'A sea of troubles' (2): Brexit and the UK seafood supply chain

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Abstract

The debate over Brexit and the fisheries question has focused very largely on the expected benefits for the UK's fishing industry to the virtual exclusion of potential implications for the seafood supply chain. This paper refocuses attention on a supply chain now heavily dependent on both imports and exports of fish and fish products mainly to EU markets. Brexit could pose potentially significant problems arising from the imposition of tariff and non-tariff restrictions on trade and limitation on future movements of semi-skilled and unskilled EU migrants into the UK labour market. Three elements of the supply chain are likely to be directly affected: the shellfish and small scale fisheries sectors impacted by tariff and non-tariff restrictions and perhaps most significantly the fish processing industry, similarly affected by trade restrictions and heavily dependent on EU labour. Brexit has also been the catalyst for renewed pressures in Scotland for further devolution of powers relating to the fishing industry that at some future date could see the development of two distinctive seafood supply chains within the UK.

Key words: Brexit; Fisheries; Seafood; Supply chain; Trade

1. Introduction

The UK seafood supply (or added value) chain is encumbered by an unconformity between harvesting and downstream links. Although not uncommon in food chains – and certainly not dysfunctional in its impact on the efficacy of the seafood chain – it is perhaps more obvious in the case of the seafood industry. Here the difference between a harvesting sector preoccupied with the allocation of fishing opportunities and increasing regulatory intervention and concerned to land a good catch in return for a fair price, and the downstream focus on the customer, assuring product quality and securing both domestic and export markets, tends to make discourse difficult. Formal dialogue between the harvesting, processing and retail sectors is still quite rare and communication is hampered by strongly contrasting perspectives and lack of a common language (1).

This difference is reinforced by the content of fisheries policy with the EU's dedicated Common Fisheries Policy (CFP) centred on resource conservation and the UK focussed on its responsibilities for implementing and developing its own quota management and inshore fisheries strategies *inter alia*. It is further highlighted and possibly intensified by the Brexit debate where attention has been fixed almost exclusively on the opportunity to expand the UK's share of the catch taken within its EEZ, as mirrored in media coverage, government statements on future arrangements for fisheries management (2) and, to a lesser extent, in the limited academic literature (see for example 3, 4).

In practice, the expected benefits of any enhanced fishing opportunities for the UK fleet will be restricted to quota regulated stocks. These stocks make up the vast majority of established demersal and pelagic capture fisheries (valued at around £337 m and £261 m respectively in 2016) (5). By contrast, the important shellfish sector (£339 m landing value) can expect to derive less in the way of direct benefits from the Brexit negotiations. Only the nephrops fishery (valued at £104 m in 2016) is subject to quotas. Moreover, given the shellfish sector as a whole is heavily dependent on export markets for around 80% of its production, its main concern is the outcome from the general negotiations on future trade relations with the EU. Perhaps not surprisingly, while UK fishermen's organisations have been anxious to press the UK government for a clear separation of discussions on fishing opportunities and future tariff arrangements, their counterparts in EU Member States, threatened with reduced fishing opportunities in the UK EEZ, are keen to press for these two issues to be considered as reciprocal items on the agenda.

The aims of this paper, which is the second instalment of our Brexit analysis in *Marine Policy* (4), are therefore to restore something of the balance in the fisheries debate by focusing the attention not on the harvesting sector but on the supply chain and thereby resetting the negotiations in a broader context. The nature of the UK supply chain is shaped by a multiplicity of national, regional and global circumstances: in this instance, the emphasis is on future UK-EU trade relations that, over the last 40 years, have played a defining role in shaping the seafood supply chain. Accordingly, the paper first outlines the evolving nature of the UK supply chain (Section 2) and presents the options for restructuring future trade relations between the UK and the EU (Section 3). Section 4 examines possible impacts on key actors in the supply chain, identifying those more clearly impacted. While Section 5 considers how the supply chain may evolve in a post-Brexit future, including the implications of renewed pressures in Scotland for further devolution of responsibilities.

