photosynthesis of the vegetation. The loss of 85% of the seagrass <i>Caulerpa prolifera-Cymodocea nodosa</i> mixed meadows caused temporal trophic changes and increased the demand for oxygen due to the decomposition of organic matter from the seabed, similar to those occurring seasonally since <i>Caulerpa prolifera</i> colonised the lagoon. The disappearance of <i>Caulerpa</i> allowed the sediments to re-oxygenate. Its rapid recovery has returned the sediment conditions to their original pre-crisis state under <i>Caulerpa</i>-dominated meadows.</p> <p>A new ecosystem crises occurred in September and December 2019. The unfortunate events of September were especially virulent, caused by an Isolated Depression at High Levels (DANA) that generated torrential rains and a massive influx of freshwater into the Mar Menor, loaded with suspended materials and nutrients. The abundant influx of freshwater caused a stratification of the water column into two layers of different salinity, with hypoxia in the deeper layer and, ultimately, the massive death of fish and crustaceans.</p> <p>In August 2021, the Mar Menor lagoon in Murcia, Spain, faced a severe ecological crisis marked by the mass death of marine life. Approximately 15 tons of dead fish and crustaceans washed ashore due to hypoxia critically low oxygen levels in the water. This hypoxic event was primarily driven by eutrophication, a process where excessive nutrients enter the lagoon, notably phosphates due to the high phreatic level that added to the nitrates from agriculture. The change in N/P ratios fuel algal and microbial blooms, which deplete oxygen levels, creating uninhabitable conditions for aquatic organisms</p> <p>Besides, in the scope of the management plan, there is a single quarry located outside the SPAMI (Cabezo Gordo). However, mining activity in the Cartagena and La Unión mining district has caused a significant runoff of sediments and minerals into the Mar Menor for decades.</p>	

	<u>Score</u>
<p>4.2.1.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the pollution problems from external sources including solid waste and those affecting waters up-current. See 5.2.1 in AF.</p>	<p>3</p>

<p><u>Rating scale</u></p> <p>No efforts : 0</p> <p>Little efforts : 1</p> <p>Some efforts : 2</p> <p>Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.2.1. a) is “no threats”.)</p>	
<p><u>Rationale for the note</u></p> <p>The actions taken to mitigate the pollution problems in the SPAMI have been detailed in the question 4.1.2.b</p> <p>The budget for the action plan of the regional administration of the Region of Murcia in 2024 for the Mar Menor amounts to a total of more than 208,000,000 euros.</p> <p>Although efforts are significant, it is necessary to develop a plan, as well as the required infrastructure for monitoring water and groundwater levels in the catchment area. The scope of the basin is outside the limits of the management plan, so it has not been possible to include it within the plan.</p>	

	<u>Score</u>
<p>4.2.2.a. Significant impacts on landscapes and on cultural values. See 5.2.2 in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3</p> <p>Weak threats : 2</p> <p>Serious threats : 1</p> <p>Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.2.3. a).</p>	2
<p><u>Rationale for the note</u></p> <p>Abandonment or urban pressure has an impact on the traditional windmills of the Campo de Cartagena, which are a cultural and landscape element of singular value that should be preserved.</p>	

	<u>Score</u>
	0

<p>4.2.2.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the significant impacts on landscapes and on cultural values. See 5.2.2 in AF.</p> <p><u>Rating scale</u></p> <p>No efforts : 0 Little efforts : 1 Some efforts : 2 Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.2.2. a) is “no threats”.)</p>	
<p><u>Rationale for the note</u></p> <p>There are no impacts, thus there are no efforts</p>	

<u>Score</u>	
<p>4.2.3.a. Expected development of threats upon the surrounding area. See 6.1 in AF.</p> <p><u>Rating scale</u></p> <p>No threats : 3 Weak threats : 2 Serious threats : 1 Very serious threats : 0</p> <p>(If the answer is “no threats”, pass directly to question 4.2.4. a).</p>	<p>2</p>
<p><u>Rationale for the note</u></p> <p>In the surrounding area of the Mar Menor, it is expected to achieve:</p> <ul style="list-style-type: none"> • It is expected that in the future there will be a decrease in the input of nutrients and sediments to the Mar Menor. • Reduction of sediment input from the runoff of the Sierra Minera mine tailings. 	

