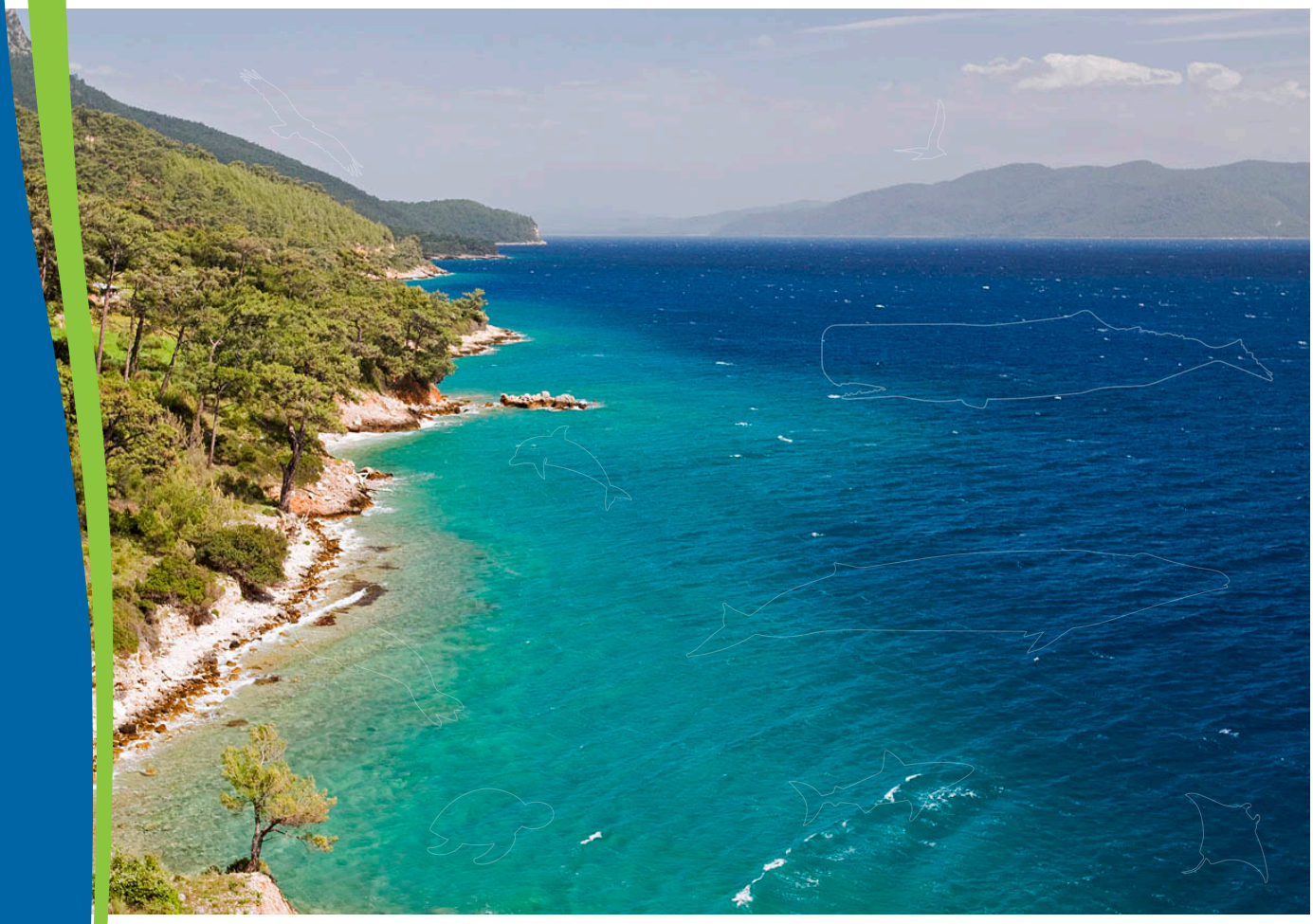
MEDPAN NETWORK REGIONAL EXPERIENCE-SHARING WORKSHOP

12/14 November 2019 - Akyaka, Turkey

Managing highly mobile species across Mediterranean MPAs



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PROCEEDINGS

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Table of contents

The organisers

MedPAN is the network of Marine Protected Areas (MPA) managers in the Mediterranean. It gathers today over 120 institutions and NGOs that either have direct responsibility for managing MPAs or are involved in the development of MPAs in the Mediterranean. These players manage over 100 MPAS in 19 Mediterranean countries. The MedPAN network's mission is to promote, through a partnership approach, the sustainability and operation of a network of MPAs in the Mediterranean which are ecologically representative, connected and effectively managed to help reduce the current rate of marine biodiversity loss. www.medpan.org

AKDENİZ KORUMA DERNEĞİ
Mediterranean Conservation Society

The Mediterranean Conservation Society (MCS) is a Turkish marine conservation NGO member of the MedPAN network. MCS has created a network of 'no-take zones' that put local fishing communities at the lead of marine biodiversity conservation. Focusing on the southern Mediterranean coast of Turkey, the organisation is effectively communicating the value of sustainable fishing techniques to ensure the long-term viability of the local fishing industry. Community-based enforcement strategies are complemented by cooperation with regional and national authorities and scientific studies to monitor the health of the ecosystem. It has been demonstrated that through the successful management of MPAs in the southern coasts of Turkey, fish stocks have grown dramatically, as have the average incomes of cooperative members. Monitoring activities confirm rejuvenated marine species diversity and abundance in the MPAs, which is an important nursing ground for diverse endangered marine species, including Mediterranean monk seals and sandbar sharks.

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Background on mobile species and MPAs

Marine highly mobile species (MHMS) are animals with large home ranges that endure long migrations or cyclic movements, travelling significant but variable distances, mainly to feed, reproduce or other life-history stages and behaviors. These species have improved their survival and reproductive success by moving between different habitats, and have therefore adopted a migratory life history showing ontogenetic and/or seasonal changes in habitat use.

Highly mobile species can be found among mammals, birds, reptiles and fishes, and their long journeys can be undertaken periodically (for example to feed), but as well just once in a life time and in association to some part of the development cycle of the animal. In addition, many MHMS are top predators playing an important role in marine ecosystems, and are considered “marine focal species”, having the potential to act as ecological indicators, flagships or umbrella species. This makes them important indicators of marine ecosystems, their state reflecting oceanographic processes and anthropogenic pressures.

MHMS are exposed to marine anthropogenic pressures throughout their life cycle either directly affecting their performance or indirectly affecting the habitats and resources they rely upon. In fact, many MHMS are among the most threatened species due to the diverse range of pressures they encounter during their extensive movements such as bycatch, pollution (oil spills, plastics, underwater noise, light pollution, etc.), collision, poaching, climate change, etc. MHMS travel

among territorial waters, Exclusive Economic Zones (EEZ) and in Areas Beyond National Jurisdiction (ABNJ) meaning they are subjected to varied, and changing legislation and management frameworks during different parts of their life cycle. This makes their conservation a challenge, requiring coordinated actions by many nations, international organisations and other stakeholders.

MPAs are key tools to promote conservation by mitigating human impacts in marine environments. Even on quite small scales, protected areas and their integrated networks can make an effective contribution towards the protection of MHMS, and as such are considered as key tool in their conservation. In short, MPAs can reduce threats by spatial protection and can improve both the prey base and the habitat for top marine predators. However, in order to achieve adequate species conservation, MPAs should ideally be used in conjunction with additional and species-specific management measures beyond their boundaries, as part of an ecosystem-based approach within zoned management.

While there is some criticism on the effectiveness of MPAs in conserving MHMS, a variety of species throughout the globe, such as marine turtles and monk seals, have already benefited from such protective measures. Additionally, we must not forget the role of MPAs as observatories or sentinel sites, places to study and monitor MHMS. Sometimes even small MPAs, which are not providing effective protection to some MHMS because of their size, location or zonation, may provide other benefits to the conservation of these species, like for example data on long-term observations of migratory animals that navigate through a certain area.

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Management activities of the MCS, the workshop's host, in the Bay of Gökova

The bay of Gökova is a hotspot of global biodiversity and a designated MPA. It is also one of 305 key biodiversity areas in Turkey, targeted as a network of breeding and resting sites for rare and endangered species. The main objective of the work carried out by the Mediterranean Conservation Society (MCS) has been to implement and extend a series of interconnected no-take zones, in addition to the existing Special Environmental Protection Areas (SEPAs) in the bay. The implementation of community-based management strategies, in cooperation with local and national authorities, and supported by scientific studies to monitor the health of the ecosystem, has shown interesting results in 9 years: significant recovery of the habitat and fish stocks, increase in fishers' incomes, decrease in the abundance of invasive species, and return of predatory species. The monitoring programme conducted by the MCS also reveals the presence of many mobile species in the MPA, such as grey shark, Mediterranean monk seals, bluefin tunas, loggerhead turtles and green turtles. Conservation measures remain generally localised and transboundary monitoring and data sharing are gaps that need to be addressed to improve the future management and conservation of these species.

Defence and protection of key biodiversity areas along Turkish coasts

The project «Defence and Protection of Key Coastal Areas for Biodiversity in Turkey» was carried out by the Underwater Research Society (SAD) between April 2015 and November 2017 and was continued from December 2017 to October 2019. The project is funded by the MAVA Foundation and the Global Environment Facility Small Grants Programme (GEF/GMP). In 28 Key Biodiversity Areas, the team has undertaken important work to protect the habitats of monk seals, marine turtles and seabirds, with habitat destruction being considered the main threat to biodiversity loss in the Mediterranean. In 19 cases (68%), habitat destruction was successfully stopped and in 4 cases (14%), habitat destruction took place but the authorities ordered the demolition of coastal structures. Unfortunately, in 5 cases (18%), coastal construction could not be stopped and the habitat was destroyed. Close cooperation with the relevant government organisations as well as with local NGOs has proved to be a decisive factor in the achievement of these unprecedented good results. The presentation covered the introduction to the project book, in which unique experiences are documented. The book mainly presents project activities and results that provide information on the conservation and protection of coastal habitats and the methodology used. The Defence and Protection of Key Coastal Areas for Biodiversity were the focus of the presentation. A future MPA in southern Marmara (Karabiga), with a high potential for birds and marine mammals, can be considered as one of the important results of the project.

An experience-sharing workshop for Mediterranean MPA managers

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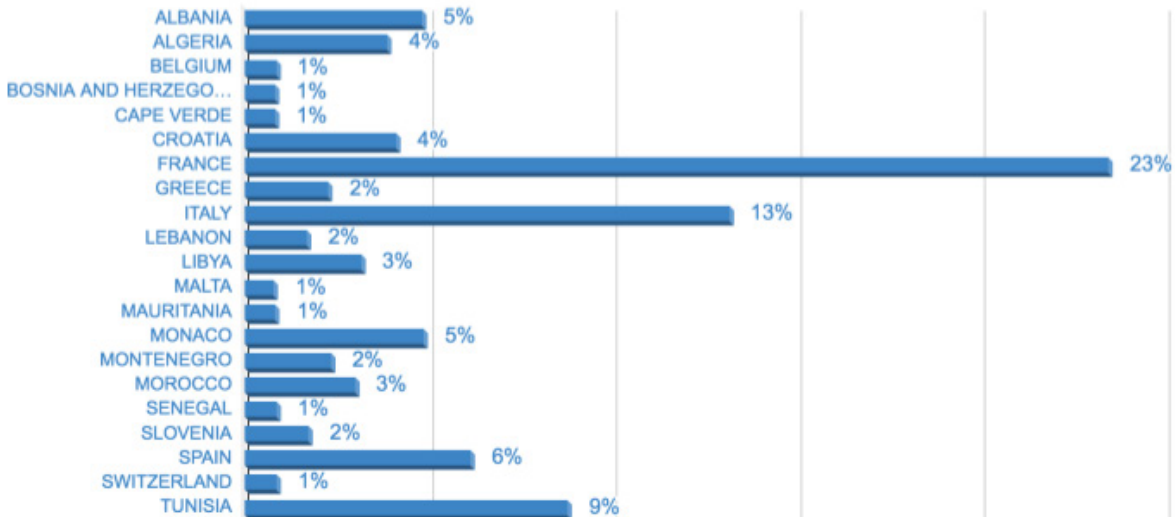
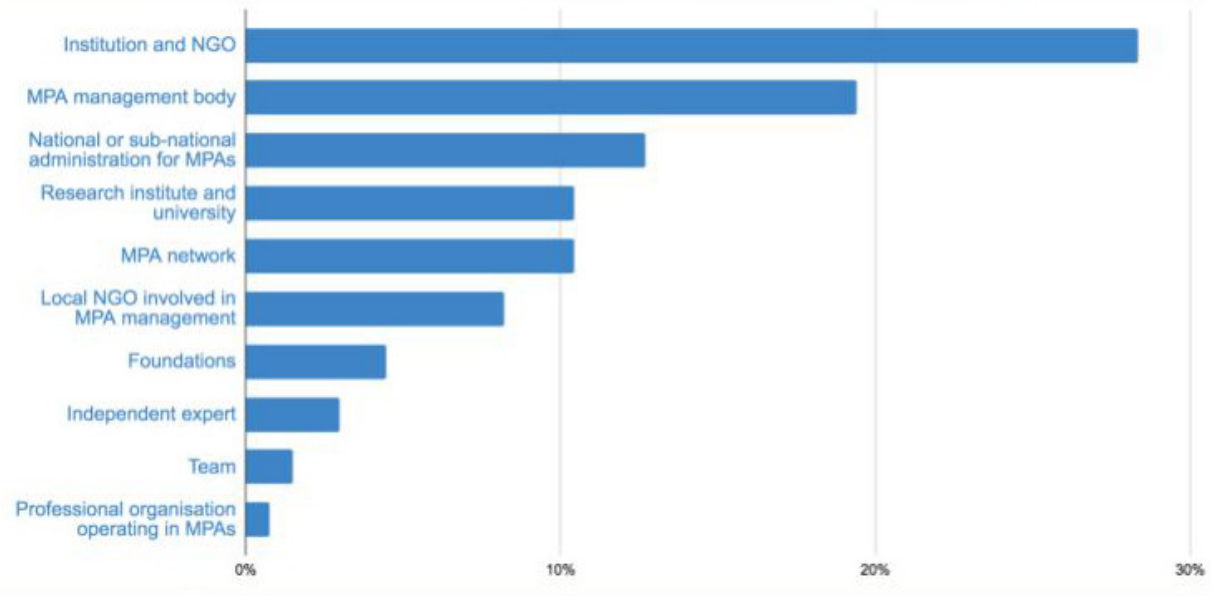
MedPAN, the network of Mediterranean Marine Protected Area (MPAs) managers, iorganised its annual regional experience-sharing workshop on the management of highly mobile species across Mediterranean MPAs. The workshop happened on 12-14 November 2019 in Akyaka, Turkey, in association with the Mediterranean Conservation Society (MCS) and several partners.

The overall purpose of the workshop was to allow MPA managers and stakeholders to pool and share information, expertise and experiences and take stock on the current challenges for the conservation of highly mobile species. The workshop thus provided an opportunity for MPA managers, project leaders, and stakeholders to meet, discover initiatives, be inspired and build long-term approaches to implement solutions together.

The workshop brought together nearly **140 marine actors** from **23 Mediterranean countries and beyond** (Belgium, Cape Verde, Mauritania and Switzerland), mainly representatives of MPA management bodies, institutions and NGOs, national MPA administrations and research bodies. (see participants list in annex).





