

# Illegal bottom trawling in the Mediterranean: the case of 'kiss trawling' in the Gulf of Gabès, Tunisia.

Briefing for decision makers

MARCH 2023







*Posidonia oceanica* meadow © Dimitris Poursanidis



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## Executive summary

- This briefing examines the impact of a form of shallow water bottom trawling, known locally as ‘kiss’ trawling, in the Gulf of Gabès region of Tunisia.
- The Gulf of Gabès is host to one of the largest remaining expanses of the seagrass species *Posidonia oceanica*, which is protected under the Barcelona and Bern Conventions. The species provides globally and regionally important ecosystem services – sequestering carbon, enhancing water quality, protecting coastal areas from erosion and providing nursery grounds and habitat for marine species, which support key commercial fisheries.
- The area is also home to ‘charfia fishing’, a traditional, low-impact fishing method unique to the Kerkennah Islands that is included on the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.
- In just over a decade, kiss trawling has emerged as a major threat to local livelihoods and marine biodiversity in the Gulf of Gabès. Hundreds of kiss trawlers have been observed in ports in the area, with numbers increasing by over a third between 2018 and 2022. Kiss trawlers have been documented operating at sea, working in groups to systematically trawl large areas and deter enforcement. It is practised openly, despite being outlawed under Tunisian law.
- Kiss trawlers operate in shallow waters close to the shore, in apparent contravention of conservation and management measures adopted by the General Fisheries Commission for the Mediterranean (GFCM). The practice is destroying sensitive *P. oceanica* meadows, driving fisheries declines and threatening local livelihoods.
- Artisanal fishers claim that their traditional fishing methods are unable to compete with more lucrative kiss trawling practices, which also damage their fishing gear. Some have themselves turned to kiss trawling to make a living.
- There are indications that illegal catches from the kiss trawl fleet are mixed with legal catches and exported to the European Union (EU), potentially via Italy and Spain, in contravention of the EU’s regulation to end illegal, unreported and unregulated (IUU) fishing.
- Urgent action is required from the Tunisian government, EU institutions and the GFCM to end illegal kiss trawling, to protect the Gulf of Gabès’ biologically and economically important coastal habitats, and to safeguard the livelihoods and the viability of artisanal fishing communities.



Size of fish caught by a kiss trawl documented by E.J.F.



# Recommendations

The following recommendations are directed at the Tunisian government, the EU and the GFCM for specific actions to end illegal kiss trawling.

## To the government of Tunisia, which should:

1. **Commit to eradicating illegal kiss trawling and develop a roadmap to this end**, in coordination with the governorate of Sfax, stakeholders from civil society, fishing communities and seafood traders, with a clear deadline for implementation by the end of 2024 given the severity of the issue.
2. **Reform the national fisheries law framework** to *inter alia*: (i) define precisely the fishing methods that constitute illegal fishing, including the practice of kiss trawling; (ii) set out comprehensive powers of inspection and enforcement to the competent authorities ensuring clarity concerning their respective mandates; (iii) establish protocols for information sharing and exchange between authorities with enforcement-related functions; (iv) establish clear requirements for port and vessel inspections; (v) impose effective, proportionate and dissuasive sanctions on offenders engaging in or supporting IUU fishing, including the cancellation of licences, and the seizure and confiscation of vessels and fishing gear.
3. **Allocate adequate financial and human resources** to enable effective monitoring, control, surveillance and enforcement, particularly in the governorate of Sfax, and **establish a new enforcement body** under the jurisdiction of the Ministry of Fisheries and Agriculture dedicated only to fisheries law enforcement.
4. Require smaller fishing vessels to be permanently marked with **unique identification numbers** and record this information in a central database. Consider starting a pilot project to **introduce vessel tracking** on small-scale fishing vessels.
5. **Implement national legislation on protected areas**, prioritising the designation and enforcement of the proposed network of marine protected areas and implementation of their management plans, and ensuring the meaningful participation of fishing communities and other stakeholders through collaborative management.
6. **Adhere to Tunisia's regional and international obligations**, including GFCM conservation and management measures and provisions of the Bern Convention and the Protocol to the Barcelona Convention Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol).
7. Implement the **national plan of action for the protection of *P. oceanica* habitat and other marine vegetation**<sup>1</sup> within Tunisia's territorial waters, with a view to ensuring maximum possible protection and recovery of the species, as required under the SPA/BD Protocol.
8. Support impacted fishermen to **sustainably transition away from kiss trawling** by the end of 2024, and engage with the international community to **target development and climate funding** for this purpose. Use of funding from the Global Environment Facility (GEF) project 'Fisheries and Ecosystem Based Management for the Blue Economy of the Mediterranean' (FishEBM MED) could be considered.
9. **Reorientate efforts under the national plan to develop the production and commercialisation of African blue swimming crab** to ensure support is focused on sustainable, low impact methods of crab harvesting and that subsidies are not funding the activities of illegal operators.

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<sup>1</sup> SPA/RAC - ONU Environnement/PAM (2021). *Plan d'Action National pour la Conservation de la Végétation Marine en Tunisie*. Par BOUAFIF Cyrine, RAC/SPA publ., Tunis: 73 pp+ Annexes.

10. Commit to improving transparency in fisheries management and governance in accordance with the **ten principles of the Global Charter for Transparency** in the fishing industry.<sup>2</sup>
11. Engage with the seafood market in Tunisia on the **implementation of traceability measures** to ensure illegally harvested seafood is not reaching the EU and other markets (e.g. in Asia).

### To the EU:

1. **The European Commission** should engage **in cooperation and dialogue with the Tunisian authorities** with a view to help end illegal kiss trawling and to ensure full traceability in supply chains to prevent illegally harvested seafood products from entering the EU market, including within the framework of the IUU Regulation.
2. **The European Commission** should, with a view to supporting EU Member States in enforcing the implementation of the IUU Regulation with regard to Tunisia, bring to their attention the IUU fishing risks identified in this briefing through appropriate channels, especially **the Mutual Assistance system set out in Chapter XI of the EU IUU Regulation**.
3. **The EU Member States, in particular Italy and Spain**, which receive the majority of octopus, squid and shrimp imports from Tunisia (and, in the case of Italy, crab imports), should **increase scrutiny of catch certificates for fisheries imports** stemming from Tunisia into the EU market to ensure legal origin, in accordance with Articles 16 and 17 of the EU IUU Regulation.
4. **The European Commission** should, in cooperation with the Tunisian authorities, ensure that relevant existing and future EU-funded projects and programmes promote sustainable fisheries and include safeguards on the protection of marine ecosystems and associated ecosystem services (including climate mitigation).
5. **The European Commission and the European Fisheries Control Agency (EFCA)** should ensure that the support given to the Tunisian authorities on fisheries control and inspection through the **EU project “Mediterranean virtual regional training academy on fisheries control and inspection (e-FishMed)”**, contributes to addressing gaps in the implementation of national and regional (i.e. GFCM) regulations pertaining to kiss trawling.
6. **The European Parliament** should consider investigating the environmental, economic and social impacts of illegal kiss trawling in the Gulf of Gabès, with a view to increasing cooperation between the EU and Tunisian authorities to improve compliance with GFCM Recommendations, as well as the implementation of Tunisia’s international obligations under the Bern Convention and SPA/BD Protocol to the Barcelona Convention on the protection of *P. oceanica* habitat.
7. **The European Commission, EFCA and the Member States** should, when exploring the extension of the EFCA Joint Deployment Plan involving third countries, consider Tunisia as a priority partner country.

### To the General Fisheries Commission for the Mediterranean (GFCM):

The GFCM should, at its **Compliance Committee** in May 2023, urgently discuss the possible non-compliance with GFCM Recommendation **GFCM/36/2012/3**<sup>3</sup> regulating fishing activities and bottom trawling in the Gulf of Gabès. To address the situation the GFCM should call on Tunisia to strengthen control of the affected areas to stop illegal kiss trawling.

