UNITED NATIONS

EP

UNEP/MED WG.546/6

UNITED NATIONS
ENVIRONMENT PROGRAMME
MEDITERRANEAN ACTION PLAN

UNEP

10 February 2023
Original: English

9th Meeting of National Correspondents of the Strategic Action Programme for the Conservation of Biological Diversity in the Mediterranean Region (SAPBIO)

Barcelona (Spain), 24 February 2023

Agenda item 4: Review of the Draft Resource Mobilisation Strategy for the implementation of the Post-2020 SAPBIO, including the Post-2020 Regional Strategy for marine and coastal protected areas and other effective area-based conservation measures in the Mediterranean

Project Concept 3:

The Conservation of Marine Turtles in the Mediterranean Region: Preserving ecosystem function & climate resiliency through enhanced marine turtle populations in the Mediterranean

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Project Concept 3

The Conservation of Marine Turtles in the Mediterranean Region: Preserving ecosystem function & climate resiliency through enhanced marine turtle populations in the Mediterranean

PROJECT SUMMARY

PROJECT TITLE	The Conservation of Marine Turtles in the Mediterranean Region: Preserving ecosystem function & climate resiliency through enhanced marine turtle populations in the Mediterranean
REGION	The Mediterranean basin
COUNTRIES	Albania, Algeria, Egypt, France, Greece, Italy, Lebanon, Libya, Morocco, Spain, Tunisia, Turkey
MEMBER INSTITUTIONS	ARCHELON: The Sea Turtle Protection Society of Greece DEKAMER (Sea Turtle Research, Rescue and Rehabilitation Center) IUCN-Med MedPAN MEDASSET National Marine Park of Zakynthos (NMPZ) SPA/RAC WWF Greece WWF North Africa WWF Turkey
PROJECT TIMEFRAME	2023 – 2026 (36 months)

PROJECT VISION	Thriving populations of sea turtles at sea and on land supported by a recognised and strong partnership
PROJECT OUTCOME	Increased capacity and ability to protect, monitor and conserve marine turtles in the face of climate change within the Mediterranean region, resulting in restored, maintained, and enhanced populations.
PRIORITY THEMES	**1:** Monitoring and research: Advancing the latest science to understand climate change impacts on marine turtles **2:** Threat reduction: An ecosystem-based approach & promoting conservation **3:** Expanding the marine turtle community: Building capacity and effective communication
KEY POLICIES & STRATEGIES	• EU Marine Strategy Framework Directive (MSFD) • EcAp/IMAP • Post-2020 SAP BIO) • Post-2020 Strategy for MCPAs and OECMs • The EU Habitats Directive 92/43/EEC • The Mediterranean Action for the Conservation of Marine Turtles • The EU Climate Law (EU Green Deal) (EU 2021/1119) • Mediterranean Strategy for Sustainable Development (MSSD 2016-2025) • Regional Climate Change Adaptation Framework for Marine and Coastal Areas (RCCAF)

	• GFCM 2030 Strategy for sustainable fisheries and aquaculture in the Mediterranean and the Black Sea • Marine and Coastal Biodiversity programme of the Convention on Biological Diversity (CBD) • UN Sustainable Development Goals (SDG) 13 and 14

PROJECT BUDGET	€2 millions
CO-FINANCING	€330,701.26 (as of June 2022)
CO-FINANCERS	MedPAN, Regional Activity Centre for Specially Protected Areas (SPA/RAC)

EXECUTIVE SUMMARY

Human pressure on ecosystems and climate change combine to hinder the capacity of coastal areas, nearshore environments, and the high seas, to adjust and adapt to the ensuing impacts. The Mediterranean is rapidly changing, and predicated conditions risk the ability of ecosystems and biodiversity to deliver essential ecosystem services and co-benefits that support livelihoods and perform crucial functional roles for the benefit of the region.

Three marine turtle species, sentinel indicators of climate change, are common within the Mediterranean (Loggerhead, Green and Leatherback). Changes to terrestrial and marine conditions threaten the survival of marine turtles by disrupting sex ratios and reduce hatchling success, while reducing nesting habitat through coastal development, touristic activities, and sea level rise, and disrupting successful foraging and feeding behaviour and reducing survival and breeding rates. Coupled with increased human pressures such as bycatch, marine pollution and litter, and poaching, the scenario for marine turtle populations in the Mediterranean, and the services they provide, is damning.

Marine turtles - even at diminished population levels - play important ecological roles in ocean ecosystems by maintaining healthy seagrass beds, providing key habitat for other marine life, balancing marine food webs and facilitating nutrient cycling, they also provide valuable cultural, social and economic services to communities, stakeholders and the tourism industry within the Mediterranean.

To overcome the threats hanging over marine and coastal biodiversity in the Mediterranean, the Contracting Parties to the Barcelona Convention the Strategic Action Programme for the Conservation of Biological Biodiversity (SAP BIO) in the Mediterranean Region recognised climate change as major hazard to biodiversity, and the need for mitigation and adaptation was emphasised. The essential need for the management and conservation of biodiversity, including marine turtles, was translated into policy implementation through the decision IG.22/1 of the Contracting Parties to develop a Mid-Term Strategy 2016-2021 (MTS).

Marine Protected Areas (MPA) including Specially Protected Areas of Mediterranean Importance (SPAMI), are vital management instruments for the Mediterranean region by protecting and increasing the adaptive ability of populations and ecosystems to resist climate anomalies. For marine turtles, the use of and Important Marine Turtle Areas (IMTA), a means of identifying critical areas for marine turtles, further strengthen the ability of effective conservation. Area-based management measures are also embedded in international and regional instruments (Convention on Biological Diversity (CBD), United Nation’s Sustainable Development Goal 14 (SDG), EU Biodiversity Strategy, Post-2020 Strategy for MCPAs and OECMs, and the UfM Greener Med Agenda, for example), and marine turtles are protected by national and international legislation including the Berne Convention, Bonn Convention, CITES and Barcelona Convention and its protocol concerning specially Protected Areas and Biological Diversity in the Mediterranean.