2. The evolving nature of the UK seafood supply chain

The supply chain, connecting the harvesting sector with the end consumer has changed dramatically over the last 40 years, not so much in its basic structure but in the sourcing of supplies and the sophistication of its operation. In the mid 1970s, at a time when the UK was reaffirming its membership of the EEC through a referendum, the dominant function of the supply chain was to ensure the efficient distribution of regular, high volume landings of fresh and frozen at sea demersal catches from distant water fisheries in the NE Atlantic, notably through the ports of Hull and Grimsby, to a myriad of small retail and catering outlets nationwide. Landings at these two ports accounted for nearly 30% of UK landings in 1975 (6).

Exclusion of the UK trawler fleet from distant water grounds from 1976 onwards presented a major challenge to the domestic supply chain. Hull and Grimsby, geographically well placed to serve the national consumer market and with the necessary infrastructure, processing capacity and skilled workforce, continued on a reduced scale to act as a main hub for distribution, replacing domestic landings with regular consignments of containerised fresh fish and less frequent landings by foreign, mainly Icelandic trawlers, together with imports of fresh and frozen fish from other NE Atlantic coastal states. A fundamental transformation of the seafood supply chain was inevitable. Aided by a prolonged period of global trade liberalisation the UK seafood supply chain was altered from a position of near self-sufficiency in 1975 when imports contributed 13% of fish supplies, to one of high import dependency some 40 years later and the now familiar assertion that the UK imports most of the fish it consumes and exports most of the fish it catches quickly took shape. The full implications of joining the EEC would not be felt until a decade later with the completion of the CFP and implementation of 'relative stability'.

What is surprising is how little the UK fishing industry now contributes to the seafood supply chain in terms of volume of landings, revenue and employment. In 2016, the UK fleet landed a total of 701,000 t of fish, valued at £936 m: one third, mainly pelagic, were landed outside the UK in pursuit of firmer markets and higher prices and the remaining 446,000 t into UK ports[1]. By contrast 730,000 t (excluding fish products) were imported with a value of £3,073 m, compared to 441,000 t of exports valued at £1,640 m (5). In employment terms the harvesting sector accounted for 11,750 jobs, compared with over 14,000 in the processing sector and an unknown figure running to tens of thousands in other activities in the supply chain, including transport, retail and food service (hotels, restaurants etc). As far as revenue generated by the supply chain is concerned, in addition to exports worth £1.89 bn, retail sale of seafood attributed to leading supermarkets is estimated at £3.22 bn and consumer expenditure on seafood eaten away from home is estimated at roughly £3.4 bn (7).

Within the framework of a new balance between domestic and imported sources of the raw materials, the seafood chain has undergone a profound change resulting from a combination of structural modification mainly in response to the forces of economic rationalisation, greater international competition and the emergence of a free market approach to fisheries management, together with a fundamental shift in the perception of fish as a food. Under the influence of economies of scale, there has been increasing structural concentration throughout the supply chain with fewer registered landing points, quayside and inland wholesale markets, processing facilities and most noticeably a dramatic reduction in the proliferation of small retail outlets handling fish. The rise of the supermarkets has also enabled a shortening of the supply chain through the growth of dedicated deliveries from quayside markets and secondary processing links to the supermarket depot.

Possibly more fundamental has been the changing perception of fish in the minds of UK consumers from that of a relatively cheap substitute for meat on one day a week to that of an essential feature of a healthy diet and providing an exciting, appetising range of meals drawn from a wide array of domestically and internationally sourced fin- and shell-fish species. Today, fish consumption is promoted as a valuable source of protein, low in saturated fats, cholesterol and carbohydrates and containing certain micronutrients unavailable in most other foods (8), and marketed especially by some secondary processors and supermarkets as a sustainably sourced and ecofriendly product. This is a far cry from the days when fish