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2 Coalition for Fisheries Transparency (undated). Global Charter for Fisheries Transparency. <https://fisheriestransparency.net/wp-content/uploads/2023/03/ONEPAGER-FINAL.pdf>

3 Recommendation GFCM/36/2012/3 on fisheries management measures for the conservation of sharks and rays in the GFCM area of application. Paragraph 5(a) provides that Contracting parties and cooperating non-contracting parties shall ensure that fishing activities carried out with trawl nets are prohibited within 3 nautical miles of the coast, provided that the 50 metre isobath is not reached, or within the 50 metre isobath where that depth is reached at a shorter distance from the coast.

## Background

Bottom trawling – which involves scraping weighted nets and rigid structures along the ocean floor<sup>4</sup> – is one of the most unselective and destructive forms of fishing.<sup>5</sup> Whether conducted by industrial or small-scale vessels, the practice causes long-lasting<sup>6</sup> and potentially irreversible damage<sup>7</sup> to marine habitats and threatens populations of sensitive species such as sharks,<sup>8</sup> turtles<sup>9</sup> and dolphins.<sup>10</sup> It leaves lifeless ocean deserts in its wake, while leading to the release of significant quantities of carbon from the seafloor into the water, which is likely to increase ocean acidification and may potentially aggravate climate breakdown.<sup>11</sup> The practice is not only destructive for nature but also for coastal communities; by driving coastal erosion, lowering water quality and robbing fishers of irreplaceable livelihoods, it undermines the ability of already highly vulnerable communities to adapt to climate change.<sup>12</sup>

The Mediterranean Sea, which is already heavily impacted by overfishing, habitat degradation, pollution, invasive alien species and climate change,<sup>13</sup> is not immune to trawling impacts. Despite the progress made in establishing protected areas and other types of spatial closures where bottom trawling should not occur, this hugely destructive practice continues even where it is considered illegal. The recently launched Med Sea Alliance online Atlas recorded evidence of potential and confirmed cases of bottom trawling in no-trawl areas across the Mediterranean.<sup>14</sup>

In this briefing, we take an in-depth look into the extent and impacts of illegal trawling activities in one of the most biodiverse and sensitive areas of the Mediterranean, the Gulf of Gabès region of Tunisia, and present recommendations to end illegal bottom trawling. The research focuses specifically on the practice known locally as ‘kiss’ trawling, which has proliferated over the past decade,<sup>15</sup> causing destruction of marine ecosystems<sup>16</sup> and loss of livelihood for local fishers.<sup>17</sup> Kiss trawling is so called because the vessels use bag-shaped nets in their fishing activities: ‘kiss’ is Arabic for ‘bag’. Kiss trawlers are small wooden boats less than ten metres in length that operate bottom trawls in shallow waters of between 5 and 15 metres depth, sometimes less.<sup>18</sup>

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## Legal status of kiss trawling

The practice of kiss trawling is expressly prohibited under Article 15 of the Tunisian Order of the Minister of Agriculture of 28 September 1995 (the 1995 Order), although it is not precise in specifying what gear this entails, which has hindered enforcement of this provision in practice.<sup>19</sup> Article 27(5) of the 1995 Order also prohibits the use of bottom trawl gear in depths of less than 50 metres in the Gulf of Gabès, subject to a special dispensation for shrimp fishing during defined periods (15 May-30 June and 16 October-30 November, inclusive)<sup>20</sup> when fishing can take place beyond 30 metres depth (Article 35 of the 1995 Order).

At the regional level, General Fisheries Commission for the Mediterranean (GFCM) Recommendation GFCM/42/2018/5 prohibits bottom trawling between the coast and the 200 metre isobath in the Gulf of Gabès between July and September each year, to allow marine species and ecosystems to recover.<sup>21</sup> This measure has been applied to the Tunisian fleet operating in the Gulf of Gabès since 2009, in accordance with a recommendation of the GFCM Scientific Advisory Committee (SAC) concerning the reduction of fishing effort for demersal stocks in the Mediterranean.<sup>22</sup> GFCM Recommendation GFCM/36/2012/3 aimed at the conservation of shark and rays in the GFCM area of application also prohibits the use of trawl nets within three nautical miles of the coast, or the 50 metre isobath, whichever is closer to the coast. The Gulf of Gabès is designated by GFCM as an area of Essential Fish Habitat (EFH).<sup>23</sup>



A kiss trawler observed by EJJ operating in the Gulf of Gabès in February 2022.

19 FishAct (2023). *Illegal shallow water bottom trawling, i.e. "Kiss" trawling in the gulf of Gabes, Tunisia*. FishAct investigation report. <https://fishact.org/tunisia-campaign-report-2022/>

20 As set out in Article 34 of the 1995 Order, as amended by the Order of the Minister of Agriculture of 19 December 2001.

21 "Any fishing activity with bottom trawlers shall not be allowed between the coast and the 200 meters depth isobaths of GSA 14 (Gulf of Gabès). This closure shall apply from 1 July until 31 September." – paragraph 18, Recommendation GFCM/42/2018/5 on a multiannual management plan for bottom trawl fisheries exploiting demersal stocks in the Strait of Sicily (geographical sub areas 12 to 16), repealing Recommendations GFCM/39/2015/2 and GFCM/40/2016/4.

22 Law N° 2009-17 of 16 March 2009 on the biological rest scheme in the fisheries sector and its financing and Appendix 12 (pending proposal of Tunisia for a GFCM Recommendation on the establishment of a closing season in the GFCM GSA 14) to FAO (2016). *General Fisheries Commission for the Mediterranean*. Report of the thirty-ninth session. Milan, Italy, 25–29 May 2015. <https://www.fao.org/publications/card/en/c/dcff3bac-72d7-43ca-8f02-d0c7a550467f/>

23 Essential fish habitats are defined as habitats identified as essential to the ecological and biological requirements for critical life history stages of exploited fish species, and which may require special protection to improve the status of the stocks and long-term sustainability (GFCM Resolution GFCM/41/2017/5).



# Socio-economic, cultural and ecological significance of the Gulf of Gabès

The Gulf of Gabès is one of the most important fishing areas in Tunisia. Its high productivity, shallow marine environment and smooth seabed topography create favourable conditions for fishing activities. The majority of fishing activities around the Gulf of Gabès are coastal and small-scale in nature, employing 63% of the area's fishers.<sup>24</sup> The area is subject to particularly heavy fishing pressure, hosting the third highest number of operational fishing vessels of all Mediterranean regions (FAO Geographical Sub-Area (GSA) 14), representing 8.4% of total vessels.<sup>25</sup> Around 52% of Tunisia's fishing fleet (which totals around 13,000 vessels) operates in this gulf, contributing 39.3% of national fish production.<sup>26</sup> The Gulf of Gabès suffers from the highest levels of overfishing in Tunisia,<sup>27</sup> with fish populations reportedly overfished by more than 30%.<sup>28</sup>

The Gulf of Gabès is culturally significant as the location of 'charfia' fishing,<sup>29</sup> a traditional, low-impact fishing method unique to the Kerkennah Islands that was included in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity in 2020.<sup>30</sup> The Kerkennah Islands are host to over half of all fishing vessels in the Sfax governorate. The islands' 15,500 inhabitants are heavily reliant on the sea for their livelihoods<sup>31</sup> – in 2014, 43% of workers were engaged in the fishing sector compared to 16.5% at the national level.<sup>32</sup> Their way of life is under threat due to declining fish populations linked to overfishing, while being highly vulnerable to sea level rise caused by global heating.<sup>33</sup>

From an ecological perspective, the Gulf of Gabès is of exceptional significance. It hosts benthic communities of macroalgae and seagrasses such as *Cymodocea nodosa* and *Zostera noltei*, Critically Endangered species such as the Mediterranean Fan Mussel *Pinna nobilis*<sup>34</sup> and species protected under Annex II of the Barcelona Convention, such as the sponges *Geodia cydonium* and *Aplysina aerophoba*.<sup>35</sup> In particular, the Gulf of Gabès is known to host one of the largest remaining expanses of *Posidonia oceanica*, a species of seagrass endemic to the Mediterranean (**Figure 1**).<sup>36</sup>

Seagrass meadows are among the most valuable ecosystems on Earth in terms of the goods and services they provide.<sup>37</sup> Rates of carbon sequestration of *P. oceanica* meadows are comparable to key terrestrial carbon sinks such as peatlands,<sup>38</sup> and up to 70 times the rate of tropical forests,<sup>39</sup> absorbing an estimated 15-20% of Tunisia's CO<sub>2</sub> emissions.<sup>40</sup> They also protect coastal areas from erosion due to rising sea levels. This is a critical service in the Maghreb, where a high proportion of the population lives on or near the