<u>Score</u>	
<p>4.2.3.b. Efforts (actions) undertaken during the evaluation period to address/mitigate the expected development of threats upon the surrounding area. See 6.1 in AF.</p>	<p>3</p>

<p><u>Rating scale</u></p> <p>No efforts : 0</p> <p>Little efforts : 1</p> <p>Some efforts : 2</p> <p>Significant efforts : 3</p> <p>(If applicable: Not applicable if the answer to question 4.2.3. a) is “no threats”.)</p>	
<p><u>Rationale for the note</u></p> <p>Reduction of sediment input from the runoff of the Sierra Minera mine tailings its ongoing, due to the restoration of these areas, developed by the regional and the State Administrations (within the frame of Marco de Actuaciones Prioritarias para Recuperar el Mar Menor (MAPMM)).</p> <p>See https://www.miteco.gob.es/es/ministerio/planes-estrategias/mar-menor/marco-actuaciones-prioritarias.html and https://www.laverdad.es/murcia/cartagena/sellado-balsa-minera-lirio-acabara-finales-2024-20231221005139-nt.html</p>	

<p>Please include here a prescriptive list of threats (not evaluated or mentioned above) that are of concern and are evaluated individually:</p> <p>As stated in the Natura 2000 SDFs to the sites overlapping the SPAMI site, the main threats happening outside the sites (and thus, the SPAMI) are:</p> <ul style="list-style-type: none"> • Livestock farming and animal breeding (without grazing) • Electricity and phone lines • Marine and Freshwater Aquaculture • Benthic or demersal trawling • Modifying structures of inland water courses • Abandon groundwater abstractions for agriculture

<p>Please include the list of threats (not evaluated or mentioned above) that were of concern and were eliminated or solved :</p> <p>To address these threats, Law 3/2020, of July 27, on the recovery and protection of the Mar Menor, was approved. This law contains the beforementioned obligation of a Plan de Ordenación Territorial de la Cuenca Vertiente del Mar Menor, for preserving not only the SPAMI but the overall watershed.</p>
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	Score
<p>4.3. Is there an integrated coastal management plan or land-use laws in the area bordering' . ' or surrounding the SPAMI? (B4.e Annex I). See 5.2.3. in AF.</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	<p>1</p>

<p><u>Rationale for the note</u></p> <p>Decree No. 259/2019 approves the Comprehensive Management Plan for the protected areas of the Mar Menor and the Mediterranean coast of the Region of Murcia.</p> <p>Law 3/2020, of July 27, on the recovery and protection of the Mar Menor.</p> <p>Integrated Coastal Zone Management Strategy in the Mar Menor and its surroundings was approved in march 2021.</p>
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	<u>Score</u>
<p>4.4. Does the management plan for the SPAMI have influence over the governance' . ' of the surrounding area? (D5.d Annex I). See 7.4.4. in the AF.</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	1
<p><u>Rationale for the note</u></p> <p>The regional administration responsible for environmental matters, within the framework of the procedures established in environmental assessment legislation, outside the territorial scope of the Management Plan, must adopt the necessary measures to prevent the deterioration, pollution, and fragmentation of habitats and disturbances affecting the species of the Management Plan, to the extent that these phenomena have a significant effect on the conservation status of those habitats and species.</p>	

5. ENFORCEMENT OF PROTECTION MEASURES

5.1. Assess the degree of enforcement of the protection measures In particular

	<u>Score</u>
<p>5.1.1. Are the boundaries of the area adequately marked on land and, if applicable, adequately marked at sea? See 8.3.1. in the AF.</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	0
<p><u>Rationale for the note</u></p> <p>There are not boundaries marked on the land or at sea. The marine reserve has some buoys to mdefine its boundaries.</p>	

	<u>Score</u>
	1

<p>5.1.2. Is there any collaboration from other authorities in the protection and surveillance of the area and, if applicable, is there a coastguard service contributing to the marine protection? See 8.3.2. and 8.3.3. in AF.</p> <p><u>Rating scale</u></p> <p>No : 0 Yes : 1</p>	
<p><u>Rationale for the note</u></p> <p>There a coastguard service on Grosa Island.</p> <p>There is an environmental patrol that monitors marine areas at the regional level too and there is also a Civil Guard patrol.</p> <p>M.Menor Annex 5.1.2 Surveillance monitoring</p>	

		<u>Score</u>
<p>5.1.3. Are third party agencies also empowered to enforce regulations relating to the SPAMI protective measures?</p> <p><u>Rating scale</u></p> <p>No : 0 Yes : 1</p>	<p>1</p>	
<p><u>Rationale for the note</u></p> <p>The Directorate General of Maritime Transport is empowered to enforce the regulations regarding SPAMI protection measures..</p> <p>Guardia Civil is often patrolling the area.</p>		

