







LEGISLATIVE FRAMEWORK FOR THE PROTECTION OF ANGEL SHARKS IN THE REPUBLIC OF CYPRUS GAPS, ENFORCEMENT AND COMPLIANCE



REFERENCE

McCann, A., Ciprian, M., Hood, A.R., Papageorgiou, M., Giovos, I. (2024). Legislative Framework for the Protection of Angel Sharks in the Republic of Cyprus. iSea, Greece, 33 pp.

ACKNOWLEDGEMENTS

The authors wish to warmly thank all fishers, citizen scientists and the Department of Fisheries and Marine Research (DFMR) of the Republic of Cyprus for the great collaboration, for granting us access to all available data regarding angel sharks in the Republic of Cyprus.

Funded by:



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Glossary/Acronyms

Angelshark - refers to the single species *Squatina squatina* and is used in species names, e.g. Sawback Angelshark.

angel sharks - referring to multiple species of angel shark

ASCN - Angel Shark Conservation Network

Bycatch- The non-targeted part of the catch made up of discarded plus retained catch

CBD - Convention on Biological Diversity

CASAs (Critical Angel Shark Areas) – A specific geographic area that contains essential features necessary for the conservation of angel sharks. This may include an area that is not currently occupied by the species that will be needed for its recovery or conservation e.g. nursery, mating, aggregation and foraging areas.

Chondrichthyans- Class comprising cartilaginous fishes (sharks, skates, rays, chimaera)

CMS- Convention on the Conservation of Migratory Species of Wild Animals

CoP - Conference of Parties

DFMR - Department of Fisheries and Marine Research

EIA - Environmental Impact Assessment

EEZ - Exclusive Economic Zones

ERS - Electronic Reporting System

FAO – Food and Agriculture Organisation of the United Nations

FMC - Fisheries Monitoring Centre

GES - Good Environmental Status

GFCM – General Fisheries Commission for the Mediterranean

GFCM 36/2012/3 is amended by GFCM/42/2018/42

IMAP - Integrated Monitoring and Assessment Programme (a tool used to assess GES).

Incidental Catch – Unintentional captures of vulnerable species (a subset of bycatch)

IPOA-Sharks - The International Plan of Action for Conservation and Management of Sharks

IUCN - International Union for Conservation of Nature

MAP - Mediterranean Action Plan

MED/POL - Programme for the Assessment and Control of Pollution in the Mediterranean Region

MEA - Multilateral Environmental Agreement

MECO - Mediterranean Elasmobranchs Citizen Observations

National Focal Points - Appointed by the countries authorities to ensure liaison with RAC/SPA on the technical and scientific aspects of implementing the Protocol.

NBSAP- National Biodiversity Strategy and Action Plan

NPOA - National Plan of Action

Range States - any State that exercises jurisdiction over any part of the range of a migratory species, or a State, flag vessels of which are engaged outside national jurisdictional limits in taking that migratory species.

RAC/SPA - Regional Activity Centre for Specially Protected Areas

Recreational Fisheries – The fishing of aquatic animals (mainly fish) that do not constitute the individual's primary resource to meet basic nutritional needs and are not generally sold or otherwise traded on export, domestic or black markets.

RFMO - Regional Fisheries Management Organization

SEA - Strategic Environmental Assessment

SPA/BD - concerning Specially Protected Areas and Biological Diversity

SPA/RAC - Specially Protected Areas Regional Activity Centre

SPAS - Specially Protected Areas

SPMS- Strategic Plan for Migratory Species

UNCLOS- United Nations Convention on the Law of the Sea

UNEP- the United Nations Environment Programme

UNEP-MAP- the United Nations Environment Programme Mediterranean Action Plan

VMS - Vessel Monitoring System

Introduction

Angel sharks (*Squatinidae*) are flat-bodied sharks, normally found in sandy habitats in coastal waters. *Squatinidae* rank as the third most threatened family of elasmobranchs (sharks, skates and rays) in the world. Currently 24 species of angel shark have been described worldwide¹. Only three species of angel sharks are present in the Mediterranean Sea with overlapping ranges – the Sawback Angelshark *Squatina aculeata*, the Smoothback Angelshark *S. oculata*, and the Angelshark *S. squatina*². All three are classified as Critically Endangered on the IUCN Red List due to past population reductions, meaning they face an extremely high risk of extinction in the wild³. In the Republic of Cyprus, all the three species of angel sharks are present, among them, *S. squatina* seems to be the most abundant. In the area, these large-bodied, coastal species are highly susceptible to human related activities, not only fishing but also coastal development and habitat degradation. Given their conservation status, it is urgent to promote and ensure regional and global conservation actions for these species.

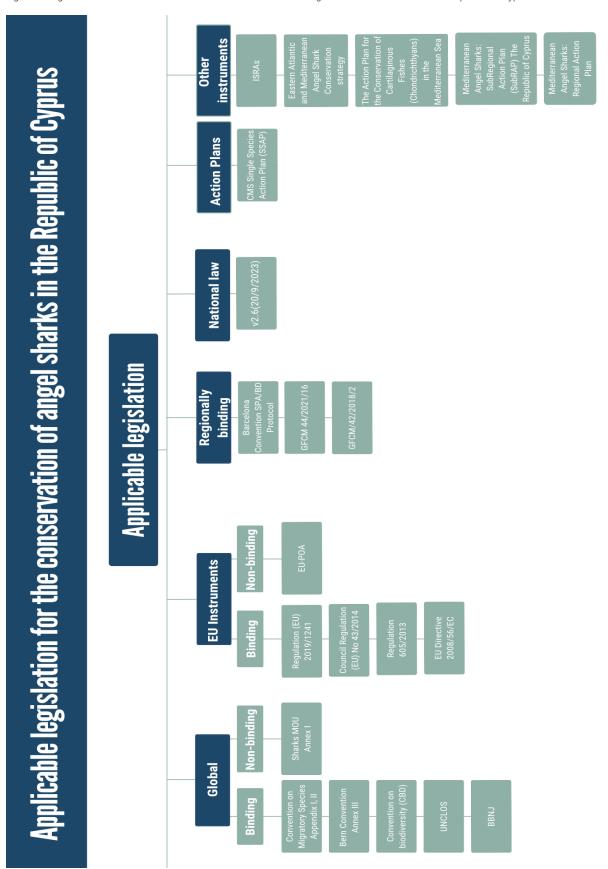
¹ Angel Shark Conservation Network 'What are Angel Sharks' < https://angelsharknetwork.com/ accessed 22 April 2024.

² Ibid.

³ IUCN 'Red List Assessment' https://www.iucnredlist.org/species/39332/117498371> accessed 22 April 2024.

Legislative framework

Figure 1: Legislative framework and additional tools that influence angel shark conservation in the Republic of Cyprus.



Globally binding instruments

The Convention on the Conservation of Migratory Species of Wild Animals (CMS)

The Convention on the Conservation of Migratory Species of Wild Animals (CMS), also known as the Bonn Convention, represents a cornerstone in the global effort to protect migratory species and their habitats. By establishing a legal framework for cooperative conservation measures across nations, CMS aims to ensure the survival and flourishing of migratory species and their habitats⁴. The treaty lays a framework for supporting internationally coordinated conservation measures throughout a migratory range. The Convention's approach is both species-specific and habitat-oriented, with its Appendices listing species that either are endangered or would benefit significantly from international cooperation. It involves the states, the Range States, through whose waters the migratory species might pass.

The Conference of Parties (CoP) is the principal decision-making forum of CMS composed of all signatory state Parties as well as observers who wish to participate⁵. Instruments of CMS are often tailored according to the conservation needs of a species and the requirements of the Range States. Appendix I contains a list of migratory species, which are threatened (Critically Endangered, Endangered, Vulnerable) under the IUCN Red List Threat categories⁶. Appendix II contains a list of species that have an unfavourable conservation status and would significantly benefit from international cooperation⁷.