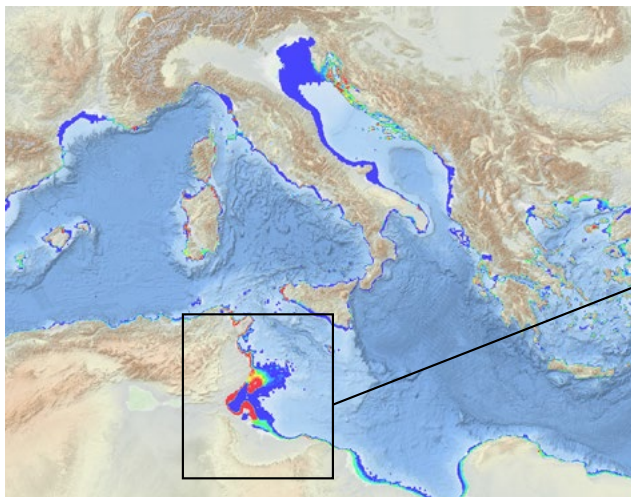
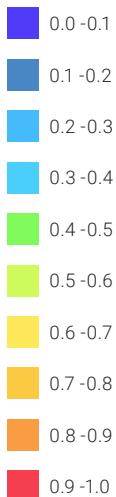
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- 29 The charfia is a fixed, passive fishery system, in which palm fronds embedded on the seafloor form a triangular barrier that channels fish into capture chambers on the ebb tide and finally into a net or trap: United Nations Educational, Scientific and Cultural Organization (UNESCO) (undated). 'Charfia fishing in the Kerkennah Islands', UNESCO.
- 30 United Nations Educational, Scientific and Cultural Organization (UNESCO) (undated). 'Charfia fishing in the Kerkennah Islands', UNESCO. <https://ich.unesco.org/en/RL/charfia-fishing-in-the-kerkennah-islands-01566>. [accessed 6 October 2022]
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- 39 Campagne, C. S., Salles, J. M., Boissery, P., & Deter, J. (2015). The seagrass *Posidonia oceanica*: Ecosystem services identification and economic evaluation of goods and benefits. *Marine Pollution Bulletin*, 97(1–2), 391–400. <https://doi.org/10.1016/J.MARPOLBUL.2015.05.061>. Based on an estimated carbon sequestration for *P. oceanica* of between 6 and 175 g C/m<sup>2</sup>/year, compared to 2.3–2.5 g C/m<sup>2</sup>/year for tropical forests.
- 40 *Ibid.*



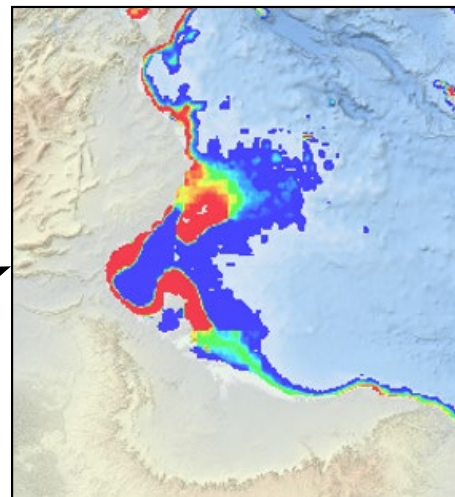
coast (85% in Tunisia specifically),<sup>41</sup> and where rates of coastal erosion are the second highest in the world (with the highest rates of retreat found in Tunisia).<sup>42</sup> *P. oceanica* meadows further enhance water quality through oxygenation and serve as an important regional nursery area and habitat for many marine species (including endangered species of sharks and marine turtles),<sup>43</sup> supporting key commercial fisheries.

**Figure 1: Distribution of *Posidonia oceanica* (a) in the Mediterranean and (b) the Gulf of Gabès specifically.**

***Posidonia oceanica* distribution (seagrass species)  
(Probability occurrence: from absent 0 to present 1)**



**Gulf of Gabès**



**Source:** Adapted from European Commission, European Atlas of the Seas. [https://ec.europa.eu/maritimeaffairs/atlas/maritime\\_atlas/](https://ec.europa.eu/maritimeaffairs/atlas/maritime_atlas/) [accessed 28 February 2023]



Charfia fishing system in the Kerkennah Islands.

41 Schaer, C. and Guizani, T. (2022). 'North Africa's disappearing beaches', DW (20.07.22). <https://www.dw.com/en/why-are-north-africas-beaches-disappearing/a-62529665>. [accessed 11 October 2022]

42 Heger, M.P. and Vashold, L. (2021). *Disappearing coasts in the Maghreb: Coastal erosion and its costs*. Maghreb Technical Notes Series. No. 04 - May 2021. World Bank Group. <https://www.worldbank.org/en/country/morocco/publication/disappearing-coasts-in-the-maghreb-coastal-erosion-and-its-costs>

43 Boudouresque C. F., Bernard G., Bonhomme P., Charbonnel E., Diviacco G., Meinesz A., Pergent G., Pergent-Martini C., Ruitton S., Tunesi L. (2012). *Protection and conservation of Posidonia oceanica meadows*. RAMOGE and RAC/SPA publisher, Tunis: 1-202. [https://www.rac-spa.org/sites/default/files/doc\\_vegetation/ramoge\\_en.pdf](https://www.rac-spa.org/sites/default/files/doc_vegetation/ramoge_en.pdf)



***“The Gulf of Gabès is a very important region. Many species come for nursery, nutrition and to reproduce in this area. We can imagine how rich the area is in terms of species, and how important it is in the life cycle of many creatures which live in the Mediterranean, not only in Tunisia.”***

Olfa Sehli, Head of Tunisian Association for Wildlife

The *P. oceanica* meadows in the Gulf of Gabès are protected under the Protocol to the Barcelona Convention Concerning Specially Protected Areas and Biological Diversity in the Mediterranean (SPA/BD Protocol)<sup>44</sup> and the Bern Convention,<sup>45</sup> to which Tunisia is signatory. The SPA/BD Protocol requires Parties to ensure the “maximum possible protection and recovery of flora species listed in Annex II” (Article 12(2)), which includes *P. oceanica*, and “to regulate, and where appropriate, prohibit all forms of destruction and disturbance” (Article 11(5)). The Bern Convention requires parties to take “appropriate and necessary legislative and administrative measures to ensure the special protection of the wild flora species specified in Appendix I”, which includes *P. oceanica*, and to prohibit the deliberate cutting or uprooting of such plants (Article 5). In addition, in June 2012,<sup>46</sup> members of the Barcelona Convention agreed on an Action Plan for the conservation of marine vegetation in the Mediterranean Sea, which includes the protection of *P. oceanica* and the other aforementioned seagrass species. Two of the key actions agreed in this Action Plan are “avoiding loss and degradation of the seagrass meadows, and of other vegetal assemblages of importance for the marine environment, as marine habitats that are essential to the survival of many Mediterranean species, and keeping them in favourable conservation status” and “ensuring the conservation of marine vegetal assemblages that could be considered natural monuments, such as barrier reefs of *Posidonia*...”<sup>47</sup>



A small-scale fisher returns to port with a meagre catch.

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44 The SPA/BD protocol is the Mediterranean’s main tool for implementing the 1992 Convention on Biological Diversity - for further details, see: <https://www.rac-spa.org/protocol> [accessed 24 October 2022].

