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RESEARCH



The Brexit deal and UK fisheries—has reality matched the rhetoric?

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Abstract

Fisheries management has been a strongly contested aspect of the UK's position in the EU since UK accession, with the fishing industry frequently questioning both the efficacy and fairness of arrangements. During the campaign for UK exit (Brexit) from the EU, and the subsequent negotiations of a new legal and political relationship from 2016 to 2020, senior UK political leaders strongly committed to deliver radically changed fisheries arrangements with respect to the three central issues: regulatory autonomy; access to waters; and quota shares, all while maintaining minimal trade impacts. The Trade and Cooperation Agreement diverges from this Brexit rhetoric. While some regulatory independence has been achieved, UK fisheries management continues in a state of interdependence and significant EU access to UK waters remains, even in the 6–12 nautical mile territorial waters. While the UK gained an increase in quota shares which is estimated to reach 107 thousand tonnes of landed weight annually by 2025 (an increase of 21.3% for quota species and 16.9% for all species, or 17.8% and 12.4% by value), this pales in comparison to the UK Government's stated ambitions for zonal attachment (achieving 68% by weight and by value - a potential shortfall of 229,000 tonnes / £281 million). This modest change explains the negative reaction of the fishing industry and claims of betrayal in the face of the UK Government's announcement of a "successful" deal. The stark delivery gap between rhetoric and reality means the UK government faces a challenging start to managing fisheries outside of the Common Fisheries Policy.

Keywords Fisheries management · Seafood · Trade · Politics · Zonal attachment

Introduction

Achieving sustainable management of fisheries can be considered a "wicked" socio-ecological problem (Jentoff and Chuenpagdee 2009), but the challenges involved are dramatically amplified when fish stocks cross jurisdictional boundaries. Achieving sustainable and equitable management in this arena requires international cooperation, but this situation

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also frequently leads to political conflict (Pomeroy et al. 2007; Jensen et al. 2015; Steinsson 2016). Politicising the management of fisheries can raise the public interest and attention on what is often otherwise a very small sector of the economy and employment (House of Commons 2017a, European Commission 2020), but also risks raising expectations beyond what is feasible in terms of sustainability (avoiding overfishing) or the economy (impacts on larger sectors). In the North East Atlantic, management of many shared fish stocks has largely been conducted through the European Union's (EU) Common Fisheries Policy (CFP) since 1973; however, many in the United Kingdom (UK) fishing industry have long felt this arrangement was biased against them (Phillipson and Symes 2018; Hatcher 2020). The UK vote to leave the EU in 2016 therefore relied heavily on using fishing as a totemic issue for the UK Government to get voter support, but did this approach of politicising the issue deliver on the expectations the industry had?

The UK prides itself on being a maritime nation with a rich history connected to the sea (Redford 2014). Indeed, many coastal communities have been shaped by fishing (Stead 2005), and fish and chips is said to be the national dish (Murcott 2013). From the 1950s to the 1970s, the British fishing



industry grew to an unprecedented size, largely due to the development of a distant water fleet which exploited waters across the North Atlantic, particularly those surrounding Iceland and Greenland (Hatcher and Read 2001).

However, by the 1970s, various countries, beginning with Iceland, began to assert exclusive control over a wider band of coastal waters (Steinsson 2016), culminating in the recognition of national 200 nautical mile (M) Exclusive Economic Zones (EEZ) through the United Nations Convention on the Law of the Sea (UNCLOS) in 1982 (United Nations 1982). This dramatically restricted the operations of the British distant water fleet and largely led to its collapse (Hatcher and Read 2001). In 1973, the UK had also joined the European Communities (now the EU), which led to the development of the CFP, fully implemented in 1983 (Wise 1984; Stewart et al. 2019). The CFP was aimed at ensuring sustainable management of shared fish stocks and providing all European fishing fleets with equal access to EU waters in an effort to promote fair competition (European Commission n.d.).

One of the key components of the CFP was the implementation of a system known as relative stability for sharing out proportions of total allowable catches (TACs) for each fish quota to member states. These fixed shares were based on reported landings during a reference period from 1973 to 1978 (Lado 2016; Hansard 2020). British fishers have long argued that this system resulted in an unfair allocation as much of their fleet was still fishing outside EU waters during this period (McLean and Gray 2009). The allocation of TAC shares based on where fish stocks were distributed would have led to a very different outcome for the UK. An analysis of fish landings in 2018 demonstrated the importance of UK waters for fishing, particularly for EU vessels, with the EU27² and Norway (and excluding Faroes), representing 49% by value and 63% by volume of the total from UK waters (MMO 2020).

The CFP also performed poorly, both biologically and economically, during its first two decades of operation (European Commission 2009). Inappropriate subsidies encouraged overcapacity and quotas were regularly set well above scientific advice (Carpenter et al. 2016). During the 1990s, there were significant decommissioning schemes to tackle overcapacity, but the real improvements to the CFP came through reforms in 2003 and particularly 2013 (Fernandes and Cook 2013; Aranda et al. 2019). Ambitious

 $^{^2}$ EU27 refers to the EU member states (of which there were 28) minus the UK, in the period when the UK was still formally a member of the EU.



targets were set to restore stocks to levels capable of providing maximum sustainable yield, to reduce discards, and to regionalise management and limit fleet capacity (European Commission n.d.). Consequently, the sustainability of many fish stocks has increased (European Environment Agency 2021), and in 2018, the most recent data available, the UK fleet generated more profit than any other EU member state (EU STECF 2020).

Despite these improvements, and historical research by Thurstan et al. (2010) demonstrating that most of the decline in European fish stocks occurred prior to the CFP, many British fishers remained deeply unhappy with the management regime and felt that the UK received a poor deal in relation to national quota shares (Hansard, 2020). This was amplified by the introduction of fixed quota allocations (FQAs) in the UK in 1999 (Forse et al. 2021), which distributed UK quotas among UK vessels based on historical catch records. As a result, the vast majority of fishing opportunities for quota species went to vessels above 10 m in length who were able to demonstrate their historical landings. Consequently, over 95% of quotas are currently held by larger boats, including a number which are owned by Spanish, Dutch, and Icelandic companies (Davies et al. 2018; Greenpeace 2018). The transferable nature of the UK FQAs led to concentration of quota ownership and therefore also a notable shift in terms of power within the large-scale sector (Cardwell 2015). This combination of history and perceptions made the UK fishing industry a prime target for those campaigning for the UK to leave the EU, soon to be known as "Brexit". This research aims to present the rhetoric and promises made by the UK Government during the 2016-2020 negotiation period and evaluate whether the promises made have been delivered through the Trade and Cooperation Agreement (TCA).