As a Range State and Contracting Party to CMS, the Republic of Cyprus has an obligation to implement its objectives⁸. National reports are submitted to provide an official record of the national implementation of the instrument. While the Republic of Cyprus has taken steps towards implementing CMS objectives, the Country report indicates that areas regarding implementation, legislation, participation, and engagement need to be addressed to effectively conserve the Angelshark (*Squatina squatina*). It is clear from the report that there is room for an increase in the application of CMS objectives and improved governance, with the Republic of Cyprus listing better enforcement of national and EU laws as its future priorities.

A noticeable governance gap is the lack of a committee or special arrangement established in the Republic of Cyprus for liaison between different government agencies/ministries to address issues of CMS implementation⁹. At present in 2024, the Ministry of Environment, along with other bodies, share information relating to CMS implementation and are in charge of compiling the reports for CMS. However, when it comes to marine species, they receive their data from the Department of Fisheries and Marine Research (DFMR). A single committee focusing on CMS could allow for smoother facilitation of CMS-related discourse and would distribute the workload when aiming to achieve the CMS objectives and oversee conservation projects. Moreover, it is important for the public and organisations acting to implement CMS objectives to have a clear body to report any issues that are arising.

Regarding implementation into national legislation, the report affirmed that national legislation regarding the Prohibition of Taking of Appendix 1 species is in effect, and this can be found in N. 17(III)/2001 of

⁴ Convention on the Conservation of Migratory species of Wild Animals, opened for signature 23 June 1979, 1651 UNTS 333.

⁵ Ibid Art. VII

⁶ Ibid Appendix I.

⁷ Ibid Appendix II.

⁸ Ibid Art. I (h).

^{9 2022} CMS National Report, Cyprus, 2022 (Convention on the Conservation of Migratory species) S.VII 13.

Cyprus' law¹⁰. However, this is the original CMS Convention and has not been transposed into specific region-based Regulations for the Angelshark in the Republic of Cyprus. Few details are revealed in the report on the implementation of Articles III (4) and III (5) of the Convention. These are pivotal articles which detail conservation obligations by Range States. Article III (4) of the Convention obligates Range States to conserve and, where possible and appropriate, to restore those habitats reducing the threat of extinction¹¹. It further encourages Range States to ensure to prevent, remove, compensate for, or minimize the adverse effects of activities which seriously impede or prevent the migration of the species. Range States are also obligated to prevent, reduce or control, to the extent possible, factors that are endangering or likely to further endanger the species. Article III (5) elaborates on the exemptions to the prohibition on taking of species listed in Appendix I¹². More comprehensive information is needed to ascertain if there is adequate implementation.

The Republic of Cyprus has reported that there is currently no national legislation, policies, initiatives, or Action Plans that promote community involvement in the conservation of migratory species in the Republic of Cyprus¹³. The report notes that the Republic of Cyprus has not yet managed to identify critical habitats or provide an inventory of critical habitats to meet the objectives of the Strategic Plan for Migratory Species (SPMS) 10 which calls for area-based conservation measures. It is reported that assessments of management effectiveness have been 'partly' undertaken in regard to protected areas important for migratory species for some areas¹⁴. This is because assessments are happening for commercially exploited migratory species. Beyond protected areas, there are no other effective area-based conservation measures listed. Signing of the CMS MoU, discussed later in the report, will aid in furthering SPMS objectives.

The Republic of Cyprus omits angel sharks when listing species affected by bycatch¹⁵. As bycatch is the biggest threat to angel sharks, their exclusion from this list negatively affects conservation efforts and significantly stalls conservation progress. The explicit inclusion of angel sharks as a species affected by bycatch would encourage the application of conservation actions such as fishing gear modification and the ban on fishing practices that threaten angel sharks.

Positively, in the CMS National Report, the Republic of Cyprus has indicated that it has implemented several awareness measures and campaigns that they list as having a 'good impact' in achieving CMS objectives, however, it is unclear how much these campaigns apply to the Angelshark¹⁶.

The Bern Convention

The Bern Convention, also known as the Convention on the Conservation of European Wildlife and Natural Habitats (1979), is considered the first international treaty to protect both species and habitats and promote collaboration between states¹⁷. The Convention requires that Contracting Parties take extra measures for the protection of areas that are important to migratory species listed in Annex II and III. Annex III lists

¹⁰ Ibid S.IV 7.

¹¹ Convention on the Conservation of Migratory Species of Wild Animals, opened for signature 23 June 1979, 1651 UNTS 333 Art.3 (4).

¹² Ibid Art.3 (5).

¹³ 2022 CMS National Report, Cyprus, 2022 (Convention on the Conservation of Migratory species of Wild Animals) S.VII 14.

¹⁴ Ibid S.XIII 38.

¹⁵ Ibid S.X 18.

¹⁶ 2022 CMS National Report, Cyprus, 2022 (Convention on the Conservation of Migratory species of Wild Animals) S V 10

¹⁷ Bern Convention on the Conservation of European Wildlife and Natural Habitats, opened for signature 19 September 1979, ETS No.104.

protected fauna species, and it is here that the Angelshark is listed¹⁸. Each party is obligated to take steps to promote national policies for the conservation of wild flora, fauna, and natural habitats¹⁹. Parties are required to pay particular attention to endangered and threatened species to comply with the Convention.

Measures required for the protection of Angelshark under Annex III are as follows; closed seasons and/or other procedures regulating the exploitation; the temporary or local prohibition of exploitation to restore satisfactory population levels; the regulation as appropriate of sale, keeping for sale, transport for sale or offering for sale of live and dead wild animals²⁰. All Contracting Parties must co-ordinate the protection of migratory species specified in Appendices II and III whose range extends into their territories²¹. Furthermore, parties should take measures to ensure that procedures regulating exploitation are established and appropriately disposed of to meet the requirements of the migratory species specified in Appendix III.

Parties are obligated to upload reports requesting any derogations from the Convention's obligations and justifying their reasons for doing so. As of 2024, the Republic of Cyprus has not requested any derogation from the protection of Angelshark.

United Nations Convention on Biodiversity (CBD)

The Convention on Biological Diversity (CBD) entered into force on 29 December 1993. Its three main objectives are the conservation of biological diversity; the sustainable use of the components of biological diversity; and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources²². The Republic of Cyprus has been a party to the Convention since 1996. As a contracting party, the Republic of Cyprus is required to report on the implementation of the measures of the Convention²³.

Country Report for CBD implementation & The Biological Strategy of the Republic of Cyprus 2020

In 2020, the Republic of Cyprus submitted its Sixth National Report to provide the measures it had taken towards the implementation of the CBD²⁴. In accordance with Article 6, measures are to be addressed through a national strategy and Action Plan. The Republic of Cyprus has fulfilled this obligation with the National Biodiversity Strategy and Action Plan (NBSAP) which aims to implement provisions of the CBD along with the EU Biodiversity Strategy²⁵. The overall objective of the NBSAP is to halt the loss of biodiversity and to maintain and protect the Republic of Cyprus' ecosystems. The Republic of Cyprus' NBSAP contains 13 major strategic objectives which are in line with the EU Biodiversity Strategy and UN CBD Goals²⁶. The CBD National Report submitted by the Republic of Cyprus describes how the goals of CBD have been implemented.

¹⁸ Ibid Annex III.

¹⁹ Ibid S.I art. 3.

²⁰ Ibid Annex III.

²¹ Ibid S.IV art.10.

²² Convention on Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79 art.1.

²³ Ibid art. 26

²⁴ Sixth National Report Cyprus Convention on Biological Diversity, Cyprus,2020 (Convention on Biological Diversity, 1992).

²⁵ Biodiversity Strategy and Action Plan, Cyprus, 2020.

²⁶ Ibid 4.

One such goal was to address the underlying causes of biodiversity loss. Its first target was to increase public awareness of the value of biodiversity and the steps they can use to conserve and ensure sustainable use. The Republic of Cyprus reports that awareness efforts are increasing with activities such as workshops for biodiversity, LIFE and Interreg projects, as well as environmental days such as the Environment, Biodiversity, Natura 2000 days²⁷.