45 1979 Convention on the Conservation of European Wildlife and Natural Habitats

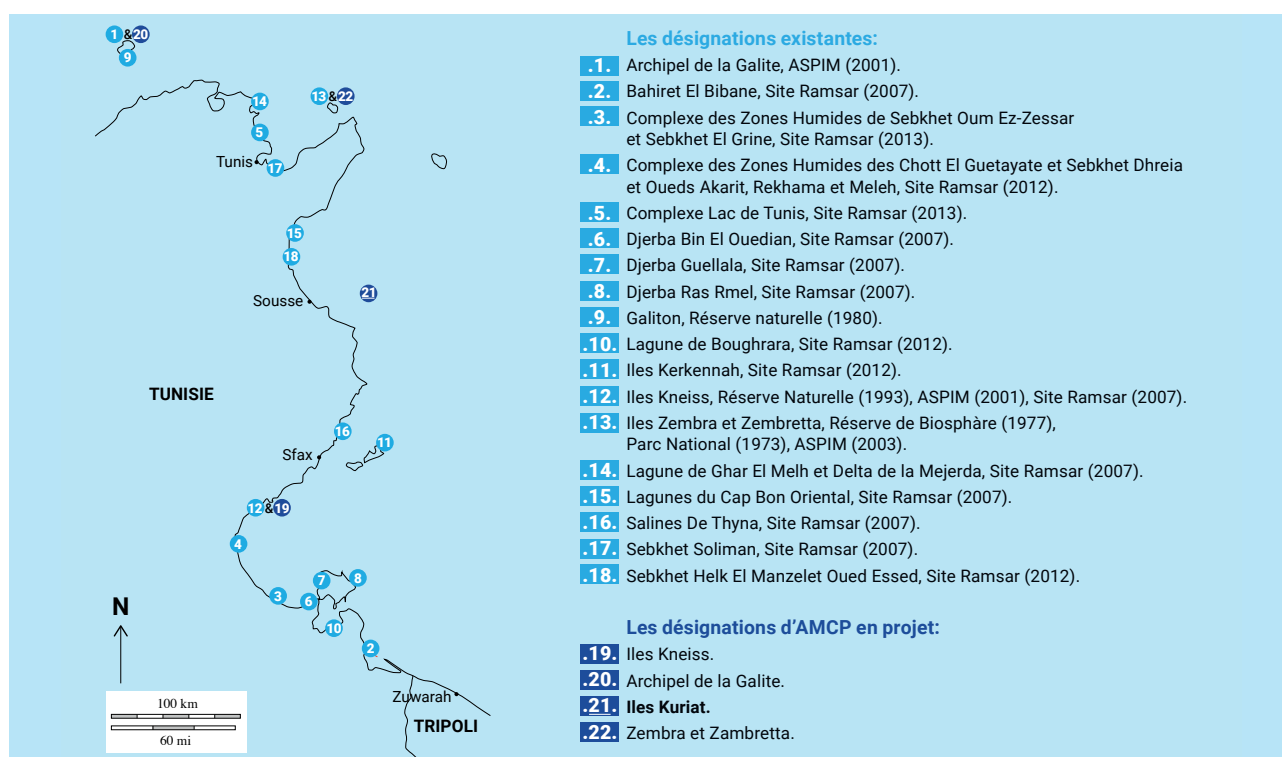
46 UNEP-RAC/SPA (2012). *Action plan for the conservation of marine vegetation in the Mediterranean Sea*. [https://www.rac-spa.org/sites/default/files/action\\_plans/apveg2012en.pdf](https://www.rac-spa.org/sites/default/files/action_plans/apveg2012en.pdf)

47 *Ibid.* at paras. 7.2 and 7.3

In spite of these protections, *P. oceanica* meadows have experienced extensive losses, regressing by an estimated 34% over the past 50 years.<sup>48</sup> In the Gulf of Gabès, degradation of *P. oceanica* meadows resulted in an overall estimated economic loss of €105 million in 2014,<sup>49</sup> and an estimated economic loss to coastal fisheries of approximately €750 million between 1990 and 2014.<sup>50</sup> The destruction of *P. oceanica* meadows releases carbon back into the environment, undermines the ability of coastal communities to adapt to the impacts of global heating and exacerbates vulnerability to sea level rise/ coastal erosion. In Tunisia, the direct costs of coastal erosion are estimated to be US\$1.1 billion annually, equating to 2.8% of gross domestic product (GDP), excluding values such as foregone revenues from tourism.<sup>51</sup>

Tunisia has designated 18 protected or managed areas with a marine component, the majority of which are Ramsar sites (15 sites).<sup>52</sup> In the Gulf of Gabès, this includes the Kerkennah Islands Ramsar site, which was designated in 2012, and the Kneiss Islands Specially Protected Area of Mediterranean Importance (SPAMI) under the Barcelona Convention (see **Figure 2**). In addition, 11 sites have been proposed as part of a national network of marine protected areas (MPAs), including the Kneiss Islands and the Kerkennah Islands.<sup>53</sup> While management plans have been drafted for several of these proposed sites, at the time of writing, Tunisia had not yet officially designated its first MPA under Law N° 2009-49 of 20 July 2009, relating to marine and coastal protected areas.

**Figure 2: Protected or managed areas with a marine component in Tunisia<sup>54</sup>**



**Source:** SPA/RAC et MedPAN (2019). *Le cadre juridique des Aires Marines Protégées en Tunisie : Fiches synthétiques*. Par Emmanouilidou P., Seddik W., Webster C., El Asmi S. et Kheriji A. Ed SPA/RAC. Projet MedMPA Network, Tunis : 11 pages. [https://www.rac-spa.org/sites/default/files/doc\\_medmpa\\_network/tunisia/amp\\_fiche\\_tunisie.pdf](https://www.rac-spa.org/sites/default/files/doc_medmpa_network/tunisia/amp_fiche_tunisie.pdf)

48 Telesca, L., Belluscio, A., Criscoli, A., Ardizzone, G., Apostolaki, E. T., Frascchetti, S., Gristina, M., Knittweis, L., Martin, C. S., Pergent, G., Alagna, A., Badalamenti, F., Garofalo, G., Gerakaris, V., Louise Pace, M., Pergent-Martini, C., & Salomidi, M. (2015). Seagrass meadows (*Posidonia oceanica*) distribution and trajectories of change. *Scientific Reports*, 5. <https://doi.org/10.1038/SREP12505>

49 el Zrelli, R., Hcine, A., Yacoubi, L., Roa-Ureta, R. H., Gallai, N., Castet, S., Grégoire, M., Courjault-Radé, P., & Rabaoui, L. J. (2023). Economic losses related to the reduction of *Posidonia* ecosystem services in the Gulf of Gabes (Southern Mediterranean Sea). *Marine Pollution Bulletin*, 186, 114418. <https://doi.org/10.1016/J.MARPOLBUL.2022.114418>

50 el Zrelli, R. et al. (2020). Economic impact of human-induced shrinkage of *Posidonia oceanica* meadows on coastal fisheries in the Gabes Gulf (Tunisia, Southern Mediterranean Sea). *Marine Pollution Bulletin*, 155, 111124. <https://doi.org/10.1016/J.MARPOLBUL.2020.111124>

51 *Ibid.*

52 SPA/RAC et MedPAN (2019). *Le cadre juridique des Aires Marines Protégées en Tunisie : Fiches synthétiques*. Par Emmanouilidou P., Seddik W., Webster C., El Asmi S. et Kheriji A. Ed SPA/RAC. Projet MedMPA Network, Tunis : 11 pages. [https://www.rac-spa.org/sites/default/files/doc\\_medmpa\\_network/tunisia/amp\\_fiche\\_tunisie.pdf](https://www.rac-spa.org/sites/default/files/doc_medmpa_network/tunisia/amp_fiche_tunisie.pdf)

53 These are: Tabarka (nord-ouest), la Galite, Cap Negro/Cap Serrat, Sidi Ali el Mekki, Zembra, les îles de Kuriat, les îlots situés au nord des Kerkennah, les îles Kneiss, la flèche de Ras Rmel (Jerba), la lagune de Boughrara et la lagune d'el Bibane. See: SPA/RAC - ONU Environnement/PAM (2019). *Plan de gestion de la partie marine et côtière des îlots nord de l'archipel de Kerkennah - Phase I : bilan diagnostic*. Par Cabinet Thétis-Conseil, Kheriji A., Limam A., Guellouz S. et Ben Hmdia A. Ed. SPA/RAC, Tunis: 79 p + annexes.