Fifty-one case studies were selected (among the 80 received) to illustrate the subjects discussed in 18 90-minute sessions, spread over 2 days; participants exchanged around common issues related to knowledge, awareness-raising, regulatory frameworks and enforcement, conservation and management measures as well as networks and collaborations.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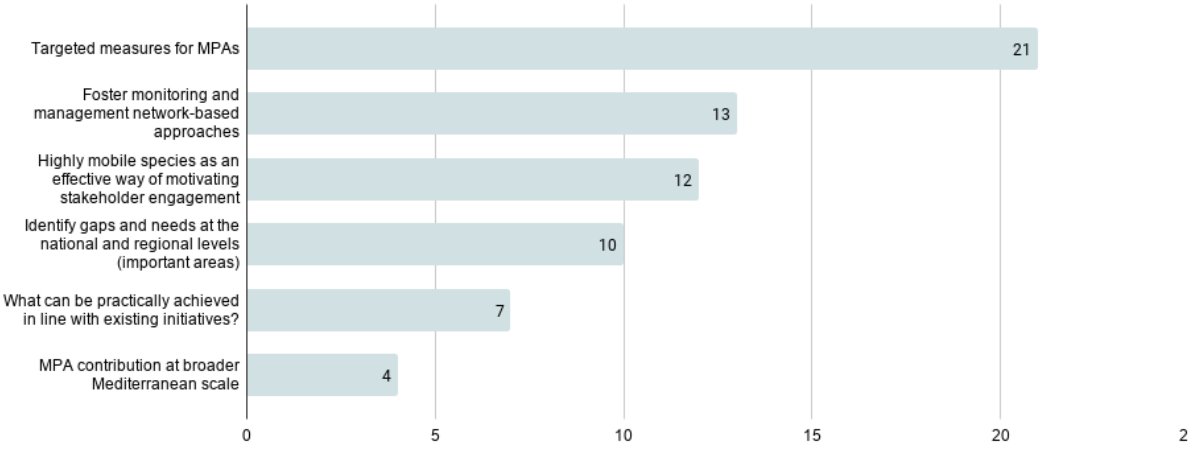
SUMMARY OF RECOMMANDATIONS

This section provides a summary of the main recommendations and key findings from the 18 discussion sessions of the workshop. We have grouped them under the 6 specific objectives set for the workshop:

- Provide an overview of the strategies, policies, projects and programmes for the conservation of highly mobile species in the Mediterranean in order to highlight what can be practically achieved in line with existing initiatives.
- Help MPA managers understand how they can effectively contribute to the conservation of highly mobile species at the broader Mediterranean scale.
- Help MPAs identify targeted measures to ensure the effective management of highly mobile species.
- Foster monitoring and management network-based approaches for the conservation of highly mobile species in their different habitats.
- Demonstrate how species can be an effective way of motivating stakeholder engagement in MPA management.
- Contribute to identify gaps and needs at the national and regional levels, in particular concerning important areas that should be protected through MPAs or other effective conservation tools.

The conclusions and recommendations included in this synthesis are those judged by the coordinators of the discussion sessions as the most salient points of the exchanges. The points highlighted are of course not exhaustive of the richness of the exchanges. For more details we refer you to the reading of the summaries and presentations of each session that you will find later in these Proceedings.

The diagram below shows how the 67 recommendations produced contribute to these 6 objectives:



What can be practically achieved in line with existing initiatives?

Related sessions : DS09 | DS13

In the Mediterranean, these include the Pelagos Agreement, the Barcelona Convention, GFCM (The General Fisheries Commission for the Mediterranean), EU policy and legislation (Habitat Directive and the Marine Strategy Framework Directive), the African Convention on the Conservation of Nature and Natural Resources, the IWC (International Waling Commission), the Bonn Convention (Convention on the Conservation of Migratory Species, CMS) and more specifically ACCOBAMS (the Agreement on the Conservation of Cetaceans of the Black Sea, Mediteranean Sea and Contiguous Atlantic Area, a special agreement from the CMS), the Bern Convention (Convention on the Conservation of European Wildlife and Natural Habitat), the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), and the UNCLOS (United Nations Convention on the Law of the Sea).

MPAs should contribute to these policy instruments and agreements, which provide legitimacy and a legal basis for conservation actions and frameworks for cooperation beyond MPA boundaries and across borders. This last point is of course essential, as active cooperation beyond the local level is crucial to address the conservation challenges of these species across their broad home ranges.

Two examples of what can be done in line with existing initiatives were discussed during the workshop:

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MPA managers should be aware of International policy frameworks and agreements for the conservation of highly mobile species.

The session **"Linking Natura 2000 conservation actions at site level with broader protection measures for highly mobile species"** took stock of the requirements and opportunities provided under **the EU regulatory framework** (nature directives/Natura 2000, MSFD, Common Fisheries Policy, MSP, EU funds) for coordinated action among Natura 2000 MPAs designated for highly mobile marine species, as well as for integration of site-level action with broader conservation strategies and related sectoral/regional regulations.

The EU nature legislation requires **strict protection of seabirds, cetaceans, seals and marine turtles in their entire natural range**, as well as designation and management of **protected areas under the Natura 2000 network**, ensuring protection of their **core habitats**. Considering the multiple and increasing pressures on protected marine species (e.g. habitat deterioration, bycatch, underwater noise, ship strikes) **a holistic approach is necessary** in order to combine effectively **site-level management plans** and measures with **broader measures** across the species' range.

Discussions stressed that **MPA managers need to be aware of this comprehensive framework for monitoring and protecting highly mobile species within and outside MPAs and contribute to its implementation and enforcement, in cooperation with authorities and stakeholders, through effective site management plans.**

Monitoring and protecting highly mobile species, however, raises the question of the means available to MPAs to perform their tasks. Part of the answer to the question of means is **to opt for cost-effective methodologies that allow maintaining the monitoring effort over time** (e.g. applying passive acoustic monitoring).

It is also essential that opportunities under EU funds for supporting transboundary cooperation are further explored.

The session "The Pelagos Sanctuary: protecting marine mammals beyond frontiers" took stock of ongoing initiatives to support conservation actions implemented under the Pelagos Agreement.

The Pelagos Sanctuary is the first transboundary Marine Protected Area in the Mediterranean dedicated to marine mammals protection. It was established by an international Agreement in 1999 between France, Italy and the Principality of Monaco. It extends over 87,500 km2 and beyond the coastal zone of the 3 countries. In 2001, the Sanctuary was officially recognised by the Mediterranean countries with its inclusion on the Specially Protected Areas of Mediterranean Importance (SPAMIs) list. Since 2004, the Pelagos Sanctuary has operated according to a management plan. The management plan combines the contributions of each of the Parties with practical measures to follow and implement as a means of managing the Sanctuary space as a whole. With the creation of the Permanent Secretariat in 2006, the three Contracting Parties began to routinely work together to implement the provisions of the management plan on the basis of a biannual working programme. Important actions are implemented by the Pelagos Agreement, in terms of legislations to protect marine mammals, research, ship strikes reduction, strandings' management, whale watching labelling, partnership agreements, communications towards the general public.

Over the years, the Sanctuary's coastal MPAs are acquiring an important role in contributing to conservation actions in the area: Port-Cros National Park plays an active role in coordinating the French part of the Pelagos Sanctuary. Since 2019 the MPA of Portofino is in charge of the Italian network of MPAs within the Pelagos area. MedPAN is supporting the networking dynamics between coastal MPAs that are in the Pelagos area to support the Pelagos Agreement.

Moreover, the Prince Albert II of Monaco Foundation, with partner NGOs, wishes to contribute to the Pelagos Agreement, by financially and / or technically supporting joint activities within the territory.

In accordance with the working programme 2018-2019 of the Pelagos Agreement (Action 24), **partnerships with MPAs/National Parks located in the Sanctuary should be promoted in order to improve the conservation of marine mammal species and their habitat. Their promotion could be further developed on the basis of a bottom-up dynamic and on a transnational network-based approach.**

Starting from the action initiated by the municipalities in the framework of the Pelagos Charter, MPAs/National Parks can facilitate the engagement of those municipalities by promoting initiatives for the conservation of marine mammals.

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MPA contribution at broader Mediterranean scale

Related sessions : DS01 | DS02

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MPAs and MPA networks can effectively contribute to the conservation of highly mobile species when designated over portions of habitats that are important for these species and have the potential to be delineated and managed for conservation. However, other approaches need to be implemented at the wider Mediterranean scale to ensure that area-based conservation effort is not lost beyond the boundaries of MPAs.

Among pressures exerted on a large scale in the Mediterranean, ocean-going vessels present a measurable threat of lethal collision with many marine species. Other impacts from shipping that may affect mobile species include noise and pollution. Other sectors, such as the Oil&Gas sector, can also impact highly mobile species. National authorities planning and managing the use of sea space, including marine spatial planners, are key actors in identifying and implementing measures to avoid sectors impacts on ecosystems in general and in MPAs in particular.

The session “Ensure highly mobile species conservation through integration of MPAs in maritime spatial planning and/or broader regulatory frameworks” discussed how national and international regulatory tools, including SPAMIs under the Barcelona Convention, as well as Particularly Sensitive Sea Areas (PSSAs), Areas To Be Avoided (ATBAs) and Traffic Separation Schemes (TSSs) under the IMO, can help address the impacts of shipping and other sectors on highly mobile species in MPAs or in their vicinity.

Discussions stressed the need for MPAs to MPAs look out of their boundaries and advocate for solutions to external pressures with national authorities: In particular, national authorities of coastal states can approach the Barcelona Convention and the International Maritime Organization (IMO) to seek the review and adoption of environmental conservation proposals involving MPAs.

It is now a critical time to do so in Mediterranean countries, especially at EU level where countries are preparing their maritime spatial plans, but also in non-EU countries.

Practically, MPAs should join forces at national level with relevant NGOs to prepare their request to national authorities to address external pressures.

Foster monitoring and management network-based approaches

Related sessions : DS03 | DS04 | DS05 | DS06 | DS07 | DS09 | DS10 | DS14 | DS17

Conservation challenges for highly mobile species explicitly emphasise the added value of monitoring and management network-based approaches beyond MPA boundaries and across borders. As they don't know any border, highly mobile species are committing MPAs to "ecological solidarity" and collaborations beyond the local level. Active cooperation between MPA managers, NGOs and scientists, working on highly mobile species in their different functional areas, is needed to allow an integrated management strategy for these species. For this reason, network-based approaches are required in the framework of the Ecosystem Approach (EcAp's Integrated Monitoring and Assessment Programme) of the Barcelona Convention, the EU MSFD (Marine Strategy Framework Directive) and the EU Habitats Directive, that target a number of highly mobile species (seabirds, cetaceans, sharks, monk seals and marine turtles).

Several discussion sessions stressed the importance of supporting network-based approaches for the conservation of highly mobile species, leading to a series of recommendations on sharing tools and data, harmonising protocols, exchanging experience, and maintaining cooperation over time.

As a preliminary recommendation, it was recalled that a network cannot operate without coordination. Maintaining exchange dynamics over time requires facilitation, which suggests the availability of human and financial resources. The value of network activities for the conservation of highly mobile species (MPA networks and networks of actors beyond MPAs) therefore needs to be further promoted to donors, urging for enhanced coordination between public and private donors and fostering dialogue and co-construction between donors and actors at Mediterranean level.

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One of the expected added values of network-based approaches to the conservation of highly mobile species is to allow data sharing and thus, the possibility to take timely and adaptive management decisions at site level, whilst contributing to an integrated management strategy for these species. Sharing monitoring data on populations and threats is essential. Individual sightings of species, although not enough to justify measures, need to feed into shared databases based on standardized protocols to improve transparency (while taking into account needs for sensitive data). As much as possible, users should use existing data repositories and sharing initiative (i.e. European Tracking Network). But the sharing of data (especially raw data) is sometimes met with reluctance on the part of the scientific institutions or NGOs that collect them.

- **Cooperation charters** aimed at clarifying the scope and conditions of use and storage of data can help to reassure contributors (scientists, NGOs), while ensuring that data relevant to MPA management are shared timely (especially when studies take place in MPA).
- In addition to cooperation charters, it is essential to **encourage public and private donors to contractually require their beneficiaries working with MPAs to share data relevant to conservation with managers**.
- **Showcasing the data collected in a joint monitoring effort** (e.g. on a webpage) can also be a strong incentive for the contributors engagement. Displaying the pooled data will give a tangible and rewarding form to the collective effort and will contribute to strengthen the sense of belonging to a network.

One of the expected added values of network-based approaches to the conservation of highly mobile species is to allow data sharing

A second challenge related to sharing data and tools is the harmonisation of approaches. The recommendation to harmonise protocols seems all the more obvious in the case of highly mobile species, but despite efforts in this direction still sounds like wishful thinking. Beyond the difficult question of the legitimacy of a standard protocol, several recommendations point to requirements and practical solutions for making progress in harmonising approaches:

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- The challenge of harmonised protocols for monitoring highly mobile species requires solving the equation of providing answers to MPAs management issues locally, while at the same time contributing to knowledge and conservation on a broader scale in an integrated and coordinated approach. Taking into consideration the specific needs and implementation constraints of MPAs, **protocols recommended by regional or European institutions should be cost-effective and easy to implement so as to ensure the continuity of monitoring programmes over the long term.**
- **Setting up Working Groups or Tasks forces can boost network-based approaches** by allowing MPAs to share tools/indicators, learn from each other, anticipate and be more prepared to face future changes. In particular, Working Groups can help identify the most effective tools for MPAs (e.g. creation of an awareness raising WG) and to agree on standard protocols and criteria (e.g. set standardised international IMTA (Important Marine Turtle Area) criteria in order to be replicable and facilitate their adoption by international conventions and other organisations).

- **Training targeting widely accepted standard protocols can help promote harmonised approaches** and ensure that their implementation by MPAs and other stakeholders is well calibrated (i.e., that protocols are applied in the same way).

- **The development and large-scale distribution of application tools (e.g. smartphone or web-based applications) embedding standard protocols can effectively contribute to the harmonisation of approaches.** Several sessions recommend the provision of user friendly turnkey monitoring solutions for MPAs and the general public, facilitating the collection, transmission, storage and sharing of standard data (e.g. creation of a Mediterranean-scale citizen science tool for monitoring mobile species and sharing the data regionally).

Targeted measures for MPAs

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Related sessions: DS04 | DS05 | DS06 | DS08 | DS09 | DS10 | DS12 | DS14 | DS15 | DS16

Effective conservation of highly mobile species should take into account both the changes that occur in the species biology and the pressures they are under in their natural habitats along their whole life cycle. The dynamic approach of conservation should involve effective and implemented management plans/strategies **within and outside MPAs**, a holistic view in order to strengthen networking and efficiency at a national and international level, a better knowledge of habitats and migratory corridors and a coherent legal framework that will address the issues of conservation at the local, national and international level.

Conservation measures implemented in MPAs target a necessarily limited portion of the life cycle of highly mobile species that are “only passing by” (e.g. breeding or nesting site). MPAs are thus an essential component of mobile species conservation strategies, but given pressures largely occurring beyond their boundaries, they are not the only answer.

Adaptive management and open governance:

Even more obviously for the conservation of highly mobile species than for others, MPAs must apply the principles of adaptive management and a governance scheme allowing collaborations with stakeholders beyond their boundaries. A «static» approach to conservation cannot effectively respond to specific and often unforeseen threats, especially when biotic and abiotic parameters are constantly changing due to the combination of climate change and the increasing impacts of human activi-

ties. As a dynamic approach, adaptive management requires an iterative process for implementing, monitoring and assessing in order to adapt and improve the effectiveness of management/conservation measures. For this, MPAs need to develop indicators to assess the effectiveness of the management/conservation measures they implement. Also, **MPAs should ensure that their governance and management bodies are open and prepared for such a dynamic approach.**

In order to ensure that the conservation effort is pursued beyond the MPA boundaries, managers must thus establish and strengthen communication, collaboration and trust between different stakeholders such as governmental bodies, NGOs, and the local community.

It is about both providing MPAs with answers to their management needs, while at the same time contributing to knowledge and conservation on a broader scale in an integrated and coordinated approach.

Putting adaptive management on a sound scientific basis:

Monitoring highly mobile species involves a twofold challenge: it is about both providing MPAs with answers to their management needs, while at the same time contributing to knowledge and conservation on a broader scale in an integrated and coordinated approach.