When asked to describe measures taken to contribute to the implementation of the country's NBSAP, the report noted that the European Nature Directives have been transposed into the Republic of Cyprus' law. This allowed for the competent governmental authorities to enforce the establishment of the Natura 2000 network which is an essential conservation mechanism for biodiversity²⁸. Actions include the completion of the Natura 2000 network in both terrestrial and marine sites, along with measures for the protection and restoration of habitats and species. The CBD and EU Birds and Habitats Directive do not explicitly mention angel sharks however, Annex I include an obligation to identify and monitor ecosystems which are required for migratory species therefore providing a more general application for angel sharks²⁹. Article 7 of Annex 1 requires parties to monitor these environments and pay close attention to those habitats requiring urgent conservation measures³⁰. In addition, activities that significantly adversely impact the conservation of migratory species habitats must be identified, and data derived from identification and monitoring activities must be maintained and organized.

The report provides an overview of the actions taken to implement EU Biodiversity Strategic Goals and Aichi Biodiversity Targets in order to enhance biodiversity conservation and protection in the Republic of Cyprus. Positive progress is reported in its 2020 targets. Target 1.2 requires that by 2020, biodiversity values be integrated into national and local development and poverty reduction strategies, and planning processes be incorporated into national accounting and reporting systems. The report notes in response to this target that Integration between the implementation of Policies and Strategies such as, the Common Agriculture Policy (CAP), the Marine Strategy, Forest Policy, Town and Planning Policy, River Basin Management Policy, and biodiversity are applied³¹.

An additional target to be met by 2020, was that at least 17% of terrestrial and inland water, and 10% of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, would be conserved through effectively and equitably managed, ecologically representative, and well-connected systems of protected areas and other effective area-based conservation measures. The Sixth National Report of the Republic of Cyprus has identified a protected area network that currently covers 29% of terrestrial and marine areas and that all protected sites have management plans, ongoing monitoring, as well as implementation of measures and actions to achieve good conservation status for the habitats and species³².

²⁷ Sixth National Report Cyprus Convention on Biological Diversity, Cyprus, 2020 (Convention on Biological Diversity, 1992) S.I.

²⁸ Sixth National Report Cyprus Convention on Biological Diversity, Cyprus, 2020 (Convention on Biological Diversity, 1992) S.2

²⁹ Convention on Biological Diversity, opened for signature 5 June 1992, 1760 UNTS 79 annex 1.

³⁰ Ibid Art. 7

³¹ Sixth National Report Cyprus Convention on Biological Diversity, Cyprus, 2020 (Convention on Biological Diversity, 1992) S.I.2.

³² Ibid 3.1.

The United Nations Convention on the Law of the Sea (UNCLOS)

The United Nations Convention on the Law of the Sea (UNCLOS) entered into force in 1994 and provides a legal framework for regulating human activities at sea³³. The Convention provides obligations for states concerning the conservation and management of living resources by, for example, setting forth that coastal states shall determine allowable catch of living resources within their Exclusive Economic Zones (EEZ) and ensuring living resources are not endangered by overexploitation with the obligation to exchange information on catch and fishing effort³⁴. Concerning highly migratory species, Article 64 provides that states shall cooperate directly to conserve and promote optimal utilization of species (listed in Annex I of UNCLOS I) within and beyond EEZs³⁵. Although angel sharks are not mentioned in this Annex, the Convention's articles can be applied to the conservation and management of their habitat.

The United Nations Conservation and Sustainable use of Marine Biological Diversity of Areas Beyond National Jurisdiction Treaty (BBNJ)

Stemming from UNCLOS, the Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ) came into force in 2023³⁶. Although not directly applicable to angel sharks, the BBNJ contains articles which indirectly apply to its conservation. One such article is Article 18 which includes measures such as area-based management tools such as Marine Protected Areas (MPA)³⁷. Its objectives include the conservation and sustainable use of areas requiring protection and emphasise the use of area-based management tools, strengthening cooperation and coordination between states and relevant legal instruments and frameworks in this regard. Furthermore, its objective is to protect, preserve, restore, and maintain biological diversity and ecosystems is also an indirect aid to the conservation of angel sharks.

Although the protection is indirect, these Conventions create obligations for the Republic of Cyprus as a contracting party.

Global non-binding instruments

Memorandum of Understanding on the Conservation of Migratory Sharks (CMS Sharks MOU)

The Memorandum of Understanding (MOU) for sharks is a legally non-binding instrument established under CMS. It is intended to apply to all migratory sharks listed in Appendix I of CMS, which includes Angelshark, while Annex III contains conservation plans for Annex I species. It is intended to apply to all migratory

³³ United Nations Convention on the Law of the Sea, opened for signature 10 December 1982, 1833 UNTS 397 (entered into force 16 November 1994).

³⁴ Ibid art. 61 (2).

³⁵ Ibid art. 64.

³⁶ United Nations Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction Treaty, opened for signature 20 September 2023, C.N.203.2023.TREATIES-XXI.10 (entered into force 19 June 2023). ³⁷ Ibid art.18.

sharks³⁸. The objective of the MOU is to encourage collaboration between CMS signatories, fishery bodies (RFMOs) and the FAO. Signatories are encouraged to apply an ecosystem and precautionary approach.

In terms of participation, the Republic of Cyprus has noted that it has not participated in the development of new proposals for CMS Agreements, including MOUs, to address the needs of Appendix II species. The Republic of Cyprus has additionally noted that it has not participated in the implementation of Concerted Actions under CMS detailed in resolution 12.28³⁹. Concerted Actions are defined as priority conservation measures, projects, or institutional arrangements undertaken to improve the conservation status of CMS Appendix I and Appendix II species⁴⁰. They involve measures that are the collective responsibilities of all parties acting in concert or that are designed to support the conclusion of an instrument under Article IV of the Convention and enable conservation measures to progress. Furthermore, Resolution 12.8 urges all Range States of existing Agreements under the Convention to sign, ratify or accede as appropriate to those Agreements and to take an active part in their implementation. The Republic of Cyprus has not yet signed the CMS MOU.

SPMS 10 could be implemented through the utilisation of tools such as citizen science to enhance public participation and contribute to the reporting of angel shark sightings and identification of their habitats in the Republic of Cyprus. Furthermore, advocacy and education campaigns should be employed to increase public awareness of threats to angel sharks and their habitats. Increased awareness will educate members of the public enabling identification and reporting of instances of angel sharks being illegally sold in places such as markets, auctions, or restaurants. Information on reporting procedures should be easily available to the should be part of public awareness campaigns.

The Republic of Cyprus could further implement CMS through contribution to the SPMS target 9 by signing the MOU. Signing the MOU would allow for the Republic of Cyprus to be included in the meeting of the signatories and have access to resources for developing national and regional conservation strategies. Access to funding opportunities and technical advice, as well as support from the international committee members, is another benefit available to MOU Signatories. Moreover, signatories play an important role in shaping upcoming conservation strategies and would receive support in developing regional and national conservation strategies.

European Union (EU) instruments

Regulation (EU) 2019/1241 - Technical Measures

Stemming from Regulation (EU) No 1380/2013, which established a Common Fisheries Policy (CFP), Regulation (EU) 2019/1241 was established to introduce additional technical measures to meet the CFP's objectives⁴¹. The enactment of the Regulation produced general rules that apply across all Union Waters with the scope covering not only the taking and landing of fisheries resources, but the operation of fishing gear and the interaction of fishing activities with marine ecosystems. The Regulation includes the requirement of regional specificities of fisheries when providing the adoption of technical measures depending on the conditions of each environment.

³⁸ Conservation on Migratory Species of Wild Animals, Memorandum of Understanding on the Conservation of Migratory Sharks, 2010.

³⁹ UNEP/CMS/Resolution 12.28 (Rev.COP13).

⁴⁰ Ibid art. 1

⁴¹ REGULATION (EU) 2019/1241 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, 2019, L 198/105.