54 *Ibid.* In addition, the Kerkennah Islands have been proposed as an MPA - see SPA/RAC - ONU Environnement/PAM (2019). *Plan de financement de la future Aire marine et côtière protégée des îlots nord de l'archipel de Kerkennah (Tunisie)*. Par Le Port G., De Toma A., Binet T. Ed. SPA/RAC. Projet MedMPA Network - Tunis : 35 p + annexes. [http://www.rac-spa.org/sites/default/files/doc\\_medmpa\\_network/tunisia/plan\\_de\\_financement\\_des\\_iles\\_ne\\_kerkennah.pdf](http://www.rac-spa.org/sites/default/files/doc_medmpa_network/tunisia/plan_de_financement_des_iles_ne_kerkennah.pdf)



## Methodology

This investigation aimed to document the threat that kiss trawling poses to the ecologically and economically important ecosystems in the Gulf of Gabès and the traditional fishers that depend on those ecosystems for their livelihoods. The research involved a desk-based review of the relevant literature and fisheries trade data, followed by fieldwork in the Gulf of Gabès in early February 2022, during the high season for kiss trawling (which takes place from November to February). Field research, which was conducted by EJF staff, focused on the Kerkennah Islands in the governorate of Sfax, which is both a hotspot for kiss trawling and a crucial area for small-scale fishers and traditional fishing techniques that are unique to the region. EJF conducted a total of 13 interviews, including with seven fishers (two of whom were retired), two fish processors/net makers, one boat builder, one kiss fisher and two scientists based in Sfax and Tunis, respectively.<sup>55</sup>

This briefing also draws on the findings of two FishAct investigations conducted in the Gulf of Gabès in October 2018<sup>56</sup> and in November 2022.<sup>57</sup>



Kiss trawlers docked at the port of Sidi Youssef in the Kerkennah Islands. The otter doors and trawl nets are visible on board the vessels and on the dockside.

55 For further information, see EJF and FishAct (2023). Kiss of death: How illegal bottom trawling threatens ecosystems and livelihoods in Tunisia. <https://ejfoundation.org/reports/kiss-of-death-how-illegal-bottom-trawling-threatens-ecosystems-and-livelihoods-in-tunisia>

56 Zerelli, S. (2018). *Illegal bottom trawling in the Gulf of Gabès, Tunisia*. FishAct investigation 25.09 - 02.10.2018. FishAct. <https://fishact.org/2018/12/investigating-illegal-bottom-trawling-in-the-gulf-of-gabes-tunisia/>

57 FishAct (2023). *Illegal shallow water bottom trawling, i.e. "Kiss" trawling in the gulf of Gabes, Tunisia*. FishAct investigation report. <https://fishact.org/tunisia-campaign-report-2022/>

## Key findings

### a. Prevalence and mode of operation

This research confirms kiss trawling as a major threat to local livelihoods and marine biodiversity in the Gulf of Gabès.<sup>58</sup> Despite being prohibited under Tunisia’s fisheries laws, kiss trawling has emerged as a significant activity over the past decade.<sup>59</sup> The proliferation of kiss trawling has its roots in the economic and political upheaval of the 2010-11 Tunisian revolution – a response to soaring unemployment, especially among young people, and the rising cost of living.<sup>60</sup>

During a visit to the area in February 2022, the high season for kiss trawling,<sup>61</sup> EJJ counted tens of kiss trawlers at the ports of Sidi Youssef in the Kerkennah Islands and at Sidi Mansour in Sfax alone. In November 2022, FishAct documented 576 kiss trawlers within the district of Sfax, an increase of 38.5% on the number recorded by the organisation in 2018.<sup>62</sup>

The practice has attracted new entrants to the fishery, who have seen an opportunity to make a quick profit,<sup>63</sup> including graduates unable to find work, as well as artisanal fishers faced with diminishing catches. According to a 2022 FishAct investigation, alleged abuse of the public subsidy system may have allowed some kiss trawlers to access state-subsidised fuel, potentially feeding the expansion of the kiss trawling industry.<sup>64</sup> Worryingly, kiss trawling is no longer a marginal practice – a survey of 250 small-scale fishers in Kerkennah, conducted by the Tunisian Forum for Economic and Social Rights (FTDES) in 2021, found it is now practised by the majority of fishers around Mellita in the Kerkennah Islands.<sup>65</sup>

Fishers interviewed by EJJ report that kiss trawling takes place throughout the year, including during the closed season for trawling activities between July and September. Their main target species are cuttlefish, shrimps, octopus, red mullet and sea bream, as well as the invasive blue crab.

***“Now fishermen are not allowing the sea to rest because the kiss [boats] are trawling for the whole year. So if a squid comes to lay its eggs, the kiss takes it and it doesn’t lay its eggs. The same thing for the octopus and the fish, it takes everything. They don’t allow them to lay eggs and reproduce.”***

Wassim Ben Slimane, fisherman in Kerkennah

***“The kiss trawling fisher can have access to the port with his gear with the nets and everything, and he finds no problem to do so. He then offloads his catch in front of the authorities. In front of them, he sells his catch, and he gets the catch much easier than us. The law should be enforced. We don’t ask for something else.”***

Local fisher in Kerkennah

58 The government of Tunisia has already recognised the threat posed by illegal kiss trawling. The 2021 action plan for conservation of marine vegetation in Tunisia identifies kiss trawling as the activity responsible for “the greatest destruction of flora, seagrass and fish resources” (SPA/RAC - ONU Environnement/PAM (2021). *Plan d’Action National pour la Conservation de la Végétation Marine en Tunisie*. Par BOUAFIF Cyrine, RAC/SPA publ., Tunis: 73 pp+ Annexes, at p.12), while the increase in illegal kiss trawling is cited as a challenge in the fisheries sector in the 2021 review of the Ministry of Agriculture, Water Resources and Fisheries (République Tunisienne (2021). *Projet Annuel de performance de la Mission agriculture, ressources hydrauliques et pêche. Année 2021*. <http://www.gbo.tn/sites/default/files/2021-04/PAP-2021%20Agriculture%20ressources%20hydrauliques%20et%20p%C3%A8che%20maritime.pdf>, at p.44). In January 2023, the Minister of Agriculture, Water Resources and Fisheries met with fishers from the Gulf of Gabès to discuss their concerns surrounding the destruction of fishing gear due to trawling at illegal depths: Ministry of Agriculture, Water Resources and Fisheries (2023), ‘Working session with sailors from Gabes’, 23 January 2023. [accessed 9 March 2023] [https://www-agriculture-tn.translate.google/?p=22766&\\_x\\_tr\\_sl=auto&\\_x\\_tr\\_tl=en&\\_x\\_tr\\_hl=en&\\_x\\_tr\\_pto=wapp&\\_x\\_tr\\_sch=http](https://www-agriculture-tn.translate.google/?p=22766&_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=wapp&_x_tr_sch=http)

59 Zerelli, S. (2018). *Illegal bottom trawling in the Gulf of Gabès, Tunisia*. FishAct investigation 25.09 - 02.10.2018. FishAct. <https://fishact.org/2018/12/investigating-illegal-bottom-trawling-in-the-gulf-of-gabes-tunisia/>

60 *Ibid.*

61 The high season for kiss trawling takes place between November and February each year.

62 Zerelli, S. (2018). *Illegal bottom trawling in the Gulf of Gabès, Tunisia*. FishAct investigation 25.09 - 02.10.2018. FishAct. <https://fishact.org/2018/12/investigating-illegal-bottom-trawling-in-the-gulf-of-gabes-tunisia/>

63 FishAct (2023). *Illegal shallow water bottom trawling, i.e. “Kiss” trawling in the gulf of Gabes, Tunisia*. FishAct investigation report. <https://fishact.org/tunisia-campaign-report-2022/>