The development and implementation of strong spatial management plans for the conservation of marine turtles, critical habitats, and co-benefits, should be an urgent priority. However, effective actions to tackle the impact of climate change and protect biodiversity are hindered by fragmented in monitoring data, efficacious mitigations and direct interventions, knowledge gaps, lack of region-wide

capacity and reduced national and regional alignment in political instruments to implement ecosystem-based management strategies for marine turtles.

It is within this context that the **Conservation of Marine Turtles in the Mediterranean Region** project will launch its third phase, building on the successful implementation of the project's phase I and II since 2017, previously funded by the MAVA Foundation.

The goal of Phase III of the project is to increase the capacity and ability to protect, monitor and conserve marine turtles in the face of climate change within the Mediterranean region, resulting in thriving populations at sea and on land through a recognised, established, and strong partnership.

To achieves this, the project will be structured around three key themes:

1. **Theme 1** - Monitoring and research: Advancing the latest science to understand climate change impacts on marine turtles
2. **Theme 2** - Threat reduction: An ecosystem-based approach & promoting conservation
3. **Theme 3** - Expanding the marine turtle community: Building capacity and effective communication

Activities under each theme will be implemented by the project's established and functioning partnership of 9 members (ARCHELON: The Sea Turtle Protection Society of Greece, DEKAMER (Sea Turtle Research, Rescue and Rehabilitation Center), MedPAN, MEDASSET, National Marine Park of Zakynthos (NMPZ), SPA/RAC, WWF Greece, WWF North Africa, and WWF Turkey) with aims to expand the partnership to national and local partners enabling a multi-stakeholder approach. The partnership and project benefits from a strong governance structure enabling participatory approaches in the strategic and technical implementation of the project enabling actions across 13 countries (Albania, Algeria, Cyprus, Egypt, France, Greece, Italy, Lebanon, Libya, Morocco, Spain, Tunisia, and Turkey). The project will also expand geographically targeting new areas including Malta, Syria, and the Western Mediterranean area, whilst continuing to act throughout the Mediterranean thanks to the activities of the regional partners of the project.

Supporting and strengthening regional policies and projects through collaborative approaches will be a central theme of the project including supporting the EU Marine Strategy Framework, Integrated Monitoring and Assessment Programme (IMAP), Post-2020 SAP BIO, and contributions to the UN SDG 13 and 14, as well as SDG 5 and SDG 17.

Timeframe, budget and funding

The project will implement its third phase from 2023 – 2026 (36 months) with a total budget of €2 million. Of this projected budget, the partnership will implement a rigorous funding strategy that will raise co-financing to be provided key funders in the region. To date, a total of €330,701.26 has been co-financed to support the implementation of the project's Phase III by the partnership (a table of co-financing is provided in the annex).

Together, the project and its partners, will take every opportunity to raise the plight of marine turtles with the broader international community and the actions that can be taken at local, national, and regional levels to secure their conservation and protection.

Conservation of
Marine Turtles
in the Mediterranean Region

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PROJECT CONTEXT

SITUATION

Human pressure on ecosystems and climate change combine to hinder the capacity of coastal areas, nearshore environments, and the high seas, to adjust and adapt to the ensuing impacts.

This scenario is no different to that in the Mediterranean Sea. The Mediterranean Sea is rapidly changing in response to the global warming of the world's atmosphere and oceans, and to the synergy of multiple local human disturbances. As a consequence, the Mediterranean is one of the most degraded basins in the world and its rich and diverse life, as well as the economic and social systems that depend upon it, are being threatened by phenomena predicted to increase. These rapidly changing conditions risk the ability of ecosystems and biodiversity to deliver essential ecosystem services and co-benefits that support livelihoods and perform crucial functional roles for the benefit of the region. With temperatures going up 20% faster than the global average, and sea level rises expected to exceed one meter by 2100, the Mediterranean is becoming the fastest warming and the saltiest sea on the planet. Overall, the region's ecological resilience has been radically reduced by unsustainable development – and with USD$ 450 billion of ocean-related value generated from the Mediterranean's natural capital each year, the socio-economic future of the region is uncertain.

The combination of human pressures and climate change pressures greatly threaten the survival, function and services of marine turtles in the Mediterranean region – considered sentinel indicators of climate change. Three species of marine turtles are commonly present in the Mediterranean, with two species nesting* (Loggerhead (*Caretta caretta*)*, Green (*Chelonia mydas*)* and Leatherback (*Dermochelys coriacea*)) and are considered species of community interest, in need of strict protection. These three species are included in the List of Endangered and Threatened Species, annexed to the Protocol concerning Specially Protected Areas and Biological Diversity in the Mediterranean.

In the IUCN RED List of Threatened Species, Green turtles are classified as "Endangered" in the Mediterranean with Leatherback turtles as "Vulnerable". The Mediterranean sub-population of Loggerhead turtle is assessed as "Least Concern" (LC), but conservation **dependent**. This means that if conservation efforts cease, their population will likely decrease. It is estimated that with current conservation efforts, there are approximately **4,000** and **7,000** green and loggerhead nests each year in the Mediterranean. Moreover, some population estimates are as low as 810,000 and 260,000 in the Mediterranean for loggerhead and green turtles, respectively[1].

Increasing terrestrial temperatures are predicted to disrupt sex ratios in marine turtle hatchlings, leading to the feminisation of turtle populations / cease in male production, a 1 ^{o}C increase in

[1] Casale & Heppell 2016

temperature can reduce hatching success by 25%, with 35 ºC temperatures nearing 0% success, and increased temperatures reducing hatchling survival rate. Sea level rise is also expected to reduce nesting site area availability, impacting over 1/3 of the marine turtle population, compounded by competition with coastal development, further predicting reduced population numbers.

