Illegal fishing for sharks and rays is devastating marine ecosystems, and the situation in the Mediterranean is worse than anywhere in the world. In this busy, overexploited and semi-enclosed sea, more than half of all shark and ray species are severely threatened, and some face the real possibility of extinction in the region.

Despite legislation banning the landing of protected species of sharks and rays and restricting pressure on others, fishing for sharks and rays is very weakly controlled and bans are badly enforced. Toothless regulations aimed at conserving vulnerable shark and ray populations don’t go nearly far enough, and – as our evidence shows – those that are in place are routinely ignored in poorly managed markets all over the region.

The result: threatened species of sharks and rays are illegally caught while for others there is next to no reporting or management. And over the last decade, the situation has got much worse: it’s not yet a lost cause, but we need to take urgent action right now.

**MEDITERRANEAN SPECIES: DIVERSITY AND DECLINE**

The Mediterranean is a biodiversity hotspot for sharks and rays, with an amazing 80+ different species counted in its waters. But for how much longer? Shocking figures from the IUCN’s most recent assessment speak for themselves: more than a quarter of all 73 assessed species are ‘Critically Endangered’, which means they face an extremely high risk of extinction.

**SHARKS UNDER THREAT IN THE MEDITERRANEAN**

<table>
<thead>
<tr>
<th>Status</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critically endangered</td>
<td>20</td>
</tr>
<tr>
<td>Endangered</td>
<td>11</td>
</tr>
<tr>
<td>Vulnerable</td>
<td>8</td>
</tr>
<tr>
<td>Near threatened</td>
<td>9</td>
</tr>
<tr>
<td>Least concern</td>
<td>12</td>
</tr>
<tr>
<td>Data deficient</td>
<td>13</td>
</tr>
</tbody>
</table>

**KEY**

- **Critically endangered**: 20 species
- **Endangered**: 11 species
- **Vulnerable**: 8 species
- **Near threatened**: 9 species
- **Least concern**: 12 species
- **Data deficient**: 13 species

**Figure 1**: IUCN Red List figures for the Mediterranean, showing shark and ray species at risk of extinction - more than half are severely threatened.

**WHY DO SHARKS AND RAYS MATTER?**

- Sharks and rays are indicators of – and fundamental to – healthy oceans. Their influence extends from surface waters down to deep sea beds.
- As apex predators some sharks keep food webs diverse and in balance.
- Rays support complex sea-bottom ecosystems and transfer nutrients up through the water column.
- Globally sharks and rays are increasingly popular with tourists, offering a potential new source of income for coastal communities.
- Shark fisheries can support thousands of livelihoods and provide an important food source in the Mediterranean, but sustainable management is critical.
Illegal, Unreported and Unregulated (IUU) fishing is the number one threat to sharks and rays in the Mediterranean today, and we have compelling evidence that it continues to take place all over the region. All kinds of species of sharks and rays are regularly caught by nets and longlines, whether as unwanted catch (bycatch) or as directly targeted quarry. Because of widespread illegality and a lack of management and control, far too many are killed each year, causing enormous damage to marine ecosystems. Many of these species are protected and critically endangered. If we want them to survive into the future, we need to fix all three parts of the IUU problem.

**WHY DOES IUU HAPPEN?**

1. **Lack of awareness** – many fishers don’t know which species are being caught, where and when, we can’t design measures to conserve them.
2. **Lack of resources** – authorities don’t have the capacity for training and/or to enforce existing rules.
3. **Lack of data** – since species are not identified and recorded properly in logbooks or at landing, management and traceability is impossible. Both cause and consequence of IUU fishing, lack of data creates a vicious circle of bad management.
4. **Lack of spatial protection** – many critical shark and ray habitats (like nursery and breeding areas) are not effectively protected, leaving them open to accidental catches. By closing these areas to all fishing activities, populations could start to recover.
5. **Lack of compliance** – economic interest can drive fishers to ignore existing rules: we have seen them sell sharks and rays outside the market, and they are caught as bycatch.
6. **Lack of tracking** – many reporting systems do not exist at all, or the data they do collect is not reported by species: if we don’t know which species are caught and brought to market in the Mediterranean are being caught and landed in EU and non-EU countries. We’ve received shocking evidence proving the high levels of IUU fishing of sharks and rays, some of them critically endangered and protected by law. Current regulations seem to make little difference at sea: highly protected species keep getting caught, and they end up on our plates. This is a small selection of the cases we received.

**Illegal** – Legislation prohibits retaining, landing and selling 2,4 species of sharks and rays in the Mediterranean. But enforcement is another matter: many fishers are either unaware of or simply ignore the restrictions, and catch and sell protected species anyway. In some cases, they sell them fraudulently as swordfish or other more commercially valuable seafood.

**Unreported** – Fisheries management needs detailed data, and sharks and rays make up a significant proportion of valuable seafood. Despite legislation, there are still reports of mako sharks being sold as swordfish in 32 out of 80 samples tested. There are also reports of shortfin mako being landed and sold in other countries including Greece, Spain, Tanisa, and Turkey. Illegal, unreported and unregulated catches are an important source of income. Landings are protected from fishing by regional and national protected areas.

**Unregulated** – Some sharks and ray fisheries fall outside any regulations, despite States’ responsibilities for the conservation of living marine resources under international law, which means there are no safeguards in place to manage their exploitation. As mostly slow-growing, late-breeding animals, shark and ray populations may fail to recover if not protected. Many of these species are protected and critically endangered. If we want them to survive into the future, we need to fix all three parts of the IUU problem.

**IUU FISHING: COMING TO A SEAFOOD MARKET NEAR YOU...**

Protected and threatened shark and ray species are being caught and landed in Mediterranean fisheries in all EU and non-EU countries. We’ve received shocking evidence proving the high levels of IUU fishing of sharks and rays, some of them critically endangered and protected by law. Current regulations seem to make little difference at sea: highly protected species keep getting caught, and they end up on our plates. This is a small selection of the cases we received.

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WWF would like to thank the MECO project for providing their social media evidence and for their contribution to the protection of sharks and rays in the Mediterranean.

The MECO Project (Mediterranean Elasmobranch Citizen Observations) is a Mediterranean initiative using social media to create a regional database of elasmobranch observations through 10 local Facebook groups where local scientists collect shark and ray observations with the help of citizen scientists. The groups include Sharks in Israel, iSea, Marine Biology Libya, SUBMON, Marine and Environmental Research (MER) Lab, MedSea, and Associacio Lamna.


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