		<u>Score</u>
<p>5.1.4. Are there adequate penalties and powers for effective enforcement? See 8.3.4. in AF.</p> <p><u>Rating scale</u></p> <p>No : 0 Yes : 1</p>	<p>1</p>	

Rationale for the note

The sanctions are enough to dissuade the people. The guards of the Regional Environmental Ministry, as well as the Ministry of Agriculture, Fishing and Food and the Ministry for the Ecological Transition have capacity to fine those people that do not have authorisation, that commit environmental crimes or that do not follow the rules of each zone.

In 2023, there were 35 fines with a total cost of 29.600 euros.

		<u>Score</u>
<p>5.1.5. Is the field staff empowered to impose sanctions? See 8.3.4. in AF.</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	<p>1</p>	

Rationale for the note

The authorized officers to impose sanctions are the environmental agents (both from the Regional Gov. and the Ministry for the Ecological Transition) and the Civil Guard. The fish guards can impose sanctions in the Marine Reserve.

		<u>Score</u>
<p>5.1.6. Has the area established a contingency plan to face accidental pollution or other serious emergencies? (Art. 7.3. in the Protocol, Recommendation of the 13th Meeting of Contracting Parties).</p> <p><u>Rating scale</u></p> <p>No : 0</p> <p>Yes : 1</p>	<p>1</p>	

Rationale for the note

The State Plan for the Protection of the Seashore against Pollution (Plan Ribera) is approved accordingly, by Order AAA/702/2014. The Ribera Plan, which has been drawn up by the General Directorate for Coastal and Marine Sustainability, with the collaboration of the Ministry of Public Works and the Ministry of the Interior, includes aspects such as an atlas of sensitivity of the Spanish coast and an analysis of its vulnerability and risk, as well as the logistical and management capacities necessary to deal with a pollution episode of significant dimension and intensity.

This Plan complements the Territorial Plans established by the Autonomous Communities, with the aim of ensuring coordination in actions to combat pollution on the coast, particularly in those cases in which more than one Autonomous Community is affected or when the intervention of resources from other States is required, that is, when the pollution episode has a supra-autonomous or supranational character, or in those cases of special need in which the danger of irreparable damage is imminent.

6. COOPERATION AND NETWORKING

		<u>Score</u>
<p>6.1. Are other national or international organizations collaborating to provide human or financial resources? (e.g. researchers, experts, volunteers...). See 9.1.3. in the AF.</p> <p><u>Rating scale</u></p> <p>No : 0 Weakly : 1 Fairly : 2 Excellent : 3</p>	<p>3</p>	
<p><u>Rationale for the note</u></p> <p>State Ministry, University-based researchers, scientists from the Spanish Institute of Oceanography, and NGOs.</p>		

		<u>Score</u>
<p>6.2. Assess the level of cooperation and exchange with other SPAMIs (especially in other nations). (Art. 8, Art. 21.1, Art. 22.1., Art. 22.3 of the Protocol, A.d in Annex I).</p> <p><u>Rating scale</u></p> <p>No : 0 Insufficient : 1 Fairly : 2 Excellent : 3</p>	<p>0</p>	
<p><u>Rationale for the note</u></p> <p>There are no in force cooperation programmes actually ongoing.</p>		

Section III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S)

7. IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATIONS

	<u>Score</u>
<p>7.1. Assess to what extent the recommendations possibly made by the previous evaluations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs regarding Section I</p> <p><u>Rating scale</u></p> <p>'No' for all of them : 0</p> <p>'Yes' for some of them : 1</p> <p>'Yes' for most of them : 2</p> <p>'Yes' for all of them : 3</p>	2
<p><u>Rationale for the note</u></p> <p>Most of the recommendations are implemented, and some are still being operated:</p> <p>Map with boundaries - yes, achieved (see at Sobre el Mar Menor – Canal Mar Menor)</p>	