In the marine environment, reduced Sea Surface temperatures (SST) caused by changes in weather patterns, can affect the physiology ability of turtles, inhibiting their ability to successfully forage, whilst increased SST can cause indirect stress through rapid phytoplankton and pathogenic growth as well as disrupting breeding patterns and possibly reducing clutch sizes. Sea level rise is expected to reduce nesting site area availability impact over 1/3 of the marine turtle population, compounded by competition with coastal development, further predicting reduced population numbers.

The impact of climate change, alongside the continued pressures from bycatch, loss of critical habitat and reduced population resiliency, paints a damning picture for marine turtle populations, and the many services they provide, in the Mediterranean, and Globally.

Marine turtles - even at diminished population levels - play important ecological roles in ocean ecosystems by maintaining healthy seagrass beds, providing key habitat for other marine life, helping to balance marine food webs and facilitating nutrient cycling from water to land. Marine turtles also provide valuable cultural, social and economic services to communities, stakeholders and the tourism industry within the Mediterranean.

Actions to tackle the impact of climate change are hindered by the lack of data due to the current fragmented monitoring, the effectiveness of direct interventions and lack of resources, political will, and funding to implement national and regional strategies. Therefore, in order to limit or reduce the detrimental impact of climate on marine turtles, and critical habitats, in the Mediterranean, the response is two-fold: direct interventions and overarching mitigations coupled with a need to fill knowledge gaps, improve current monitoring and assessment efforts and development and adoption of ecosystem-based management strategies.

Marine turtles should be regarded by Mediterranean people and visitors as a real biodiversity treasure. However, the future of marine turtles will be determined by current and future actions. The development and implementation of good management plans for the conservation of these species, and the services they provide, should be an urgent priority.

MANAGEMENT & CONSERVATION

To overcome the threats hanging over marine and coastal biodiversity in the Mediterranean, the Contracting Parties to the Barcelona Convention adopted in 2003 the Strategic Action Programme for the Conservation of Biological Biodiversity (SAP BIO) in the Mediterranean Region. Climate change issues, one of the priorities of the SAP stressed as a major hazard for biodiversity loss which must be assessed and mitigated, were updated into this Programme in 2009.

The assessment of the status and trends in ecosystems and the potential climate change risks that may affect their structure and function is essential to the success of biodiversity, including marine turtle, management and conservation. This has been translated into policy implementation through the decision IG.22/1 of the Contracting Parties to develop a Mid-Term Strategy 2016-2021 (MTS), which includes the Strategic Theme "Climate Change Adaptation" as a "Cross-cutting Theme". The MTS aims to enable climate change monitoring and assessment as a main outcome, and it scopes for that purpose to achieve as a key output the consideration of climate change vulnerability issues in existing monitoring programmes being undertaken by countries.

Marine Protected Arras (MPA) and in particular Specially Protected Areas of Mediterranean Importance (SPAMI), as healthy coastal and marine areas that provide protection and increase the adaptive ability of populations too resist climate anomalies, are one of the most effective tools to challenge the detrimental impacts of climate change to marine turtles, marine ecosystems and livelihoods. For marine turtles, the use of Important Marine Turtle Areas (IMTA), a means of identifying critical areas for marine turtles, further strengthens the ability of effective conservation. Therefore, the use of effective marine spatial planning through ecosystem-based management, MPAs, in particular SPAMI, are vital instruments for national and regional parties to protect, maintain and enhance marine turtle populations and their functional roles.

Marine Protected Areas (MPA) are a key tool for the successful conservation of marine turtles. By ensuring the protection of critical habitats, MPAs enable the protection of biodiversity and ecosystem services alongside marine turtles for the successful completion of basic biological requirements, such as feeding and breeding, and the protection of individuals from direct threats both on land (through Natura 2000 sites) and at sea. A key example of this is the protection of critical feeding sites, such as seagrass meadows that host an abundance of biodiversity and are crucial in the adaption and mitigation to climate change. Supporting their use, MPAs are also embedded in several international and regional instruments (Convention on Biological Diversity (CBD), United Nation's Sustainable Development Goal 14 (SDG), EU Biodiversity Strategy, Post-2020 Barcelona Convention strategies, and the UfM Greener Med Agenda, for example).

Marine turtle species in the Mediterranean are protected by national legislation and international and regional instruments. Berne Convention (Convention on the Conservation of European Wildlife and Natural Habitats), Bonn Convention (Convention on the Conservation of Migratory Species of Wild Animals), the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), and Barcelona Convention and its protocol concerning specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol) are some examples of these instruments.

Moreover, Regional Fisheries Organisations worldwide include legal instruments to protect marine turtles and reduce incidental captures, such as the General Fisheries Commission for the Mediterranean (GFCM). Within the EU (Habitats Directive 92/43/EEC), the loggerhead and green turtles are considered priority species, whose conservation requires the designation of special areas of conservation.

The development and implementation of strong spatial management plans for the conservation of these species, critical habitats and co-benefits, direct interventions and overarching mitigations coupled with a need to fill knowledge gaps, improve current monitoring and assessment efforts and development and adoption of ecosystem-based management strategies should be an urgent priority. These priorities, in turn, will protect, maintain, and restore marine turtle populations in the Mediterranean, while abating current terrestrial and marine threats, and increasing the climate resiliency, giving species the greatest chance of survival.

THE PROJECT

In order to contribute to protect marine turtles in the Mediterranean, a MAVA funded project, **Conservation of Marine Turtles in the Mediterranean Region**, has been implemented since 2017 within the MAVA Outcome M7 "Human induced direct mortality species has been minimized or eliminated at Mediterranean level". Under this project, strong collaborative efforts from 10 project partners, acting at regional, national, and local levels across the Mediterranean, across 13 Countries (Albania, Algeria, Cyprus, Egypt, France, Greece, Italy, Lebanon, Libya, Morocco, Spain, Tunisia, and Turkey), brought successful results over two previous phases. In 2022, Phase II of the project will conclude, and the project will establish its third phase.