As changes in population trends are usually caused by anthropogenic pressures and/or natural fluctuations, environmental dynamics and climate changes, monitoring population parameters can support the identification and prioritisation of potential management measures to mitigate pressures. On the broader Mediterranean scale, systematic monitoring of populations parameters is also recommended by the UN Environment/MAP and the Barcelona Convention for assessing Good Environmental Status and an integrated conservation strategy of cetaceans (Common Indicator 4) and EU Marine Strategy Framework Directive (MSFD).

Robust information on population parameters, on the role of the MPA for the species, on pressures and their impact, as well as on spatial and temporal carrying capacity are thus pivotal to inform adaptive management.

Highly mobile species monitoring methodologies are however potentially costly and cumbersome to implement, and MPAs should collaborate with experts to identify appropriate and cost-effective standard protocols that they will be able to implement over time. Managers also need to use the

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Passive Acoustic Monitoring implemented within MPAs is a good tool to identify key habitats for all acoustic-active species

best existing guidelines, to follow ethical training and assess the effectiveness of the methodology. As tracking technologies can affect the behaviour and health of the studied individual , MPA managers need to make sure they are using appropriate methodologies to answer their conservation/management needs.

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Passive Acoustic Monitoring implemented within MPAs is a good tool to identify key habitats for all acoustic-active species but broader collaboration among MPAs is needed to contribute to the conservation of species that are highly mobile. In addition Passive Acoustic Monitoring can be combined with other methods (e.g. visual) for a more effective monitoring. Collaboration between MPA managers and other organisations/institutions (e.g. universities) with the knowledge required to undertake Passive Acoustic Monitoring and related analyses, is needed to overcome obstacles related to this method (cost of equipment, human capacity and expert knowledge).

Engaging fishers to mitigate bycatch:

The role and impact of fisheries, especially Small Scale Fisheries, needs to be fully factored in any conservation strategy. Mitigating bycatch requires the active involvement of fishers, starting from their participation in monitoring. Bycatch data collected by fishers and fisheries administrations are crucial to better characterise the problem (vulnerable species, fishing gear, season, etc) and raise awareness. **Standard methodologies are available and can be promoted (e.g. GFCM Monitoring Protocol), as well as guides to identify species and reduce mortality.**

Besides increasing mortality of protected species, bycatch also causes economic damage to fishers. Enhance capacity to identify species, develop bycatch programmes, bring mitigation strategies are still needed across the Mediterranean, including in MPAs frequented by large populations of highly mobile species of conservation interest and where the threat is thus particularly high. Further work is needed across the Mediterranean to mitigate bycatch and assess the feasibility, cost/benefits and sustainability of different techniques and approaches.

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In MPAs frequented by highly mobile species, it will therefore be essential to foster the engagement of fishing communities in conservation, by involving fishers in decision-making processes to support behavioural change, and finding technical alternatives (innovation in fishing gears), market-based incentives (e.g. labellisation of sustainable fishing products and techniques), and financial alternatives (e.g. pescatourism).

Managing wildlife watching and related activities:

Intensive and unregulated marine wildlife watching activities can lead to negative impacts on marine animals and populations through disturbance of animals in vital activities and increasing the risk of injuries. To mitigate the impacts of these activities on animals inside their boundaries and contribute to the conservation of populations, MPAs can develop code of conducts and labelisation schemes for operators (e.g. High Quality Whale-Watching label) to promote diversified (non-targeted) and eco-responsible activities.

MPAs can develop code of conducts and labelisation schemes for operators to promote diversified and eco-responsible activities.

Engaging enforcement and judicial bodies:

Highly mobile species are largely protected under statutory regulations and several international agreements (e.g. Berne Convention, Bonn Convention, Barcelona Convention, Habitat Directive and the Marine Strategy Framework Directive, ACCOBAMS, Pelagos, etc), and under national legislation. Enforcement and judicial bodies are not always aware of these environmental provisions or sometimes do not consider them as a priority. It is therefore essential to raise awareness and inform the police, gendarmerie, coastguards, and other law enforcement authorities, in order to disseminate environmental rules and ensure effective control and enforcement.

Although sporadic and localised, direct and intentional pressures that affect highly mobile species, such as poaching for commercialisation (turtles, sharks and rays), deliberate killing of species considered to be competing with the fishing activity (dolphins, monk seals), or use of explosive devices, constitute, where they persist (or sometimes reappear), considerable harm to the populations concerned and a major breach of international conventions protecting these species.

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Eradicating these practices can involve a range of responses, starting with awareness-raising and education to counter the negative effects of tradition which is often the legitimation for their perpetuation. But the highly destructive nature of these practices and the urgent need to put an end to them also call the adaptation of regulatory frameworks (e.g. ban guns onboard) and for repression taking into account all accomplices in the criminal response (poachers, fish markets, consumers).

Highly mobile species as an effective way of motivating stakeholder engagement

Related sessions: DS06 | DS07 | DS08 | DS11 | DS16 | DS17

Stakeholder engagement is an essential component of any conservation strategy. The wide ranges of highly mobile species require the active participation of many categories of stakeholders, again well beyond the boundaries of the MPA. The flagship nature of these species is in itself one of the keys to mobilisation. For their part, MPA managers can promote stakeholder engagement using a number of tools and approaches outlined in a series of recommendations:

The support of volunteers/citizens is essential for helping with monitoring and increasing awareness about mobile species:

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MPAs can promote collaboration between volunteers, NGOs, fishers, local tourism and marine recreation organisations and the tourists for collecting data and ensuring biodiversity conservation. In practice, a number of targeted approaches can contribute to the concretisation of these collaborations for monitoring and raising awareness:

- Involving fishers in decision-making processes to associate them with the collection of data on the basis of standard methodologies (e.g. GFCM Monitoring Protocol) and in the search for solutions to mitigate bycatch.
- Raising awareness and involving tourist operators (wildlife watching operators, boat and jet ski rentals, etc) through charters of good conduct and labelling to mitigate their impact (harassment, collisions) and make the most of individual sightings.
- Supporting the creation of stranding networks and early warning systems and channelling information feedback.
- The creation and dissemination of a Mediterranean-scale citizen science tool for monitoring mobile species and sharing the data regionally that MPAs could use and help promote locally (e.g. smartphone or web-based applications).

The support of volunteers/citizens is essential for helping with monitoring and increasing awareness about mobile species

Rescue and rehabilitation centres are powerful tools for raising awareness, educating and engaging the public:

- In the case of marine turtles in particular, MPAs can establish rescue and rehabilitation centres. Beyond their curative function, these infrastructures can welcome the public and effectively contribute to:
- Educate and involve the public in a didactic approach (understanding the characteristics and life cycle of species, the benefits of conservation), to ultimately promote behavioural change.
- Mitigate the impact of human activities (e.g. by testing alternative fishing techniques and materials).

Engaging public authorities with the support of local communities to ensure effective compliance and enforcement of laws and regulations:

As outlined above,highly mobile species are largely protected under statutory regulations, international agreements and national legislation. Enforcement and judicial bodies are not always aware of these environmental provisions or sometimes do not consider them as a priority. It is therefore essential to raise awareness and inform the police, gendarmerie, coastguards, and other law enforcement authorities, in order to disseminate environmental rules and ensure effective control and enforcement.

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In some parts of the Mediterranean, the persistence of highly destructive practices, some intentionally targeting mobile species, is a major impact that calls for a strong response: poaching for commercialisation (turtles, sharks and rays), deliberate killing of species considered to be competing with the fishing activity (dolphins, monk seals), or use of explosive devices, constitute, where they persist (or sometimes reappear), considerable harm to the populations concerned and a major breach of international conventions protecting these species.

These practices, because of their violence and the violent nature of their perpetrators, require a penal response and unfailing solidarity support from local communities. In many cases, it will be a matter of breaking the norm of acceptance and silence (omerta), the legitimation by tradition, the chains of complicity from the poacher through the fish market to the final consumer, so as to ensure the support of the local community to legal action.

Awareness and education targeting fishers, children, consumers, basing on an emotional approach, can be effective for changing behaviors, considering both the violent nature of offenses (e.g. public meetings with one-armed fishers to raise awareness on blast fishing) and the iconic nature of these flagship species (e.g. 'adopt a turtle' in schools).

Awareness and education targeting fishers, children, consumers, basing on an emotional approach, can be effective for changing behaviors.

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Addressing the impact of marine litter and pollution on highly mobile species:

Several research studies have addressed increasing concerns about the impacts of marine litter to the marine environment, biodiversity, socio-economy and health risks. Highly mobile species such as sea turtles, seabirds, seals and cetaceans are often entangled in marine litter items (e.g. ghosts nests), consume marine litter that resemble food resources causing them intestinal blockage, malnutrition and poisoning. Bioaccumulation of toxins and biomagnification through the food chain has been also documented in highly mobile species both as a result of marine litter (microplastic) and chemical pollutants such as heavy metals, etc. In terms of knowledge, highly mobile species can be relevant bio-indicators to help locate and quantify pollution (e.g. contaminants), either at the MPA scale or across MPA networks (depending on species range).

Measures implemented in MPAs for the management of marine litter and pollution are mostly limited to monitoring and clean-up campaigns, which respond to imminent threats but do not address the problem at its source.

But addressing pollution and marine litter, like protecting highly mobile species, is a complex and cross border challenge. The room for manoeuvre of MPA managers to implement measures is in both cases very limited: Protection measures for highly mobile species implemented in MPAs can only address a very limited portion of the life cycle of these species, whose conservation issues extend far beyond MPA boundaries. Similarly, measures implemented in MPAs for the management of marine litter and pollution are mostly limited to monitoring and clean-up campaigns, which respond to imminent threats (e.g. remove marine debris to allow sea turtles access nesting sites) but do not address the problem at its source.

As many recommendations point out, continuity in the conservation effort for highly mobile species requires network-based approaches and large-scale collaborations that can be promoted by MPAs. As was also highlighted, the flagship nature of highly mobile species can facilitate the engagement of the many stakeholders to be involved in their conservation.

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MPAs can play the same role as promoters for addressing marine litter and pollution with preventive measures. Depending on the origin of the pollution, solutions can be implemented with stakeholders at the watershed level and supported by dedicated instruments (i.e. Rivers Contracts of the EU WFD), or promoted through larger scale campaigns aiming at fostering cooperation extended to the impacting sectors of activities and authorities in charge.

Continuity in the conservation effort for highly mobile species requires network-based approaches and large-scale collaborations that can be promoted by MPAs.

The overlapping of issues related to the conservation of mobile species and the fight against marine litter in particular is a powerful tool for communication and engagement of stakeholders and the general public for the protection of marine ecosystems in general (e.g. the viral campaign of the turtle and the plastic bag). As the visible part of the iceberg, marine litter is a powerful vector for raising awareness on pollution in general, like emblematic species are among the best ambassadors for conservation.

Raise awareness of governments and public administrations about funding needs for actions on mobile species beyond MPA boundaries and across borders:

Continuity of conservation effort for highly mobile species across MPA boundaries and borders needs to be supported by continuity of funding at these same scales. As a concrete example, effort and investment to protect marine turtle nests in a Natura 2000 site in Greece should not be lost in interactions with fisheries on the other side of the Mediterranean. **Here again, highly mobile species explicitly underline the need for ecological solidarity, urging for enhanced coordination between public and private donors to effectively support technical cooperations at Mediterranean level.**

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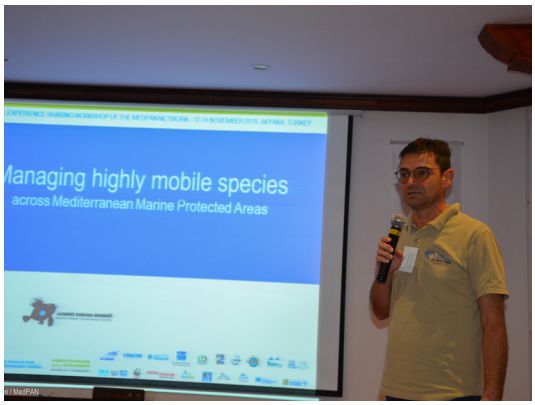
Identify gaps and needs at the national and regional levels (important areas)

Related sessions: DS01 | DS02 | DS09 | DS12 | DS17 | DS18

The application of area-based marine conservation and management measures as a tool for the conservation of highly mobile species has proven to be effective in a number of marine areas. In order to put in place measures of conservation for highly mobile species however, we first need to acquire knowledge regarding their distribution, their abundance and the key activities of their life cycle (i.e. breeding, feeding, nesting, etc). This information can then be used to identify portions of habitat important to highly mobile species, that have the potential to be delineated and managed for conservation.

Achieving a coherent network of MPAs for the conservation of highly mobile species thus requires an overall vision of important areas (IMMA, IBA, IMTA) at a geographical scale that is relevant to the species. The criteria to identify Important Areas should be solely based on science, without consideration of pressures, social and economic issues, nor geopolitical boundaries, following a transparent and open process in order to be recognised and adopted by the whole community of experts. Criteria for identifying Important Areas should also be standardised at international level in order to be replicable and facilitate their adoption by international conventions and other organisations.



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The identification of Important Areas for highly mobile species requires baseline data and ideally long term dada to assess trends in distribution and abundance. In particular, the availability of long-

term data is crucial for anticipating changes in distribution and abundance due to climate change. Also, the information gained by monitoring soundscapes can be used to fill current knowledge gaps on key habitats, impact of anthropogenic activities and inform on the measures required to protect the ecosystems.

The transition from Important Areas to coherent networks of MPAs for the conservation of highly mobile species needs to be done in concert with Maritime Spatial Planning approaches in order to avoid or mitigate sectors impacts on species and ecosystems beyond MPA boundaries (speed and traffic regulation through IMO, mitigation measures for bycatch, etc).

A transboundary approach is necessary for identifying key areas for highly mobile species and integrating conservation measures in MSPs, in coordination with macro-regional strategies (e.g. EUSAIR) and agreements (e.g. ACCOBAMS), for increased resilience of species against global threats.

The criteria to identify Important Areas should be solely based on science, without consideration of pressures, social and economic issues, nor geopolitical boundaries.

MSP plans should thus support MPA networks by keeping space for new MPAs, addressing issues of connectivity of highly mobile species, and mitigating external impacts on MPAs (through strategic environmental assessments). To this end, National authorities can approach the Barcelona Convention and the International Maritime Organization (IMO) to seek the review and adoption of environmental conservation proposals involving MPAs.

The conservation of highly mobile species requires a common vision and strategy based on a clear identification of priorities and needs for each of the concerned species to effectively coordinate area-based conservation measures and MSP approaches, and target donors or build custom-made mechanisms if needed. MedPAN as network of MPAs can play a key role.

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Discussion sessions

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Funding highly mobile species management beyond borders

Chair: Marie Romani (MedPAN) - marie.romani@medpan.org & Sandro Dujmovic (Brijuni National Park) - sandro.dujmovic@np-brijuni.fr

The session gathered and presented on-going and new initiatives that provide funding to support the conservation of highly mobile species in the Mediterranean and beyond. Other existing financial mechanisms supporting biodiversity were also invited to join and contribute to the session. Key challenges to fund the monitoring and management network-based approaches for the conservation of highly mobile species in their different habitats were highlighted. Potential to upscale, sustain and enlarge current initiatives in the future were explored.

Download presentation

The Monk Seal Alliance

Fotini Vrettou (Thalassa Foundation) - projects@thalassafoundation.com

The Monk Seal Alliance (MSA) brings together funders to increase the scope of the activities carried out by monk seal conservation specialists in the field and allows for concerted, long-term and regionwide implementation of actions. It was launched in April 2019, by the signing of an MoU between the Prince Albert II of Monaco Foundation, the MAVA Foundation for Nature, the Segré Foundation, the Sancta Devota Foundation and the Thalassa Foundation.The aim of the MSA is to support effective conservation of the Mediterranean monk seal by: (1) Promoting information exchange, networking and collaboration among experts, MSA partners and various stakeholders (2) Contributing to implementing the regional strategies and national action plans established by co-funding collaborative projects and helping coordinating efforts (3) Leveraging funds.