The rhetoric

During both the run up to the June 2016 Brexit Referendum and the period afterwards, the large UK fishing industry federations (the Scottish Fishermen's Federation—SFF and after the vote the National Federation of Fishermen's Organisations—NFFO) threw their support behind the Government promises for Brexit as a means to rejuvenate the UK fishing sector. The federations campaigned under the slogans of the UK "taking back control" (Vote Leave 2016a) (the central campaign slogan for Vote Leave) of its waters and delivering a "sea of opportunity". This rhetoric was widely adopted in the media. Politicians were also keen to adopt the sea of opportunity rhetoric and link it to commitments and promises to secure gains and avert losses for the fishing industry and coastal communities (Duguid 2018; Gove 2017) and many signed the SFF pledge to vote against any arrangement that "prevents the UK from negotiating access

¹ However, the Hague Preferences provided compensation for the loss of distant-water fishing grounds and guaranteed a minimum level of certain quotas due to the dependency of coastal communities on fishing.

and quota shares" or that does not allow the UK to "exercise complete control and sovereignty over its own waters" (SFF 2018; Scottish Conservative and Unionist 2018).

A pro-Brexit fishing lobby group, Fishing For Leave (FFL), was formed and openly criticised the large fishing federations for not supporting Brexit enough (Fishing News 2016). FFL received widespread coverage (alongside similar groups such as Save Britain's Fish) particularly from the 35 boat flotilla, headed by Nigel Farage (leader of the UK Independence Party at the time), that steamed up the Thames to urge Parliament to "take back control of British waters" a week before the referendum (BBC 2016; Save Britain's Fish no date).

Although dominant, the rhetoric of "taking back control" of UK waters to deliver a "sea of opportunity" was not universally shared. Fisheries researchers from Universities, think tanks and environmental NGOs warned before the Brexit referendum that the effects of Brexit on the UK fishing industry would be complicated and that benefits were not guaranteed (Baldock et al. 2016; Stewart and Carpenter 2016; Phillipson and Symes 2018). Research on the potential impacts of different Brexit scenarios noted that for some UK fishing fleets, particularly smaller vessels, the potential trade impacts from Brexit and the lack of quota holdings presented a "sea of risk" (NEF 2017). The shadow Fisheries Minister, Luke Pollard (Labour), also expressed concerns about the impossibility of delivering on the rhetoric of the referendum campaign and the potential losses for the industry resulting from a "bad deal" (Labour List 2017).

These concerns over the impact of Brexit were also expressed by smaller fishing organisations but received much less coverage. Media analysis undertaken (NEF 2019) revealed that of the 12,000 UK fishers and their representatives, the head of the SFF received 48% of the coverage, with a further 11% and 6% for the heads of FFL and NFFO respectively. Organisations specifically representing the small-scale fleet (e.g. New Under Tens Fishing Association (NUTFA), Coastal PO, and the Scottish Creel Fishermen's Federation) received only 2% of the media coverage. Processing and wholesale parts of the seafood sector (economically as significant as the catching sector, Stewart et al. 2019) received only 15% of the sectoral coverage between them (NEF 2019).

The leave campaign successfully used rhetoric to generate support for their cause, particularly through messages appealing to emotion (e.g. the unfairness of the CFP or the EU's blame for the decline of the British fishing industry) and authority (e.g. portraying the EU as unaccountable or distant to the reality facing fishermen) (Crines 2016). These were hard to counter, because in simple terms they were claims that Brexit would deliver benefits for the industry and so were more compelling for media dissemination than arguments that highlighted the risks to trade or the ongoing need

for cooperation in fisheries management. This is reflected in a statement by the UK Prime Minister, Boris Johnson: "We have a fantastic opportunity now to take back control of our fisheries, and that is exactly what we will do. We will become an independent coastal state again, and we will, under no circumstances, make the mistake of the government in the 1970s, who traded our fisheries away at the last moment in the talks. That was a reprehensible thing to do. We will take back our fisheries, and we will boost that extraordinary industry" (Fishing News 2019). As a result, claims about unfairness and new opportunities tended to be overinflated, whereas more rational discussions of the advantages and disadvantages of managing fisheries outside of the EU became marginalised. This bias in the handling of views was further reinforced during the negotiation of the future EU/UK relationship because the UK Government needed to maintain a degree of bullishness about its negotiating position, and not reveal positions that might compromise its ability to secure its negotiating objectives.

What promises were made?

The UK Government's aspirations for how Brexit would change and benefit UK fisheries were most clearly articulated in the Fisheries White Paper (Defra 2018), published in July 2018. These goals continued to be maintained during the development of the UK Fisheries Bill (HM Government 2020a) and the UK's negotiating position with the EU (HM Government 2020b).

A key goal of UK Government policy and the supporting political rhetoric was to control access and fishing opportunities in UK waters for EU and other coastal state vessels on an annual basis. The UK Government also sought to "move away from relative stability towards a fairer and more scientific method for future Total Allowable Catch (TAC) shares" (Defra 2018), and specifically "that future fishing opportunities should be based on the principle of zonal attachment" (HM Government 2020b). It was also stated by Prime Minister Johnson that access to EU markets for fisheries products would be agreed separately from negotiations around fishing opportunities and access to waters (Johnson 2020). The general approach purveyed in the White Paper appeared to be strongly welcomed by the large UK fishing federations, with supporting statements from both the NFFO and SFF included in the UK Government press release (HM Government 2018a). Surprisingly, however, other key stakeholders in the fishing industry, including the devolved administrations, did not appear to have been given the same opportunity to comment.

Several senior government leaders went beyond these general ambitions to comment on what specific outcomes could be expected for UK fisheries post-Brexit. Three issues



received most of the attention and are detailed in this section based on Government publications, recorded statements in the media and parliamentary record regulatory autonomy, access to UK waters, and quota shares. Our methodology for obtaining and analysing the evidence pertaining to these three issues is presented in supplementary material. Given that over the last 5 years all of us have been involved in researching the potential effects of Brexit on UK fisheries, speaking to the media, and giving evidence to parliamentary committees, we also provide details of our positionality in the supplementary material section.