The coordination and sustainability of the project through this established partnership is a key strategy for Phase III. Therefore, the third phase of this Project, ***Conservation of Marine Turtles in the Mediterranean Region,*** will continue to build on this success, addressing threats to marine turtles, improving knowledge and conservation strategies and build national capacity, to enhance the protection and conservation of marine turtles in the Mediterranean region, resulting in thriving populations at sea and on land. The third phase will be implemented over a three-year period from 2023 – 2026.

To achieve this, the project, and its partners, will implement activities under 3 core themes:

1. **Theme 1** - Monitoring and research: Advancing the latest science to understand climate change impacts on marine turtles
2. **Theme 2** - Threat reduction: An ecosystem-based approach & promoting conservation
3. **Theme 3** - Expanding the marine turtle community: Building capacity and effective communication

Critical regional policies and strategies will be supported, contributed to and strengthened over the course of the project timeframe, including: EU Marine Strategy Framework Directive (MSFD), Integrated Monitoring and Assessment Programme (IMAP), Mediterranean Action Plan for the Conservation of Marine Turtles, Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region" (Post-2020 SAP BIO), and Post-2020 Strategy for MCPAs and OECMs for: Maintaining the efforts made by the Mediterranean countries and regional bodies for the conservation of marine and coastal species and ecosystems. The implementation of the EU (Habitats Directive 92/43/EEC), GFCM and Convention on Biological Diversity will also be supported.

Moreover, over the course of the next three years, the Project will contribute national and regional progress towards Sustainable Development Goal 13 (take urgent action to combat climate change and its impacts) and Goal 14 (conserve and sustainably use the oceans, seas and marine resources). The project and partnership will operate a gender-balanced approach, promoting equitable and equal opportunities, contributing to SDG 5 (achieve gender equality and empower all women and girls) and encourage and promote effective public, public-private and civil society partnerships, through a strengthened partnership, contributing to SDG 17 (strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development).

The project will continue to implement actions that support the conservation and protection of marine turtles, with the collective vision of: **Thriving populations of marine turtles at sea and on land supported by a recognised and strong partnership.**

Together, the project and its partners, will take every opportunity to raise the plight of marine turtles with the broader international community and the actions that can be taken at local, national, and regional levels to secure their conservation and protection.

The Partnership

Throughout the previous implementation of Phase I and II, the project became, and continues to be, a brand name for marine turtles with a specific and identifiable logo, synergized identity, goals, and communication tools (social media, website, videos and documentary), promoting its work and efforts, in addition to the partnership's simple reporting system, decentralized work regime, data collection, protocols, capacity building, expert panel, streaming results into national and regional reports.

For the implementation of Phase III, the project will, initially, be enacted by the following partnership of 9 members:

1. ARCHELON: The Sea Turtle Protection Society of Greece
2. DEKAMER (Sea Turtle Research, Rescue and Rehabilitation Center)
3. MedPAN
4. MEDASSET
5. National Marine Park of Zakynthos (NMPZ)
6. SPA/RAC

7. WWF Greece
8. WWF North Africa
9. WWF Turkey

In addition to these core partners, the Partnership benefits from international, national and local partners collaboration: IUCN Marine Turtle Specialist Group (IUCN MTSG), Egyptian Environmental Affairs Agency, Egypt (EEAA); Ministry of Environment (Lebanon, Libya, Algeria, Morocco); APAL, NGB, INSTM (Tunisia); AHE (Spain); Regional Administration for Protected Areas, (Albania).

Representation of the geographical scope of the project (dark blue) and the new geographical regions to be targeted (light blue). The distribution of project partners is presented (yellow pins).

Together with the support of key experts, governments and dedicated organisations, the project partners will take and encourage actions under the following outcomes, and five themes:

> **Project Outcome Statement**: By 2026, the protection and conservation of marine turtles in the Mediterranean region is enhanced, resulting in increased populations at sea and on land through a recognised, established, and strong partnership.

Theme 1 – monitoring and research: Advancing the Latest Science to understand climate change impacts on marine turtles

> **Project Desired Outcome by 2026:** Monitoring practices for marine turtles and their habitats are advanced with rigorous scientific data used to report on the status of marine turtles, critical habitat identification and conservation response development to key threats through science-based management.

1.A – continued monitoring of marine turtles on both land and at sea to guide management measures.

The project aims to support national marine turtle monitoring networks and the creation (and implementation) of tools that will enable the monitoring of threats to marine turtles and result in an increase in ability for their mitigation. As sentinel indicators for climate change, monitoring the status and trends of marine turtles will provide a crucial indication to the impacts of climate change in the Mediterranean region.

Under the SPA/RAC protocol for Action Plans concerning Marine Turtles, alongside the IUCN MTSG key research priorities, understanding the impact of climate change on marine turtles is a key priority. Harmonised monitoring protocols will be implemented at local, national, and regional scales, building on existing monitoring efforts, as well as establishing baselines in geographical regions that lack existing data such as Libya, Malta, Syria and the Western Mediterranean area. The project will improve monitoring protocols both in-water and on land, advance innovative data sampling techniques and improve the understanding of marine turtle behaviour in lesser studies geographical regions. Additionally, the project will coordinate with international bodies such as the GFCM to supplement available data on vulnerable and protected species to support obligations under the GFCM Strategy 2030, and support the identification of Important Marine Turtle Areas (IMTA).

Monitoring efforts will contribute to the implementation of sustainable management plans for marine turtles and their habitats in the Mediterranean, established in line with the Ecosystem Approach (EcAp), and by adopting a participatory and integrated approach that consider both local socio-economic and environmental contexts.