The scope of the Regulation also extends to recreational fisheries and, where relevant, the Technical Measures also apply. Protection under this Regulation is limited to the Angelshark which is mentioned in Annex I of the Regulation and also protected from recreational fishing under Article 2.2⁴².

Fishing Gear & Methods

The Regulation obligates the Republic of Cyprus to ban destructive fishing gear and methods such as explosives or poisons, and to enforce specific conditions for the use of other types of gear and methods in order to minimize the environmental impact⁴³. The Regulation sets out further obligations by forming rules to minimize the capture of sensitive species and protect vulnerable habitats from the adverse effects of fishing activities. The Republic of Cyprus under Article 21(e) is required to place restrictions on the operation of certain fishing gear, or total prohibition on the use of certain fishing gear, in areas where such gear would be a threat to the conservation status of the Angelshark⁴⁴.

Regionalisation of measures

Under this Regulation, the Republic of Cyprus is required to promote regionalisation and flexibility for the development of region-specific measures. The aim is to account for local conditions and support the adoption of innovative fishing practices aimed at reducing unwanted catches. This is essential in the context of Angelsharks as certain habitats that Angelsharks are likely to occupy, or have occupied in the past, will need to have Regulations tailored towards their protection. Additionally, local areas where there is less environmental awareness due to various factors will need to have tailored measures to improve public awareness of the protection of Angelsharks. This may also include increased outreach to encourage the reporting of Angelshark sightings especially in areas where there are known cases of illegal capture and sale

Council Regulation (EU) No 43/2014

Council Regulation (EU) No 43/2014 protects Angelsharks by prohibiting Union vessels to fish for, retain on board, tranship or to land the Angelshark under article 12^{45} . It extends its scope further in article 41 to apply the prohibitions to third party vessels fishing in Union Waters⁴⁶.

Regulation (EU) No 605/2013

This Regulation reinforces (EC) No. 1185/2003 and GFCM/36/2012/3 and aids in the conservation of sharks through prohibiting the removal of shark fins on board vessels, obligating Member States to report cases where vessels flying the flag of the Member State catch, retain on-board, tranship or land sharks⁴⁷. As a Member State the Republic of Cyprus is required to annually send a report to the EU Commission regarding the implementation of the Regulation and cases of non-compliance. Member States are required to provide;

⁴² Ibid art.2.2

⁴³ Ibid S.I art.7.

⁴⁴ Ibid 21(e).

⁴⁵ Council Regulation (EU) No 43/2014 of 20 January 2014 fixing for 2014 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, to Union vessels, in certain non-Union waters, 2014, L 024 28.1.2014, p. 1, art. 12.

⁴⁶ Ibid art.41.

⁴⁷ Regulation (EU) No 605/2013 of the European Parliament and of the Council of 12 June 2013 amending Council Regulation (EC) No 1185/2003 on the removal of fins of sharks on board vessels,2013, L 181, 29.6.2013, p. 1–3.

the number of landings of sharks; the number, date and place of the inspections that have been carried out; the number and nature of cases of non-compliance detected, including a full identification of the vessel(s) involved and the penalty applied for each case of non-compliance, and the total landings by species (weight/number) and by port.

EU Directive 2008/56/EC

The Marine Strategy Framework Directive (MSFD) (Directive 2008/56/EC) represents the first EU legislative instrument related to marine biodiversity. Following its adoption in 2008, all EU Member States were obliged to transpose relevant measures into national law in July 2010 ⁴⁸. The MSFD, alongside the Habitats Directive, focuses on the protection and restoration of representative habitat types, including offshore, to ensure healthy populations of species ⁴⁹.

With the MSFD, Good Environmental Status (GES), is aimed to be achieved, through an ecosystem approach, in Union waters (Commission Decision (EU) 2017/848). The characteristics for GES include the conservation of biodiversity and food webs. The inclusion and selection of elasmobranchs in the monitoring programmes and measures under the MSFD is at the discretion of the Member State and there are varied approaches between them.

Regional legally binding instruments in the field of the environment

The Barcelona Convention and the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocols)

The first Regional Seas Action Plan adopted by UNEP is the United Nations Environment Programme's (UNEP/MAP), a Multilateral Environmental Agreement (MEA) that was created in 1975⁵⁰. The Barcelona Convention was ratified in 1976, revised in 1995, and brought into effect in 2004 under the umbrella of UNEP/MAP⁵¹. Angel sharks are protected under Annex II of the SPA/BD Protocol. The Convention requires Parties to reduce disturbances at sensitive times (e.g., breeding) and to regulate or forbid (as necessary) actions such as the taking, possessing, or killing (incidentally or intentionally) of protected species⁵². The Parties will cooperate in their efforts to protect and restore migratory species that range into the Mediterranean high seas through bilateral or multilateral measures. Parties are obligated to provide the

⁴⁸ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive), 2008, OJ L 164, 25.6.2008, p. 19–40.

⁴⁹ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora, 1992, OJ L 206, 22.7.1992, p. 7–50.

⁵⁰ United Nations Environment Programme (UNEP), Mediterranean Action Plan (MAP), UNEP/MAP, 1975.

⁵¹ Barcelona Convention for the Protection of the Mediterranean Sea against Pollution, opened for signature 16 February 1976, 1164 UNTS 3.

⁵² Ibid S.III 11 (3)(a).

Compliance Committee with annual national reports⁵³. As a contracting party to the Convention and the SPA/BD Protocols the Republic of Cyprus is obligated to implement its Regulations. Information available on the Republic of Cyprus' implementation of the Barcelona Convention and the SPA/BD Protocols is minimal. The Republic of Cyprus country biennial general report and report on the implementation of the Convention for the Protection of the Mediterranean Environment and the Coastal Region of the Mediterranean provides a broad overview of the state of implementation of the Barcelona Convention in the Republic of Cyprus. Administrative management is consistently listed throughout the report as being a challenge in implementing the Barcelona Conventions and its Protocols⁵⁴.

The Republic of Cyprus has reported that SPA/BD Protocol of the Barcelona Convention is solidified in national law with the Law No.20(III)/2001⁵⁵. The report confirms that the Republic of Cyprus has undertaken Environmental Impact Assessments (EIAs) for proposed activities that are likely to cause significant adverse effects or are subject to authorisation from the competent authorities⁵⁶. The Report notes that the Republic of Cyprus has implemented its obligations to the Barcelona Convention since 2012 however it does not give any examples⁵⁷. Again, administrative management, along with financial resources, are listed as a challenge.

Public access to documents regarding activities adversely affecting or likely to affect the marine environment are confirmed in the report ⁵⁸. This is a step in the right direction which should allow members of the public to be aware of activities in marine areas that may affect angel sharks or other endangered migratory species. Relevant decisions for projects that may affect the marine environment and coastal areas are uploaded on the website of the Department of Environment and are publicly available. Furthermore, public participation is also encouraged in the procedure for any new legislation which is relevant to marine protection. The report lists the declaration of an MPA as an example stating that relevant stakeholders are asked to provide their views and opinions when deciding on a new MPA⁵⁹. This is constructive as it allows fisheries, NGOs, and local people who are knowledgeable about the environment to participate in the declaration of MPAs.

A national monitoring programme is noted as being established within the framework of the Programme for the Assessment and Control of Pollution in the Mediterranean Region (MED POL / UNEP) to assess the state of the marine environment and its coastal areas for effective implementation of the Barcelona Convention and its Protocols⁶⁰. However, it is unclear what these are and how effective they are. They also cite financial resources, technical capabilities, and administrative management as challenges to this.

The Strategic Action Programme for the Conservation of Biological Diversity (Post-2020 SAPBIO)

In a more general report, Post-2020 The Strategic Action Programme for the Conservation of Biological Diversity (SAPBIO) Report provides an overview of the state of SPA/BD Protocol implementation across the Mediterranean in general⁶¹. SAPBIO makes a major contribution to preserving the natural heritage in the

⁵³ Ibid 3.