Regulatory autonomy

The campaign to leave the EU was dominated by the slogan: "Take Back Control" (Vote Leave 2016b; Berry 2016). This rhetoric, both during the referendum campaign and subsequently, was extended to fisheries by senior politicians in the Conservative Government and taken up by leading figures in the fishing industry. The slogan framed control as a means to an end, although the actual "ends" were elusive. Thus, Boris Johnson campaigned strongly for Brexit on the general notion of control: "Whilst Britain is in the EU we cannot take measures to protect our fishing industry and stocks. And if we Vote Leave we can take back control over UK waters, set our own fishing policies, and support our fishermen" (Johnson 2016). Public statements of politicians (and mirrored or supported by industry leaders) show that "control" can be categorised as a means to three broad ends: allowing the UK to represent UK fishing interests internationally, through for example the North Atlantic Fisheries Commission (NEAFC) and trilateral EU/Norway/UK fora; correcting historical injustices in the distribution of resources under the CFP; and enabling the UK to adopt a better management regime that is more efficient and responsive to the needs of the UK fishing industry (House of Lords 2016a, Q 32—Eustice; and O 12—Deas and Armstrong).

These objectives are well illustrated in the Government policy positions advanced by two leading campaigners for Brexit who also had ministerial portfolios covering fisheries. In April 2016, George Eustice, Minister of Agriculture and later Fisheries, set out a vision for post-Brexit fisheries where the UK, outside of the EU, would be able to represent its own interests directly in regional fisheries negotiations. The UK would be able to negotiate more favourable access and quota allocations and thereby correct the perceived historical injustices of the CFP, under which UK fishing interests were traded away (Eustice 2016). Environment Secretary Michael Gove stated: "Leaving the EU creates a sea of opportunity for our fishing industry. Outside the Common Fisheries Policy we can take back control of our waters and revitalise our coastal communities. We will be able to put in place our own systems, becoming a world leader in managing our resources while protecting the marine environment" (Foster 2018). This was echoed by the Prime Minister, who stressed that leaving the EU would enable the UK to "release our fishermen from the tangled driftnets of arcane quota systems" (Hansard 2019, column 148).

After the referendum, the negotiation of the future UK relationship on fisheries would take almost 5 years to resolve. During this period, the drive for regulatory autonomy was consolidated in the Fisheries White Paper (Defra 2018) which included more than 20 references to "taking back control" or the UK becoming an "independent coastal state". Taking back control was used by the Government (Michael Gove) to explain withdrawal from the London Fisheries Convention (HM Government 2017) and to introduce domestic legislation to frame powers to control exclusively UK waters (HM Government 2018b).

While not strictly an issue of regulatory autonomy, it is important to highlight the linkage between the regulation of fisheries and wider questions of market access to seafood. The Government sought to separate the negotiation of fisheries from negotiation of market access (House of Commons 2017b, Questions 644–8; Hansard 2018; Defra 2018, pp 9, 17). This was in contrast with the EU objective of linking access to fisheries with access to markets (Council of the European Union 2020, Part 12). The link between access to waters and quotas, and tariffs and non-tariff barriers for seafood were raised as matters of concern during a House of Lords Enquiry into the impact of Brexit on fisheries. While some in the industry accepted the need to find a balance (NFFO), other industry figures (SFF, FFL) were less concerned, taking the view that market demand would play a determining role in shaping market access rather than any political deal (House of Lords 2016b).

Access

The principle that the UK would have the ability to control access to its waters was strongly and frequently asserted as a benefit of Brexit by British politicians and fisheries leaders. The UK Government emphasised that "access to UK waters will be on our terms, under our control and for the benefit of UK fishermen" (Defra 2018). It was described by Eustice as a powerful negotiating card (House of Lords 2020a Q 27). For industry, retaining full control over access to the UK EEZ was a key objective for negotiations on future UK/EU relations (NFFO 2016).

In the media, access was linked to the fairness of fishing opportunities, with the EU portrayed as benefiting more from access to UK waters than vice versa (House of Lords 2016a, Q 35—Eustice). Accordingly, the UK could exercise control over access to correct this unfairness. Although much focus was on the full power to exclude access, there was early recognition that there were limits on this imposed



by international law, and possibly historic rights of access (House of Lords 2016a, Q 35—Eustice). There was also recognition that foreign access would continue, at least as a transitional measure. Concern about possible historic treaty rights of access triggered the UK withdrawal from the London Fisheries Convention 1964, which established access rights for vessels from France, Ireland, Belgium, Germany, and the Netherlands to UK waters between 6 and 12 M, and which were subsequently subsumed into the CFP (HM Government 2017).

There was imprecision and a lack of specificity over how access would be controlled and what levels of access would be provided. Changes were promised in two ways. First, access would be determined on an ongoing basis and separately from any questions about wider trading relations. Thus, Gove stated that access to waters would be determined on an annual basis and that this would be done as part of a fisheries agreement, separate to agreement on a future economic partnership (Hansard 2018). This continued as a UK position in the negotiation of the future relationship agreement with the EU (HM Government 2020b).

Second, access would be reduced, although the extent of this was uncertain. Here a distinction was drawn between access to the EEZ and access to waters within 12 M, where it was recognised in a letter from the House of Lords EU Committee to the Secretary of State for Environment Food and Rural Affairs that there were "significant potential benefits for the inshore fleet to be gained from significantly reducing non-UK access to the 6-12 mile zone" (House of Lords 2020b). However, the Government did not present a consistent position on this. Gove publicly stated in July 2017 that there would likely be some access for foreign vessels in the 12-200 M zone, but no access to foreign vessels within 6–12 M (BBC 2017). Later, Eustice said that there would be "some reduction in access ... not least in the 6 to 12-mile zone, which is important", although he conceded that the extent of this was subject to negotiation (House of Lords 2020a, Q30). However, Fisheries Minister Victoria Prentis stated that "The Government have been clear throughout that access to the UK's territorial seas is out of scope for any fisheries framework agreement with the EU. Any access negotiated with the EU will cover only the UK's exclusive economic zone, and not the 0 to 12-mile zone. That remains the case" (Hansard 2020, column 265).

Quota

On the issue of quota shares, Defra's White Paper (2018) set out the Government's objective that "We will be seeking to move away from relative stability towards a fairer and more scientific method for future Total Allowable Catch (TAC)

shares". While the White Paper did not specify a new system for UK-EU quota shares, Annex C of the paper analysed potential quota shares using the principle of zonal attachment (where the spatial distribution of stocks between different jurisdictions is used as a basis for the allocation of quota shares between parties) for a select sub-set of fish stocks. These all showed potentially large gains for the UK under a zonal attachment system.

