

DECARBONISING EU FISHERIES: A ROADMAP TO 2050



ClientEarth®

 **SEAS AT RISK**

Coalition Clean Baltic





1. ANCHORING CLIMATE AMBITION TOWARDS 2050: EU FISHERIES ON THE ROAD TO DECARBONISATION	4
2. KEY FACTS: DIVING INTO THE FISHERIES TRANSITION CHALLENGES WHICH FLEETS AND FISHING METHODS HAVE THE HIGHEST DIRECT EMISSIONS?	7
3. THE ROADMAP FOR JUST DECARBONISATION PATHWAY	8
BY 2030 - FROM SLOW PROGRESS TO FASTER ACTION: STARTING THE TRANSITION	11
BY 2040 - CUTTING FISHERIES ACTIVITIES NET EMISSIONS BY 90%	12
BY 2050 - FULL DECARBONISATION, CONTRIBUTION TO NET ZERO EU GHG EMISSIONS	18
	22

NET ZERO

1.

Anchoring climate ambition towards 2050: EU fisheries on the road to decarbonisation

The European Union has committed to achieving climate neutrality by 2050, which means that human activities should not emit more greenhouse gas (GHG) emissions than can be removed from the atmosphere. Within this framework, fisheries are expected to contribute to climate mitigation while continuing to provide food, employment and resilience for coastal communities.



Climate objectives and sustainable fisheries mutually reinforce each other.¹ Healthy fish stocks reduce the effort and fuel required to catch fish. Better fisheries governance can restore biodiversity, cut direct emissions, and at the same time strengthen the economic viability of the sector, since energy is now one of the highest operational costs for the EU fisheries fleet.²

The energy transition of the EU fisheries sector can deliver clear benefits, reducing both air pollution and GHG emissions while improving ocean health and the capacity of marine ecosystems to store carbon and regulate the climate.³

The European Commission recognises that reducing GHG emissions cannot be achieved through technological innovation alone; it requires structural reforms that improve environmental and socio-economic sustainability.⁴ For that reason, a just transition – one which embraces energy transition while accompanying fishers and the value chain – will depend on better policies and implementation of existing laws to restore marine ecosystems and improve equity across fleets.

The current debate on decarbonising fisheries focuses mainly on reducing direct fishing emissions, through the transition to alternative propulsion systems and energy sources, within the national fleet capacity ceilings listed

in Annex 2 of the Common Fisheries Policy (CFP). Decarbonisation efforts must not lead to overcapacity or increased fishing pressure. That would not only undermine the CFP's objectives, but also breach the UN Sustainable Development Goal (SDG) 14.6, which prohibits fisheries subsidies contributing to overcapacity and overfishing, and the WTO Agreement on Fisheries Subsidies, which bans public aid to fisheries targeting overfished fish populations.

The challenge, therefore, when talking about decarbonisation of the fisheries sector, extends well beyond replacing fossil fuels with low-carbon energy alternatives: it requires addressing fleet overcapacity, rebuilding fish stocks, improving energy efficiency along the whole value chain, adopting less energy-intensive and less damaging fishing gears and practices, and reforming how fishing opportunities are allocated. Replacing engines can improve energy efficiency, but energy efficiency is not the same as decarbonisation. Investment in cleaner technologies must be accompanied by a transition plan that addresses every aspect of the fishing profession, co-designed with fishers and civil society, and backed by public funding and authorities.⁵

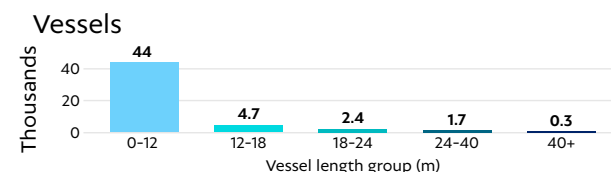
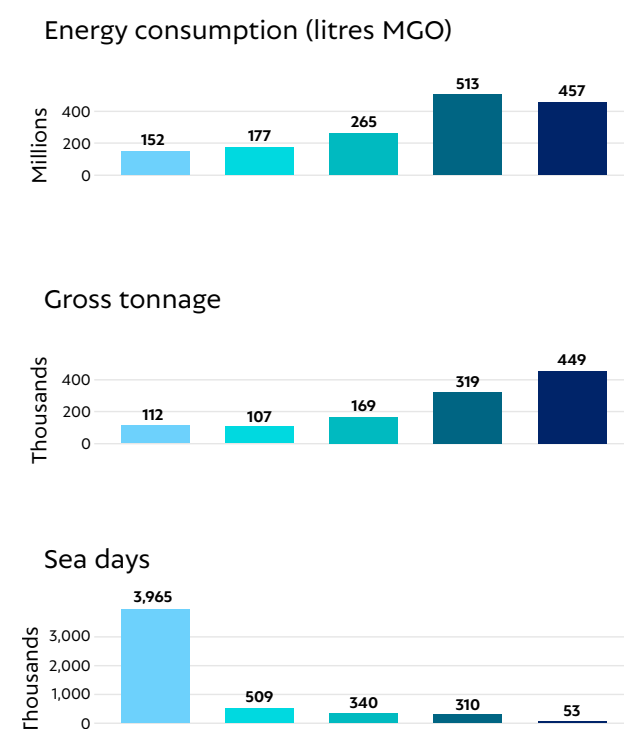
Today, the political economy of EU fisheries remains marked by unequal access to resources, with industrial fleets often capturing a far higher share of public support and fishing opportunities