64 *Ibid.*

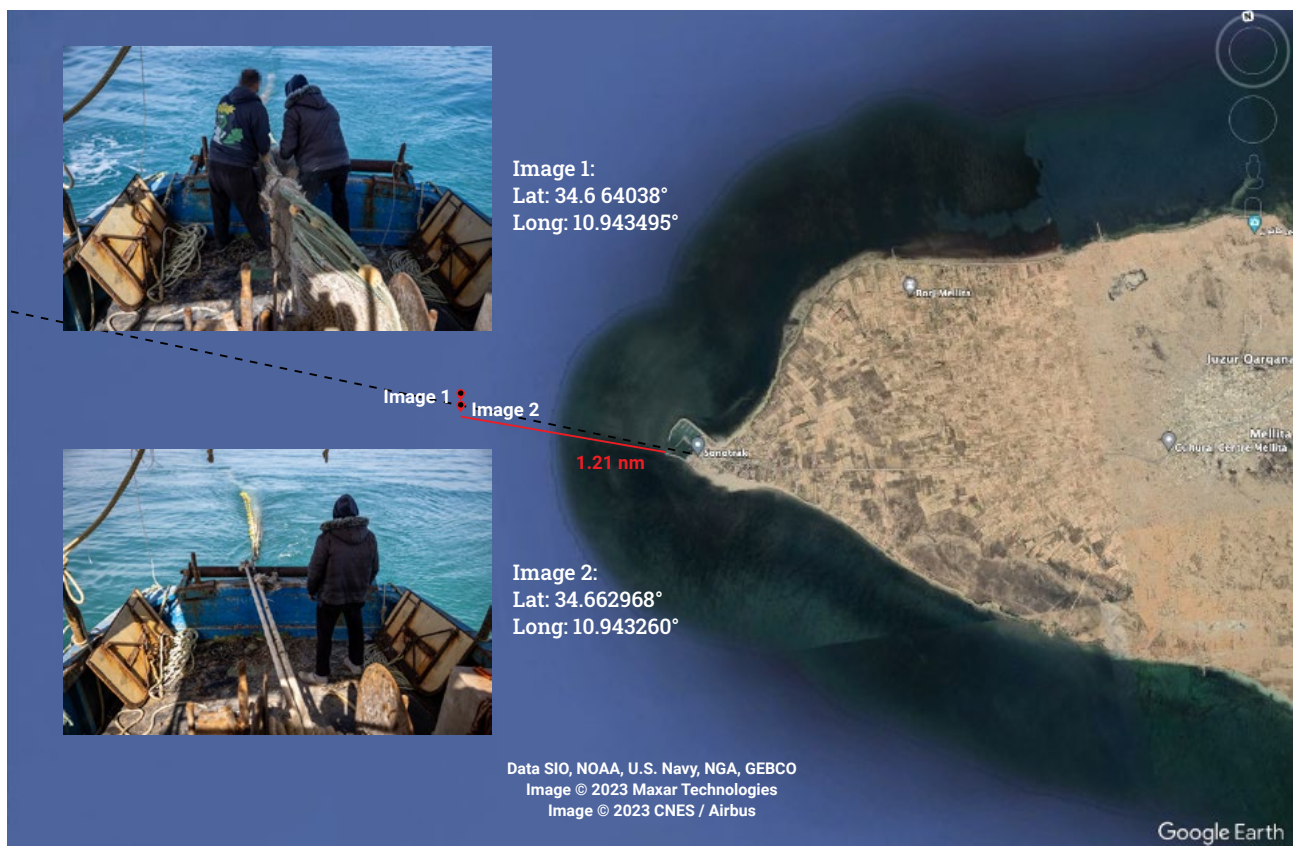
65 FTDES (2021). *Enquête auprès des petits pêcheurs sur la situation du secteur de la pêche côtière dans les régions Teboulba, Kerkennah et Zarzis*. <https://ftdes.net/en/enquete-aupres-des-petits-pecheurs-sur-la-situation-du-secteur-de-la-peche-cotiere-dans-les-regions-teboulba-kerkennah-et-zarzis/>



EJF investigators observed how kiss trawling operations, despite being illegal, are conducted in plain sight. From on board a kiss trawl vessel, EJF investigators documented a kiss trawling operation from start to finish, capturing geotagged images of the vessel with nets deployed at a distance of approximately 1.2 nautical miles from the coast of Mellita on the Kerkennah Islands (**Figure 3**), in apparent contravention of Tunisian law and GFCM Recommendation GFCM/36/2012/3 which prohibits bottom trawling within three nautical miles of the coast. **Figure 4** shows how this kiss trawling operation was conducted in an area of confirmed *P. oceanica* distribution in the Mediterranean. Images captured by EJF show seagrass, likely *P. oceanica*, present in the vessel's catches from the same fishing trip (**Figures 5 and 6**).

FishAct's 2022 investigation revealed how kiss trawlers now operate in a highly coordinated manner, in groups of up to 30 vessels, to systematically trawl large areas and cooperate in deterring enforcement action.<sup>66</sup> Kiss trawlers have been observed employing dangerous methods to evade capture, such as deploying ropes in the water which can become caught around the propellers of a patrol vessel (**Figure 7**).

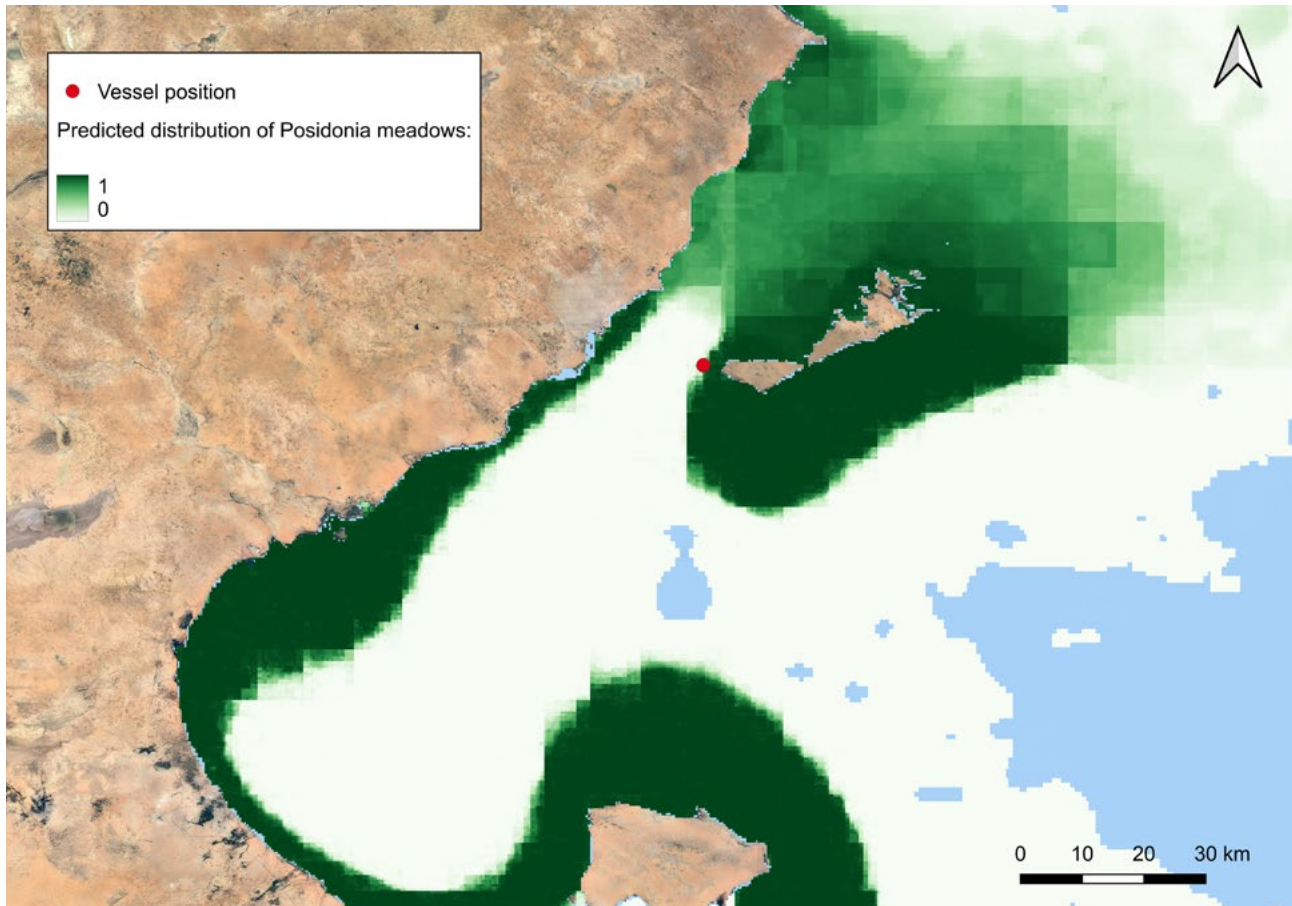
**Figure 3: Position of kiss trawling operations documented by EJF in relation to predicted distribution of *Posidonia oceanica* in the Gulf of Gabès**