During the years that followed, the principle of zonal attachment became seen as a natural starting position for future UK-EU quota shares, not least because it has been the basis for quota shares between the EU and Norway under their bilateral agreement (Arthur et al. 2014). In the UK Government's communications, zonal attachment was explained as an extension of the Government's position on access rights and securing the UK EEZ. The UK Fisheries Minister, George Eustice, explained that "When it comes to haddock and cod, France gets about three or four times more than English fishermen. [But] if we were to leave the EU, we would re-establish control of our waters out to 200 nautical miles, and this would give us a starting point to renegotiate quota allocations for the UK" (Langston 2016). In the Government's published negotiating position in 2020, it was explicitly stated that "future fishing opportunities should be based on the principle of zonal attachment" (HM Government 2020b). Another key priority for the Government was that quota shares should be set in annual negotiations rather than as part of the trade deal, with Minister Eustice referring to a trade deal and a fisheries agreement as "two separate things" (BBC 2018).

Besides the analysis in Annex C of the White Paper, UK Government sources did not quantify what changes in quota shares could be expected as a result of zonal attachment. Minister Eustice was at times hesitant to specifically promise that Brexit would lead to higher quotas (House of Commons 2017b), but did point to specific species as likely to increase (including cod and haddock in Langston (2016) and cod and plaice in The Sun (2016)).

On many occasions, Minister Eustice gave relatively specific figures on the difference between what the UK caught in EU waters and vice versa and implied that this would be corrected through new quota shares. In one prominent instance, this was reported as "British fishermen will catch hundreds of thousands of tonnes after Brexit, minister says" (Telegraph 2016) and subsequently picked up by many news outlets (The Sun 2016; The Express 2016) and quoted by fishing industry leaders (NUTFA 2021). Prime Minister Johnson repeated the claim later specifically about Scotland, claiming Scotland would be the "proud possessors of hundreds of thousands of tonnes" (Daily Mail 2020).



The reality

The EU and UK finally agreed a Trade and Cooperation Agreement (TCA) to govern relations between the two parties after the end of the Brexit transition period on December 24th 2020, coming into force on January 1st 2021 (European Commission 2021). It is wide-ranging, covering trade in goods, trade in services as well as governance, subsidies, and level playing field provisions. Fisheries is included within Part Two (trade, transport, fisheries, and other arrangements), under Heading Five with further detail in four appendices. The TCA provides for managing fisheries in accordance with the UN Convention on the Law of the Sea 1982, establishing the objective that populations of harvested species should be above biomass levels capable of producing the maximum sustainable yield, and identifies the International Council of the Exploration of the Sea (ICES) as the main body responsible for providing scientific advice on management decisions. The detail of the TCA in relation to regulatory autonomy, access, and quotas is described below, together with analysis on the extent to which the UK rhetoric on these topics was achieved.

Regulatory autonomy

A key policy objective of Brexit was for the UK to secure regulatory autonomy, i.e. the power to act as an independent sovereign state, and so determine its own fisheries law and policy (Defra 2018). This could bring regulation closer to the industry, with UK level regulation likely to be more agile than the centralised and bureaucratic processes of the CFP. Formally speaking, autonomy now exists. The UK has resumed its rights and duties directly under UNC-LOS 1982 (United Nations 1982). The TCA recognises the sovereign rights of each party and provides that each party shall manage fisheries within their respective waters (European Commission 2021). The UK has acceded to NEAFC and has negotiated fisheries framework agreements with Norway and the Faroe Islands, and a Fisheries Memorandum of Understanding with Greenland (Barnes 2021).

However, this formal autonomy belies the reality that sustainable fisheries management for shared stocks is fundamentally a matter requiring cooperation, and that fisheries access is often linked to wider trade matters. Cooperation between the UK and EU remains both a legal and practical necessity. The reality is closer to interdependence than independence, as shown in three key areas of fisheries management. First, fisheries law in the UK remains much the same as it was before Brexit. Although

the Fisheries Act 2020 establishes a framework for adopting new measures, the bulk of the CFP was transformed into domestic law under the European Union (Withdrawal) Act 2018 and it will take time for the UK to develop its own specific rules. Even then some degree of alignment of rules may be required. Assuming the EU and UK want to facilitate access and fishing between UK and EU waters, then alignment of rules will help avoid practical complications resulting from different technical or control measures applying to boats fishing stocks across UK and EU waters. Second, under the TCA, key decisions on fisheries will be the result of cooperation rather than unilateral action. This includes the setting of TACs at annual negotiation rounds and the development of cooperative management approaches through the Specialised Committee on Fisheries (SCF) (HM Government 2021a). The SCF is a joint forum for discussion and cooperation in relation to fisheries matters between the UK and the EU, and may adopt measures, decisions, and recommendations relating to cooperation on sustainable fisheries management, including recommendations around joint reviews of the implementation of the fisheries heading in the TCA. Third, as discussed below, under the TCA, the quota shares are locked in. Thus, the UK can only manage fish within the quota allocations established by the TCA. These three factors represent key limitations on UK regulatory autonomy. Fundamentally, the need to balance trading interests with fisheries quota and access, as well as the same power dynamic that shaped the deal, remains in place. It is therefore unlikely that the UK could secure more favourable concessions or control in the future, than it enjoys now. Indeed, while the UK enjoys tariff-free access to EU markets for seafood products under the TCA, expensive and burdensome non-tariff barriers remain. This has negatively impacted upon seafood trade, for example, effectively ending UK export of live bivalves (House of Commons 2021; Stewart and Carpenter 2021), demonstrating the inevitable link between regulation and market access in fisheries.

Access

In accordance with international law, the UK now enjoys full control over access to its waters. This is further set out under Sect. 12 of the Fisheries Act 2020. Under the terms of the TCA, the UK has exercised this power to grant access to EU vessels to UK waters. Access is guaranteed during the adjustment period until 30 June 2026 as follows. Full access to waters is available to vessels of the other Party at a level that is reasonably commensurate with the shares of fishing opportunities (i.e. quota share) or for non-quota species at a level that equates to an average tonnage fished between 2012 and 2016. In waters between 6 and 12 M within ICES divisions 4c and 7d-g (southern North Sea, English Channel,



Table 1 Change in quota and anticipated landings (taking account of quota uptake) by tonnage and value for the UK under the Trade and Cooperation Act

Measure	Weight	Value
Change in quota (annual)	135,484 tonnes	£157 million
Relative change in quota	22.7%	19.8%
Change in landings (annual)	107,180 tonnes	£124 million
Relative change in landings (only quota species)	21.3%	17.8%
Relative change in landings (all species)	16.9%	12.4%

Authors' calculations based on an average of 2016–2020 for all data sources. Initial quota from Carpenter (2021), quota uptake from FIDES, quota landings and total landings from MMO (2021a). Prices used to convert weight to value are calculated from MMO landings by quota (MMO 2021a) and converted to 2020 real values using the Bank of England inflation calculator. Where UK values for quota uptake or price were not available, the EU average was applied

and Bristol Channel), access is also secured for qualifying vessels (i.e. those vessels with a track record of fishing between 2012 and 2016, or their replacement). This represents a significant concession to the exclusion of access in the 6–12 M zone that was described as a red line (see the "Access" section above).