1. Scholten, P., Hindriks, I., Van der Hek, N., Van Seters, D. (CE Delft), Steinmann, J., Elrington, S., Volino, E. (Ramboll), Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050, European Commission DG MARE, January 2026. Study on greenhouse gas emission (GHG) reduction costs, scenarios and pathways for EU fisheries to achieve net zero by 2050 - Publications Office of the EU
2. European Commission, COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS On the Energy Transition of the EU Fisheries and Aquaculture sector, February 2023
3. The combustion of MGOs from fishing vessels releases a range of harmful pollutants, including sulphur oxides (SO_x), nitrogen oxides (NO_x), particulate matter (PM), and black carbon (BC). These contribute to air pollution from the maritime sector, posing health risks to coastal communities and contributing to environmental problems such as ocean acidification and eutrophication (EEA, 2025; Jutterström et al., 2021).
4. European Commission, COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS On the Energy Transition of the EU Fisheries and Aquaculture sector, February 2023
5. European Commission, Directorate General for Internal Market, Industry, Entrepreneurship and SMEs, Transition pathway for the industrial ecosystem, March 2024

than small-scale fisheries.⁶ Fuel tax exemptions and crisis subsidies disproportionately benefit the most fuel-intensive fishers, often operating large vessels or energy-intensive gears such as bottom trawling, creating a structural disincentive to reduce fuel use and carbon emissions.

Understanding the transition needs requires a clear picture of the different fleet segments, including their gross tonnage (GT), energy consumption, days at sea, fishing methods (including their selectivity) and catches (Figure 1).

Figure 1 Distribution of vessels, sea days, GT, and energy consumption by vessel length class



A “just transition” to decarbonisation is central to the future of European fisheries. The latest European Commission study confirms it: without an explicit emissions-reduction objective and supportive policies, decarbonisation in the fisheries sector remains limited. The “business as usual” scenario delivers only a 4% reduction by 2050 compared to baseline, falling short of the 2030, 2040 and 2050 climate objectives.⁷

Building on recent reports, earlier stakeholders’ recommendations, and the methodology developed by the European Commission with the EU’s Industrial Forum⁸ for industrial ecosystem transition pathways (set out in its blueprint),⁹ and drawing on the twin green and digital transition approach, this brief turns the available evidence into clear, actionable recommendations and a roadmap to decarbonise the fisheries sector in a fair manner.¹⁰ It proposes concrete pathways to feed into the European Commission’s forthcoming roadmap for the energy transition of the fisheries sector, expected in the autumn of 2026. Finally, it demonstrates that structured multi-stakeholder engagement, targeted investment, and sustained governance efforts will be key to achieve the 2050 target.

6. Seas at risk, Power structures shaping EU fisheries How the political economy favours industrial over small scale, low impact fishing, 2025. Available here: https://seas-at-risk.org/wp-content/uploads/2024/09/R8_Political-Socio-Economy-of-EU-Fisheries_30thApril.pdf

7. Scholten, P., Hindriks, I., Van der Hek, N., Van Seters, D. (CE Delft), Steinmann, J., Elrington, S., Volino, E. (Ramboll), Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050, European Commission DG MARE, January 2026. Study on greenhouse gas emission (GHG) reduction costs, scenarios and pathways for EU fisheries to achieve net zero by 2050 - Publications Office of the EU

8. Industrial Forum - Internal Market, Industry, Entrepreneurship and SMEs

9. Transition Pathway for the agri-food industrial ecosystem - final_en.pdf

10. EU Transition Pathways

2.

Key facts: Diving into the fisheries transition challenge

- Globally, the fisheries sector’s direct emissions account for 4% of food production emissions and 0.5% of total emissions.¹¹ This does not include indirect emissions of the sector – be it along the entire value chain, as well as the release of CO₂ or other emissions through the fishing activities themselves.
- Fuel is the largest single source of emissions (69% to 90% of the sector’s emissions up to the point of landing) and of operating costs for most fleets, especially energy-intensive gears such as bottom trawling.¹²
- Some zero-emission fuels and technologies remain technically and economically difficult to implement on many vessels without support, especially those of smaller operators.
- Public support continues to rely heavily on fuel tax exemptions, while available funding for the transition to more sustainable practices remains comparatively underused.¹³
- Rebuilding fish populations through sustainable management is one of the most effective decarbonisation pathways: healthier, more abundant stocks reduce search time, distances, fuel use and operating costs.¹⁴
- Increasing fleet capacity – currently capped per Member State by the CFP – without tackling excessive fishing effort or properly monitoring engine power risks worsening overcapacity, increasing emissions, and undermining stock recovery. The evaluation of the CFP stresses that further reducing or re-distributing the capacity of the national fleets appears to be an “imperative both for long-term socio-economic viability and for a successful energy transition.”¹⁵
- Member States have flexibility to allocate the capacity margin between fleet segments within the current capacity ceilings. Each Member State sets its own allocation mechanism and priorities and can therefore make decisions based on its capacity to invest in energy-efficient propulsion systems or modernisation. According to the CFP