⁵⁴ Biennial general report and report on the implementation of the Convention for the Protection of the Mediterranean Environment and the Coastal Region of the Mediterranean, Cyprus, 2020-2021, (Barcelona Convention for the Protection of the Mediterranean Sea against Pollution).

⁵⁵ Ibid S.II 4.3 (a).

⁵⁶ Ibid. S.V (iii) (c)

⁵⁷ Ibid S.III.

⁵⁸ Ibid S.IV art.12.

⁵⁹ Ibid S.II art.15.1.

⁶⁰ Ibid S.IV art.12.

⁶¹ Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable

Mediterranean marine and coastal zones and plays an important role as a strategic framework for implementing the SPA/BD Protocol at national and regional levels.

The post-2020 SAPBIO reported some positive findings at the Mediterranean level, including that MPA coverage in 2021, which was found to be 9.3%, very close to the 10% Aichi target⁶². Additionally, improvements in marine habitats and recovery of species have been recorded, most notably in MPAs and in the no-take zones (NTZs) that are well managed and enforced⁶³. The report shows that integration and regional system-based approaches are becoming increasingly recognised as the most effective way to address systematic factors. Contracting Parties to the Barcelona Convention and its Protocols have agreed, since 2008, to gradually apply the ecosystem approach to manage human activities in the Mediterranean, with the ultimate aim of achieving GES.

It is reported that all Mediterranean countries have adopted frameworks for ex-ante EIA and 72% have enacted a legal framework for Strategic Environmental Assessment (SEA)⁶⁴. Despite these positives, Mediterranean countries are not on track to achieve and fully implement the agreed-upon goals, including the Sustainable Development Goals (SDGs) and Ecological Objectives for GES. Eleven SDGs remained unachieved in all Mediterranean countries including SDG 14 Life Below Water⁶⁵. Furthermore, nine out of 21 countries had achieved none of the SDG 2030 targets in 2019, and the maximum number of SDGs a country has achieved is two.

One of the main issues reported in the implementation of the Barcelona Convention and its Protocols is that the administrations in charge are often underfunded and lack the institutional strength to enforce environmental policy integration⁶⁶. Additionally, a lack of cross cutting administrative cooperation is reported as being an issue. Competition between different economic sectors for the use of marine space exacerbates the lack of collaboration in the administrative sector ⁶⁷.

Sub-regional assessments show that even when appropriate legislation is available, the implementation of the legislation is falling behind. At the 19th meeting of the Contracting Parties, the Parties agreed on the use of the Integrated Monitoring and Assessment Programme (IMAP) as a tool to assess GES. IMAP lays down the principles for integrated monitoring, which will, for the first time, monitor biodiversity and non-indigenous species, pollution and marine litter, and coast and hydrography in an integrated manner. The report mentioned that every country and subregion has identified knowledge gaps for implementing IMAP and for the identification of protection measures for the conservation of species. The report additionally notes that knowledge, data availability and sharing are either insufficient or inconsistent due to the limited financial, technical, and institutional capacities.

A big concern listed in the report is that less than 25% of the Mediterranean MAPs have a management plan, with less than half of these being reported as effectively implemented⁶⁸. Inadequate resources are listed as resulting in weak enforcement, and regular monitoring activities are limited to a few MPAs. Annual fishery discards in the Mediterranean are estimated at around 230 000 tonnes, 18% of the total catch, mainly due to bottom trawl fisheries⁶⁹. This is of particular concern to the conservation of angel sharks as their

Management of Natural Resources in the Mediterranean Region, Post-2020 SAPBIO report, Decision IG.25/11 2020-2021.

⁶² Ibid S. V.II para. 44.

⁶³ Ibid.

⁶⁴ Ibid para 47.

⁶⁵ Ibid S.III(iii)para 49.

⁶⁶ Ibid para 50.

⁶⁷ Ibid.

⁶⁸ Ibid S.III (iii) para 58.

⁶⁹ Ibid para 59.

biggest threat is bycatch through bottom trawling⁷⁰. Limited funding sources are also cited as a reoccurring obstacle, especially in Eastern Mediterranean areas, where national resources are irregular and insufficient.

The Report recognises the gaps in knowledge and status of protected species under the SPA/BD Protocol. It highlights the need for mapping and inventory of habitats to better confirm species' status and develop and implement recovery plans for all threatened species whose survival depends on such actions.

Spatial protection measures

Comprehensive assessments on Mediterranean marine biodiversity identified a number of gaps and barriers to biodiversity conservation with the gaps being identified in the Post-2020 SAPBIO subregional assessments.

The report shows that the majority of assessments highlight weak management in most of the already established MPAs and underlines the urgent need for proper management planning⁷¹. It calls for effective collaboration between various administrations and stakeholders, regulation enforcement, capacity building, and the sustainability of human and financial resources for MPAs.

Sub-regional assessments find that in multiple countries the administrations in charge of environmental issues, lack the strength to enforce environmental policy and remain underfunded⁷². Despite fit-for-purpose legislation, implementation and enforcement are lagging and the gap between the goals of the international Agreements and their implementations at local and national levels continues to persist⁷³. This is due to a combination of insufficient political interest and limited awareness and engagement in decision-making at the national level, where most of the implementation needs to take place.

The establishment of fishery-management measures inside MPAs is pointed out as being paramount to conservation objectives. Management plans should also take into account the impact of recreational fisheries on resources and ecosystems⁷⁴. To reduce bycatch, mitigation measures and data collection on it need to be increased. The use of bottom-contacting fishing gear needs to be modified to suit biodiversity conservation goals. This is of particular importance to the conservation of angel sharks, which are heavily affected by bottom trawling.

The assessments carried out in the Post-2020 SAPBIO Report highlight the necessity to have coherence of all strategies, policies, initiatives, plans and funding which effect marine biodiversity conservation. Coordination between the various relevant authorities within different administrative levels is important to effectively manage environmental plans. Regarding monitoring, the report shows that in most of the Mediterranean countries, when it comes to explicit deadlines and reporting mechanisms on GES, implementation is lacking. Additionally, the progress on the implementation of the Post-2020 SAPBIO will also need to be regularly monitored and assessed. Regionalisation is also important when regulating the management of MPAs. Data gaps are noted between countries, with national and sub-regional reports, underlining the data gaps. Furthermore, essential knowledge generated by various assessments, institutes and universities is not being sufficiently transmitted to decision makers.

The 16th meeting on SPA/BD Protocol Thematic Focal points produced a report on the status of the implementation of the SPA/BD Protocol⁷⁵. It confirmed previous reports that the most frequently cited.

⁷⁰ Ibid para 59.

⁷¹ Ibid S.IV (ii) para 69.

⁷² Ibid para 71.

⁷³ Ibid para 72.

⁷⁴ Ibid S.III (iii) para 59.

⁷⁵ United Nations Environment Programme, Sixteenth Meeting of SPA/BD Focal Points, 2023.

implementation difficulties were limited financial resources and technical capabilities, while administrative management difficulties also affected several aspects of the implementation.

Report on the status of implementation of the Protocol concerning Specially Protected Areas (SPAs) and Biological Diversity in the Mediterranean (SPA/BD Protocol)

Further information is available on the status of implementation of the Protocol concerning SPA/BD Protocol for the biennium 2020-2021 in a SPA/RAC report⁷⁶. This report has been drafted based on national reports submitted through the online Barcelona Convention Reporting System (BCRS), in which Parties submit information on the legal and regulatory measures taken to implement SPA/Protocol.

Article 2.1 of the SPA/BD Protocol states that the protocol shall apply to the terrestrial coastal areas designated by each of the Parties, including wetlands. The report shows that most reporting Contracting Parties (6 out of 8) have designated these areas under different protected area management categories, encompassing mainly MPAs⁷⁷. Five out of eight reporting Contracting Parties have confirmed the existence of measures for the protection, preservation and sustainable management of SPAs through the adoption of new MPAs along with new laws and Regulations⁷⁸. Furthermore, six out of seven reporting Contracting Parties have informed that they are in compliance with article 3.4 which requires Contracting Parties to implement a national strategy and Action Plan to protect marine and coastal biodiversity⁷⁹ that is encouraging. Monitoring of coastal biodiversity and activities which have an adverse impact are required under article 3.5 and six out of seven of the reporting Contracting Parties referred to programmes of observation and monitoring under the Integrated Monitoring and Assessment Programme (IMAP) as well as the SAPBIO process with additional reference to monitoring programs in protected areas⁸⁰.