Beyond the adjustment period, access will become a matter for annual negotiation, provided that TACs have been agreed. However, the power to restrict access is still constrained by the TCA. Thus, access shall "normally result" in access to the EEZ at a level commensurate with the respective shares of the TACs. Access to non-quota stocks in each other's EEZ (or territorial waters, if access is continued) shall be at a level that at least equates to the average tonnage fished by that Party in the waters of the other Party during a reference period between 2012 and 2016. Here it is important to note that for 2021, the EU and UK agreed that tonnage limits on catches of non-quota species caught in each party's EEZ would not be enforced (Defra 2021). Instead, these will be monitored and factored into a longterm management plan to be initiated by the SCF. Access to waters between 6 and 12 M continues in the areas specified for vessels with a track record in 2012-2016. Additional access conditions may be set, but only through mutual agreement between the UK and EU. Any attempt to limit access can be met by retaliatory measures, so if the UK wanted to limit access to its waters, then this is likely to come at a cost to market access for seafood and, potentially, other goods (Stewart 2020).

Some uncertainty exists about the extent of access beyond 30 June 2026 because this is linked to quota shares and annual negotiations. There are no indications of what position the UK will take once the adjustment period ends.

Quota

Quota shares for the UK and the EU were agreed as part of the TCA and specified in Annexes 35 and 36. This inclusion of quota shares as part of the broader trade agreement contrasts with the UK negotiating position that quota shares should be set in annual negotiations separate from the TCA.

The quota shares are established as permanent shares, with the phrase "2026 onwards" indicating that the final division of shares is expected to continue. Any attempt to change these unilaterally can be met with remedial measures—i.e. the suspension of fishing rights or preferential tariffs for seafood products, and, potentially, escalated to wider trade sanctions. The resolution of disputes arising from such matters is subject to binding third party arbitration.

The new quota shares, which are phased in from 2021 to 2025, increase the UK share for 63 of the 105 quotas in the agreement (and decrease for one quota, Celtic Sea saithe). Where there are increases, the increased share varies by quota from 0.5 to 35.5 percentage points (comparing the end of the phase-in period in 2025 to 2020).

Converting these percentage shares into tonnage based on the size of quotas over the 2016–2020 period, the new quota shares represent an increase of 135,000 tonnes of quota for the UK annually (Table 1). However, quotas are often not fished to their full extent. Assuming a similar level of quota uptake as in the period 2016–2020, and without hypothesising how quota will be swapped, this corresponds to an extra 107,000 tonnes of annual landings. In comparison to the Prime Minister's claim of "hundreds of thousands of tonnes" of extra catch, the result reaches the right order of magnitude for the UK as a whole, but fails to deliver in one crucial way—the letter "s".

In economic terms, using fish prices over the same 2016–2020 period, this corresponds to £157 million of potential quota value and £124 million of landed value, taking into account quota uptake. This corresponds to a 17.8% increase in landed value and a 21.3% increase in landed weight for quota species. However, as nearly one-third of the UK's landings value is of non-quota species, this corresponds to a 12.4% increase in landed value and a 16.9% increase in landed weight for UK fisheries as a whole. Landings of non-quota species are not directly impacted by the changes to TCA quota shares.



Table 2 Change in landed weight and value by quota for the UK under the Trade and Cooperation Act

Quota	Change in landed weight (tonnes)	Share of total change	Change in landed value	Share of total change
Mackerel (Western)	37,392	35%	£39 million	32%
Herring (North Sea)	25,923	24%	£14 million	11%
Sole (North Sea)	1,140	1%	£9 million	7%
All other (102)	42,724	40%	£62 million	50%
Total	107,180	100%	£124 million	100%

As per Table 1

Out of the 105 quotas covered by the TCA and the 63 increased shares, the gains to the UK in terms of tonnage and value are highly concentrated in a select few quotas. Just three quotas—western mackerel, North Sea herring, and North Sea sole—constitute over half of the change in value (50%) and three-fifths of the change in weight (60%) (Table 2). Some quotas that were prioritised by the industry for any increased quota share, for example Channel cod (NFFO 2020a, b,c), remain at their pre-Brexit share.

Given the concentration of UK quota gains in a small number of species there is also an important distributional element, with the UK fishing fleets targeting these species (and holding the shares of UK quota) gaining much more than others. For the UK small-scale fleet, which mostly catches quota from a collective pool for under 10-m vessels, there is a negative correlation between the gains in UK quota shares and the share of the quota that the UK allocates to the under 10-m pool (Barnes et al. 2021).

Much of the Government rhetoric evoking an increase in quota shares post-Brexit referenced the imbalance in catches taken by EU vessels from UK waters compared to the catches taken by UK vessels from EU waters. Compared to EU landings from UK waters (£523 million), the estimated change in landings (£124 million) reaches 24% of the value, comparable to the 25% figure promoted by the UK government in the media following the TCA (HM Government 2021b). The change in quota shares raised the UK share of landed value from UK waters from 49 to 57%, short of the two-thirds claimed by the Prime Minister when announcing the deal, which likely overlooked Norwegian landings from UK waters (Stewart 2020) as well as quota uptake.

The quota shares achieved for the UK through the TCA also fall far short of zonal attachment estimates (Fig. 1). Based on zonal attachment estimates for 24 stocks (sourced from available literature and adjusted to reflect the share between the UK and EU only, i.e. holding the Norwegian share fixed and using the size of quotas and fish prices over the 2016–2020 period), the UK quota shares post-Brexit represent a shortfall of 229,000 tonnes and £281 million (see Supplementary information for further details). For

the stocks analysed, the increase in quota shares represents 68% of zonal attachment quotas by tonnage and by value.