11. Parker, R. et al. (2018), “Fuel use and greenhouse gas emissions of world fisheries”, Nature Climate Change, Vol. 8/4, pp. 333-337, <https://doi.org/10.1038/s41558-018-0117-x>.

12. OECD, Mitigating the impact of fisheries on climate change, 2024. Available here: <https://www.oecd.org/content/dam/oecd/en/topics/policy-issues/fisheries-and-aquaculture/workshop-background-note-mitigating-the-impact-of-fisheries-on-climate-change.pdf>

13. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS On the Energy Transition of the EU Fisheries and Aquaculture sector COM/2023/100 final

14. Bastardie F, Wakeford RC, Torreele E, Aranda M, Doering R, Ligas A, Mele I, Castresana J, Gabiña G, Maes SM, Sabatella R and Malvarosa L (2026) How to ensure sustainable fisheries while renewing the EU fishing fleet for modernization and energy transition?. Front. Mar. Sci. 13:1812898. doi: 10.3389/fmars.2026.1812898

15. European Commission, *Evaluation of Regulation* (EU) No 1380/2013, cit., p. 60.

evaluation, many Member States currently have spare capacity margins which remain unused for the energy transition of their fleets.¹⁶ Thus demonstrating that the CFP is fit for purpose, given the available capacity margin.

- Current EU governance structures often favour industrial fishing interests through quota allocation, subsidies and political influence, while small-scale fisheries – which account for most fishing vessels and provide significant coastal employment and opportunities – remain on the sidelines of decision-making for a just transition.
- More selective gear (targeting commercial/marketable species) can enhance sustainability while reducing fuel-use intensity (kg fuel/kg catch) and promoting healthier stocks and ecosystems.

WHICH FLEETS AND FISHING METHODS HAVE THE HIGHEST DIRECT EMISSIONS?

CUTTING FUEL USE: REALLOCATE FISHING EFFORT TOWARDS MORE SELECTIVE AND FUEL-EFFICIENT TECHNIQUES, WHILE PHASING OUT THE MOST ENERGY-INEFFICIENT PRACTICES

Emissions vary considerably by catching methods or techniques, next to fleet size. The latest study of the European Commission on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050 shows that demersal trawling and seining together account for roughly half of the sector's total direct emissions (this again does not consider indirect emissions or climate impact holistically), at an intensity of 2.9 kg CO₂-eq per kilogram landed. Beam trawling is the most carbon-intensive technique, at 4.8 kg CO₂-eq/kg, while pelagic trawling is the most efficient, at just 0.3 kg CO₂-eq/kg, though its bycatch and ecosystem impacts reinforce the need to transition towards more selective fishing practices¹⁷. In the same study, the data shows that emission intensity is driven primarily by the fishing technique itself, not simply by fleet size. This distinction matters: it gives policymakers a clear, evidence-based way to identify where emission reductions can be achieved most effectively, and which parts of the fleet are best placed to lead the transition towards climate neutrality.

Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050

Fishing Technique	Primary fishing activity ¹	Number of vessels	Landings weight (mln kg)	Landings value (€ mln)	GHG emissions (TTW, ton CO ₂ -eq)	GHG emissions per vessel (TTW, kg CO ₂ -eq)	GHG intensity (kg CO ₂ -eq/kg landings)	GHG intensity (kg CO ₂ -eq/€1,000)
FPO	SSCF	2,778	34	145	42	15	1.2	0.3
FPO	LSF	184	10	45	21	111	2.0	0.5
PGO	SSCF	640	6	6	2	3	0.3	0.3
PGO	LSF	1	0	0	-	-	-	-
PG	SSCF	4,387	33	36	16	4	0.5	0.4
PGP	SSCF	13,924	43	260	108	8	2.5	0.4
PGP	LSF	404	29	116	76	187	2.6	0.7
PMP	SSCF	4,238	52	137	61	14	1.2	0.4
PMP	LSF	134	16	28	21	158	1.3	0.8

¹⁾ This allocation is based on the fishing technique under which most vessels in this fleet activity are registered. Given their small number, DWF are not included here, as they do not make up the majority of vessels for any technique. However, the data shows that the DWF mainly use DTS and PS.
Note: Figures represent average values for the period 2018-2022. A multi-year average is used to smooth out annual fluctuations and to provide a more stable picture of the current general structure and performance of the fleet.