All Contracting Parties noted the existence of EIA Regulations or Strategic Environmental Assessment (SEA) Directives and Regulations which are in place to assess the impact of long-term planning on habitats⁸¹. The report notes that the difficulties most frequently reported by Contracting Parties in SPA/BD implementation, arise from financial shortfalls and technical capabilities.

Six out of eight parties have reported having established SPAs under Article 3.1(a) while four out of seven Contracting Parties reported having established cooperation arrangements to protect and restore migrant species in the area where the Protocol applies⁸². Regarding the implementation of GFCM Recommendations and SPA/BD Protocols, four out of seven reporting Contracting Parties reported that they have established strict legal protection for Annex II species in their national legislation and only two parties reported having completed inventories of critical habitats⁸³. The development of programmes that raise awareness with the public and target groups, including decision-makers, concerning the risks associated with species introduction have been reported by only three Parties⁸⁴.

⁷⁶ The status of implementation of the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) report, 2020-2021, Barcelona Convention.

⁷⁷ Ibid para 4.

⁷⁸ Ibid para 6.

⁷⁹ Ibid para 9.

⁸⁰ Ibid para 10.

⁸¹ Ibid para 11.

⁸² Ibid para 13.

⁸³ Ibid para 49.

⁸⁴ Ibid para 63.

Reporting Patterns

Reporting Patterns						
	CMS	CMS MOU	BARCELONA	CBD	BERN	
2017	~	Х	N/A	N/A	N/A	
2018	N/A	X	/	~	N/A	
2019	~	X	N/A	N/A	N/A	
2020	N/A	X	/	N/A	N/A	
2021	N/A	X	N/A	N/A	N/A	
2022	N/A	X	N/A	NBSAP	N/A	
2023	~	X	N/A	N/A	N/A	

Figure 2: National report submission N/A (not applicable), X (Absent), NBSAP (National Biodiversity Strategic Action Plan).

As previously mentioned, various reporting obligations arise from each Convention. CMS, for example, requires Contracting Parties to submit national reports for each Conference of the Parties (CoP). In this case, the Republic of Cyprus has been consistent with its reporting, uploading national reports for every CMS CoP. Reporting obligations for the Bern Convention require parties to submit biennial reports to justify any derogations they plan on making to the provisions of the Convention. The Republic of Cyprus has submitted such reports; however, none of them requests derogations to the conservation of the angel shark. For the CBD, the Parties must submit a report on the implementation of the provisions of the Convention and their effectiveness in meeting the objectives. In 2022, Cyprus submitted its national biodiversity strategy, which detailed how it would implement the provisions of the Convention along with the required national reports.

In addition, the CMS Sharks MoU invites Parties to submit a regular national report on implementing this Memorandum of Understanding and the Conservation Plan. As of early 2024, the Republic of Cyprus has not published any reports.

The Republic of Cyprus has complied with its obligation to report under the Barcelona Convention. It has consistently submitted national reports on measures taken to implement the Barcelona Convention and its Protocols and reports on the technical implementation of the SPA and Biodiversity Protocol.

Examining the reports, the consistent submission of reports to particular Conventions such as CMS and the Barcelona Convention is noted, while reporting deficiencies are apparent with respect to the Bern and CMS Sharks MoU. Progressing onwards, addressing the source of these disparities in reporting practices and emphasizing the importance of consistent and timely reporting will undoubtedly aid the Republic of Cyprus's effort to fulfil its commitments to Conventions it is signatory to.

The General Fisheries Commission for the Mediterranean (GFCM)

The EU has been a member of the GFCM since 1999. The GFCM is mandated to adopt binding decisions (Recommendations) concerning fisheries conservation and management. As a member of the EU, the Republic of Cyprus is subject to these decisions, as GFCM Recommendations are directly applicable to all EU Member States. Consequently, member states are not obligated to incorporate GFCM recommendations into national law, although many desire for this to strengthen enforcement through licensing conditions.

Recommendation GFCM/42/2018/2

This Recommendation amended GFCM/36/2012/3. Recommendation GFCM/42/2018/2 requires the adoption of fisheries management measures to ensure adequate conservation status of sharks⁸⁵. It provides, among other measures, special measures which reduce the use of trawl nets and enforce the prohibition of certain trawling behaviours. The Recommendation provides robust measures particularly for the species listed in Annex II of the SPA/BD Protocol of the Barcelona Convention. Annex II species are listed as 'prohibited', requiring that any individuals caught during fishing activities cannot be retained on board, transhipped, landed, transferred, stored, sold, or displayed for sale.

In accordance with GFCM/42/2018/2, the Republic of Cyprus is obligated to ensure trawling is prohibited within three nautical miles off the coast or to the 50-meter isobath, whichever is reached first⁸⁶. The Republic of Cyprus may grant limited derogations. These are granted following the conditions that they are justified by particular geographical constraints and/or concern small trawling vessels of less than or equal to 12 meters in length overall. Their engine power must be less than or equal to 85 kW, traditionally operating in coastal areas or concerning a limited number of vessels during a seasonal campaign.

Furthermore, the Republic of Cyprus shall enhance the collection and monitoring of data and the reporting of information on the incidental catch of elasmobranchs in accordance with Recommendation GFCM/42/2018/2. To support regional monitoring Programmes the Republic of Cyprus should use the FAO technical manual on 'Monitoring the incidental catch of vulnerable species in Mediterranean and Black Sea fisheries: methodology for data collection' and with Task 3 of the Data Collection Reference Framework (DCRF)⁸⁷.

⁸⁵ Recommendation GFCM/42/2018/2 on fisheries management measures for the conservation of sharks and rays in the GFCM area of application, 2018.

⁸⁶ Ibid S.III art.5.

⁸⁷ Ibid S.III art.8.

All three species of the angel shark are listed in Annex II of the SPA/BD Protocol, and the Republic of Cyprus must ensure high protection from fishing activities under Part III section six of the Recommendation⁸⁸. Accidentally caught angel sharks must be released unharmed and alive to the extent possible. Furthermore, Recommendation GFCM/42/2018/2 prohibits the removal of shark fins onboard, along with the beheading and skinning of specimens before landing. Beheaded and skinned specimens are not to be marketed at the first point of sale, and it is prohibited to purchase, offer for sale or sell shark fins which have been removed, retained on board, transhipped or landed detached from the carcass.

Moreover, the Republic of Cyprus is required to promote research initiatives and capacity building efforts to improve knowledge on elasmobranchs and to support the effective implementation of this Recommendation, including entering into cooperative arrangements with other relevant international bodies⁸⁹.

Recommendation GFCM/44/2021/16

The purpose of the Recommendation is to encourage further actions to improve the conservation status of elasmobranchs and mitigate the risk of incidental catches of all Annex II and III of the SPA/BD Protocol species, including angel sharks in fishing operations and increase post-release survival rates⁹⁰.

As an EU Member State, the Republic of Cyprus is required to adopt relevant mitigation measures in order to achieve this objective. Measures should include research into fishing gear, equipment and fishing techniques along with technical training and certification schemes for vessel captains. Such measures shall be accompanied by appropriate monitoring to establish the efficacy of the actions and may include fishing gear modifications and alternative fishing gear types; improvements in fishing gear marking and detection; time-area fishing restrictions or closures, if appropriate; implementation of maximum potential bycatch thresholds; and the use of other bycatch mitigation measures⁹¹.

Additionally, the Republic of Cyprus should identify critical habitats for elasmobranchs and analyse the impacts of fishing gear and alternative fishing gear with the aim that the results will inform national legislation.