Notably, the three stocks for which the UK achieved the greatest gain in quota value (western mackerel, North Sea herring, and North Sea sole) are also the three stocks for which the amount achieved fell furthest short from the zonal attachment estimates. This indicates that rather than these quotas being especially prioritised by the UK in negotiations, they are three large quotas where the UK had a strong case for an increased share based on zonal attachment.

Since the publication of the TCA, both the NFFO and the MMO have published calculations that analysed the change in quota. The NFFO analysis, published in September 2021 (NFFO 2021b), takes the £148 million from the Government press release gain as a given and calculates that £58 million is "paper fish" due to a lack of full quota uptake. After accounting for the increases in pelagic fish (e.g. mackerel, herring), issues with third country agreements, and the costs of red tape, the NFFO concluded that "the majority of the UK fleet received no post-Brexit gains. In fact, they lost £79.5 m" per annum (NFFO 2021b). The MMO analysis, published in October 2021, explained that the £148 million from the Government press release was calculated using 2020 quotas and 2018 prices and re-calculated this figure using 2012–2020 averages for both to arrive at a potential quota value of £144 million. Despite using historical values for quota quantities and fish prices, the MMO did not account for historical values for quota uptake and cites uncertainty in "predicting what percentage may be utilised" (MMO 2021b). Neither the MMO nor the NFFO analysis published a quota-by-quota account for full comparison, but the estimate in our study of a potential quota value of £157 million aligns closely with the MMO calculation of £144 million (and the original Government press release of £148 million). Where our study goes further is by publishing the quota-by-quota calculation (see Supplementary information), comparing the results to zonal attachment, and incorporating quota uptake.



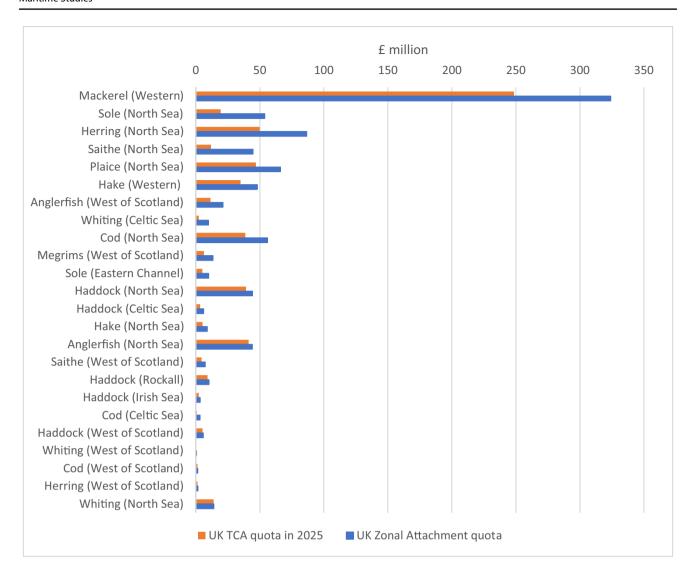


Fig. 1 Value of UK quota based on 2025 quota shares under the Trade and Cooperation Act, and based on zonal attachment estimates for UK waters (£ million)

Discussion

In this part of the paper, we reflect upon the gap between rhetoric and reality, and how this shortcoming has been received by key stakeholders. We then draw attention to some key lessons from the episode. These include the risks of downplaying the realities of international policy negotiations, the risks of using rhetoric to mobilise public opinion, and the risks of marginalising cautionary voices. Failing to acknowledge these risks can contribute to a damaging erosion of trust and make future collaboration between stakeholders more difficult in the future.

When the TCA was finally signed in December 2020, the UK Government celebrated their achievements in securing a deal that delivered upon their political promises. For example, UK Prime Minister Boris Johnson claimed

success, citing a "fantastic deal", under which, "[f] or the first time since 1973 we will be an independent coastal state with full control of our waters with the UK's share of fish in our waters" with the UK share rising "substantially from roughly half today to closer to two-thirds in five-and-a-half years' time" (Evening Standard 2020). Furthermore, assuring "...great fish fanatics [will] be able to catch and eat quite prodigious quantities of fish" (The Sun 2020). Indeed, one senior member of the Government who had strongly backed the leave campaign claimed that fish were "happier" now they're "British" (Independent 2021a).

However, as our analysis has revealed, across the main fishery issues of regulatory autonomy, access, and quota, there was a clear delivery gap between the rhetoric used by the UK Government during the Brexit negotiations and the reality of fishing under the TCA. First, although the UK is



no longer part of the CFP and has regulatory autonomy to implement its own international agreements and approaches to management as a coastal state, the extent of this autonomy is limited. In direct contrast to explicit promises made (see the "Regulatory autonomy" section), the fisheries deal was directly linked to the wider trade deal. As demonstrated in the "Regulatory autonomy" section, the structure of the fisheries deal in the TCA, as well as the contingent link between fisheries and trade, limits the extent to which the UK can unilaterally adjust key aspects of fisheries policy on quota and access.

Second, despite clear promises to reduce or control levels of access to UK waters (the "Access" section), it is now clear that EU vessels continue to enjoy quite extensive levels of access to UK waters, including in the 6–12 M territorial zone (the "Access" section). Up to 15 December 2021, 1822 EU vessels had been granted access to UK waters, with 153 of these also permitted to fish within the 6–12 M zone, and another 170 in Crown Dependency waters (Hansard 2021).

Third, despite promises to deliver quota gains through the advocacy of zonal attachment (the "Quota" section), the reality is that quota gains are extremely modest compared to the quotas that could be expected under zonal attachment—with UK quota shares post-Brexit representing 68% of zonal attachment quotas by tonnage and by value for the stocks analysed (the "Quota" section).

Not surprisingly, the TCA gained a considerably less positive reception from the UK fishing industry than from the Government on each of these three key issues. Representatives of the fishing industry broadly stated that the reality did not match the Government rhetoric, promises, or expectations which had been generated in the buildup to the referendum and in the intervening period of negotiation to reach the TCA (Fishing News 2021a). Major disappointments regarding the TCA centred around lower than expected quota gains which did not reflect zonal attachment, and the "red line" of exclusive territorial waters being crossed as well as extensive access for EU fishing vessels to UK waters to 200 M. Statements from industry bodies, whether representing large-scale or small-scale fishing interests, were in agreement that the TCA "...falls very far short of the commitments and promises that were made to the fishing industry by those at the highest level of government" (SFF 2020b). The SFF described the TCA changes as "hugely disappointing" (SFF 2020a) and the NFFO described them as "miniscule", "marginal", "paltry", and "pathetic" (NFFO 2020b). According to NUTFA (who represent under 10-m vessels), "probably the most damaging outcome from the TCA, and certainly the one that has produced the majority of calls from fishermen to our offices is the failure to secure exclusive access to the 6-12 mile zone of our own waters" (House of Lords 2021, para 106). While many in the fishing industry may have originally been closely aligned with the

Government on the potential benefits of Brexit, the reality of the deal has since pushed Government and industry apart.