The Thalassa Foundation, active in marine protection and conservation in the Mediterranean, particularly in Greece, has a long-lasting engagement to monk seal conservation with most notably its latest initiative and first contribution to the Monk Seal Alliance of identifying the critical habitat for the monk seal in Greece. The Monk Seal Alliance, an alliance of five flagship foundations (PAthe2F, Sancta Devota Foundation, Segré Foundation, Thalassa Foundation and MAVA foundation) aspires to foster more concentrated action amongst donors, to encourage increased collaboration amongst conservation experts and to provide more visibility to the issue of monk seal conservation in general.

Download presentation

Critical Ecosystem Partnership Fund (CEPF)

Speaker: Awatef Abiadh (CEPF) - awatef.abiadh@lpo.fr

The Critical Ecosystem Partnership Fund (CEPF) is a joint initiative of l'Agence Française de Développement, Conservation International, the European Union, the Global Environment Facility, the Government of Japan and the World Bank. It has a unique, strategic role in addressing the biodiversity crisis, Managing highly mobile species across Mediterranean Marine Protected Areas mobilising international, regional and local partners to protect the world's biodiversity hotspots. CEPF has chosen to focus its resources on conserving the variety of life found in the world's biodiversity hotspots, some of the most biologically diverse yet threatened areas on the planet. Furthermore, it works with the people in the hotspots to develop a conservation strategy with civil society organisations according to national strategies and situations. Migratory species are among the focus of CEPF's conservation priorities because of the pressure they face along their migratory routes, and for marine species, the Marine Protected Area network is an important tool to protect them during their migration and for other key periods of their life cycles. CEPF has supported civil society organisations around MPAs in the Mediterranean basin and in other hotspots for the conservation of marine turtles, monk seals and seabirds. Since 2012, over $1.5 million has been granted to projects in the Mediterranean, dealing with migratory marine species and MPAs - with direct action, awareness raising and research taking place in Tunisia, Libya, Lebanon, Albania, Montenegro and Cabo Verde.

Download presentation

The MedFund

Romain Renoux (The MedFund) - rrenoux@m2pa.org

The MedFund is a custom-made environmental trust fund that aims at financing Mediterranean MPAs. Launched by 3 countries (Monaco, France, Tunisia) and the Prince Albert II Fondation, The MedFund is a nonprofit Monaco based organisation that mobilises, invests and channels funds to support day to day management of MPAs in the Mediterranean. The Fund brings together States and civil society to lead the establishment and management of this mechanism; 6 countries and 9 regional organisations are now part of this initiative. The MedFund benefits from a global alliance of donors including AFD, GEF, FFEM, Prince Albert II Fondation and private sectors.

European Commission - Natura 2000

Fotios Papoulias - fotios.papoulias@ec.europa.eu

The adequate financing of the Natura 2000 network is a key priority of the EU biodiversity strategy. A variety of EU funding sources are available for the conservation of marine sites and species, namely the well-established LIFE programme (traditional and integrated projects), the maritime and fisheries fund, other structural funds incl. Interreg, the research programme. Along with efforts to increase the uptake of those funds for marine biodiversity, the new multiannual financial framework for the 2021-2028 period will provide similar opportunities and an increased budget under LIFE. Their success will largely depend on the preparation of substantial prioritised action frameworks (PAF) by Member States, properly reflecting the needs for marine conservation.

Session conclusions and recommendations

- Promote coordination between public and private donors as well as dialogue and co-construction between donors and actors at Mediterranean level (network of MPAs but also other actors that lead actions on mobile species beyond MPAs)
- Identify priorities and needs for each mobile species (MedPAN as network of MPAs can play a key role), establishment of a common vision and strategy to conserve and manage mobile species, to target donors or build custom-made mechanisms if needed
- Raise awareness of governments and public administrations about funding needs for actions on mobile species beyond MPAs

The impact of marine litter and pollution on highly mobile species: challenges beyond boundaries

Coordinator(s): Maria Rousou (DFMR, Cyprus) - mrousou@gmail.com & Pierre Vignes (MedPAN) - pierre.vignes@medpan.org

Marine litter is a complex and cross border environmental problem. Several research studies have addressed increasing concerns about the impacts of marine litter to the marine environment, biodiversity, socio-economy and health risks. Highly mobile species such as sea turtles, seabirds, seals and cetaceans are often entangled in marine litter items (e.g. ghosts nests), consume marine litter that resemble food resources causing them intestinal blockage, malnutrition and poisoning. Bioaccumulation of toxins and bio-magnification through the food chain has been also documented in highly mobile species both as a result of marine litter (microplastic) and chemical pollutants such as heavy metals, etc. The session aimed to identify best practices and management measures so as to mitigate the impact of marine litter and pollution on highly mobile species and to identify the challenges.

Download presentation

Kentish plover (Charadrius alexandrinus) conservation on Adriatic Italian coast

Fabio Vallarola (Torre del Cerrano MPA Management Consortium, Italy) - info@torredelcerrano.com

Marine Litter, global change and tourism are all the problems of the Kentish plover (Charadrius alexandrinus), a small bird that travels from Africa to Northern Europe using the Italian Adriatic sand beaches for nesting. The bird is reported as a decreasing in the IUCN Red List of Threatened Species from 2016 and listed in the Annex I of the Birds Directive lists. The reproduction of this species takes place from March to July, with small nests directly on the sand of the Adriatic beaches. But these beaches are also used by tourists in late spring and summer. The municipalities therefore clean the beaches that are invaded with marine litter, sometimes with heavy machinery from April to June. The beaches are clean but the Kentish plover nests are destroyed. During the last years, the reproduction of the bird was successful only inside the few protected areas existing along the coast. A hard work from protected areas is taking place in together with NGO and different stakeholders to help this endangered species.

Download presentation

Impact of organic contaminants and heavy metals on the populations of Mediterranean Cory's shearwater

Mathieu Thevenet (Association PIM, France) - m.thevenet@initiative-pim.org

Biotic samples were collected on individuals of this species in 3 Mediterranean MPAs. The results show that contaminant levels are present in the tissues of each of them. We propose a geographical comparison of these pollution levels in order to highlight the impact of these pollutants on the associated food chain.

Download presentation

Santa Luzia Island, Cabo Verde: turtles and waste that come from far away

Blandine Mélis (Biosfera, Cape Verde) - bmelis@hotmail.com

Achados beach in the protected and deserted reserve of Santa Luzia Island in Cape Verde is an important nesting site for the loggerhead sea turtle (Caretta caretta). This beach, exposed to the prevailing marine currents, receives tons of marine litter each year. The accumulation of this waste, mainly artisanal fishing gear, prevents females from getting on the beach and reduces the progression of young turtles to reach the ocean. This pollution is a regional challenge. Who bears the responsibility and who intervenes to reduce the impact?

Download presentation

Session conclusions and recommendations

- **Preventive measures** to address the problem of marine litter and pollution at its source are the most effective, but are also the most challenging. Depending on the origin of the pollution, solutions can be implemented at the watershed level and supported by dedicated instruments (i.e. Rivers Contracts of the EU WFD), or must be part of a logic of international cooperation. **At all levels, highly mobile species, as flagship species, can contribute to raising awareness and engaging stakeholders** .
- **Clean-up campaigns (beaches, ghost nets, etc.) are of course to be implemented in response to imminent threats** (i.e. to allow sea turtles access nesting sites).
- **In terms of knowledge, highly mobile species can be relevant bio-indicators to help locate and quantify pollution** (e.g. contaminants), either at the MPA scale or across MPA networks (depending on species range). Monitoring protocols should however be low cost and easy to implement for MPAs.

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IMTAs: A path towards identifying Important Marine Turtle Areas in the Mediterranean

Coordinator(s): Susan Gallon (MedPAN) - susan.gallon@medpan.org & Ibrahem Benamer (SPA/RAC) - ibrahem.benamer@spa-rac.org

The identification of important areas for highly mobile species is key to designate areas to be protected and to identify existing gaps in the protection of these species. To date, there are 167 Important Bird Areas (IBAs) and 26 Important Marine Mammal Areas (IMMAs) officially identified by standardised scientific processes in the Mediterranean. These IBAs and IMMAs can now be used as information layers in the designation of areas that deserve particular attention in terms of conservation. They also help inform MPAs, networks of MPA and national authorities with strategies for highly mobile species conservation. The next step is now to identify Important Marine Turtle Areas (IMTAs) in the Mediterranean.

This will be done in the framework of the MAVA Turtles Project and in collaboration with different regional partners. The aim of this workshop was thus to bring together experts involved in the IMMA process. These were joined with sea turtles' experts to discuss and review criteria for Important Marine Turtles Areas (IMTAs).

Download presentation

Identifying and Implementing the New Tool of Important Marine Mammal Areas

Erich Hoyt (Co-chair, IUCN SSC/WCPA Marine Mammal Protected Areas Task Force / Research Fellow, Whale and Dolphin Conservation, UK) - erich.hoyt@mac.com

The IUCN SSC/WCPA Marine Mammal Protected Areas Task Force was set up in 2013 with the goal of implementing a new tool for marine mammal habitat conservation inspired by Important Bird & Biodiversity Areas (IBAs). After three years of taking the Important Marine Mammal Area (IMMA) concept around, devising criteria and holding scientific and public review, the IMMA was born. The first IMMA expert workshop, in October 2016, focused on the Mediterranean. Since then, 4 more regional expert workshops across the southern hemisphere have been held, resulting in more than 130 IMMAs, and two more workshops will be staged in 2020. The IMMA identification process takes 10 months during which experts consider the data and nominate candidate IMMAs which then go for peer review. IMMA results may be used in countries to inform MPA design, expansion, networking and adaptive management, and for marine spatial planning (MSP). In addition, the International Whaling Commission has adopted IMMAs to address ship strike threats and the US Navy has agreed to avoid testing low frequency sonar in IMMAs with baleen whales.

Download presentation

Conserving sea turtles across multiple realms

Antonios Mazaris (Aristotle University of Thessaloniki, Greece) - amazaris@bio.auth.gr

Effective conservation largely depends on our ability to protect species across all the sites and habitats they use. This is rather challenging for highly migratory, multi-realm species such as sea turtles. Here, we make an effort to advance systematic conservation planning by incorporating information across the multiple realms they frequent (e.g., breeding, foraging grounds, migratory areas) on an annual basis. We delineate and present potential foraging sites for adult sea turtles (loggerheads), we synthesize all available information on migratory corridors and determine movement hotpots in the Mediterranean. This information could enhance our ability to identify spatially-explicit adaptive actions by further considering impacts of altered conditions across time and space.

Download presentation

Session conclusions and recommendations

- IMTA criteria should be solely based on science and not bring threats, socio-economic or borders into it.
- IMTA criteria should be standardised and international in order to be replicable and facilitate their adoption by international conventions and other organisations.
- The identification of IMTA criteria need to be a transparent and open process in order to be recognised and adopted by the whole turtle community of experts.

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The Pelagos Sanctuary: protecting marine mammals beyond frontiers

Coordinator(s): Costanza Favilli (Permanent Secretariat of the Pelagos Agreement) - costanzafavilli@pelagos-sanctuary.org

The Pelagos Sanctuary is the first transboundary Marine Protected Area in the Mediterranean dedicated to marine mammals protection. It was established by an international Agreement in 1999 between France, Italy and the Principality of Monaco. It extends over 87,500 km2 and beyond the coastal zone of the 3 countries. In 2001, the Sanctuary was officially recognised by the Mediterranean countries with its inclusion on the Specially Protected Areas of Mediterranean Importance (SPAMIs) list. Since 2004, the Pelagos Sanctuary has operated according to a management plan. The management plan combines the contributions of each of the Parties with practical measures to follow and implement as a means of managing the Sanctuary space as a whole. With the creation of the Permanent Secretariat in 2006, the three Contracting Parties began to routinely work together to implement the provisions of the management plan on the basis of a biannual working programme. Important actions are implemented by the Pelagos Agreement, in terms of legislations to protect marine mammals, research, ship strikes reduction, strandings' management, whale watching labelling, partnership agreements, communications towards the general public. Over the years, the Marine Protected Areas are acquiring a more important role to contribute to conservation actions of the zone. Port-Cros National Park plays an active coordinating role of the Pelagos Sanctuary French part. Since 2019 the MPA of Portofino is in charge of the Italian network of MPAs within the Pelagos area. MedPAN, basing itself on the experience of AdriaPAN, the sub-regional network of Marine and Coastal Protected Areas managers in the Adriatic , is supporting the networking dynamics between coastal MPAs that are in the Pelagos area to support the Pelagos Agreement. Moreover, the Prince Albert II of Monaco Foundation, with partner NGOs, wishes to contribute to the Pelagos Agreement, by financially and / or technically supporting joint activities within the territory. This session presented on-going actions and contributions within the Pelagos Sanctuary. The discussion stimulated on the mobilisation potential of MPAs within the Pelagos area to contribute to actions aiming to protect marine mammals and their habitat in the area of the Pelagos Sanctuary.

Download presentation

The emerging network of MPAs in the Pelagos Sanctuary

Valentina Cappanera (Portofino MPA, Italy) - v.cappanera@portofinoamp.it

The Pelagos Sanctuary is a pearl in the Mediterranean Sea. Conservation efforts could benefit from the cooperation of coastal MPAs that act as key actors for the protection of habitats and species in the Sanctuary. Indeed, networks of MPAs can contribute through awareness raising activities for local stakeholders, implementation of a standardised approach to conservation and monitoring, exchange of best practice and lessons learned and support the implementation of the recommendations of the Pelagos agreement. Since, 2015, with the technical support of WWF, the Italian MPAs located within the Pelagos Sanctuary are exploring opportunities to join forces and propose ideas of collaboration. In July 2019, a network of MPAs was created.

Download presentation

AdriaPAN, a bottom-up network in the Adriatic Sea

Fabio Vallarola (ADRIAPAN) - fabiovallarola@gmail.com & Marie Romani (MedPAN)- marie.romani@medpan.org

As an example of sub-regional networks, the case of AdriaPAN was showcased in this session. AdriaPAN, the "Adriatic Protected Areas Network", is a bottom-up initiative, started by the 2 Italian MPAs of Miramare and Torre del Cerrano. The aim of the network is to facilitate contacts between protected areas in the Adriatic and to improve their partnership effectiveness. In 2008, 10 Italian Protected Areas signed the Cerrano Charter, the founding act of AdriaPAN. The network now gathers 43 members from all countries bordering the Adriatic Sea, and more than 50 associated organisations interested in collaborating on AdriaPAN initiatives. AdriaPAN was conceived as an integral part of the existing network of Mediterranean MPA managers MedPAN; it aims at representing and promoting the ecological, cultural and economic specificities of the Adriatic sea and coasts. At the moment AdriaPAN has no legal status and management is provided on an ad-hoc basis. AdriaPAN plans to become AdrIonPAN, to encompass protected areas in the Ionian Sea, and explore sustainable management alternatives.

Download presentation

The coordination of the French part of the Pelagos Sanctuary

Alain Barcelo (Port-Cros National Park, France) - alain.barcelo@portcros-parcnational.fr

Since 1999, Port-Cros National Park has been responsible for establishing and maintaining the French Part of the Pelagos Sanctuary. Port-Cros coordinates research activities, animates the Pelagos Charter, develops communication tools, awareness-raising actions and trainings, promotes systems of ship collision reduction and the whale watching label and contributes to legislations improvement and management of strandings. Port-Cros also develops and coordinates partnerships (with institutions, stakeholders, scientists, NGOs) to contribute to the Sanctuary objectives.

Download presentation

Session conclusions and recommendations

- In the framework of the 2020 Forum for Mediterranean MPAs, as stated within the Programme of work of SPA/RAC for the biennium 2020-2021 and the MedPAN strategy 2019-2023, promote transnational sharing of experience between different actors of the Pelagos area (MPAs, municipalities, regions, State services, scientists, NGOs, economic actors);
- In accordance with the working programme 2018-2019 of the Pelagos Agreement (Action 24), partnerships with MPAs/National Parks located in the Sanctuary should be promoted in order to improve the conservation of marine mammal species and their habitat. Their promotion could be further developed on the basis of a bottom-up dynamic and on a transnational network-based approach.
- Starting from the action initiated by the municipalities in the framework of the Pelagos Charter, MPAs/National Parks can facilitate their engagement in order to promote initiatives for the conservation of marine mammals.