<u>Illustrative activities:</u>

- In-water marine turtle monitoring, threat analyses and establishment of appropriate conservation measures, including:
  - Satellite tracking of marine turtle juveniles, sub-adults, males, and females from less studied regions, and;

  - locating, assessing, and monitoring key foraging and wintering locations of marine turtles and identify migratory routes.
- Develop and implement a national monitoring programme for marine turtle bycatch in Mediterranean fisheries to understand and mitigate bycatch, in collaboration with the MedBy-Catch Project.
- Continued monitoring of indexed nesting sites and expansion of monitoring efforts to new and sporadic nesting sites, alongside recommendations for appropriate adaptation measures.
- Coordinate with the GFCM and their data collection protocols of vulnerable and protected species included in the GFCM Strategy 2030.

1.B – Important marine turtle areas (IMTA) identification process

Important Marine Turtle Areas (IMTA) are discrete areas within existing marine turtle regional management units (RMUs) that are of particular biological significance for the persistence of marine turtles, and/or where the contributions of marine turtles to traditions and cultures of local people are particularly significant.

IMTAs will be identified based upon the biological and/or cultural significance of the area, and various ecological criteria. However, for effective identification and establishment, essential data are required. The Conservation of Marine Turtles in the Mediterranean Region is therefore in a prime position to supply data and advance the IMTA process based on previous assessment efforts (Phase I & II) and the proposed Phase III activities.

The project will identify IMTAs through global standardised processes supported through a multi-stakeholder approach including the pre-identification of potential IMTA sites through collected data and resources (e.g., including population data, regional management and assessment documentation, tracking and survey data, and local, published and unpublished reports).

<u>Illustrative activities:</u>

- Provision of data to support and test the IMTA identification process within the Mediterranean region enabling the two-step criteria process based on biological and/or culturally significant places.
- Important areas for nesting/hatching and important habitats for feeding, wintering and migratory passages collected during previous, and current efforts will be utilised to identify IMTAs.
- In collaboration with the IUCN Marine Turtle Specialist Group (MTSG), support the development of the IMTA processes through technical iterations based on the experience and resources developed by the project.
- In collaboration with the IUCN MTSG, support the implementation of the IMTA process in the Mediterranean through an IMTA regional pilot testing thanks to technical iterations based on the experience and resources developed by the project.

1.C – Filling knowledge gaps for monitoring and managing ecosystems for marine turtles in the face of climate change

The effective implementation of conservation strategies for marine turtles in the Mediterranean needs to be guided by sound science and rigorous application of monitoring protocols, that are holistic to the ecosystem and consider biodiversity within the system. However, there are existing gaps in the knowledge and capability of practitioners and organisations to implement protocols. There is a clear need for the development of resources, activities, and publications to address these gaps by the partnership to enable effective management actions to increase resiliency and adaptation potential to climate change.

Effective management decisions must be supported by appropriate monitoring data and evidence. Due to the sporadicity of monitoring data within the region, and knowledge gaps around the impact of climate change, it is critical that collected data are stored and centralised appropriately to facilitate access and enable collaborative actions, improve interoperability, and fill existing gaps in assessment data. This is particularly important for regional Mediterranean work.

The project will build up on the activities in 1.A and B and, at least, produce annual technical reports and technical summaries to share knowledge and good practices around the Mediterranean, ensuring their dissemination to keys stakeholders, organisations, and practitioners within the region. Regional and international for a will also be attended by the project to disseminate knowledge and build capacity.

Illustrative activities:

- Coordinated communications strategy for the dissemination of developed products for the monitoring and management of marine turtles.
- To address any intra-partnership knowledge gaps, all resources (produces, reports, publications) will be collated, shared, and stored via the Partnership and hosted online in a centralised location. Data from project partners will also be collate and centralised.
- Production of annual technical reports and annual technical summaries that will be disseminated and proposed to relevant national and regional authorities in order to timely inform management decisions
- Participation and presentation of key technical summaries and monitoring data at international sea turtle fora and regional Mediterranean conferences.

Theme 2 – Threat Reduction: an ecosystem-based approach & PROMOTING CONSERVATION

Project Desired Outcome by 2026: Threats to marine turtles are identified, minimised and mitigated against through coordinated responses, and a suite of tools is applied in the Mediterranean, encouraging area-based management, through local, regional and

international frameworks, to maintain and enhance marine turtle populations in the Mediterranean.

2.A – Identification and selection of hotspots for threats and pressures

To understand areas of high-impact and pressures for marine turtles, spatial and/or seasonal identification of hotspots need to be recognised through rigorous monitoring programmes. Building upon the activities in Theme 1, and in particular the identification of IMTAs, the project will highlight areas where marine turtles are, or likely to be, subject to direct and indirect threats, and in turn, locating key areas threatened by the impacts of climate change and loss of critical habitat (impacting ecosystem integrity and biodiversity loss). These threats include tourism, bycatch, pollution, marine litter, poaching or intentional killing, invasive species, and climate change.

To identify these critical hotspots, the Project will utilise existing and collected monitoring data, from innovative satellite telemetry, sporadic and indexed nesting assessments, to threat assessments and analyses, to overlay critical habitats (i.e. IMTA) and areas of high-risk for marine turtles. This will enable the determination of 'hotspots' to guide conservation measures and highlight possible solutions mitigating and/or possible adaptation to climate change. Not only will this identification facilitate local-scale management measures but also contribute to, and facilitate, the Post-2020 SAPBIO Strategy for MCPAs and OECMs, the EcAp/IMAP, and SDG 14.

Illustrative activities:

- Collation of existing spatial monitoring data (abundance, population, nesting etc.) and spatial threat assessments.
- Identify critical habitats and key hotspots under threat for marine turtles to develop recommendations for spatial mitigation and conservation measures.
- Coordinate with local, national and regional frameworks to support the establishment or adaptation of measures to mitigate the impacts of threats.