	<u>Score</u>
<p>7.2. Assess to what extent the recommendations possibly made by the previous evaluations were implemented: Recommendations made by the TAC(s) and/or approved by the Focal points for SPAs regarding Section II</p> <p><u>Rating scale</u></p> <p>'No' for all of them : 0</p> <p>'Yes' for some of them : 1</p> <p>'Yes' for most of them : 2</p> <p>'Yes' for all of them : 3</p>	2
<p><u>Rationale for the note</u></p> <p>Most of the recommendations are implemented, and some are still being operated.</p> <p>Better coordination- yes, achieved (and still ongoing); see at Comisión Interadministrativa del Mar Menor - Ficha de órgano colegiado - Portal de la Transparencia</p> <p>Water management - yes, achieved (and still ongoing). See at Avances</p> <p>Scuba diving -yes, achieved (see at Reservas Marinas de España)</p> <p>Control and surveillance - yes, achieved (and still ongoing). See at Informe de seguimiento – Canal Mar Menor</p> <p>Monitoring Climate Change -yes, achieved (and still ongoing). See at Informe de seguimiento – Canal Mar Menor and PROYECTO BELICH CONOCE EL MAR MENOR)</p>	

CONCLUSION* (based on score*) :

Based on the results obtained, the SPAMI is maintained in the ordinary revision process.

*Evaluation of the score:

The TAC will propose to include the SPAMI in a period of provisional nature (in accordance with paragraph 6 of the Procedure for the revision of the areas included in the SPAMI List) if the SPAMI has:

- a score < 1 in one or more of the following questions: 1.1, 2.1, 2.2, 2.3, 3.1, 3.2, 3.3, 3.4, 3.5 and 3.6;
- a score < 2 in one or more of the following questions: 1.2, 1.3, 7.1 and 7.2.

Furthermore, considering that the sites included in the SPAMI List are intended to have a value of example and model for the protection of the natural heritage of the region (Paragraph A.e of Annex 1 to the SPA/BD Protocol), the TAC shall also propose to include the SPAMI in a period of provisional nature if:

- the total score of the evaluation is less than 54 for a coastal national SPAMI (= 70% of the maximum total score without bonus: 78);
- the total score of the evaluation is less than 50 for a coastal national SPAMI subject to its first ordinary periodic review (= 70% of the maximum total score without bonus: 72);
- the total score of the evaluation is less than 58 for a multilateral (transboundary high sea) SPAMI (= 70% of the maximum total score without bonus: 83);
- the total score of the evaluation is less than 53 for a multilateral (transboundary high sea) SPAMI subject to its first ordinary periodic review (=70% of the maximum total score without bonus: 77).

The bonus will count only in the case where the SPAMI has not reached the minimum score without the bonus. Then, the bonus will be added to the total score achieved by the SPAMI.

**Section I: FEATURES PROVIDING A VALUE - ADDED TO THE AREA
(Section B4 of the Annex I, and other obligatory for a SPAMI, and Art . 6 and 7 of the Protocol))**

1. MEDITERRANEAN VALUE OF THE SPAMI

Total score 6 (Max : 7)

2. LEGAL AND INSTITUTIONAL ARRANGEMENTS

Total score 6 (Max : 6)

3. MANAGEMENT AND AVAILABILITY OF RESOURCES

Total score 19 (Max : 24)

Section II: FEATURES PROVIDING A VALUE-ADDED TO THE AREA

4. THREATS AND SURROUNDING CONTEXT

Total score 12 (Max : 23)

5. ENFORCEMENT OF PROTECTION MEASURES

Total score 5 (Max : 6)

6. COOPERATION AND NETWORKING

Total score 3 (Max : 6)

Section III: FOLLOW-UP OF THE RECOMMENDATIONS MADE BY THE PREVIOUS EVALUATION(S)

7. IMPLEMENTATION OF THE RECOMMENDATIONS MADE BY THE PREVIOUS**EVALUATIONS**

Total score

4 (Max : 6)

Overall total score**55 (Max : 78)****Recommendations for future evaluation**

- 1 - Continue to advocate for better water and waste management in the surrounding area due to serious threats coming from pollution problems from external sources.
- 2 - Implement the existing recovery plans for the area (restoration of mines, green vegetation filters for denitrification...).
- 3 - Continue the enforcement of existing regulations regarding minimising the freshwater input into the lagoon.
- 4 - Continue the enforcement of existing regulation on illegal fisheries (both in the lagoon and the marine area).
- 5 - Continue to work on pressures from nautical tourism (surveillance, buoys for anchoring and for diving, etc.).
- 6 - Continue to ensure the proper functioning of stakeholder meetings and foster their participation in the participatory body.
- 7 - Add information panels about the protected area at relevant points of interest (where they are missing).
- 8 - Improve cooperation and exchange with other SPAMIs at national and international level.
- 9 - Update the benthic habitat map of the area to understand the trend and enable adequate management.

Signatures

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