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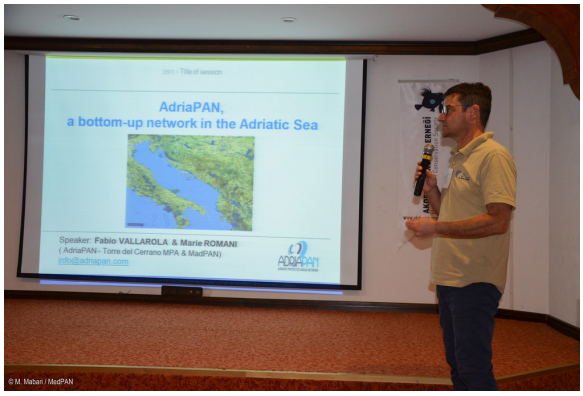

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Awareness raising: reaching and engaging local stakeholders and communities

Coordinator(s): Ahmed Ghedira - notre_grand_bleu@hotmail.fr & Manel Ben Ismail - manel.benismail@gmail.com (Notre Grand Bleu, Tunisia)

Experiences in the conservation of mobile species are in their infancy and are still limited to a few examples of conservation planning for migratory species, which are constantly being impacted by climate change. In this session, we presented some specific experiences in managing the conservation of mobile species through awareness raising, in order to reach and engage the local community and all stakeholders in MPAs to develop a strategy specific to these mobile species. Issues discussed: 1) What is the vision of stakeholder and local community engagement? 2) What is community and stakeholder engagement, and how to achieve it? 3) Who are the local community actors and stakeholders who need to be involved? 4) How to effectively engage stakeholders and the local community? 5) What are the methods and responsibilities of each party?

Conservation through knowledge: the need for a common education project to promote turtle and cetacean conservation. Join us to create an outreach taskforce!

Tommaso De Lorenzi (DelTa Association, Italy) - tdelorenzi@gmail.com

Since 2017, the DelTa association has been running an educational project tailored principally to high schools to steer the youngsters toward future «green» or «blue» jobs and bring out a sense of stewardship towards the marine environment and its protection. Thanks to this positive experience in the Gulf of Trieste (Italy), we would like to replicate the project architecture (lectures, educational school kits, field activities) at international level involving other association to implement it in their geographical area of interest. To do so, we need other organisations interested in embracing this project idea and create with us an outreach task force on marine species conservation.

Download presentation

Protection and first monitoring of Mediterranean monk seals in Karaburun-Sazan National Marine Park

Kastriot Korro (Royal Albania Foundation, Albania) - kkorro@gmail.com

The monitoring of the Mediterranean Monk seal (Monachus monachus) in the Albanian Karaburun-Sazan National Marine Park took place for the first time in 2017-2018 as a result of the project «Protect the Mediterranean monk seal in the peninsula of Karaburun and Sazan island of Albania». This project was funded by the MMC (Marine Mammal Commission) and we developed sessions with fishers and high school students to train them to identify monk seals. The installations of 5 cameras to monitor the seals as well as the creation of a local/national coalition to protect the species were 2 innovations of this project.

Download presentation

Session conclusions and recommendations

- Involve and raise awareness in the legislative and judicial system: inform the police, coastguard (law enforcement authorities), to disseminate environmental rules and ensure control and enforcement.
- Finding alternative funding for fishermen linked to the conservation of mobile species; involving fishermen in co-management and decision-making in areas where there is a strong presence of mobile species, labelling the product of fishermen who invest in conservation.
- Collaboration between local experts, fishermen, decision-makers, NGOs, administrations, youth associations, media, private sector
- Create networks or task forces (with different organisations, in different sites and countries) to share effective tools (e.g. use a social facilitator for awareness raising, education kits for the general public, sustainable fishing tools).

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Protecting key areas: moving from Important Areas to Protected Areas for highly mobile species

Coordinator(s): Susan Gallon (MedPAN) - susan.gallon@medpan.org & Ibrahem Benamer (SPA/RAC) - ibrahem.benamer@spa-rac.org

The application of area-based marine conservation and management measures as a tool for the conservation of highly mobile species has proven to be effective in a number of marine areas. In order to put in place measures of conservation for highly mobile species however, we first need to acquire knowledge regarding their distribution, their abundance and the key activities of their life cycle (i.e. breeding, feeding, nesting, etc). This information can then be used to identify portions of habitat important to highly mobile species, that have the potential to be delineated and managed for conservation. In this session, 4 case studies shared their experience in gathering the appropriate data, either through long-term studies or through pioneering ones in order to identify key areas to protect. The aim of this session was to identify recommendations that facilitate the transition between Important Areas to Marine Protected Area

 Download presentation

Birds of Mljet National Park, Croatia

Aleksandar Popijač (Mljet National Park Public Institution, Croatia) - aleksandar.popijac@np-mljet.hr

This long-term study, led by Luka Jurinović, PhD, from 2007 to 2019, aimed at obtaining a detailed inventory of the avifauna in Mljet National Park as well as in the adjacent wetlands near the villages of Blato and Kozarica. Status (breeding, wintering, flyway, vagrants) and seasonal occurrence were determined for every single species. Overall, a total of 129 species were recorded in the wider area of Mljet National Park, of which 53 species are breeding in the Park. Six species were identified as key species for conservation purposes: Mediterranean Shag, Audouin's Gull, Yellow Legged Gull, Common Tern, Honey Buzzard and Peregrine Falcon. Except for the Yellow Legged Gull, these species are listed on the Annex I of the EU Birds Directive. Under this Directive, EU Member States select the most suitable sites and designate them directly as Special Protection Areas (SPAs) of the EU Natura 2000 Network, as is HR1000037 NW part of Mljet National Park.

 Download presentation

From small cetaceans to the giant guardians of deep seas: selecting Critical Habitats in the Turkish Levantine Sea

Aylin Akkaya (DMAD-Marine Mammals Research Association and WWF-Turkey, Turkey) - akkayaaylinn@gmail.com

The current study forms the first seasonal survey effort employing both visual and acoustic data collection protocols within the Mediterranean Turkish territorial and offshore waters. It aims to collect the long-missing scientific data on cetacean distribution and habitat preferences for in-situ conservation and management actions. A total of 4,385 km in 49 days were covered between April 2018 and July 2019 and 145 encounters of cetaceans were sighted on 35 days. Delphinidae species formed the majority of the sightings, sperm whales were detected on 23 occasions and beaked whales only once. While a cetacean presence was recorded in each season, 83% of the sightings occurred in spring and summer. While the distribution range covers from the coastal waters up until to 4,000m depth contours for Delphinidae species, sperm whales were detected mainly on the 1,000m contour and a beaked whale was detected on the 1,500m contour line. Additionally, sea turtles were also detected on 26 occasions, with a depth record at 2,500m. Collected data serves as the stepping stone for delineating the cetacean critical habitats within the northern Levantine Sea, an area that suffers from irregular and uncontrolled human activities, from fishing practices to seismic surveys.

 Download presentation

The first-ever practical guide to making shark and ray MPAs more effective

Marina Gomei - mgomei@wwfmedpo.org & Jamel Jrijer (WWF) - jjrijer@wwfna.org

Sharks and rays are by far the most endangered group of marine fish in the Mediterranean Sea and the decline of some population is now a matter of international concern. Sharks and rays face a variety of threats, but the biggest risk comes from overfishing. MPAs can be a successful tool to support the conservation of sharks and rays if designed properly. A new report, the first of its kind, summarizes the science on what has proved to work for sharks and presents recommendations for the establishment of Shark MPAs. Currently in the Mediterranean, although the most dangerous sea for sharks globally, only a handful of MPAs designated protection measures for sharks. During the workshop, WWF presented the guide which can offer guidance and support for the establishment of shark and ray focused MPAs, presented a case study in the Gulf of Gabes in Tunisia and facilitated a discussion on how spatial fishing measure for sharks can become future MPAs in the Mediterranean.

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Establishing the first MPAs in order to protect nursery grounds of rays and skates

Adla Kahric (SharkLab, Boznia and Herzegovina) - adla.k@sharklab-adria.org

Bosnia and Herzegovina doesn't have any MPAs. In order to establish it, my team and I started the pioneer studies to find out the nursery areas of skates and rays in order to protect their habitats. Through our enthusiastic research we found out locations of possible nursery grounds of four species: Torpedo marmorata Risso, 1810; Dasyatis pastinaca (Linnaeus, 1758), Raja miraletus, Linnaeus 1758 and Myliobatis aquila (Linnaeus, 1758). These results gave us a baseline for the further studies in order to establish the first MPAs and to make out sea safer for marine fauna.

Download presentation

Session conclusions and recommendations

- Need to check if an MPA is the appropriate answer to protect the targeted mobile species (i.e. nursery areas, nesting sites). Other approaches (mitigation measures for bycatch, MSP approach, speed & traffic regulation through IMO, etc.).
- You need baseline data and ideally long term dada to assess trends in distribution & abundance.
- Need a coherent network of MPA for highly mobile species and thus we need an overall vision at a geographical scale that is relevant for the species (IMMA, IBA). This network of MPA also need to be employed in concert with other approaches (mitigation measures for bycatch, MSP approach, speed & traffic regulation through IMO, etc.).
- Need to anticipate for future changes in distribution & abundance due to climate change.

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Linking Natura 2000 conservation actions at site level with broader protection measures for highly mobile species

Coordinator(s): Fotios Papoulias (European Commission) - Fotios.Papoulias@ec.europa.eu

The EU nature legislation (Birds and Habitats Directives) provides a comprehensive framework for the protection of highly mobile marine species. It requires a strict protection of seabirds, cetaceans, seals and marine turtles in their entire natural range, as well as the designation and management of protected areas under the Natura 2000 network, ensuring protection of their core habitats. Considering the multiple and increasing pressures on protected marine species (e.g. habitat

deterioration, bycatch, underwater noise, ship strikes) a holistic approach is necessary in order to combine effectively sitelevel management plans and measures with broader measures across the species' range. The aim of the session was to showcase the requirements and opportunities provided under the EU regulatory framework (nature directives, common fisheries policy, maritime policy) for coordinated action among Natura 2000 MPAs designated for highly mobile marine species, as well as for integration of site-level action with broader conservation strategies and related sectoral/regional regulations.

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Managing wide ranging species in the Adriatic

Nikolina Rako-Gospić (Blue World Institute of Marine Research and Conservation, Croatia) - Nikolina.Rako@blue-world.org

Wide-ranging species provide particular problems for site based conservation measures. Until recently, in the Adriatic Sea, the coastal zone was considered of particular importance for species such as dolphins and sea turtles. However, basin wide aerial surveys and acoustic monitoring has indicated that these species are more abundant offshore, including areas beyond national jurisdiction (ABNJ). While the Natura 2000 network is an important site-based protection tool, the Member States and the European Union authorities should give higher priority to directly mitigating human-induced mortalities throughout their range. This should include regular transboundary monitoring programmes within national waters and in the ABNJs.

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Coordinated monitoring of the Mediterranean monk seal among MPAs in the Adriatic-Ionian macro-region

Luigi Bundone (Archipelagos Italia, Italy) - archipelagos.italia@gmail.com

Mediterranean monk seal sightings have been repeatedly recorded since 2000 in Croatia, Montenegro, Albania and Southern Italy and a known reproductive population lives in the Greek Ionian Islands. Two independents, but related, projects started in Natura 2000 marine sites in the Greek central Ionian Sea (2018) and the Karaburun-Sazani MPA, Southern Albania (2019, funded by CEPF) aiming at the parallel monitoring of the population(s): movements, exchange between countries and actual population numbers are important parameters for the species´ effective protection. In light of our preliminary results, we believe that the Adriatic-Ionian macro-region is of utmost importance for the overall species protection and recovery.

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Session conclusions and recommendations

- EU policy and legislation (nature directives/Natura 2000, MSFD, Common Fisheries Policy, MSP, EU funds) provides a comprehensive framework for monitoring and protecting Highly Mobile Species (HMS) within and outside MPAs.
- MPA managers need to be aware of it and contribute to its implementation and enforcement, in cooperation with authorities and stakeholders, through effective site management plans.
- A transboundary approach is necessary for identifying key areas for HMS and integrating conservation measures in MSPs, in coordination with macro-regional strategies (e.g. EUSAIR) and agreements (e.g. ACCOBAMS), for increased resilience of species against global threats.
- The role and impact of fisheries, esp. SSF, needs to be fully factored in any conservation strategy.
- Sharing monitoring data on populations and threats is essential. Individual sightings of species, although not enough to justify measures, need to feed into shared databases based on standardized protocols to improve transparency (while taking into account needs for sensitive data)
- Opportunites under EU funds for supporting transboundary cooperation should be further explored
- MPA managers should become more aware of available and effective methods to perform their tasks, e.g. in applying passive acoustic monitoring.

Effective and adaptive co-management plans

Coordinator(s): Almokhtar Saied (Environmental General Authority, Libya) - mok405@yahoo.com

The session gathered and presented co-management experiences between different institutions and associations to monitor highly mobile species. Adaptive co-management is receiving considerable attention as an innovative governance strategy to sustain socio–ecological systems. Collaborative resource management strategies, such as co-management, are often described as useful approaches that can fill the gap left by incomplete science or the lack of large-scale institutional capacity to manage resources at the local level. Two case studies illustrated monitoring of endangered species conducted under a collaborative scheme of cooperation between different institutions and associations. The objective of this session was to illustrate how the combination of scientific and local knowledge can provide a solid basis to set up more effective monitoring and management programmes for the conservation of highly mobile species.

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Supporting management actions in the National Marine Park of Alonissos Northern Sporades

Fotini Vrettou (Thalassa Foundation) - projects@thalassafoundation.com

We presented a collaborative effort to promote the effective management of the National Marine Park of Alonissos, Northern Sporades, one of the largest MPAs in the Mediterranean Sea. The collaborative scheme involves the Management Body of the Park, Local Authorities, Universities, NGO's and other interested parties and tries to promote the management of the area through a holistic approach involving various activities. The main activities of this initiative are: surveillance of the protected area; monitoring of endangered marine mammals; monitoring of fish stocks; support of local fishing community species; promotion of sustainable tourism; public awareness and education.

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Co-management of the Kuriat Islands and fauna conservation

Samia Boufarès (Agence de Protection et d'Aménagement du Littoral, Tunisia) - boufaressamia@gmail.com & Ahmed Ghedira - notre_grand_bleu@hotmail.fr / Manel Ben Ismail (Notre Grand Bleu, Tunisia) - manel.benismail@gmail.com

In 2017, a first APAL-Notre Grand Bleu-M2PA agreement has been signed for the co-management of the future Kuriat MPA through the establishment of a joint management unit. The role and responsibilities of the co-managers are multidisciplinary and reflect the site protection strategy adopted in the management plan. Monitoring of key mobile species (sea turtle) is a part of this strategy. Co-management therefore consists in coordinating, implementing and supervising all conservation and promotion activities for the Caretta caretta, which has been nesting here in a stable manner for decades, with a view to sustainable and participatory management.

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Session conclusions and recommendations

- Insufficient and unsustainable financial resources and funding to implement studies in MPAs. This is one of the core issues of conservation effort in MPAs.
- Establish and strengthen communication, collaboration and trust between different stakeholders such as governmental bodies, NGOs, and the local community in the MPA.
- The lack or outdated management plans of the MPAs which require either updating or develop.
- Promote other sustainable practices in MPAs such as ecotourism and sustainable pescatourism.