66 FishAct (2023). *Illegal shallow water bottom trawling, i.e. "Kiss" trawling in the gulf of Gabes, Tunisia*. FishAct investigation report. <https://fishact.org/tunisia-campaign-report-2022/>



**Figure 4: Position of kiss trawling operations documented by EJF in relation to predicted distribution of *Posidonia oceanica* in the Gulf of Gabès**



**Source:** distribution of *Posidonia* meadows from the European Marine Observation and Data Network (EMODnet)<sup>67</sup>

**Figures 5 and 6: Images taken by EJF onboard a kiss trawl vessel showing seagrass in the catches**



<sup>67</sup> European Commission, European Marine Observation and Data Network (EMODnet). <https://emodnet.ec.europa.eu/en> [accessed 14 February 2023]

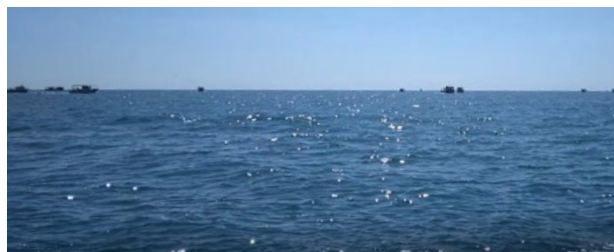




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**Figure 7: Images from a 2022 FishAct investigation provided by an anonymous source within the enforcement agency<sup>68</sup>**

**Kiss trawlers flocking together**



**Kiss trawlers dragging a rope to deter law enforcement**



68 FishAct (2023). *Illegal shallow water bottom trawling, i.e. "Kiss" trawling in the gulf of Gabes, Tunisia*. FishAct investigation report. <https://fishact.org/tunisia-campaign-report-2022/>

## b. Destination of catches

Local fishers claim that the catch from kiss trawls is mainly exported abroad. They allege that the catches are mixed with the catches of legal trawlers and exported to Europe, particularly the shrimp, octopus and squid. This is supported by the findings of investigations by FishAct and others, which identified weak controls on fisheries products leaving Tunisia and highlighted Italy as the likely entry point for non-compliant products to the EU, centred on a major seafood trading group that distributes products throughout Europe.<sup>69</sup>

***"Now the shrimp caught by the kiss is exported to Europe, the squid is taken to Europe, the octopus goes to Europe, everything is caught by the kiss and out of season. The catch of the kiss varies between the big fish to the fish which is still an egg, and everything is exported abroad."***

Abderrazak Joulak, fisherman in Kerkennah

The European Union is the leading destination for fish and fisheries products from Tunisia, accounting for 55.5% of total export value in 2021, equating to €118.7 million (approx).<sup>70</sup> Italy and Spain dominate imports of octopus, cuttlefish, squid and shrimps – the key target catches of the kiss trawl fleet. According to data reported by EU Member States in Eurostat, in 2021, Italy imported 2,267 tonnes (€16.3 million) of cuttlefish and squid, 1,639 tonnes (€20.3 million) of shrimps and 945 tonnes (€8.5 million) of octopus from Tunisia, while Spain imported 2,487 tonnes (€30.0 million) of shrimps from Tunisia in the same year.<sup>71</sup>

## c. Socio-economic impacts

Tunisia's fishing communities have been severely affected by the worsening economic situation in the country and fallout from the COVID-19 pandemic.<sup>72</sup> The degradation of marine resources and associated fishery declines have left fishers in a precarious situation, unable to respond to successive crises. Climate change, the invasion of alien species and pollution from petroleum factories, among other factors, are exacerbating these threats.<sup>73</sup> The findings of this and previous research<sup>74</sup> confirm the lack of employment prospects in the fishing industry as a driver for young people to migrate from the Kerkennah islands.

Speaking to EJF, fishers highlighted the conflict between artisanal fishers and kiss trawlers, which is especially acute around the Kerkennah Islands. Fishers complained that kiss trawling is damaging the marine environment and driving declines in fish populations, forcing some to abandon their traditional methods in favour of the practice.<sup>75</sup> They say their traditional, low-impact methods are unable to compete with kiss trawls, which also damage or tow away their artisanal fishing gear.<sup>76</sup> With the cost of living and fuel and gear prices continuing to rise, illegal and unsustainable practices among small-scale fishers are also on the increase, including the failure to comply with annual restrictions and use of undersized mesh nets, as well as substitution of materials, such as plastics, that damage the marine environment.<sup>77</sup>

69 *Ibid.* See also: Mancini, D., Manisera, S. and Poletti, A. (2023). 'How illegally caught fish in the Mediterranean enter Europe', *Geographical*, 1 March 2023. [accessed 7 March 2023] <https://geographical.co.uk/science-environment/how-illegally-caught-fish-in-the-mediterranean-enter-european> and Mancini, D., Manisera, S. and Poletti, A. (2023). 'La zona grigia dello strascico: il pesce illegale del Mediterraneo nei supermercati europei', *IrpiMedia*, 15 March 2023. [accessed 16 March 2023] <https://irpimedia.irpi.eu/pesca-strascico-pesce-illegale-mediterraneo-supermercati-europei/>

70 United Nations, UN Comtrade Database: <https://comtradeplus.un.org/> [accessed 28 February 2023]. Export data reported by Tunisia for products reported under commodity codes in Chapter 03, and under subheadings 1604 and 1605. US dollar to euro conversion based on historical USD:EUR exchange rate reported by xe.com on 30 June 2021: <https://www.xe.com/currencytables/?from=USD&date=2021-06-30#table-section> [accessed 28 February 2023].

71 European Commission, Eurostat – EU trade since 1988 by HS2-4-6 and CN8. <http://epp.eurostat.ec.europa.eu/newxtweb/> [accessed 28 February 2023]. Import data reported by the EU-27 for products reported under commodity codes in Chapter 03, and under subheadings 1604 and 1605.

72 Herbert, M. (2022). *Losing Hope: Why Tunisians are leading the surge in irregular migration to Europe*. Global Initiative Against Transnational Organised Crime. <https://globalinitiative.net/analysis/tunisia-migration-europe/>; FTDES (2021). *Enquête auprès des petits pêcheurs sur la situation du secteur de la pêche côtière dans les régions Teboulba, Kerkennah et Zarzis*. <https://ftdes.net/en/enquete-aupres-des-petits-pecheurs-sur-la-situation-du-secteur-de-la-peche-cotiere-dans-les-regions-teboulba-kerkennah-et-zarzis/>

73 EJF interviews. See also: *ibid.*

74 See, for example, FTDES (2021). *Enquête auprès des petits pêcheurs sur la situation du secteur de la pêche côtière dans les régions Teboulba, Kerkennah et Zarzis*. <https://ftdes.net/en/enquete-aupres-des-petits-pecheurs-sur-la-situation-du-secteur-de-la-peche-cotiere-dans-les-regions-teboulba-kerkennah-et-zarzis/>

75 EJF interviews. See also *ibid.* and Kechuindi, A. (2022), 'Trawlers: the new pirates of the Mediterranean Sea', *Blue TN*, 30 December 2022. [accessed 28 February 2023] <https://bluetunisia.com/6692-2022/trawling-boats-the-new-pirates-of-the-mediterranean-sea/>

76 EJF interviews. See also Ministry of Agriculture, Water Resources and Fishing (2023), 'Working session with sailors from Gabes', 23 January 2023. [accessed 9 March 2023] [https://www-agriculture-tn.translate.google.com/?p=22766&\\_x\\_tr\\_sl=auto&\\_x\\_tr\\_tl=en&\\_x\\_tr\\_hl=en&\\_x\\_tr\\_pto=wapp&\\_x\\_tr\\_sch=html](https://www-agriculture-tn.translate.google.com/?p=22766&_x_tr_sl=auto&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=wapp&_x_tr_sch=html)

77 EJF interviews.



*"[Kiss trawling] is everywhere. They are just watching. We made lots of complaints. The small-scale fisherman is the one who will pay the bill."*

Salah Ben Slimane, fisherman in Kerkennah

*"They come to work in shallow water which is our place of fishing...If we throw the nets, they destroy them. They take our cages. They cut our nets."*

Salah Ben Slimane, fisherman in Kerkennah

*"When I used to go with my father to pick up the charfia catch, sometimes we would bring a cart to take the fish, it was so prolific. Now there are people who make charfia with 15 or 20 cages, but get so little catch, they collect them in a small plastic bag. Charfia was able to make a living for the whole family, but not anymore."*

Abderrazak Joulak, fisherman in Kerkennah

*"The skilled workers who can work with nets are dwindling because they prefer the kiss."*

Kiss fisher



Abderrazak Joulak, a fisherman from the Kerkennah islands, checks his charfia traps.