Number of vessels, primary fleet activity, landings, emissions, and GHG Intensity by fishing technique for the (average over 2018 - 2022)

Fishing Technique	Primary fishing activity ¹	Number of vessels	Landings weight (mln kg)	Landings value (€ mln)	GHG emissions (TTW, ton CO ₂ -eq)	GHG emissions per vessel (TTW, kg CO ₂ -eq)	GHG intensity (kg CO ₂ -eq/kg landings)	GHG intensity (kg CO ₂ -eq/€1,000)
TBB	LSF	627	102	376	491	783	4.8	1.3
DTS	LSF	4,952	732	1,916	2,326	470	3.2	1.2
DTS	DWF	76	156	260	256	3,384	1.6	1.0
TM	LSF	504	1,483	651	435	864	0.3	0.7
TM	DWF	5	94	61	100	19,967	1.1	1.6
PS	LSF	1,470	353	551	203	138	0.6	0.4
PS	DWF	49	358	547	525	10,806	1.5	1.0
PS	SSCF	2	0	-	-	-	-	-
DRB	LSF	2,877	108	201	98	34	0.9	0.5
MGO	LSF	574	4	18	5	10	1.3	0.3
MGP	LSF	132	38	-	34	258	0.9	
HOK	SSCF	4,660	20	138	63	14	3.2	0.5
HOK	LSF	868	71	239	148	171	2.1	0.6
HOK	DWF	120	80	188	187	1,560	2.3	1.0
DFN	SSCF	11,683	45	261	121	10	2.7	0.5
DFN	LSF	623	46	183	83	133	1.8	0.5

16. European Commission, *Evaluation of Regulation (EU) No 1380/2013*, cit., p. 60. & Bastardie F, Wakeford RC, Torrele E, Aranda M, Doering R, Ligas A, Mele I, Castresana J, Gabiña G, Maes SM, Sabatella R and Malvarosa L (2026) How to ensure sustainable fisheries while renewing the EU fishing fleet for modernization and energy transition?. *Front. Mar. Sci.* 13:1812898. doi: 10.3389/fmars.2026.1812898

17. Scholten, P., Hindriks, I., Van der Hek, N., Van Seters, D. (CE Delft), Steinmann, J., Elrington, S., Volino, E. (Ramboll), Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050, European Commission DG MARE, January 2026. Study on greenhouse gas emission (GHG) reduction costs, scenarios and pathways for EU fisheries to achieve net zero by 2050 - Publications Office of the EU

Fishing techniques and corresponding abbreviations based on the Data Collection Framework (DCF) classification

Abbreviation	Fishing Technique/Vessel Type
DTS	Demersal Trawlers
TBB	Beam Trawlers
TM	Pelagic Trawlers
HOK	Vessels Using Hooks
PGP	Vessels Using Polyvalent Passive Gears
PS	Purse Seiners
DRB	Dredgers
FPO	Vessels Using Pots and/or Traps
PMP	Vessels Using Active and Passive Gears
DFN	Drift and/or Fixed Netters
PG	Passive Gears
PGO	Vessels Using Other Passive Gears
MGP	Vessels Using Polyvalent Active Gears Only
MGO	Vessels Using Other Active Gears

DECARBONISING FISHERIES
GOES BEYOND REPLACING
ENGINES OR SWITCHING TO
ALTERNATIVE FUELS.

Fleet capacity needs to be reduced to be brought into line with the sustainable level of the stocks it exploits. In many European fisheries, fishing capacity still exceeds what ecosystems can sustainably support, undermining the long-term resilience of both fish stocks and the sector itself. The transition should prioritise phasing out destructive practices and the most highly fuel-intensive techniques as well as those that generate substantial indirect greenhouse gas emissions by disturbing carbon-rich seabed habitats. Together, these measures would reduce pressure on overfished stocks, lower emissions, protect marine ecosystems, and preserve the ocean’s carbon storage capacity.¹⁸

For instance, on seafood supply, studies estimate that up to 85% of current bottom-trawl catches could be harvested using alternative gears, showing that substantial emissions reductions and ecological benefits are possible without significantly compromising food production.¹⁹

Catch loss should not be treated as an obstacle but as the starting point of the transition – one paired with essential support: transitional funding, price premiums, consumer awareness campaigns, and help for those leaving the fleet to diversify their activities or repurpose their skills, so that fishers are not penalised for adopting more sustainable practices.²⁰

18. Oceana, Seas At Risk, Exploring alternatives to Europe’s bottom trawl fishing gears, May 2022, SAR_Report_LV9.pdf
19. Mouillard, R., Gascuel, D., Estimation des captures de la senne et du chalut démersal transférables aux arts dormants, March 2025, Microsoft Word - Mouillard et Gascuel 2025 Note Volume transférable
20. STOA (2024). Exploring the viability of innovative fishing technologies as an alternative to bottom trawling in European marine protected areas: An environmental and socioeconomic analysis 2024. Author: Bastardie F. for STOA Panel for the Future of Science and Technology (Brussels: The European Parliament)

3.