Network based approaches for broader integrated management of highly mobile species

Coordinator(s): Pierre Vignes - pierre.vignes@medpan.org & Susan Gallon (MedPAN) - susan.gallon@medpan.org

Conservation challenges for highly mobile species explicitly emphasise the added value of monitoring and management network-based approaches across MPAs at regional levels. As they don't know any border, highly mobile species are committing MPAs to "ecological solidarity" and collaborations beyond the local level. Active cooperation between MPA managers, NGOs and scientists, working on highly mobile species in their different functional areas, is needed to allow an integrated management strategy for these species. For this reason, network-based approaches are required in the framework of the Ecosystem Approach (EcAp's Integrated Monitoring and Assessment Programme) of the Barcelona Convention, the EU MSFD (Marine Strategy Framework Directive) and the EU Habitats Directive, that target a number of highly mobile species (seabirds, cetaceans, sharks, monk seals and marine turtles). Sharing tools and data, harmonising protocols, exchanging experience, and maintaining cooperation over time, are both the key conditions and main challenges of network-based approaches.

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Towards network management of the bottlenose dolphin in the Mediterranean

Hélène Labach (GIS3M, France) - hlgis3m@gmail.com

In the French Mediterranean, the bottlenose dolphin is a species that occurs throughout the continental shelf and is observed in the 30 or so existing MPAs. Since 2018, the TURSMED programme, in partnership with the French Biodiversity Agency, has been coordinating the monitoring of the Bottlenose dolphin within the MPA network in order to allow integrated monitoring at the scale of the façade. The programme provides support to managers in the implementation of monitoring strategies, encourages the harmonisation of protocols by providing common data collection and database tools, and promotes the exchange of information and experience.

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Network-based approaches for sea turtle conservation in North Africa

Jamel Jrijer (WWF North Africa) - jjrijer@wwfna.org

Sea turtles are one of the emblematic species in the Mediterranean region; as such they have gained a lot of focus that includes studies, scientific research, conservation activities, and communication. This increasing attention leads to the proliferation of initiatives and action between many partners coming from different backgrounds. Intergovernmental organisations, research institutions, universities, international NGOs as well as national NGOs are today involved and need to better work together at regional and national Level. In North Africa (Morocco, Algeria, Tunisia, Libya, Egypt), the majority of Sea turtle conservation actors are gathered to coordinate protection, awareness and research efforts in the region. The main result of this initiative is to initiate a North African Network that aims to coordinate marine turtle conservation efforts in North African countries. Its mandate is to share experiences and build capacity to develop a network strategy to support partners in the areas of conservation, awareness and scientific research, as well as pursue funding opportunities for marine turtle conservation. Since coordination with Mediterranean and international organisations and initiatives active in the marine environment is paramount, the network also works in close coordination with WWF, SPA/RAC, and RASTOMA (Network of Actors for the Conservation of Marine Turtles in Central Africa).

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Session conclusions and recommendations

- Network leader/facilitator: provide turnkey tools (low cost, multi-species/uses protocols implemented in user friendly application) for monitoring, data storage, data sharing, and feedback (valuing the monitoring effort and network dynamics).
- Cooperation charter: support of external actors (scientists, NGOs) within the framework of a MoU for data sharing and storage ensuring that data relevant to MPA management are shared timely.
- Encourage donors to contractually require their beneficiaries working with MPAs to share data relevant to MPAs with managers.
- Training for implementing harmonised protocols and ensuring the calibration of the actors who implement them.

Marine soundscapes monitoring as an ecological assessment tool

Coordinator(s): Nikolina Rako-Gospić (Blue World Institute of Marine Research and Conservation, Croatia) - Nikolina.Rako@blue-world.org

Marine soundscapes carry information about habitat quality. The assessment of the underwater soundscape patterns provides critical insights for the sensible integration of human activities and the protection of marine species sensitive to sound that are often put at risk of population decline due to noise. According to the MSFD, underwater noise is an important indicator in defining the "Good Environmental Status" of marine ecosystems. This session highlighted the importance of reporting and monitoring of impulsive underwater noise events as a part of the MSFD implementation. Furthermore, the relevance of the assessment of the temporal patterns in the soundscape of both shallow and deep water areas of the Mediterranean Sea were tackled. Such assessments provide critical information for defining the baseline noise-monitoring plans within MPAs, demonstrate correlation between underwater noise and anthropogenic activities and contribute to the development of mitigation measures required for protected species.

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The International Impulsive Noise Register for the Mediterranean Sea Region (INR-MED)

Léa David (ACCOBAMS) - lea.david2@wanadoo.fr

The QUIETMED project, funded by the EC-DG Environment, aims to enhance cooperation among Member States in the Mediterranean Sea to implement the Second Cycle of the Marine Directive (MSFD). In this framework, a common register for the Mediterranean basin for the monitoring of impulsive noise was developed, facilitating the assessment of pressure: once data are uploaded, the reported noise events are mapped and calculation of Criterion 1 of D11 is automatically provided, facilitating the interpretation. The project QUIETMED2 will facilitate the assessment through the establishment of a link between the pressure and the associated environmental risk.

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The approach of the Network of Spanish Marine Reserves to monitor and mitigate the impact of underwater noise

Silvia Revenga Martínez de Pazos (Ministry of Agriculture, Food and Environment - General Secretariat of Fisheries, Spain) - srevenga@mapa.es

In line with the Marine Directive (MSFD 2008/56/EC) and specifically Descriptor 11, the Network of Spanish Marine Reserves is dealing with issue of underwater noise in 2 ways: (1) as a case study, the impact of underwater noise on groupers and other fishes in the marine reserve of Tabarca was studied in partnership with the University of Alicante (2) the need to reduce underwater noise was also addressed through vessel speed regulation inside the marine reserves with a maximum speed of 10 knots (and a minimum speed of 6 knots for non authorised fishing vessels to ensure effective control of the fishing activity in the reserves). To further reduce underwater noise, jet-skis have been banned in the Marine Reserves of Levante de Mallorca-Cala Rajada and Isla de Tabarca.

Download presentation

Passive acoustic monitoring: a tool for assessing the distribution of a soniferous species, the corb, throughout the territory of the Calanques national Park

Alessandra Accornero-Picon (Calanques National Park, France) - alessandra.accornero-picon@calanques-parcnational.fr & Lucia Di Iorio (Chorus, France) - lucia.diiorio@chorusacoustics.com

A first acoustic mapping was carried out (24-26 June 2018, 19:00 to 01:00, 3 passive recorders) to establish the distribution of corbs, based on the detection of stereotyped sounds emitted by males for reproduction. 72 listening sites (42 in no-take zones) were visited over 43 kilometres of coastline (20.3 km²). A total of 20 sites revealed the presence of corb. In 8 sites, the detections corresponded to R-calls (stereotyped sequences) indicating a reproductive role of these sites. This first acoustic monitoring made it possible to: (1) assess the feasibility of passive acoustic monitoring (2) draw up an initial acoustic mapping of the distribution of the corb within a vast territory (3) demonstrate that the probability of an acoustic encounter of a corb is higher in no-take zones, (4) propose a MedPAN «small project» with the objective of purchasing a shared acoustic sensor between 3 MPAs and producing a methodological monitoring guide for managers. A second field campaign was conducted in 2019 on all habitats likely to support corb populations in the marine heart (43,500 ha, 150 listening sites, 4 days). Ongoing analyses and comparisons will confirm corb distribution patterns and assess interannual variability. In the long term, this type of monitoring, reconducted every 3 years, will make it possible to obtain quantitative data at the scale of the national park and to objectify the renewal of the next moratorium, in 2023.

Download presentation

Session conclusions and recommendations

- Passive Acoustic Monitoring (PAM) implemented within MPAs is a good tool to identify key habitats for all acoustic-active species but broader collaboration among MPAs is needed to contribute to the conservation of species that are highly mobile. In addition PAM can be combined with other methods (e.g. visual) for a more effective monitoring.
- Collaboration between MPA managers and other organisations/institutions (e.g. universities) with the knowledge required to undertake PAM and related analyses, is needed to overcome obstacles related to this method (cost of equipment, human capacity and expert knowledge)
- The information gained by monitoring soundscapes can be used to fill current knowledge gaps on key habitats, impact of anthropogenic activities and inform on the measures required to protect the ecosystems

Towards effective and adaptive management measures for highly mobile species

Coordinator(s): Laurent Sourbès (Zakynthos National Marine Park, Greece) - lsourbes@nmp-zak.org

Effective conservation of highly mobile species should take into account both the changes that occur in the species biology and the pressures they are under in their natural habitats along their whole life cycle. The dynamic approach of conservation should involve effective and implemented management plans/strategies within and outside MPAs, a holistic view in order to strengthen networking and efficiency at a national and international level, a better knowledge of habitats / migratory corridors and a coherent legal framework that will address the issues of conservation at the local, national and international level.

Download presentation

Adaptive management as a prerequisite for effective conservation of marine turtles in the area of the National Marine Park of Zakynthos

Laurent Sourbès (Zakynthos National Marine Park, Greece) - lsourbes@nmp-zak.org

The issue of efficiently protecting highly mobile species when breeding / nesting in overcrowded areas with high level of pressures due to tourism and/or fishing activity must be based on the implementation of the principles of adaptive management. It is indeed accepted that a "static" approach of conservation is often not able to answer to specific threats that are often unforeseen, especially when biotic and abiotic parameters are constantly evolving due to the combination of climate change and increasing anthropogenic activities impacts. In this framework, key parameters (e.g. number of nests, number of visitors) and critical parameters (e.g. predation, mortality rate, human activities on the shore and in the marine area) that are monitored on a daily basis should be addressed in an iterative, structured and interconnected way in order to implement effective protection measures that will answer to uncertainty of changes and allow precautionary measures to be taken as well.

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Dynamic monitoring of the loggerhead turtle population in Taza National Park MPA

Abderrazek Lahmer (Parc National De Taza-Jijel, Algeria) - lahmerpnt@gmail.com

To be effective, marine turtle conservation must go beyond the protection of nesting sites to consider the pressures on populations in the different areas visited during their life cycle. The strandings of loggerhead turtles on the Taza-Jijel coast in Algeria have led Taza National Park to initiate cooperations (with the coast guard in particular) aimed at systematically recording data on stranding and observation of turtles at sea. The objective of this monitoring is to confirm the migration pattern of loggerhead turtle populations in transit through Taza MPA to their spawning sites in Tunisia, in order to put in place more appropriate conservation strategies, in particular to reduce interactions with fishers, since turtles are too often victims of by-catch. As a follow-up to this initiative, the challenge is to engage conservation authorities and stakeholders at the national level within the North African marine turtle network.

Download presentation

The Transatlantic project Score Card

Susan Gallon (MedPAN) - susan.gallon@medpan.org

The European Commission has set up the Transatlantic MPA network project to promote cooperation between MPA managers in countries and territories around the Atlantic Ocean. It is designed to stimulate exchange and the sharing of best practice to improve the effective management of MPAs in coastal and offshore areas of the Atlantic. One of the three thematic twinning/partnership projects deals with marine mammals' protection, as a way to enhance transatlantic cooperation between MPAs. The Marine mammals' twinning project seeks a better understanding of migrations and threats to species, towards programmes and practices for good conservation by means of developing the following activities: 1) Exchange of technical information and practical experiences about marine mammals and their respective habitats; 2) Identification of common challenges; 3) Identification of priorities for cross-border collaboration; 4) Identification of good practices. The project partners developed a Score Card for the main tools to measure management effectiveness, related to marine mammals management. The goal is to help MPA managers to track how marine mammals are integrated into the management plan and how they could be better integrated.

Download presentation

What awareness-raising, control and enforcement strategy to eradicate highly destructive practices affecting mobile species?

Coordinator(s): Pierre Vignes (MedPAN) - pierre.vignes@medpan.org

This session focused on the direct and intentional pressures that affect certain mobile species: poaching for commercialisation (turtles, sharks and rays), deliberate killing of species considered to be competing with the fishing activity (dolphins, monk seals), use of explosive devices... Although sporadic and very localised, these practices constitute, where they persist (or sometimes reappear), considerable harm to the populations concerned and a major breach of international conventions protecting these species. Whether motivated by gain, legitimised by tradition, or based on a lack of knowledge, these highly destructive practices must be eradicated. Illustrated by three case studies, this discussion session aimed to identify the key elements of an awareness, control and enforcement strategy to put an end to these practices.

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Role of community management in restoring threatened biodiversity in the marine area of Al Hoceima National Park

Houssine Nibani (AGIR - Association de Gestion Integrée des Ressources, Morocco) - agirnibani@gmail.com

The use of dynamite to fish in the heart of the marine area of Al-Hoceima National Park (PNAH) has been practiced for many years and affects the marine ecosystem, destroying habitat and biocenosis, from small invertebrates to marine mammals. From 2012, the actions carried out by AGIR with the artisanal fishing community helped reduce certain threats, in particular the eradication of dynamite fishing, which greatly contributed to restoring habitats and regenerating marine resources in PNAH. On the other hand, the well-being of the fishing community has been improved by increasing their catches and incomes, as well as by stopping the accidents and amputations suffered by poaching fishers.

Download presentation

Raise awareness and strengthen protection programmes in Farwa's Marine Protected Area

Ali Berbash (Environment General Authority, Libya) - Aberbash83@yahoo.com

Farwa's MPA comprises the Farwa lagoon, which is the largest lagoon on the Libyan coast. It is located on the west Libya coast between Zawara and the Tunisian border and covers an area of 32km2. Farwa's lagoon is home to meadows of Posidonia and Cymodocea which supply a wide variety of marine life, and attracts mobile species such as cetaceans, sharks, birds, sea turtle. Unfortunately the biodiversity and productivity of this beautiful lagoon is constantly being endangered by extensive anthropogenic activities such as blast fishing which affects all marine life in the Farwa MPA and buffer zones, sea turtle egg collection, illegal bird hunting, harmful fishing methods, pollution and urbanisation of the coastline. Marine law does not effectively curb these pressures, so EGA (the Libyan Environmental General Authority) as well as other stakeholders are trying to increase public awareness through public marine biodiversity protection lectures and social media activities. The aim is to empower the local community to support marine conservation programmes.

Download presentation

Marine turtle poaching in the Kerkennah Islands

Sami Karaa (Association Jeunes Science Kerkennah, Tunisia) - k-sami@hotmail.fr

The historical data related to the commercialisation of marine turtles or their derivatives in Tunisia are very old; these chelonians were sold on the markets and consumed by the poorest fishers and sea users; the flesh and blood of the turtles sold were also used as an aphrodisiac or as a medicine. Marine turtles, and especially their shells, were used for decoration or as cradles, especially in the islands of Kerkennah and Djerba. After the late 1990s, accidentally caught turtles are commonly released into the sea. The situation of marine turtles has improved mainly through surveillance, which has followed the development of a national legislation to protect marine turtles and other marine vertebrates such as cetaceans and monk seals. But despite all the efforts dedicated to the conservation of marine turtles in Tunisia, cases of poaching are still recorded; the preliminary results of these offences recorded between 2004 and 2018 in the Kerkennah Islands will be presented in this presentation.

Download presentation

Session conclusions and recommendations

- **Know the offender's motivation** to respond effectively
- **Find support from the local community** both to persuade and to prosecute
- **Education** is a good investment to counter the negative effects of tradition and educational activities should be monitored.
- **Awareness** targeting fishers, children, consumers: emotional approach can be effective for changing behaviors, considering both the violent nature of offenses (public meetings with one-armed fishers to raise awareness on blast fishing) and the iconic nature of flagship species ('adopt a turtle' in schools).
- **Repression**: adapt the law when needed (e.g. ban guns onboard), control with early warning systems and taking into account all accomplices in the criminal response (fishers, fish markets, consumers).
- **Market incentives:** set up alternative activities to support behavioural change and promote sustainable fishing.
- **Mitigate bycatch** through innovation in fishing practices and gear (illegally traded turtles are caught accidentally)

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Bycatch: from assessing the problem to engaging fishers, defining mitigation measures and handling to increase the survival rate of species

Coordinator(s): Maria del Mar Otero (IUCN Mediterranean), MariadelMar.OTERO@iucn.org

Whether large or small, many MPAs in the Mediterranean, have some type of small scale fisheries within them. Managers might need to address the issue of bycatch, that is, the incidental capture and mortality of marine animals (e.g. sharks and rays, seabirds, sea turtles and marine mammals) during the fishing activity. This session presented with case studies, how to assess the problem, monitor species caught and explore possibilities to mitigate this impact while supporting fisheries to be more sustainable.