***"We used to release the small fishes to grow, but now we take them to sell for a cheap price so we can survive. Because of climate change, pollution and illegal fishing, small-scale fishermen are no longer able to make a living on the island."***

Hamza Feguir, local union of fishers

Fishers interviewed by EJF expressed their desperation at their economic situation and readiness to migrate. The appeal of the fishing sector was low for the young people (under 30) we interviewed.

***"The young people are moving away from the sea. When I fish with nets, I go to find workers who will fish with me, but I don't find any. Many young people have left the country. They have migrated illegally."***

Mohamed Ben Salem, fisherman

***"The majority of youth here in Kerkennah don't find a job to do. People living here have only two options. Either leave the island or leave the country."***

Hamza Feguir, local union of fishers



Image taken on board a kiss trawler in the Gulf of Gabès.



***“It is true that those who migrate illegally are not all fishermen. But there is a big number among them whose fathers are working in the sea.”***

Hamed Mallat, Marine Biodiversity Specialist, Association Tunisienne de la Vie Sauvage

The invasive African blue swimming crab (*Portunus segnis*) presents a further threat to fishers' traditional fishing practices, according to the fishers interviewed. The species has driven declines in populations of native marine species, while causing damage to fishing gears.<sup>78</sup> In the absence of stricter controls and targeted support, there is a risk that more fishers will switch to kiss trawling, which is the most efficient method of catching the blue crab for the lucrative export trade.

#### **d. Ecological impacts**

The findings of this investigation show that kiss trawls are having an extremely damaging impact on marine ecosystems in the Gulf of Gabès. Nets and otter doors are dragged along the seafloor, ripping up and destroying fragile *P. oceanica* beds, as confirmed by images of kiss trawl catches taken by EJJ (see **Figures 5 and 6**). Kiss trawlers use small mesh nets resulting in extremely high rates of bycatch, much of which is discarded; one study recorded discard rates of over 95%.<sup>79</sup> Small mesh nets catch significant quantities of juvenile fish, accelerating the depletion of fish populations.<sup>80</sup> Due to their small mesh size and operation in shallow waters and sensitive areas of habitat, kiss trawls are considered even more damaging than regular bottom trawls.<sup>81</sup>

***“The kiss...they go to shallow waters of three metres and start trawling. Just in three metres. It destroys the sea and the fish.”***

Abderrazak Khcharen, retired fisherman

***“Imagine a boat fishing in a depth of two metres, trawling everything. There is a big impact on marine biodiversity. This is one of the remarkable topics in the Gulf of Gabès. If you access any sea port, you will find this kind of mini kiss trawling. It is illegal but the lack of surveillance and enforcement of the law is making this phenomenon grow day by day.”***

Hamed Mallat, Marine Biodiversity Specialist, Association Tunisienne de la Vie Sauvage

***“The seagrass on the seafloor gets trawled by the kiss. This grass is a shelter for the squid to lay the eggs and reproduce. Same for the fish and the octopus. The seagrass is where species eat and reproduce but when it is trawled it becomes a desert...The kiss takes everything.”***

Wassim Ben Slimane, fisherman in Kerkennah

***“The kiss has trawled the Posidonia. It took all the sea bed with it.”***

Mohamed Ben Salem Khcharen, former fisherman

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78 Correia, A. T., Castriota, L., Falautano, M., Maggio, T., & Perzia, P. (2022). The Blue Swimming Crab *Portunus segnis* in the Mediterranean Sea: Invasion Paths, Impacts and Management Measures. *Biology*, 11(10), 1473. <https://doi.org/10.3390/BIOLOGY11101473>; Zerelli, S. (2018). *Illegal bottom trawling in the Gulf of Gabès, Tunisia*. FishAct investigation 25.09 - 02.10.2018. FishAct. <https://fishact.org/2018/12/investigating-illegal-bottom-trawling-in-the-gulf-of-gabes-tunisia/>; FTDES (2021). *Enquête auprès des petits pêcheurs sur la situation du secteur de la pêche côtière dans les régions Teboulba, Kerkennah et Zarzis*. <https://ftdes.net/en/enquete-aupres-des-petits-pecheurs-sur-la-situation-du-secteur-de-la-peche-cotiere-dans-les-regions-teboulba-kerkennah-et-zarzis/>

79 Ben Hmida, A., Shili A., Sghaier Y.R., Rais C. (2014). Impact de la pêche par mini-chalut benthique sur les herbiers à *Posidonia oceanica* dans le secteur nord-est des îles Kerkennah (Tunisie). *5th Mediterranean symposium on marine vegetation* (Portoroz, Slovenia, 27-28 October 2014).

80 Zerelli, S. (2018). *Illegal bottom trawling in the Gulf of Gabes, Tunisia*. FishAct investigation 25.09 - 02.10.2018. FishAct. <https://fishact.org/2018/12/investigating-illegal-bottom-trawling-in-the-gulf-of-gabes-tunisia/>

81 *Ibid.*

## The way forward

In a little over a decade, illegal kiss trawling has emerged as a major threat to local livelihoods and marine biodiversity in the Gulf of Gabès region of Tunisia. This briefing highlights how the practice is damaging marine ecosystems and the fisheries they sustain, threatening the sole source of income of thousands of fishers.

The solution to the problem is, at the same time, both simple and complex. The practice occurs in plain sight, in full view of the authorities in the Governorate of Sfax. With the appropriate dedication of resources and enforcement effort, perpetrators can be identified, arrested and sanctioned.

However, kiss trawling is so widespread and embedded in local economies that efforts to eradicate the practice must be underpinned by political will at the highest levels of government. To succeed, actions must be taken in partnership with fishing communities and kiss fishers themselves, to find a lasting solution that protects livelihoods, conserves marine ecosystems, and respects human rights and cultural values.

A vital aspect of this effort should be the protection of the Gulf of Gabès through a network of marine protected areas, managed collaboratively with local communities, across which bottom trawling is strictly prohibited. The Tunisian government must commit to eradicating kiss trawling and support impacted fishermen to sustainably transition away from the practice. It is key that the national fisheries law be reformed to define precisely what constitutes illegal kiss trawling, provide comprehensive powers of inspection and enforcement for the competent authorities, and introduce effective, proportionate and dissuasive sanctions for illegal fishing.

While the responsibility for ending kiss trawling lies primarily with the Tunisian government, the international community must play a role in the form of support and diplomatic pressure to end the practice. The findings presented above indicate that EU Member States may be importing seafood caught illegally by kiss trawlers, in possible contravention of Council Regulation (EC) No. 1005/2008 which prohibits the import of illegally-caught seafood into the EU.<sup>82</sup> The EU is the most important market for seafood from Tunisia and has an interest and responsibility to ensure harvests are legal and sustainable, in line with the requirements of its regulation to prevent, deter and eliminate IUU fishing.

This briefing has highlighted the need for urgent action to end illegal kiss trawling. Kiss trawling breaches national laws, contravenes regionally agreed management measures aimed at conserving fish populations, and undermines global conventions to conserve marine biodiversity and fight global heating. The implications of failing to act are serious and far-reaching. At stake are ecosystems of critical significance for local livelihoods, regional biodiversity and climate mitigation/adaptation efforts, as well as traditional ways of life that are recognised as cultural heritage of mankind by UNESCO. The findings of this study are unequivocal: illegal kiss trawling is unsustainable, unethical and must be stopped.

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<sup>82</sup> Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing: <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX%3A32008R1005>









Source: FishAct. A beautiful piece of protest art, showing the destruction of 'kiss trawling', in the port of Kraten, Kerkennah islands. By Mejbri Ahmed.