The roadmap for a just
decarbonisation pathway

The 2026 study on greenhouse gas emission reduction costs, scenarios and pathways for EU fisheries to reach net zero by 2050, commissioned by the European Commission,²¹ recommends a “progressively stricter CO₂ scenario” as the best route for the transition. This means gradual tightening in the early years, followed by sharper reductions after 2040. Although this pathway starts more slowly, it ramps up investment and emissions reductions over time, taking advantage of lower technological barriers and costs after 2040. It is also expected to offer a more cost-effective route to net zero²². But there is a catch: without short-term incentives to support their development and scale-up, the uptake of existing or emerging technologies could remain slow beyond 2030. Our recommendations are designed to overcome this barrier. The roadmap below builds on this trajectory.



© Wild Wonders of Europe/Magnus Lundgren

21. Scholten, P., Hindriks, I., Van der Hek, N., Van Seters, D. (CE Delft), Steinmann, J., Elrington, S., Volino, E. (Ramboll), Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050, European Commission DG MARE, January 2026. Study on greenhouse gas emission (GHG) reduction costs, scenarios and pathways for EU fisheries to achieve net zero by 2050 - Publications Office of the EU
22. Scholten, P., Hindriks, I., Van der Hek, N., Van Seters, D. (CE Delft), Steinmann, J., Elrington, S., Volino, E. (Ramboll), Study on Greenhouse Gas Emission (GHG) Reduction Costs, Scenarios and Pathways for EU Fisheries to achieve Net Zero by 2050, European Commission DG MARE, January 2026. Study on greenhouse gas emission (GHG) reduction costs, scenarios and pathways for EU fisheries to achieve net zero by 2050 - Publications Office of the EU

20
2020
3020
4020
5020
6020
70

BY 2030 - FROM SLOW PROGRESS TO FASTER ACTION: STARTING THE TRANSITION

1. DEVELOP A COMPREHENSIVE BASELINE AND MARINE ENVIRONMENT MAP TO ASSESS PROGRESS²³

The Commission, working with Member States and stakeholders, should develop a scientifically robust baseline and marine-environment map to assess the full climate footprint of the sector. It should cover direct and indirect emissions, including energy use (with monitoring of real engine power), infrastructure, equipment and the entire value chain from feed production to processing and transport. Energy audits should be conducted to verify actual engine power and identify readily implementable measures to improve energy efficiency and reduce fuel consumption. The baseline should also assess impacts of decarbonisation of the sector and its value chain on employment, skill needs, biodiversity and carbon sinks, including the effects of habitat destruction, overfishing, seabed disturbance, sediment carbon release and bycatch.

Why: A comprehensive baseline is essential to identify the main sources of emissions and environmental impacts, prioritise effective action, and measure progress towards climate and biodiversity objectives. Energy audits would also provide a practical basis for identifying immediate efficiency gains and ensuring that engine power and energy use are accurately monitored.

23. NGO Working Group Recommendations, Energy Transition Partnership for EU Fisheries & Aquaculture, 2026, p4. https://maritime-forum.ec.europa.eu/document/download/991c045c-6bbc-486d-9c14-99fb97d74160_en?filename=NGO%20WG%20Recommendations.pdf

2. LINK DECARBONISATION WITH STOCK RECOVERY

The European Commission and Member States should treat sustainable fisheries management as core climate policy and ensure fleets are in balance with healthy fish populations. This means recognising that rebuilding fish populations is an essential part of fisheries decarbonisation. Annual fishing opportunities must be set at precautionary, science-based levels that enable depleted populations to recover. Healthy stocks reduce the fishing effort and energy needed to catch fish, while a shift towards less energy-intensive fishing techniques can further improve energy efficiency.

Why: Healthy stocks reduce fuel use, boost profitability and strengthen ecosystem carbon resilience.

3. COMPLETE AN EU FLEET TRANSITION STRATEGY ALIGNED WITH THE 2050 NET ZERO EMISSION TARGET.

The European Commission and Member States should finalise an EU Fleet Transition Strategy, integrating binding CO₂ reduction targets, energy transition, profitability, climate and biodiversity impacts, safety and inclusivity, with clear renewal and retrofitting criteria. The strategy should be informed by regional audits and pilot studies reflecting diverse environmental and operational conditions.

Why: A coherent, evidence-based framework grounded in regional realities ensures that fleet-wide investment, renewal and retrofitting (i.e. upgrading of existing assets) decisions are matched to local conditions.

4. EMBED A STRUCTURED STAKEHOLDER PARTICIPATION AND ESTABLISH A SOCIO-ECONOMIC BASELINE

The European Commission, Member States and stakeholders, including civil society, must continue the dialogue on mitigating the social impacts of the transition and on the skills needed to co-design solutions. Workforce characteristics and skills requirements should be clarified for different fleet segments and geographies and implications of transition for coastal communities clarified.