The leaders of the large UK fishing federations have now even stated that they would prefer staying in the EU to the TCA outcome, including Barrie Deas of the NFFO (LBC 2021) and Elspeth MacDonald of the SFF who concluded: "Your deal actually leaves the Scottish industry in a worse position on more than half of the key stocks and now facing acute problems with North Sea cod and saithe, in particular. This industry now finds itself in the worst of both worlds." (SFF 2021). This latter point refers to the fact that the UK is now locked into a deal and unable to leverage further change.

The small-scale sector of the UK fishing industry appears to have suffered the most economically from the Brexit deal. Due to the disparity in quota shares across the UK fleet, most smaller vessels focus on non-quota species such as shellfish. There obviously has not been any increase in fishing opportunities for these species, but instead trade with the EU has become both more costly and difficult, and in some cases prohibitive. This led Jerry Percy (Director of NUTFA) to state "The Sea of Opportunity diatribe...drowned out many of the voices of smaller scale fishermen reliant on shell-fish exports who had been raising their concerns for many months" (Daily Express 2021).

A drastic decline in exports due to these trade barriers and a collapse in prices (up to 80% for some species) as a result of being unable to deliver to market were highlighted as major failures by industry body, Scotland Food & Drink (Euronews 2021). Shellfish exporters staged a protest in February 2021 at Westminster to highlight the issue and failure to deliver on promises of frictionless trade (Guardian 2021b). "This, coupled with the chaos experienced since 1st January in getting fish to market means that many in our industry now fear for their future....There is huge disappointment and a great deal of anger about your failure to deliver on promises made repeatedly to this industry" (SFF 2021). To back up these feelings, a recent report commissioned by the NFFO calculated that by 2026 the TCA will have cost the UK fishing industry £300 million rather than led to any overall benefits (NFFO 2021b).

The Government's response was to describe these issues as "teething problems" (Independent 2021c), but many of the issues remain features of ongoing issues—that the Government had been warned would be a feature of trade after leaving the EU single market and Customs Union (BBC 2021a, b; Reuters 2021). These problems have also impacted other exporters—by March 2021 there was a fall in exports worth £5.6 billion overall (Guardian 2021c). The UK Government announced a £23 million fund for the fishing and seafood industries to deal with these problems in February 2021—the Seafood Disruption Support Scheme will cover up to £100,000 of losses per business caused by



delays related to the export of fresh or live fish and shellfish to the EU during January 2021 (HM Government 2021c).

These negative sentiments from the fishing industry were echoed by Fergus Ewing MSP, Scottish Cabinet Secretary for Rural Economy, who added: "The gap between UK Government rhetoric on the Trade and Cooperation Agreement, and reality, is vast." (House of Lords 2021). While it is common for opposition MPs to draw attention to broken promises, this leads us to note the more damaging economic consequences for the fishing industry. As described in our introductory sections, the "sea of opportunity", and the narrative that dominated politics and the media, has in fact instead caused economic and emotional hardship for the fishing sector, particularly on the key issues of access, quota shares, and access to market, since these are the material conditions upon which fishing depends.

In somewhat of a contrast to this mood, some eNGOs cautiously welcomed the commitment to sustainability in the TCA and were pleased that a deal had been struck which should prevent unilateral quota setting and subsequent overfishing (Pew 2021). They were also encouraged when the UK Government announced plans to ban bottom trawling in several offshore Marine Protected Areas (Guardian 2021a), a move that would not have been possible before Brexit without agreement from the other relevant EU states (Solandt et al. 2017).

Media coverage of the TCA widely cited "betrayal", with fishers "stabbed in the back", "sold down the river", or "sacrificed" from the perspectives of all parts of the UK fishing industry. This messaging was covered in all parts of the UK media spectrum, from local and regional newspapers through to national outlets on both sides of the Brexit referendum debate and subsequent negotiation outcome (Guardian 2020; Reuters 2020; BBC 2021a; BBC Radio 4 2021; Cornwall live 2021; Fathom Podcast 2021; Financial Times 2021; Fishing News 2021b; Hastings online 2021; Independent 2021b; Politico 2021a). In contrast to numerous media outlets promoting the benefits of Brexit for the UK fishing industry prior to the TCA, there have been almost no positive stories since then.

During political negotiations, it is expected that there will be a gap between stated positions and outcomes. EU fisheries interests have also expressed their disappointment with the outcome given the position of the EU Parliament's Fisheries Committee that there should be "No increase to the UK's share of fishing opportunities for jointly fished stocks" (Guardian 2017). In response to the TCA, Gerard van Balsfoort, Chairman of the European Fisheries Alliance, concluded that "this is a dark day for the European fishing industry. The loss of a significant part of our fishing rights, built up over many generations of fishermen, is a huge blow that leaves thousands of livelihoods hanging in the balance. On top of this, the extremely

short transition period leaves us facing further uncertainty and hardship in the very near future" (European Fisheries Alliance 2020). Esben Sverdrup-Jensen, CEO of the Danish Pelagic Producers Organisation, said the deal's transfer of quotas was a "massive blow" to the Danish fleet (Financial Times 2021).

This sense of disappointment from EU fishers, despite what the UK fishing industry sees as overly generous concessions on access to UK waters, is particularly apparent in ongoing tensions with France. These centre on the UK refusal to grant all French requests for licences to fish around the island of Jersey and in English inshore waters, due to an alleged lack of evidence of historical fishing in those areas (BBC 2021c). In retaliation, the French fishing industry and some members of the Government have threatened everything from turning off the electricity supply to Jersey, to blockading ports and instigating extra checks on goods imported from the UK to France (BBC 2021a, b, c). Although the UK has now granted 93% of the French requests for licences (Politico 2021b), disagreements remain and France is continuing to threaten retaliation, including potential legal action (Daily Mail 2021).