2.b – Appropriate tools to manage critical habitats for nesting, FORAGING, wintering and migration

Following the identification of key habitats, hotspots and important areas in the Mediterranean for marine turtles, the project will put in place appropriate tools for the management of critical habitats for nesting, feeding, wintering and migration passages (supported by Theme 1 to increase monitoring to assess the status of marine turtles in the region). Identification of these habitats can guide holistic spatial management to aid in the mitigation of climate change, and preserve, rehabilitate and restore biodiversity.

Possible management measures include threat management on nesting beaches and nearshore areas during nesting periods, as well as greater coordination and capacities by practitioners, stakeholders and public. Supporting, and advocating for, the development and establishment of establishment of marine zones, and/or restriction of potentially impactful threats restricted, either during high-risk periods (nesting, migration, for example) or permanently, as well as coordination with tourism and fishery sectors. Protection measures, such as MPAs, will guided

to protect static habitats of importance such as nesting, foraging or wintering grounds, providing refugia for marine turtles. Moreover, the establishment of MPAs will contribute to Goal 1 of the Post-2020 SAPBIO - By 2030, 100% of MPAs and as appropriate OECMs, and 50% of the remaining marine areas are sustainably managed by applying ecosystem-based approaches including biodiversity and climate change-informed marine spatial planning.

To enable the implementation of such management actions, the project will aim to operate numerous, and build upon existing, pilot projects in relation to critical habitats for marine turtles. These pilot projects will develop key recommendations and good practices from lessons learned and enable the scaling-up of priorities and solutions (especially where resources are limited).

Illustrative activities:

- Organisation of local dialogues and public participation about the identification and management of threats to marine turtles on land and at sea.
- Establish, or build upon, pilot projects in critical habitats and develop recommendations from lessons learnt to scale up, and replicate, solutions within the wider region.
- Develop key management recommendations across each critical habitat to support the recognition of actions in national and regional frameworks as well as National Action Plans.
- Provide technical and capacity to support the establishment of appropriate management tools throughout the Mediterranean for the conservation of marine turtles.

2.C – Establish unified and scientifically operational national stranding network

Stranding networks are important mechanisms that can identify presence of turtles in an area, causes of death and changes in threat levels. Stranding networks, coordinated well, can guide appropriate management actions as well as collect crucial data to quantify the presence of marine turtles, species, size, seasonality and threats, and further support insights into habitat use – helping to establish spatial management measures. However, they must hold suitable capacity for monitoring and data collection and be scientifically operated. Therefore, the project will unify national networks and support standardised data collection and responses through the development of guidance and protocols (guided by the regional protocol of the MSFD: EcAp/IMAP). Guidance will include appropriate actions for necropsy, reporting mechanisms for macro-plastic and protocols for sample collection. A standardised reporting approach will enable regional analysis on the status and trends of marine turtles, further supporting policy and frameworks.

In addition, rescue centres generate useful data on population status. Given their conservation value, the project will reinforce the ability of rescue centres to react to strandings and promote standardised data collection and reporting mechanisms.

Illustrative activities:

- Standardisation of stranding network protocols within the Mediterranean region to implement necropsy's, report on macro-plastics, and collect key [biological] samples guided by the regional protocol of the MSFD: EcAp/IMAP.
- Develop holistic guidance for standardised protocols for networks and rescue centres.
- Reinforce the capacities of rescue centres and marine turtle first aid response.

2.D – improving policies for marine turtle conservation: aligning national ACTION PLANS

The effective and sustainable protection of the Mediterranean marine turtles implies management of the Mediterranean as a whole, taking into account an ecosystem-based approach, and should take advantage of the actions of all concerned stakeholders and be carried out in cooperation with organisations, programmes and plans, at the supranational and national level.

A key mechanism for supporting the conservation of marine turtles at the national level, is ensuring that Mediterranean countries develop and implement respective National Action Plan (NAP) for Marine Turtles. It is important that developed NAPs are well-aligned with each other (adopted standardised protocols, standardised report mechanisms and clear national-level indicators) as well as with regional policies to enable regional-level assessments and analyses. NAPs are a key instrument referenced in the Post-2020 Strategic Action Programme for the Conservation of Biodiversity and Sustainable Management of Natural Resources in the Mediterranean Region (Post-2020 SAPBIO),

Currently, in the Mediterranean, numerous countries hold NAPs specific to marine turtles (including Albania, Egypt, for example). Therefore, the project will work with national agencies, through a bottom-up and participatory approach, to aid in the development, review and/or adaption of NAPs for marine turtles, and secondly, work towards their regional alignment. This will not only enable regional assessments but will also enable the fulfilment of obligations under the SPA/BD protocol, EcAp/IMAP and implementation of the Post-2020 SAPBIO.

Illustrative activities:

- Review and synthesise existing marine turtle NAPs within the Mediterranean region and identify gaps in national policy.
- Coordinate with national governments and ministries for the development, alignment, or adaption to marine turtle NAPs.
- Promote standardised processes and best practices for inclusion in NAPs and encourage the contribution of data for regional assessments.

2.E – Support obligations under regional policy frameworks post-2020, and international commitments

The project aims to support the creation of monitoring networks and tools and a sustainable management plan for marine turtles and their habitats in the Mediterranean, through the

implementation of harmonized monitoring protocols in line with the Ecosystem Approach (EcAp) guidelines of the Barcelona Convention, and by adopting a participatory and integrated approach that consider both local socio-economic and environmental contexts.

This project also aims to assist the contracting Parties of the Barcelona Convention to fulfil their obligation under the SPA/BD Protocol, the Strategic Action Programme for the conservation of Biological Diversity (SAP BIO) in the Mediterranean Region, the Regional Action Plan for the conservation of Marine Turtles in the Mediterranean and enable the national Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast and Related Assessment Criteria (IMAP) implementation.