Why: A just transition requires addressing social consequences alongside environmental ones and a baseline is required to monitor progress on a just transition.

5. CREATE A WORKING GROUP ON CAPACITY METRICS TO PREVENT CAPACITY CREEP THROUGH SAFETY AND GREEN RETROFITS

The European Commission, working with expert groups that include naval architects and independent specialists, should close specific loopholes in the GT/kW system –

20
2020
3020
4020
5020
6020
70

particularly around the deduction of non-cargo space and the definition of safety-related tonnage – and require independent review of any gross-tonnage increase tied to green retrofits, such as upgrading equipment or gear to cut emissions.

Why: Previous exemptions for safety-related tonnage have resulted in unintended capacity increases, highlighting the need for clearer and more transparent rules (e.g. 3,776 GT added in Spain between 2003 and 2013).²⁴

6. USE THE EXISTING CAPACITY MARGIN²⁵ TO DRIVE DECARBONISATION AND EFFICIENCY, NOT EXPANSION

Member States should direct current GT/kW capacity margins to the vessels that are most energy-efficient.

Why: The margin allows the transition to be done without reopening the CFP framework or increasing fishing power.

7. INCENTIVISE SELECTIVE, LOW-IMPACT GEAR WITHIN 12 NAUTICAL MILES

Member States and the European Commission should strengthen

transparency and fair quota allocation under Article 17 of the CFP and reward compliant selective, low-impact, small-scale coastal fleets (as they create benefits for coastal communities and in terms of employment) with priority access to the 12 nautical mile zone by requiring Member States to designate such preferential access²⁶ through the European Ocean Act.

Why: Encourages the uptake of techniques with lower energy use and habitat impact.

8. INCLUDE FISHERIES IN THE SINGLE EU METHOD FOR MEASURING TRANSPORT SECTOR EMISSIONS

The European Commission should include the fishing fleet in this common methodology for calculating carbon footprints.

Why: Current audits are fragmented, which limits evidence-based investment, analysis especially for the comprehensive baseline exercise and map and prevents consumers from choosing seafood based on its environmental performance.

9. RING-FENCE FUNDING FOR SMALL-SCALE LOW IMPACT FISHERS AND RESTORATION IN EUROPEAN MARITIME, FISHERIES AND AQUACULTURE FUND (EMFAF) AND OTHER UPCOMING FUNDS

During the current revision of the EMFAF, the European Commission should ring-fence funding to help small-scale, low-impact fishers make the transition. For the upcoming Multiannual Financial Framework (MFF), the total fisheries budget should be split equally between two priorities: ocean conservation and restoration, and a just transition towards a regenerative Blue Economy. These priorities should be clearly spelled out in the NRPP text. Half of the funding should support ocean conservation and restoration, safeguarding and restoring the ecosystems that underpin climate resilience, including a reserved, separate amount for data collection and fisheries control and enforcement, corresponding to the current allocation to these priorities under the EMFAF.

The other half should support a just transition towards a regenerative Blue Economy, including a reserved, separate amount to support small-scale, low-impact fishers and their clean-energy transition. A further reserved, separate

amount should be allocated, under strict conditions, to the transition towards low-impact fisheries, especially to phase out trawling, or to support fishers' professional transition outside the fishing sector.

Why: Public funding should reward the delivery of public goods. Prioritising small-scale, low-impact fisheries and marine restoration (historically insufficiently supported) ensures public investment contributes to climate mitigation, biodiversity recovery, and the long-term resilience of fisheries and coastal communities.

10. BOOST R&I, DIGITAL AND TECHNOLOGY UPTAKE – FOR INSTANCE THROUGH THE UPCOMING OCEAN OBSERVATION INITIATIVE, AND FEED THE OCEAN PACT DASHBOARD

The European Commission, SMEs and research institutions should support environment-friendly innovation via the EMFAF, the Blue Invest program, Horizon Europe, the future Competitiveness Fund and other funding streams, and create a shared technology-matching platform to share the latest updates and knowledge.²⁷

24. Bastardie F, Wakeford RC, Torreele E, Aranda M, Doering R, Ligas A, Mele I, Castresana J, Gabiña G, Maes SM, Sabatella R and Malvarosa L (2026) How to ensure sustainable fisheries while renewing the EU fishing fleet for modernization and energy transition?. Front. Mar. Sci. 13:1812898. doi: 10.3389/fmars.2026.1812898

25. Capacity margin in fisheries is the difference between a Member State's current fishing capacity and the maximum capacity it is legally allowed to maintain under applicable limits.

26. As per Article 20 "Member State measures within the 12 nautical mile zone" of the Common Fisheries Policy Regulation No 1380/2013

27. European Commission (2024c). "European climate, infrastructure and environment executive agency," in Techno-economic analysis for the energy transition of the EU fisheries and aquaculture sector. Eds. Vet J., Gardner H., Sala Pérez M., Matheus D. et al. Available online at: <https://data.europa.eu/doi/10.2926/425550>.