Our analysis in this study has confirmed earlier views from some researchers (including us) that the UK would find it extremely difficult to deliver the rhetoric around Brexit and UK fisheries (Baldock et al. 2016; Barnes and Rosello 2016; Stewart and Carpenter 2016; Phillipson and Symes 2018). Clearly a deeper understanding of the outcome of the TCA would benefit from insights into the conduct of the negotiations but it is difficult to comment on this element because of their closed nature. Nevertheless, while compromise was likely inevitable and anticipated by expert commentators, the final outcome is closer to the EU's negotiating position than the UK's. This is indicative of either the EU's stronger bargaining position, a more effective negotiating strategy, or a combination of the two. Just weeks before the final deal was struck, it was reported that the UK was asking for an 80% cut of EU catches from UK waters whereas the EU was offering a 15–18% cut (Irish Times 2020). Days before the final deal, the positions were reported to have shifted to 60% from the UK and 25% from the EU (Politico 2020). In the end, the result is nearly identical to the final EU offer. This suggests that the prospect of a "no-deal Brexit" was ultimately more threatening to the UK than the EU.

It is not only the respective quota shares that point to a strong EU influence on the final terms of the deal, there is also some of the language of the text. The fisheries heading of the TCA frequently refers to the term fishing opportunities, a term whose provenance is rooted in the CFP. Similarly, the terms non-discrimination and proportionality (a concept particularly associated with EU law) appear in the text. In contrast, there is no reference in the TCA to the concept of zonal attachment, espoused by the UK.



There is also a distinction between the rhetoric-reality delivery gap and the expectations-reality delivery gap. While a negotiating party may privately concede that their rhetoric is a strategy, the public nature of the Brexit negotiations blurred the lines between rhetorical strategy and political promises. Media reports, tending to focus on the bold claims more than the non-committal responses about ongoing negotiations, fueled this further.

As opposed to the private minds of negotiating parties, in this specific case, expectations on the part of the fishing industry were raised even above the political rhetoric, creating a bigger delivery gap and a bigger disappointment. Much of this was due to the type of rhetoric used by political leaders. By adopting industry catch phrases like "sea of opportunity", political leaders could make few explicit promises but allowed the exact meaning of sea of opportunity to be defined by the industry. Both the SFF and FFL produced calculations showing exactly how much fish UK fishers could expect (Fishing for Leave 2016; University of Aberdeen 2017).

Throughout the Brexit negotiations, experts in trade negotiations, trade law, marine law, and European fisheries management more broadly warned about unreasonable expectations. On access to waters, marine lawyers noted that "Brexit is unlikely to produce a radical revolution in fishing regulation and allocation" (Barnes and Rosello 2016) and "a negotiated solution between the UK and the EU that involves some form of reciprocal fisheries access seems to be more likely than not" (Schatz 2017). Former Fisheries Minister Ben Bradshaw put it more directly when he said "George Eustice blithely asserts Britain could unilaterally impose a 200-mile fishing limit and that our fishermen would get bigger quotas if we left the European Union. Any sensible person considering these wild claims would understand them to be complete nonsense." (Through the Gaps! 2016). On quota, a fisheries economist described that "There is little doubt that some change in quota shares post-Brexit is possible; indeed it may have been on the cards regardless. What is debated is to what extent the UK can unilaterally define what 'fair shares' would look like." (NEF 2017). This scepticism was also voiced by the managing director of the Norwegian Fishing Vessel Owners' Association (Intrafish 2016). Yet these warnings did little to temper expectations. Secretary of State Michael Gove's infamous dismissal that "people have had enough of experts" (Financial Times 2016) seemed particularly true for fisheries.

The one exception came in late 2020 when UK fish processors and fish exporters began to publicly warn of the business losses in the fisheries sector should a "no-deal Brexit" take place (Fishing News 2020). This distinction may reflect what Smith et al. (2020) found about populist discourses in the EU Referendum campaign that were mobilised, crafted, and amplified by key protagonists in and by the Vote Leave

campaign at the end of May 2016 to shift focus to exclusionary and anti-elitist discourses.

The fallout from the delivery gap we have quantified remains to be seen. The fishing industry, though small in number, commands a great deal of media influence and their support for the UK Government in the Brexit negotiations, based on both rhetoric and promises made, was seen as an important constituent group (Hatcher 2020). With that relationship now soured, there may be an electoral shift in fishing communities which in England, and some key areas of Scotland, are largely Conservative seats. The UK Government balanced this against the benefits of delivering on their larger promise to "get Brexit done".

Like the UK Government, the strategy from the large fishing federations was to use high rhetoric, emphasising the "sea of opportunity" while claiming just weeks before the TCA was concluded that the EU negotiating strategy on fisheries constituted a "fatal miscalculation" (NFFO 2020c). Despite the disappointment from the fishing industry and criticism of the UK Government, UK fishing representative bodies appear relatively unscathed in their lobbying strategy.

As the "sea of opportunity" as envisioned by the UK fishing industry has failed to materialise, the industry seems destined to chart a similar course as under EU management, with modest quota gains and trade disruptions shifting but not transforming the industry. In terms of meeting stated objectives, the UK is now no longer part of the CFP and has regulatory autonomy to implement its own approaches to fisheries management as a coastal state. However, cooperation is still required for shared stocks and there is potential for the UK to be tied into EU rules indirectly through TAC and quota regulations. The UK will now represent itself on NEAFC and other regional bodies and can agree deals (or not) with Norway, Faroes and other third countries. Despite these largely symbolic victories matching claims of "sovereignty being restored" and being an "independent coastal state", in reality the UK has not taken back "full control", waiving some autonomy by signing up to the TCA with the fixed quota shares and expectations on maintaining a level of access for EU fleets.

Some rhetoric could still be delivered, as promises of rejuvenated small fishing ports are as much to do with UK domestic management policies (e.g. quota allocation) as EU-level policies (The Times 2016). The UK fishing industry was a long-time critic of EU fisheries management. With management functions now shifting to the UK government, and ongoing cooperation still required, the Brexit deal appears to be a rocky start to the new relationship (NFFO 2021a). The UK fishing industry's trust in fisheries management bodies was already low before Brexit (Ford and Stewart 2021) and is only likely to have been further eroded. Furthermore, as climate change continues to shift the abundance and distribution of marine species across the



world's oceans (IPCC 2019), the management of fisheries in multi-jurisdictional areas such as the North East Atlantic will only become more complicated (ABPmer 2018; Harte et al. 2019). If such fisheries are to be kept sustainable, then future negotiations and decisions between the UK and EU will need to move further away from rhetoric, and more towards science and cooperation.

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Declarations

Conflict of interest The authors declare no competing interests.

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