Cetacean interaction with small-scale coastal fisheries

Iuri Peri - italy@lifeplatform.eu, Clara Monaco - clamonaco@unict.it & Santo Castorina (LIFE Platform)

In the last few years, there has been an increasing interest to solve the problem of cetaceans interactions (especially dolphins) with the fishing activities carried out by small-scale fishers (SSF). Thanks to the support of the MAVA Foundation, LIFE has launched an initiative that involves three Mediterranean countries (Italy-Sicily),Spain-Andalusia and Malta) in order to fill the gap in terms of real and measurable information on the impact of interactions. The data collected investigate the occurrence of cases of interaction of cetaceans with the SSF fishing fleets and try to estimate the economic damage that fishers endure. The study also explore the issue of by-catch of vulnerable species for a better understanding of gear degradation dynamics in order to provide information on possible mitigation measures to be used, and to raise awareness at the administration and decision-making level on the issue and to favour practical solutions.

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Engaging key stakeholders in a bycatch reduction strategy and protocol

Genti Kromidha (Institute of Nature Conservation in Albania -INCA, Albania) - gkromidha@yahoo.it

Through various activities the project that started a year ago, is to engage key stakeholders in the region to support the transformation of the Southern Adriatic longline fleet in a best practice example of bycatch reduction and management, where fishers and port authorities are fully involved in the development and implementation of a bycatch reduction strategy and have developed ownership of the protocol.

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The Med Bycatch Project - «A collaborative approach for understanding multi-taxabycatch of vulnerable species in Mediterranean fisheries and testing mitigation» in Tunisia GSA 12, GSA 13 and GSA 14 (central Mediterranean): approach and methodology

Marouene Bdioui - marouene.bdioui@instm.rnrt.tn & Béchir Saidi - bechirinstm@yahoo.fr (SPA/RAC, AAO/Birdlife Tunisie and INSTM Bycatch coordinators, Tunisia)

Within the framework of Med Bycatch project*, the three Tunisian GFCM areas have been selected. This program started in March 2019 and will end by June 2020. It is coordinated by SPA/RAC and AAO/BirdLife in Tunisia and involves many stackeholders: INSTM, DGPA and APAL. Data collection is carried out by a team of 22 observers and experts. During the first 6 months, more than 90 days at sea were carried out for onboard observations and about 400 interviews were fulfilled in 24 fishing harbors. The concerned fishing gears are: bottom trawls, gillnets and entangling nets and demersal longlines.

* The Med Bycatch project is Funded by the MAVA Foundation and implemented within a partnership between the ACCOBAMS, the GFCM, the UNEP/MAP SPA/RAC, the IUCN Med, the BirdLife International (BLI) and the MEDASSET.

Download presentation

Session conclusions and recommendations

- Bycatch refers to the incidental capture by fisheries of vulnerable species (cetaceans, sharks, rays, sea turtles, sea birds and other key benthic species such as corals and sponges), some high mobile species.
- The session shows the importance of the collection of bycatch data with the engagement with the fishers and fisheries administrations. Data coming from bycatch where collected through onboard observations, questionnaires on port and fishers data reporting. This can assist to understand the problem (what vulnerable species, the time, the fishing gear or the season) and create awareness. It was emphasized the use of a standard methodology (e.g. GFCM Monitoring Protocol), and some of the guides that can help to reduce mortality and identify species.
- Looking at predation (the dynamics of vulnerable species as predator and fishermen) can perhaps help to address future strategies. Bycatch thus also have an economic damage to fishers (as for some artisanal fishers) and also increase unintentional mortality of species of conservation. Enhance capacity to identify species, develop bycatch programmes, bring mitigation strategies are still needed across the Med, including at the MPAs where this might be an important threat because they have aggregations and nesting sites of high mobile species of conservation interest. To address mitigation (reduction of bycatch) further work is still needed across the Med to see the feasibility and durability of different techniques and cost/benefits.

Managing wildlife watching and related activities: setting guidelines and best practices

Coordinator(s): Hélène Labach (AFB / GIS3M, France) - hlgis3m@gmail.com

Intensive and unregulated marine wildlife watching activities can lead to negative impacts on marine animals and populations through disturbance of animals in vital activities and increasing the risk of injuries. How can MPAs limit the impacts of these activities on animals inside their boundaries and contribute to the conservation of populations? Two case studies presented how voluntary and legal framework can be useful tools to effectively manage wildlife activities and will bring relevant experience to discuss about the interest, constraints and limits of existing management tools. This session aimed to provide guidelines and best practices for MPAs to manage marine wildlife activities in order to limit the impact on marine species.

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The organisation of the marine mammal discovery activity and the added value of the High Quality Whale-Watching label

Alain Barcelo (Port-Cros National Park, France) - alain.barcelo@portcros-parcnational.fr

Since the early 2000s, ACCOBAMS and Pelagos have been working together to organise the tourist activity of discovering marine mammals from a boat. After initial work on the code of approach, the socio-professional and institutional partners developed the basis for the High Quality Whale-Watching (HQWW) label, developed jointly by ACCOBAMS and Pelagos, and registered by ACCOBAMS in 2014. In France, the management of the label is delegated by the Ministry in charge of the environment to the Association Souffleurs d'Écume. In 2019, 15 of the 35 structures that operate in the French Mediterranean were certified. Among the non labelled structures, some practice swimming with cetaceans, sometimes with aerial sightings, which is the opposite of the philosophy advocated by ACCOBAMS and Pelagos. France will soon incorporate into its national legislation the legal bases of the fact that approaching an animal less than 100 metres away disturbs it, when it is not the animal that intends to approach. We hope that this will lead to the cessation of commercial activities in the immediate vicinity of marine mammals, which are very harmful. France will soon incorporate into its national legislation the legal bases for stopping commercial activities harmful to marine mammals.

The presentation described the organisation set up and the steps necessary to enable institutions, NGOs and MPAs from Mediterranean countries present to get to know the HQWW tool and to deploy it on their territory. In use, it obviously seems much easier and beneficial for animals to frame a profitable economic activity in the Mediterranean that has not yet taken off, in order to guide future operators in a sustainable direction.

Download presentation

Management effectiveness of the marine turtles' watching activity within the international and national legal framework: the case of the National Marine Park of Zakynthos

Laurent Sourbès (Management body of Zakynthos National Marine Park, Greece) - lsourbes@nmp-zak.org

The lack of a legal framework on the disturbance / harassment of priority species during the breeding / reproduction period should be tackled with alternative solutions. Such solutions include the enhancement of the participatory approach with involved stakeholders but also regulations that are not directly addressing those issues but can indirectly contribute to a more effective conservation / management of mobile species. To balance sustainable development and conservation objectives, the Management Agency Zakynthos National Marine Park (NMPZ) has from the beginning instigated a number of measures: the introduction of a code of conduct, the information and the certification of operators within the marine area of the Park as well as the zoning of a "Turtle Spotting Area". These constitute the basis of the activity's sustainable management strategy. Nevertheless, multiple changes in the national legislation regarding the vessels operating within the marine area of NMPZ combined with an important increase of the number of visitors and operators during the last decade, forced NMPZ Management Agency to tackle the issue of the increasing sea turtles harassment incidents in a different way, through the strengthening of the legal framework and the adoption of different rules and strategies.

Download presentation

Session conclusions and recommendations

- Have solid arguments: know the impact, the importance of the pressure and the spatial and temporal carrying capacity.
- Promote diversified (non-targeted) and eco-responsible activities.
- To take into account invidual observations (boats and jet ski rentals) and raise awareness among tourist operators.
- Involve public authorities as much as possible (legislation & control)

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Regional approaches to acquire knowledge as well as identify and address pressures at Mediterranean level

Coordinator(s): Léa David (ACCOBAMS) - lea.david2@wanadoo.fr

The regional scale is one of the most relevant to understand the distribution and important areas of highly mobile species. Moreover, for a conservation objective, the regional approach helps map the pressures and determine the risk areas for the animals. Three case studies will show the strength and interest of this approach. The objective of this session is to help identify sources of data to finalise the process of identification of risk areas for highly mobile species and suggest relevant measures in those areas: area-based measures or sectorial based measures? National or regional level? Who to contact and what are the steps to implement concrete measures?

Download presentation

ACCOBAMS SURVEY INITIATIVE: a large scale survey of marine megafauna in the Mediterranean Sea

Léa David (ACCOBAMS) - lea.david2@wanadoo.fr

The "ACCOBAMS Survey Initiative" (ASI) is a unique cooperative project aiming to improve harmonised monitoring of cetaceans in the entire ACCOBAMS area. By training and mobilising over 100 scientists from the region, the ASI led in 2018 collected an unprecedented amount of data on mega vertebrates and anthropic pressures throughout the Mediterranean Sea, which will support ACCOBAMS countries but also multiple research projects and conservation initiatives such as MPAs. The ASI case study also helped assess how regular and harmonised monitoring in MPAs could contribute to the regional vision of the status and evolution of cetacean populations.

Download presentation

Toward the identification of important cetacean's areas under threat at a regional scale: the ACCOBAMS Cetacean Critical Habitat's process

Léa David (ACCOBAMS) - lea.david2@wanadoo.fr

Countries member of the ACCOBAMS and its Scientific Committee are engaged in identifying Cetacean Critical Habitats (CCHs), whose concept refers to "those parts of a cetacean's range that are essential for day-to-day well-being and survival, as well as for maintaining a healthy population growth rate". This identification will be based on existing initiatives: IMMA, ASI, Gap Analysis. However, in the context of cetacean conservation and management, it is essential to incorporate the concept of human activities and potential threats. Existing data on the distribution of activities will be overlapped with areas of interest for cetaceans to highlight potential risk areas.

Download presentation

The marine turtle monitoring network in the French Mediterranean

Marie Baudouin (MNHN, France) - marie.baudouin@mnhn.fr

The monitoring of marine turtles in the French Mediterranean is based on an observatory coordinated by the Muséum National d'Histoire Naturelle, which includes a stranding network and health centres. The objective of this observatory is to collect information useful for environmental policies on the basis of harmonised protocols. The case study described its activities and the modalities of collaboration between the MPAs and the observatory (training of staff, collection and sharing of samples and data, etc.). It put into perspective the interest of broadening the coordination at Mediterranean level in view of the mobile nature of these species as well as global changes.

Download presentation

Session conclusions and recommendations

- From local to regional scales and vice versa (data and results flows) - Standardised data
- Organise the communications of existing data protocols
- From science to action - Identify key processes and individuals to transform recommendations into measures

Engaging citizen to contribute to monitoring and conservation effort for transboundary species beyond MPA borders

Coordinator(s): Zafer Kizilkaya - zafer@imagesandstories.com & Ozkan Anil (Mediterranean Conservation Society, Turkey) - oanil@yahoo.com

The range of transboundary species as the name implies are beyond MPAs and countries borders. The major challenge for their conservation is the non-availability of complete and consistent data that are however necessary to build management strategies. The nature of transboundary species implies monitoring of vast open seas and coastal habitats regularly, a time consuming and expensive endeavour for which management resources are scarce, and investments are variable in different countries. Citizen science in this respect could fill an important gap given the proper policies and initiatives. Citizen science helps accelerate the volume of information gathered on transboundary species within and beyond our MPAs while simultaneously enhancing the public's appreciation and enthusiasm for science. However, marine and coastal citizen science projects only represent a small part of citizen science projects (14% according to a broad international survey of over 200 projects).

Download presentation

Monitoring of Tursiops truncatus population during boat excursions to Kornati National Park

Martina Markov (Motonautika-Luke LTD, Croatia) - martina.markov.podvinski@gmail.com

The monitoring of Tursiops truncatus was developed as part of a volunteering programme organised by Kornati National Park. Three excursion boats were selected to participate in a monitoring that took place in 2016 and 2017. Trained volunteers were present on the excursion boats in order to monitor dolphins during excursions to Kornati National Park. The data were analysed and the results revealed that the average number of findings per trip was 2.1. By implementation of this volunteering programme, many benefits could be achieved: cost-effective dolphin research, additional value for the excursion trips, strengthening of the cooperation with tourism stakeholders and awareness raising of Kornati National Park visitors.

Download presentation

A 10-year evaluation of sea turtle rescue and rehabilitation activities in the DEKAMER Centre of Dalyan, Turkey

Yakup Kaska (Pamukkale University, Turkey) - caretta@pau.edu.tr

The Sea Turtle Research, Rescue and Rehabilitation Centre (DEKAMER) was established in 2008 in Dalyan-Muğla-Turkey. A total of 266 stranded turtles (dead or injured) turtles were admitted from all along the Turkish coastline between 2008 and 2018. 78 % were Caretta caretta, 19% Chelonia mydas and 3% Trionyx triungus (3%). 146 turtles (54.8%) were released to sea after the rehabilitation process, 115 (43.2%) died during the rehabilitation, and 5 (2%) are still in rehabilitation process. The number of stranded turtles admitted to DEKAMER increased in the 10 years period (r2=0.94). Stranded turtles were found throughout the year, but the peak season was summer, which coincides with the high tourism season. Most injured turtles were admitted from Muğla and Antalya, the biggest mass tourism regions. Marine and coastal citizen science is very important to inform us about the location of such turtles. In addition, DEKAMER has a strong stranding network in these regions. Strengthening the stranding network in all regions will increase rescuing injured or sick turtles.

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Session conclusions and recommendations

- Create a Mediterranean-scale citizen science tool for monitoring mobile species and sharing the data regionally: develop a web application for sharing sightings of mobile species across the Mediterranean (easy to use and available in several languages/signs)
- Support collaboration between volunteers, local tourism and marine recreation organisations and the tourists for collecting data and ensuring biodiversity conservation
- Establish rescue and rehabilitation centres to;
  - › educate and involve the public using concrete explanations about the sea turtles characteristics, explaining how conservation can be beneficial to them => promote a change of attitude
  - › mitigate the impact of human activities (e.g. by testing alternative fishing techniques and materials)
- The support of volunteers/citizens is essential for helping with monitoring and increasing awareness about mobile species

Tracking technologies for transboundary species: how they can help MPAs monitor and manage mobile species

Coordinator(s): Hélène Labach (AFB / GIS3M, France) - hlgis3m@gmail.com

Highly mobile species management is a challenge for MPAs. Individual monitoring constitutes a relevant methodology to inform on species ecology, movements and residency. Furthermore, individual monitoring can also represent an interesting tool to connect MPAs and improve data sharing. New tracking technologies, such as satellite or acoustic tracking, are being developed and constantly improved; these tools are increasingly used to monitor marine species. Based on 2 original case studies, this workshop showed how marine animal tracking can improve knowledge on species and populations and help MPAs in species monitoring, bringing information of the life of the animals beyond MPA borders. This workshop aimed to understand the interest, constraints and limits for MPAs to use these technologies and to discuss about the needs and perspectives for a large and integrative use of these tools.

Download presentation

Connectivity between transboundary MPAs: the case of two fish species, grouper and white seabream

Eneko Aspillaga (Institut Mediterrani d'Estudis Avançats (IMEDEA, CSIC-UIB) Spain)
aspillaga@imedea.uib-csic.es

Along a rocky coastline between France and Spain, we have set up a hydrophone network to track acoustic marks on 50 groupers and 50 white seabreams in two MPAs separated by about 20 km. The exchanges show that it is important to harmonise management tools within an interconnected MPA network.

Download presentation

Argos systems and data

Sophie Baudel (CLS, France) - sbaudel@groupcls.com

The Argos satellite system is used since 1978 by biologists for tracking high-migratory animals and collecting biodata all around the globe. Many species of sea turtles, big fishes, cetaceans have been tracked with Argos tags and provided huge amount of data allowing to observe large-scale movements of species, map hot spots and delineate vulnerable areas. Beyond marine biology and research goals, these data are used to provide stakeholders with evidence showing the necessity to establish conservation measures and design new marine protected areas. The talk detailed the present and future Argos constellation (25 nanosatellites operational in 2022), statistics and maps of around 77,000 Argos wildlife platforms, 3,000 Argos programmes deployed for more than 10 years, and some proposal for the valorization of these data in the Mediterranean area.