The activities implemented by the project will continue contributions to regional policies and treaties including the EU Habitats Directive 92/43/EEC, the EU Biodiversity Strategy, Post-2020 Barcelona Convention Strategy and the UfM Greener Mediterranean Agenda. Countries will also be facilitated in their commitments to international agreements including the CITES Convention, Bonn Convention and the Convention on Biological Diversity as well as the UN SDGs 13 and 14.

Illustrative activities:

- Deliver high-quality and scientifically sound guidance to regional and international instruments to enable countries to fulfil obligations either through reporting and conserving marine turtles. The project will utilise the experience of its partners to ensure contributions at the national level and the partnership will advocate for marine turtles at the regional level.
- To contribute to international commitments and objectives, the project will submit its Plan of Action for the three-year project timeframe as a voluntary commitment to the UN Ocean Conference Community of Ocean Action.

Theme 3 – expanding the marine turtle community: building CAPACITY and effective communication

> **Project Desired Outcome by 2026:** Capacities to collect critical data, monitor marine turtles, and respond to threats and impacts is increased, producing a network of conscious stakeholders, practitioners, and citizens.

3.A – Building capacity of internal project partners

Ensuring a strong, pro-active and well-equipped partnership is essential for the successful conservation of marine turtles in the Mediterranean. Within the partnership each partner holds valuable strengths and experience to implement key activities in during the project's timeframe. This is includes driving scientific research and the advancement of protocols, capacity building, communication and integrating the project's activities in line with regional and international frameworks. However, it is important to enable resources and information to travel throughout the partnership, building the capacity of the partnership to ensure a) the implementation of best practices, b) to cohesively implement the project, achieving goals and objectives throughout

the region. Key consideration will be given gender advocacy, ensuring equitable and equal opportunities for women. Therefore, the partnership will establish multiple mechanisms to ensure that the partners hold the technical capabilities for the conservation of marine turtles.

Illustrative activities:

- Annual workshops and Steering Committee meetings are held between partners to share stories, exchange protocols and advance conservation measures.
- Technical workshops for project partners are organised to provide training in latest monitoring protocols and management practices (developed by the project) both on land and at sea
- Online events will be held between partners to disseminate and discuss latest pattern achievements and updates from the local, national and regional level.
- Strong communication between partners through various platforms will be maintained to coordinate actions and exchange resources and products.

3.B – Raise capacity and STRENGHTEN exchanges between stakeholders, operational networks & rescue centers

To successfully manage critical habitats, mitigate against threats, adapt to climate change, and respond to marine turtle strandings, and other impacts, a network of capable and standardised responses are required. Moreover, successful management depends on the technical capacities of practitioners and managers, available resources and continuous adaptation and exchange and collaboration.

Increasing the level of capacity amongst stakeholders with the Mediterranean region will be a core activity for the project. Capacity will be built in data collection protocols, marine turtle monitoring and management, management of critical habitats, stranding response, and adaptive management to new and emerging threats such as climate change. The project will develop and deliver training courses and modules (utilising the MedPAN training programme for MPAs on mobile species), establish key networks between MPA managers, experts, scientists and NGOs (enabling the latest advancements in research and management recommendations to be communicated), exchange visits among MPA managers and rescue centres across the Mediterranean, and promote dialogues between sectors to identify best practices and solutions for the protection of marine turtles and mitigation of their threats.

Illustrative activities:

- Training courses and developed modules, utilising and building from, MedPAN's training programme for MPAs on mobile species, in collaboration with regional and local partners, will be developed and hosted by the project and respective partners in geographical locations.
- Promote and facilitate exchanges between MPA practitioners, NGOs, Scientists and experts with exchange visits between different MPA managers and rescue centres.
- Promote dialogue between local sectors and practitioners to build technical capacities to report or respond to marine turtle impacts (i.e. Bycatch within the fishery sector).

3.C – Maintain and expand communication on the project's activities, results and ACHIEVEMENTS

Throughout the implementation of the project's phase I & II, the Conservation of Marine Turtles in the Mediterranean has become a brand name for marine turtles in the region, and Phase III will continue to build upon this established presence.

The project holds an informative and active website and strong online presence that will be vital in continuing to maintain and expand current communication efforts of the project's activities, results, and achievements. Effective communication is critical to disseminate publications and reports as well as raise awareness of the plights to marine turtles as well as necessary and correct responses to marine turtle threats. Moreover, effective communication and communication with stakeholders and public, as well as sectors, can not only serve to limit, minimise, or mitigate against threats, but also generate stewardship and develop a strong network of individuals to support monitoring and reporting.

In addition, it is crucial that the achievements of the project, from advancing research to management actions, are communicated accordingly on national, regional, and international platforms. As such the project will utilise fora, conferences, and other events to present and showcase achievements while engaging in high-level discussions to support regional and international frameworks.

Illustrative activities:

- The project will maintain its strong communication strategies across a range of platforms including the project's website (www.medmarineturtles.org) and various social media channels.
- Undertake and host public awareness activities amongst fishers, tourism facilities and related stakeholders. This will be implemented by national and local project partners within local regions and could include open days at facilities, educational events at schools and group exchanges with fisherfolk. To reach wider audiences, online events such as webinars will be explored.
- Targeted public campaigns will be utilised during specific events of importance including nesting and hatching season, in coordination with tourism bodies, to highlight the importance of management and protection for marine turtles.
- The project will participate and present in national and international fora and symposia including the International Sea Turtle Symposia, Mediterranean Marine Turtle Conference, and others.