20
2020
3020
4020
5020
6020
70

Why: This lowers transition costs, develops and promotes environment-friendly techniques across fleets, and draws lessons from other green and digital ecosystems. An integrated European technology infrastructure offering testing, validation and scale-up support to industry and SMEs could deliver added value beyond fisheries policy, positioning the EU competitively worldwide.

11. PHASE OUT MOBILE BOTTOM FISHING IN MARINE PROTECTED AREAS (MPAS)

The European Commission and Member States should begin phasing out mobile bottom trawling – the most fuel intensive techniques – in Marine Protected Areas, paired with dedicated just transition support.

Why: Protects and restores marine ecosystems, which play a vital role in climate resilience, while cushioning affected fishers and engaging the phase out and transition of the most fuel intensive technique.

12. ENSURE PORT AND ENERGY INFRASTRUCTURE KEEPS PACE WITH THE TRANSITION

The European Commission and Member States should integrate the infrastructure

needed for the fleet's transition into the Alternative Fuel Infrastructure Regulation (AFIR) and corresponding national plans and financing.

Why: Infrastructure gaps remain a barrier. Charging stations vary across countries, payment systems lack harmonisation, and growing renewable-energy uptake risks overwhelming grids if they are not upgraded in time. AFIR offers a solid framework to guide this planning, though further discussion and cooperation must follow.²⁸

13. ESTABLISH A DEDICATED BODY OR FORUM, SUCH AS THE ENERGY TRANSITION PARTNERSHIP, TO MONITOR, COORDINATE AND REGULARLY REVIEW THE ROADMAP.

A dedicated governance forum should bring together the European Commission, Member States, the fisheries sector, civil society and other stakeholders to track progress, identify barriers and coordinate implementation.

Why: Strong governance and regular monitoring are essential to ensure accountability, maintain momentum and adapt over time, so that the energy transition delivers on its climate, social and economic objectives.

These processes and consultations should help identify the investment and funding needed to drive the transition and build resilience, alongside a mapping of possible public and private financing sources at local, regional, national and EU level to accelerate the process.



© Michel Gunther/WWF

28. European Commission, Internal Market, Industry, Entrepreneurship and SMEs, Transition pathways for European industrial ecosystems, EU Transition Pathways, D2.1 Blueprint for the development of Transition Pathways_Official v1.01.pdf

20
2020
3020
4020
5020
6020
70

BY 2040 – CUTTING FISHERIES ACTIVITIES NET EMISSIONS BY 90%²⁹

1. SHIFT INTO THE SHARPER-REDUCTION PHASE OF THE CO₂ PATHWAY WITH INNOVATION UPTAKE

The European Commission should trigger the tightening phase of the progressive CO₂ scenario, by facilitating innovation uptake.

Why: A gradual start allows technology costs to decrease before the larger deployment of zero-carbon solutions after 2040.

2. ESTABLISH A CENTRALISED EU CONTACT POINT FOR INNOVATION UPTAKE

The European Commission, building on platforms such as the European Digital Innovation Hubs (EDIHs)³⁰, the knowledge valorisation platform³¹, and the Enterprise Europe Network, should centralise advisory services on funding and innovation uptake, especially for small scale operators. The upcoming Ocean Observation Initiative (OceanEye) could help facilitate this process.

Why: Helps businesses find financing and share best practices more efficiently as the transition accelerates.

3. ASSESS PROGRESS ON A JUST TRANSITION (2032 CHECKPOINT)

The European Commission and Member States should evaluate whether fishers and coastal communities are active participants benefitting from the transition – through financial support, access to skills, participatory governance and equitable funding – supported by a set of key performance indicators (KPIs) reflecting the EU Fleet Transition Strategy. These KPIs should be split between common indicators, enabling comparison across fleets and other maritime sectors, and indicators specific to fisheries.

Why: Confirms that decarbonisation investment prioritises the greatest environmental, social and economic benefits, not just existing fleet capacity, while shared KPIs help to capture best practices and make progress measurable and comparable over time.

4. SCALE UP INFRASTRUCTURE ACROSS THE WHOLE FISHERIES VALUE CHAIN

Member States and port authorities should expand alternative fuel and charging infrastructure beyond core transport corridors, while assessing the needs of other links in the value chain, such as processing, storage, logistics and distribution.

Why: Ports are just one link in an interdependent value chain, so infrastructure must be strengthened systemically, not link by link, to support fleet-wide uptake of clean technologies and build resilience against supply-chain disruptions from pandemics, geopolitical conflicts or trade restrictions.

5. CONSOLIDATE STOCK RECOVERY AND BLUE CARBON RESERVE PROTECTION IN CLIMATE POLICY

The European Commission should formally treat maintaining stocks well above maximum sustainable yield (MSY) and protecting blue carbon reserves (such as seagrass meadows, kelp forest and others) as natural allies in capturing and storing carbon, while keeping them separate from compensation and emission-reduction schemes, such as the Emissions Trading System (ETS).