Download presentation

Should I stay or should I go? Evidence-based conservation for highly mobile marine megafaunai

Antonis Mazaris (Aristotle University of Thessaloniki, Greece) - amazaris@bio.auth.gr

It is globally acknowledged that tracking data of highly mobile marine species could offer a wealth of information towards improving our understanding on their biology and behaviour. At the same time, spatial datasets could be incorporated and greatly improve marine spatial planning and management. For example, Cumulative Impact Assessments and Systematic Conservation Planning require comprehensive information on key migratory corridors and habitat use. By using sea turtles as model species, a list of potential tools that feed on tracking data is presented. Major challenges, current gaps and future directions towards an effective use of technological advances in conservation of marine megafauna were discussed.

Download presentation

Session conclusions and recommendations

- COLLABORATE with experts in the tracking technology you are planning to use.
- ETHICS: managers need to use best existing guidelines, to follow ethical training and assess the effectiveness of the methodology. As tracking technologies can be invasive, MPA managers need to make sure that it is the best methodology to answer their conservation/management need.
- DATA SHARING is critical for conservation and management: Users should use existing data repositories and sharing initiative (i.e. European Tracking Network). Also managers should make tracking data sharing mandatory especially when studies takes place in MPA.

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Ensure highly mobile species conservation through integration of MPAs in maritime spatial planning and/or broader regulatory frameworks

Coordinator(s): Catherine Piante (WWF France) - cpiante@wwf.fr

Ocean-going vessels present a measurable threat of lethal collision with many marine species worldwide. Other impacts from shipping that may affect mobile species include noise and pollution. Other sectors, such as the Oil&Gas sector, can also impact highly mobile species. National authorities planning and managing the use of sea space, including marine spatial planners, are key actors in identifying and implementing measures to avoid sectors impacts on ecosystems in general and in MPAs in particular. National authorities of coastal states can also approach the Barcelona Convention or the International Maritime Organization (IMO) to seek the review and adoption of environmental conservation proposals involving MPAs. This session will review and discuss how national and international regulatory tools, including SPAMIs under the Barcelona Convention, as well as Particularly Sensitive Sea Areas (PSSAs), Areas To Be Avoided (ATBAs) and Traffic Separation Schemes (TSSs) under the IMO, can help address the impacts of shipping and other sectors on highly mobile species in MPAs or in their vicinity.

Download presentation

Taking action to limit collisions between large marine mammals and ships and taking action if they occur: some courses of action for MPAs

Alain Barcelo (Port-Cros National Park, France) - alain.barcelo@portcros-parcnational.fr

At the scale of the Pelagos Sanctuary, collisions between ships and large marine mammals are the leading cause of unnatural mortality. The density of traffic and its expected increase probably require anticipation by institutions, NGOs and MPAs to reduce this mortality factor and react effectively if it occurs. Pelagos, a pilot area for ACCOBAMS, has been experimenting for 2 decades with sometimes innovative actions at different levels. From supporting the REPCET collision avoidance programme, which is now operational worldwide, to training ship captains and shipping professionals, reporting collisions or near misses, to proposing possible legal tools to reduce collisions, such as PSSA, the objective of this presentation was to provide an overview of existing or future opportunities to reduce the number of collisions. The latest advancements within Pelagos to take action after collisions were also presented.

Download presentation

Is it enough to protect highly mobile species with existing MPAs in Turkey?

Burak Ali Çiçek (EKAD, Turkey) - burak.cicek@emu.edu.tr

In this study, we have assessed the efficiency of existing Turkish MPAs to protect highly mobile marine organisms with conservation approaches that have traditionally focused on the areas near the coast; the conservation areas determined by different statuses and regulations in Turkey were also discussed. The need to expand the national MPA scope and to create local and international corridors were emphasised with examples in order to protect highly mobile species more effectively.

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Session conclusions and recommendations

- MPAs can look out of their boundaries and advocate for solutions to external pressures with national authorities
- Now it's a critical time to do this within Mediterranean countries especially at EU level where countries are preparing their maritime spatial plan, but also in non EU countries
- MSP plans should support MPA networks by
  - keeping space for new MPAs
  - addressing issues of connectivity of highly mobile species
  - mitigating external impacts on MPAs (through strategic environmental assessments)
- MPAs should join forces at national level with relevant NGOs to prepare their request to national authorities to address external pressures


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MAMMIFÈRE MARIN ÉCHOUÉ : ATTEN
RESPECTEZ LE PÉRIMÈTRE DE SÉCURITÉ
RESTEZ À DISTANCE
TENEZ VOS CHIENS EN LAISSE
NE TOUCHEZ PAS L'ANIMAL. VIVANT OU MORT, IL PEUT TRANSMETTRE DES MALADIES


MBAĞALARI ARAŞTIRMA
VE REHABİLİTASYON
MERKEZİ
SEA TURTLE RESEARCH
RESCUE AND REHABILITATION
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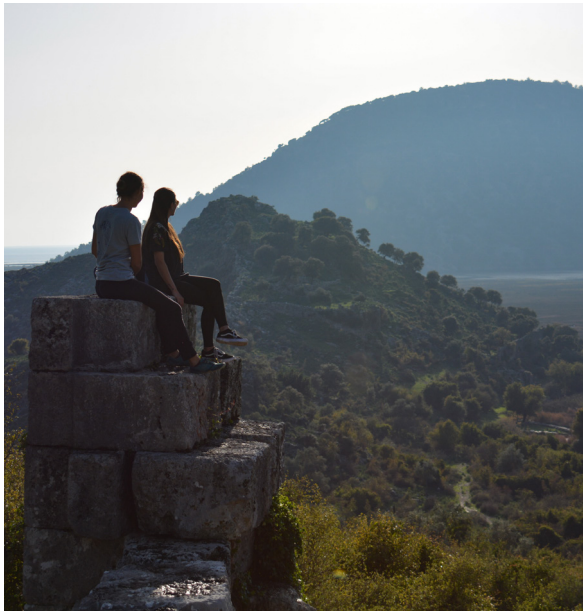
FIELD TRIP TO DALYAN

Participants visited DEKAMER, the sea turtle research, rescue and rehabilitation centre located in Dalyan-Muğla. Four turtles were released in front of the participants. After visiting the centre and exchanging with its director, participants boarded on a traditional boat for a trip along the river Boğazı that flows to the sea. After admiring the ancient Lycian rock tombs, the trip ended with some free time to shop for souvenirs or rest in a cafe.

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DENİZ OĞLU


DENİZ KAPLUMBAĞALARI ARAŞTIRMA
KURTARMA VE REHABİLİTASYON
MERKEZİ
SEA TURTLE RESEARCH
RESCUE AND REHABILITATION
CENTRE

APPENDIX 1 - PROGRAM OVERVIEW

Monday 11 November

9:00 - 13:15	**MedPAN General Assembly** - Main Ballroom **(on invitation)**
15:00 - 17:30 :	Special event for the preparation of the 2020 Mediterranean MPA Roadmap evaluation and Forum - Main Hall **(on invitation)**
19:30-21:00:	**MedPAN social event** «Traditional local aperitif»

Tuesday 12 November

8:30 - 9:00	**Registrations and welcoming of the participants**	Lobby
Opening of the workshop		
9:00 - 9:15	**Welcoming words** - Purificacio Canals, President of MedPAN	Main Hall
9:15 - 9:45	**Offical speech** - Mr Turgay Turkyilmaz, General Director of Fisheries and Aquaculture General Directorate, Turkey	
9:45 - 10:15	**Programme overview** - Pierre Vignes & Susan Gallon, MedPAN	
10:15 - 10:45	*Coffee break*	
10:45 - 11:15	**Keynote speech** - Laurent Sourbès, Zakynthos National Marine Park & Susan Gallon, MedPAN	
11:15 - 11:45	**General presentation of the MPA of Gökova** - Zafer Kizilkaya, Mediterranean Conservation Society, Turkey	
11:45 - 12h00	**Protection and defence of key biodiversity areas along Turkish coasts** - Cem Orkun Kirac, SAD, Turkey	
12h00 - 13h00	**Q&As**	
13:00 - 14h:30	*Lunch*	• Hotel restaurant
MedPAN workshop breakout sessions		
14:30 - 16:00	**Workshop breakout sessions -** 3 sessions in parallel	Main Hall, Room A, Room B
16:00 - 16:30	*Coffee break in the lobby*	
16:30 - 18:00	**Workshop breakout sessions -** 3 sessions in parallel	Main Hall, Room A, Room B
18:30 - 20:00	**COGITO project special event - cocktail party**	• Hotel garden *Weather permitting*

Wednesday 13 November

14:00-17h30 :
(upon invitation only)
COGITO project Steering Committee - Room C

09:00 - 10:30	**Workshop breakout sessions -** 3 sessions in parallel	• Main Hall, Room A, Room B
10:30 - 11:00	*Coffee break in the lobby*	
11:00 - 12:30	**Workshop breakout sessions -** 3 sessions in parallel	
12:30 - 14:00	*Lunch*	• Hotel restaurant
14:00 - 15:30	**Workshop breakout sessions -** 3 sessions in parallel	• Main Hall, Room A, Room B
15:30 - 16:00	*Coffee break*	
16:00 - 17:30	**Workshop breakout sessions -** 3 sessions in parallel	
17:30 - 18:30	**Closing session** • Conclusions on the spot - Pierre Vignes & Susan Gallon, MedPAN and sessions coordinators • Closing words - Zafer Kizilkaya, MCS	• Main Hall
20:00	*Dinner at Kordon restaurant along the river and live music at Kum Kafe after dinner*	

Thursday 14 November

Field trip to Dalyan	
08:30	Departure from Yücelen hotel by bus
17:30	Return trip to Yücelen hotel (through Dalaman airport for participants leaving in the evening)
20:00	Dinner

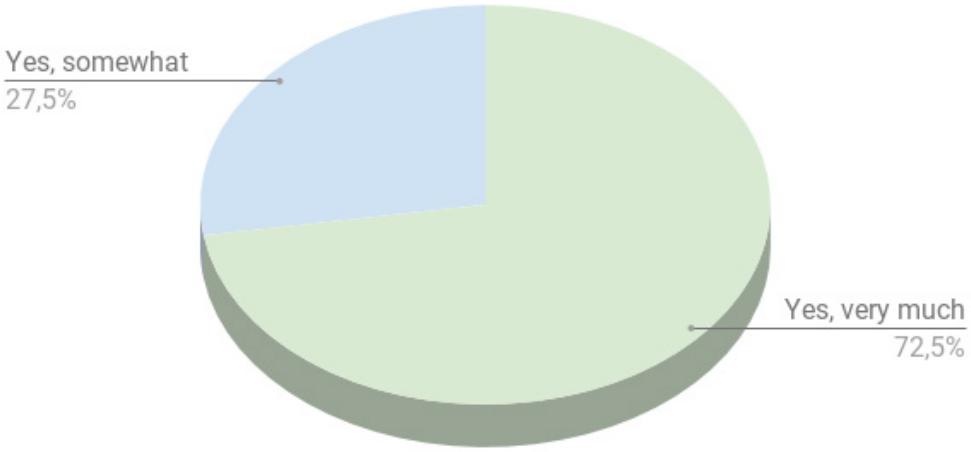
Friday 15 November / Saturday 16 November - on invitation only

MedFund workshop	
Friday 15 November - Presentations and discussions on the financial needs and management effectiveness of MPAs	Room B
Saturday 16 November - Working groups on financial needs analysis and management effectiveness	Room B

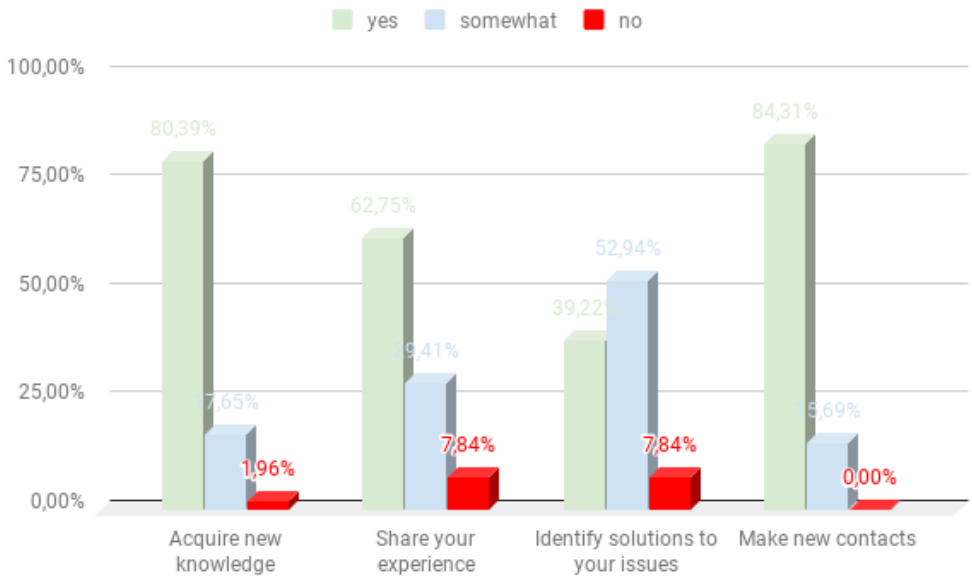
APPENDIX 2 - WORKSHOP EVALUATION

An evaluation survey was sent to 135 participants. Here are the main results from the 51 responses received (response rate: 37,78%)

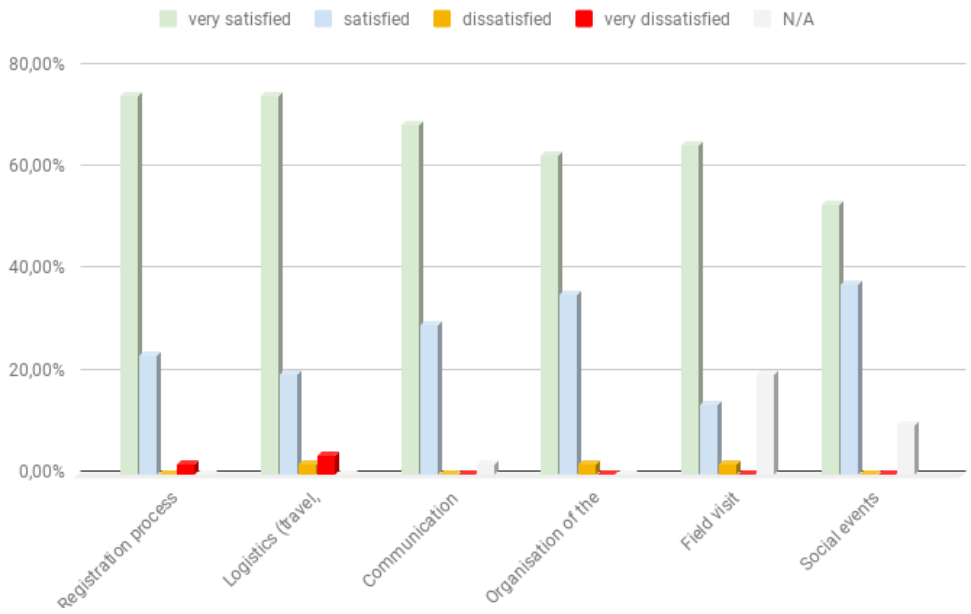
Overall, did this workshop meet your expectations?



This workshop was an opportunity to :



Are you satisfied with the organisation of the workshop?



The MedPAN collection

The MedPAN collection is a series of tools and user-friendly guidebooks that can provide guidance and build capacity on key issues that managers of Marine Protected Areas (MPA) in the Mediterranean have to confront daily.

The MedPAN collection is fully adapted to the Mediterranean context and is peer reviewed by MPA managers and experts of the region. It gathers tools and guidebooks developed by key players in the Mediterranean under a unified look and feel.

The MedPAN collection is an initiative of several Mediterranean partners. It is edited by MedPAN, the network of MPA managers in the Mediterranean.

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