National law

National law in the Republic of Cyprus includes protection for the angel shark from recreational activities. Recreational fishery law prohibits the catch and possession of any species of elasmobranchs, and if caught by accident, fishers must release the individual immediately with as little harm as possible⁹². Regarding tourist activities, advertising activities targeting elasmobranchs or protected species is prohibited⁹³. Boat holders are required to hold a permit issued by the DFMR indicating the prohibition of elasmobranch fishing.

⁸⁸ Ibid S.III art.6.

⁸⁹ Ibid S.IV art.10

 $^{^{90}}$ Recommendation GFCM/44/2021/16 on additional mitigation measures for the conservation of elasmobranchs in the Mediterranean Sea, 2021.

⁹¹ Ibid S.II art.5.

⁹² Terms of Recreational Fishing License, v2.6 (20/9/2023), art. 9.

⁹³ Ibid 34.

Fishers are obliged to record such instances, including the number of catches, weight and whether the individuals were discarded dead or alive⁹⁴.

Regional non-binding instruments in the field of the environment

Action Plans

CMS Single Species Action Plan (SSAP)

In a recent 2024 development, CMS finalised the adoption of a Single Species Action Plan (SSAP) for the Mediterranean Angelshark⁹⁵. This SSAP calls for actions such as reporting the implementation of SSAP actions and the establishment of working groups to establish a governance structure to implement SSAP and enhance cooperation between stakeholders and Range States. Most importantly, Range State parties are requested to undertake the actions of the SSAP and begin the implementation of short term/medium term activities within three years and long-term activities within five years.

Action Plans

Partners of the Angel Shark Conservation Network (ASCN) have focused since 2016 on developing strategic conservation planning documents for angel sharks and actively encourage organisations across the range to participate in the delivery of the Action Plans goals⁹⁶. Partners of the ASCN published the Eastern Atlantic and Mediterranean Angel Shark Conservation Strategy⁹⁷ and the Mediterranean Angel Sharks: Regional Action Plan⁹⁸. The objectives of the strategies include that fisheries-based angel shark mortality is minimised; Critical Angel Shark Areas (CASAs) are identified and protected; negative impacts on angel sharks from human interactions are minimised; and that national legislation for angel sharks is established, implemented, and enforced. Additional policy priorities of the Action Plans include the implementation of GFCM measures and expansion of Common Fisheries Policy (CFP) to include additional *Squatina* species.

Furthermore, Sub Regional Action Plans (SubRAPs) have been developed to facilitate cooperation between stakeholders, governments, and industry further. One such Action Plan is the Mediterranean Angel Sharks: SubRAP for the Republic of Cyprus (Geographic Sub Area 25). The Republic of Cyprus has been identified as a priority region for angel sharks, given that all three Mediterranean species have occurred there recently, along with instances of recent capture and trade. Several key projects are already in progress in the Republic of Cyprus to help mitigate the catches and trade and further conservation efforts. Mediterranean Elasmobranchs Citizens Observations (MECO) collects sightings data and share them between a network of organisations to understand occurrences, seasonality, and distribution of elasmobranchs in certain regions. ELIFE is a project that aims to improve elasmobranch conservation through promoting best practices in professional fishing. The Cyprus Bycatch Project assessed and monitored fisheries bycatch in the Republic of Cyprus. Species data were collected by observers and collaborating fishers, and through different data collection methodologies and mitigation measures were tested with a focus on advocating for and implementing changes in practices and updating national legislation and conservation areas.

⁹⁴ Ihid 33

⁹⁵ Conservation of Migratory species Single Species Action Plan, 2024.

⁹⁶ Angel Shark Conservation Plan, 2016.

⁹⁷.Gordon, C.A., Hood, A.R., Barker, J., Bartolí, À., Dulvy, N.K., Jiménez Alvarado, D., Lawson, J.M., & Meyers, E.K.M. (2017) Eastern Atlantic and Mediterranean Angel Shark Conservation Strategy. The Shark Trust, UK

⁹⁸ Sara A. A Al Mabruk , Joanna Barker , Rebecca L. Gillham , Ioannis Giovos , Ali R. Hood , David Jiménez-Alvarado , Eva K. M. Meyers 'Mediterranean Angel Sharks: Regional Action Plan', 2020.

The Action Plan for the Conservation and Management of Sharks (EU-POA Sharks⁹⁹) is another important Action Plan with which the EU aims to restore and maintain populations of harvested species above levels which can produce the maximum sustainable yield. The EU-POA was adopted in 2009 and while non-binding, the plan applies in all EU Member States and has the objective to broaden knowledge on sharks and to ensure sustainability of shark fisheries.

The Action Plan for the Conservation of Cartilaginous Fishes (Chondrichthyans) in the Mediterranean Sea (hereafter Mediterranean Shark Action Plan), following its development led by Barcelona Convention Contracting Parties (UNEP RAC/SPA 2009), the Mediterranean Shark Action Plan (UNEP MAP RAC/SPA 2003), was approved at the 13th Conference of Contracting Parties to the Barcelona Convention. It was updated in 2020 (UNEP MAP RAC/SPA 2020) and calls on parties to the Barcelona Convention to execute National Action Plans in accordance with the IPOA-Sharks' Recommendations¹⁰⁰. It lays out six goals for the Regional Action Plan. The National Focal Points for the SPA/BD Protocol are responsible for assessing the progress of implementation.

The plan lays out priorities addressing general management of chondrichthyan populations and specifically includes that legal protection should be awarded to endangered species following the regular status reviews of Mediterranean species. 2020-2024 priorities also include species which should receive specific attention (SPA/RAC- UNEP 2020). At the point of writing, no reporting Contracting Party to the Barcelona Convention has adopted such a National Plan of Action. NPOA is under development, while only four out of seven Contracting Parties reported strict legal protection for the species listed in Annex II to the SPA/BD Protocol and GFCM Recommendation through their national laws and Regulations¹⁰¹. It is important to note that overall, only seven out of 21 Contracting Parties reported on the implementation of the Mediterranean Shark Action Plan in 2023.

Other relevant instruments

ISRA (Important Shark and Ray Areas)

The vision of ISRA is to enhance the conservation of all sharks, rays, and chimaera species. It aims to achieve this through the implementation of a systematic place-based approach, which is supported by the identification of ISRA through the species ranges¹⁰². The main purpose of ISRA is to gain the attention of policy makers to secure favourable conservation status of sharks through the subsequent implementation of appropriate management measures which can include the designation of MPAs.

ISRAs differ from MPAs in that ISRAs are identified only based on scientific criteria that describe their importance for the survival and well-being of one or more shark species found there. Whereas MPAs are delimited spaces where specific Regulations are enforced to ensure that human behaviour is controlled to mitigate the negative effects on the conservation of the target species.

⁹⁹ Commission 'European Community Action Plan for the Conservation and Management of Sharks ' https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52009DC0040

 $^{^{100}}$ UNEP/MAP - SPA/RAC, 2019. Action Plan for the conservation of cartilaginous fishes (Chondrichtyans) in the Mediterranean Sea. Ed. SPA/RAC, Tunis: 15 pp + Annex.

¹⁰¹ Giovos, I., Pytka, J.M., Barone, M. *et al.* Conservation and management of chondrichthyans in the Mediterranean Sea: gaps, overlaps, inconsistencies, and the way forward. *Rev Fish Biol Fisheries* **34**, 1067–1099 (2024). https://link.springer.com/article/10.1007/s11160-024-09857-z

¹⁰² Important Shark and Ray Areas, https://sharkrayareas.org/.

At present, there is one ISRA in the Cilician Basin in the Republic of Cyprus of which the Sawback Angelshark (*Squatina aculeata*) was listed as a *supporting species*, meaning that there is evidence to suggest that this species of angel shark resides there, but it is not enough to confirm it.

ENFORCEMENT

Report of Bycatch in Cyprus

The Republic of Cyprus faces significant challenges in the enforcement of legislation aimed at prohibiting the capture and retention of Critically Endangered angel sharks. This issue is underscored by five incidents reported over the last decade (*Figure 3*), highlighting a pattern of retention, albeit sporadic, that may threaten the conservation of this rare species within the waters of the Republic of Cyprus.