Why: Healthy stocks directly reduce fuel needs and emissions, making stock recovery central to climate goals.

6. CONSOLIDATE FAIR AND TRANSPARENT ACCESS TO FISHING OPPORTUNITIES

The European Commission should ensure full implementation of Article 17 by Member States in allocating fishing

29. The recently updated EU Climate Law commits to a 90% net reduction in EU GHG emissions by 2040, compared to 1990

30. Shaping Europe's digital future | Shaping Europe's digital future

31. Knowledge Valorisation Platform - Research and innovation

20
2020
3020
4020
5020
6020
70

opportunities to those that fish with the best environmental and social performance criteria, to align with a just and fair transition and Member States reward (preferential access, support, etc) those who make the greatest efforts to improve environmental performance.

Why: Ensuring sustainable livelihoods for low impact fishers requires continued prioritization of fishing opportunities to those that fish in the most environmental and socially sustainable way. This aligns access to fishing opportunities with climate, biodiversity and social objectives.

7. ESTABLISH COORDINATED, SCALED-UP FUNDING MECHANISMS

The European Commission should align EMFAF and its successor (NRPPs), Horizon Europe, EIB facilities and the future Competitiveness Fund, with easier access for small-scale operators.

Why: A coordinated funding landscape ensures continued, equitable support as investment needs grow.

8. ACCELERATE INVESTMENTS IN SKILLS, TRAINING AND WORKFORCE RENEWAL

The European Commission and Member States should build energy-transition, digital and sustainability skills into education and training, including apprenticeships and mentoring.

Why: Closes workforce gaps and supports gender equality and inclusivity as new vessel designs and technologies scale up.

9. CHECK CONSISTENCY IN THE REGULATORY AND GOVERNANCE FRAMEWORK

The European Commission should identify barriers and useful public initiatives to strengthen coherence between climate objectives, restoration, fisheries management and social justice in decarbonising the fishing fleet.

Why: Ensures governance keeps pace with acceleration and does not become a bottleneck.



© naturepl.com/Franco Banfi/WWF

20
2020
3020
4020
5020
6020
70

BY 2050 – FULL DECARBONISATION, CONTRIBUTION TO NET-ZERO EU GHG EMISSIONS

1. ACHIEVE NET-ZERO GHG EMISSIONS ACROSS EU FISHERIES

The European Commission and Member States should deliver full decarbonisation of the fleet, through binding emissions-reduction targets set by the EU Fleet Transition Strategy and sustained investment in propulsion, fuel switching and vessel design.

Why: Confirms the sector's full contribution to EU climate neutrality, scaling early efficiency gains into complete decarbonisation.

2. ACHIEVE DECARBONISATION AS A GOVERNANCE TRANSITION, NOT JUST A TECHNICAL ONE

The European Commission and Member States should ensure fleet capacity stays balanced with sustainable fishing effort, coastal communities are active participants, and public support has prioritised fairness and resilience throughout.

Why: Net zero achieved through growth of fishing capacity or social exclusion would undermine the CFP's sustainability objectives and the sector's long-term legitimacy.

3. SECURE A FULLY RENEWED, ZERO-EMISSION FLEET

Member States should complete the shift to zero-emission fishing fleet operation, propulsion and vessel design across all fleet segments, while EU funding instruments should provide targeted support for sustainable fleet segments (or decommissioning) and operators, including small-scale fisheries.

Why: Ensures no segment of the fleet is left behind or dependent on fossil fuels, avoiding a two-speed transition.

4. SUSTAIN HEALTHY FISH STOCKS AS THE LEGAL BACKBONE OF A NET-ZERO FLEET

The European Commission and Member States should keep stocks above MSY as a permanent feature of fisheries management.

Why: Long-term emissions performance depends on continued stock abundance. Healthy stocks keep fuel use and effort low well beyond 2050.

5. ACHIEVE THRIVING, RESILIENT COASTAL COMMUNITIES WITHIN A FULLY FUNCTIONAL MARITIME SPATIAL PLANNING SYSTEM

Member States should sustain generational renewal, decent working conditions and diversified local economies in fishing-dependent regions, underpinned by maritime spatial planning that fully accounts for the cumulative impacts and carrying capacity of our ocean.

Why: A net-zero fleet is only a success if coastal communities remain viable and attractive to young fishers, within an ocean where climate, biodiversity and pollution pressures are managed together rather than in isolation as they are all connected.



© 2026

© 1986 Panda symbol WWF – World Wide Fund for Nature (Formerly World Wildlife Fund)

® “WWF” is a WWF Registered Trademark.

WWF European Policy Office, 123 rue du Commerce, 1000 Brussels

For contact details and further information, please visit our website at wwf.eu

Designed by www.dougdawson.co.uk



ClientEarth®

 **SEAS AT RISK**

Coalition Clean Baltic