3.D - learning lessons and developing relationships for marine turtles outside of the mediterranean

Developing trans-regional partnerships for the implementation of critical marine turtle management measures is essential to ensure the maximum impact of the project. Therefore, collaborative relationships with initiatives outside of the Mediterranean region will be developed with knowledge exchange between actors and the development of best practices and

lessons learnt publications. By adopting best practices and understanding lessons learnt from previous projects working towards the protection of marine turtles, the project can build upon previous successes and/or failures to develop and implement valuable conservation practices and protocols. Moreover, such collaborations serve as an opportunity to promote the conservation efforts within the Mediterranean, building technical capacities on an international scale.

Illustrative activities:

The project will:

- Seek collaborative opportunities with initiatives operating in Africa, the Caribbean and Atlantic including North African Sea Turtles Network (NASTNET), West African Sea Turtles Conservation (WASTCON) and Réseau des Acteurs de la Sauvegarde des Tortues Marines en Afrique Centrale (RASTOMA).
- Coordinate with the EU-funded Ocean Governance Project multiple Twinnings including Twinnings on Coastal Resilience and Marine Protected Areas, as well as the Marine Mammal Twinning (developing an MPA assessment tool for migratory species).

A sustainable and functioning partnership for marine turtles

To maintain the impact and function of the project, the partnership will benefit from a strong governance structure, will aim to expand across the Mediterranean region and acquire appropriate financial support. The below section details the three key areas for a sustainable partnership:

Project governance

The Governance structure of the Conservation of Marine Turtles in the Mediterranean Region project addresses participation, strategic and technical oversight as well as regional coordination of the partnership.

The project aggregates marine turtle-focused NGOs, research entities, pan-Mediterranean organisations and MPA managers into a strong partnership, established during Phase I of the project and animated throughout Phase II. The partnership forms the core of the project and provides the foundation its activities and for achievement of objectives. This is a primary strengthen of the project, bringing together collaborators from the across the Mediterranean region, a critical region for Loggerhead and Green turtles as well as Leatherback turtles. The partnership also values Ad Hoc contributions from a range of public, private, academic, or civil society entities, individuals, short-lived projects and/or volunteer networks with a shared goal of effective conservation for marine turtles in the Mediterranean region.

The Partnership is an operational network, and its structure and governance mechanisms are approved by its members, formed through the partnership, and projects, Steering Committee of core partners.

The Conservation of Marine Turtles in the Mediterranean Region Steering Committee provides regional oversight to the project and partnership. It guides and advises the regional activities and advocates for the project on a regional and international level to support further its development and to ensure impact.

The specific functions of the Steering Committee are to:

1. Provide high-level oversight of the delivery and periodic review of the project and partnership's implementation and governance plan as well as budget, including regional coordination, activities, outputs, capacity building and quality assurance.
2. Provide advice, guidance and follow-up to partnership members based on the implementation of decisions arising from Steering Committee meetings
3. Provide support, link and advocacy for the project and partnership in relevant national, regional and international fora and processes to maximise uptake and value generated by the project's activities and outputs, and to expand strategic partnerships of the network.
4. Assist the partnership in securing financial and in-kind support and resources for the implementation of project activities and outputs.
5. Establish and provide oversight of permanent or temporary task forces (where deemed appropriate to establish) to provide specific technical advice and solutions for the effective delivery of the project's activities.

The Steering Committee is composed of representatives from the core 9 members of the partnership, and is coordinated by SPA/RAC:

1. **Regional Activity Centre for Specially Protected Areas (SPA/RAC)**
2. ARCHELON: The Sea Turtle Protection Society of Greece
3. DEKAMER (Sea Turtle Research, Rescue and Rehabilitation Center)
4. MedPAN
5. MEDASSET
6. National Marine Park of Zakynthos (NMPZ)
7. WWF Greece
8. WWF North Africa
9. WWF Turkey

collaboration with regional projects and initiatives

The project will collaborate and build relationships with existing initiatives within the Mediterranean including the Med Bycatch project (as well as INCA, implemented by WWF in Greece) to ensure synergy for in bycatch monitoring systems, the Med MPA and No-Take Zone partnership, and other projects within the 'Together for the Med' partnership as well as the Integrated Monitoring and Assessment Programme of the Mediterranean Sea and Coast programme (IMAP). To ensure strong and collaborative governance of the project, annual workshops and coordination of a steering committee will be undertaken, supplemented by regular partner meetings at international and national fora.

funding for SUSTAINABLE operation of the partnership and project

To ensure the sustainable financing of the project, the partnership will undertake an extensive fundraising operation to raise suitable funding the implement the project's Plan of Action from 2023 – 2026. The project will be responsible for sourcing and gaining external funding to

support the activities of its partners and to enable the protection, maintenance, and enhancement of marine turtle populations in the Mediterranean.

The project is preparing to raise a total of €2 million in financing to support the project's actions.

Co-funding will be obtained and raised by partners within the project to support various activities, deliverables of the project and its governance. As of 2022, the project has sourced co-financing to the amount of €330,701.26 to support the implementation of the project's Phase III by the partnership (co-financing generated by the project is provided in the annexes).

ANNEXES

Project CO-financing

Co-financing Level	Organisation	Amount	Funded Activities
Organisation	MedPAN	€180,000.00	Funding provided from Life NGO and GEF project to MedPAN that will facilitate the implementation of capacity building activities (Theme 3). Funding is secured at €60,000.00 year^{-1}
	SPA/RAC	USD $126,855.00 (€120,701.26 – 22/06/2022)	EU-funded IMAP-MPA project for the implementation of national monitoring programmes with regard to the IMAP common indicators on marine turtles in Southern Mediterranean countries.
		€20,000.00	ENSERES project: within the project's framework is expected to support the implementation of the management plan of the Tyre Coast National Reserve (TCNR), mainly focusing on the promotion of Ecotourism activities in relation to marine turtles.
		€10,000.00	Mediterranean trust fund to support the implementation of the Mediterranean Action Plan for the Conservation of Marine Turtles.
Partnership	-		
	-		