In 2014, an incident was reported by Enalia Physis Environmental Research Centre, involving the capture of an angel shark in Kappari by fishers. The shark was found dead and, in contravention to the law, was not released back into the sea. A similar event unfolded in Latouros in 2015. Moreover, another case reported by Enalia Physis Environmental Research Center in 2014 involved the capture of an angel shark in Cavo Kiti. In this instance, it was unclear whether the shark was caught alive or dead, but it was landed. This event illustrates the ongoing challenges faced in the implementation and enforcement of relevant conservation measures. In 2019, an angel shark was caught alive in the area of Zygi. Despite being captured alive, the animal was not released, marking another instance of non-compliance with both international and EU conservation mandates aimed at protecting these vulnerable marine creatures. Still, it is unclear what the motive for landing angel sharks are.

Most recently in 2020, an incident reported by MECO involved an angel shark being caught and killed in Agios Georgios, Paphos by recreational fishers. In addition to being reported, this event was also documented with photographic evidence.



Figure 3: Map of locations of instances of non-compliance (light green circles) with protective angel shark regulations.

These cases collectively illustrate a pattern of non-release and lack of compliance with both International and EU legislation. This situation is exacerbated by incidents of bycatch and non-release from both professional and recreational fishers, indicating a broad spectrum of challenges that must be addressed to ensure the survival and protection of the angel shark population in the region. However, we must also highlight that angel shark captures and observations are very sporadic, making the enforcement much more difficult for authorities. Therefore, there is a critical need primarily for awareness among the fishing community that will facilitate better reporting and releasing of angel sharks and will help authorities to safeguard these vulnerable species.

Fisheries Monitoring Centre (FMC)

The FMC has been established in the Republic of Cyprus for several years, with annual reports being uploaded yearly on the DFMR website. It should be noted that the following reports are not all in relation to elasmobranchs however, they do provide a picture of the type of monitoring and enforcement taking place.

Figure 4 shows the rise in checks over the years, along with the number of infringements on protected species; in particular, from 2020 to 2021, the number of cross-checks is more than doubled from 249 in 2020 to 719 in 2021, with similar numbers for 2022. The annual report for 2023 has not yet been made public, so it is unclear how this progressed in 2023. However, comments from the DFMR indicate that there have been cases of fishing of prohibited species, that they have been reported, and that appropriate action has been taken. Positively, cross-checks have been rising over the last five years. The data shows a very low level of protected species infringements identified.

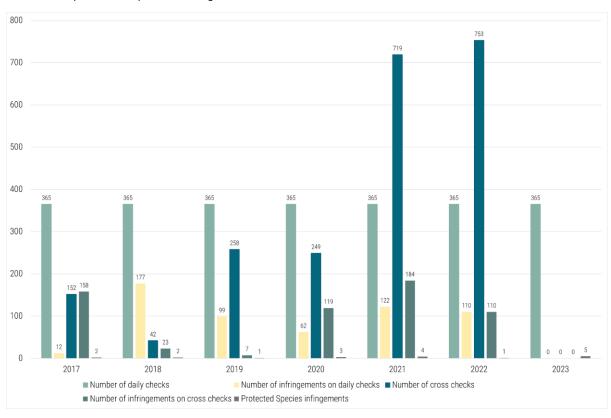


Figure 4: Frequency of checks and infringement cases involving protected species.

Analysis of the DFMR annual reports shows a consistent effort to combat breaches of legislation in place to protect vulnerable species. The reports show DFMR authorities' clear awareness of the fishery legislation.

Enforcement action is demonstrated with the documentation of cases of both retention and landing of protected species. Data entry errors relating to elasmobranchs have also been flagged, showing a positive commitment to the checks by the DFMR.

Despite these thorough checks, there have been no cases mentioned in the DFMR annual reports regarding angel sharks. Given the evidence presented, such phenomena - although sporadic - do occur, and we suspect that there might be more incidents than documented. Despite a dedicated inspection plan, it remains difficult to fully quantify incidents of angel shark bycatch. Workshops and events to train fishers to release angel sharks and other prohibited species unharmed when alive and report dead bycatch are crucial for the effective implementation of angel shark protective measures.

Conclusion

It is difficult to assess the level of full implementation of the International and European frameworks mentioned above. This is mainly due to the absence of reports on angel sharks. Despite this, there is consistent action by the DFMR to enforce regulations protecting vulnerable species in general. There are several potential reasons for the lack of reporting, which could range from a difficulty in identifying the species, whether due to lack of knowledge or due to the species being already processed upon landing. Lack of knowledge among fishers regarding legislation protecting the species could also be a source of the lack of reports. Moreover, the lack of acknowledgement of the angel shark as a species affected by bycatch has most likely hindered enforcement efforts. In any case, the DFMR authorities' infringement reports give a positive indication that checks are being made to enforce EU legislation regarding vulnerable species in general, despite no reports having yet been made on the angel sharks.

With regard to the implementation of CMS, it appears that the appointment of a committee dedicated to issues of CMS implementation, would aid the bodies already collaborating on CMS issues in the Republic of Cyprus. Generalised findings from Mediterranean countries noted that lack of institutional strength regarding the enforcement of environmental policy also contributes significantly to issues of implementation. Taking this into account, the appointment of a CMS committee in the Republic of Cyprus may further conservation efforts and aid the authorities with the work they are already doing in the enforcement of CMS Regulations.

By better utilising the existing competent authorities and by creating a new Committee with relevant authorities and scientific experts (such as the Single Species Action Plan Committee for the CMS of each country), the government can conserve and restore CASAs once identified. It will allow for competent authorities to direct their resources and attention to areas most important for angel sharks. Moreover, the designation of new MPAs for angel sharks, or the expansion of existing ones to include CASAs, would contribute positively to the Republic of Cyprus fulfilling its international obligations and championing angel shark conservation in the Mediterranean, setting a positive example for other countries. One such obligation is the CBDs objective of establishing protected areas. In 2024, MPA coverage in the Republic of Cyprus stands at 8.6%, and the expansion of MPAs would play a key role in achieving the EU biodiversity goal of protecting 30% of the EU seas by 2030. MPA coverage of EU seas stands at 12%, and strictly protected areas make up less than 1%¹⁰³.

According to the available reports, angel sharks are not being released under the correct protocol when caught. In all reported cases, they have not been returned to the sea as required by law and not reported, if dead, to the monitoring authorities. While improved compliance with existing fisheries management is required in all waters. It is possible that the designation of MPAs would also contribute to the protection of

¹⁰³ Seas at Risk 'EU countries not on track to meet international marine protection targets, warn NGOs' https://seas-at-risk.org/press-releases/eu-countries-not-on-track-to-meet-international-marine-protection-targets-warn-ngos/ Accessed 25 April 2023.

the species although the compliance with the existing fisheries legislation must be of priority for the conservation of the species. Given that the ecology of the species is migratory, it is important that enforcement is also in place outside of the MPAs and CASAs. However, the designation of MPAs in critical habitats, like nursery sites, will help prioritise action given limited resources.

Ratification of the BBNJ would further aid in conservation efforts as both the *Squatina aculeata* and the *Squatina oculata* use offshore habitats. The BBNJ calls for collaboration in Area-Based Management tools such as the designation of MPAs. Ratification would provide the opportunity to protect the angel shark outside of the Republic of Cyprus' EEZ.

Finally, it is essential to prioritise an awareness campaign aimed at improving fisher understanding of angel sharks. Such a campaign should highlight their ecological importance, vulnerability, and protected status within the marine ecosystem. In addition to fostering awareness, this initiative should complement and enhance existing fisheries management strategies by providing practical training on safe handling and release practices. Moreover, equipping fishers with the knowledge and tools for accurate reporting to monitoring authorities will help strengthen data collection efforts, ensuring better conservation outcomes. By aligning with established management frameworks, these actions can play a pivotal role in safeguarding angel shark populations.