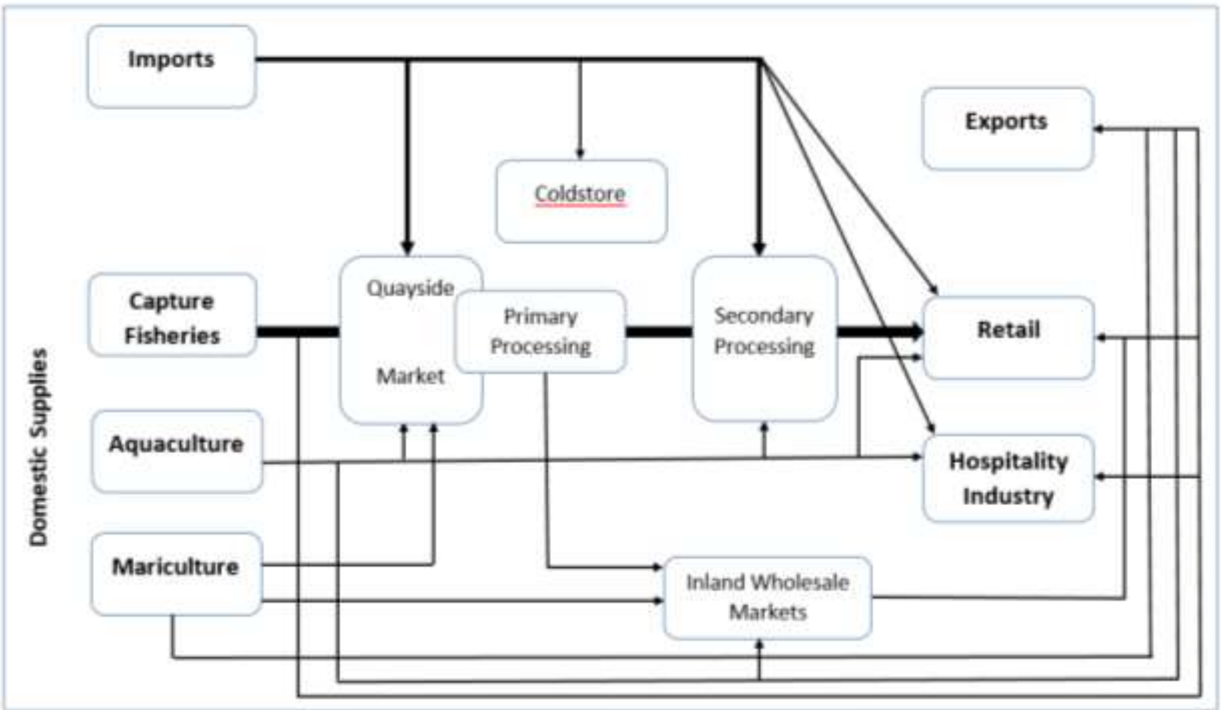
[1] The UK aquaculture sector located primarily in Scotland provided a further 225,000 t of fish, mainly salmon (9).

processing[2] was largely synonymous with prolonging the shelf life of a highly perishable commodity through canning, salting, smoking and freezing shortly after landing.

A simplified, diagrammatic representation (Fig 1) cannot describe the full complexity of the seafood supply chain, complicated for example by the practice among some larger processing firms of exporting the unfinished product to low wage economies in Asia or eastern Europe for labour intensive processing activity like filleting before re-importing the semi-finished product for value adding processing, or the practice of importing bulk frozen prawns from SE Asia to be washed and glazed by a UK based firm before re-exporting to southern Europe. Nor can it accommodate a major segment of molluscan shellfish production where preparation for export may be undertaken by the cultivator or by small firms allowing the product to bypass the initial quayside stages of the supply chain.

The existing UK seafood supply chain does, however, represent an efficient and flexible distribution system capable of coping with major challenges in terms of supply and adapting to changing patterns of consumer demand. Brexit will ask further questions of the system's robustness and adaptability.

Figure 1: Basic UK seafood supply chain



[2] Processing is a complex term when applied to fish: it can begin with gutting the fish on board to help preserve the quality of the catch; it continues with filleting in preparation for onward transfer to end consumers or to secondary, value added processing firms that transform the fish into oven-ready products. In the case of 'frozen at sea' catch the early stages of processing (gutting and filleting) together with the freezing of the product are undertaken while the freezer trawler is at sea.

3. Brexit and the seafood supply chain

Despite the reluctance of the UK fishing industry to recognise the relevance of future trade relations in the Brexit debate for fear of a repeat of the 'betrayal' during access negotiations in 1972 when future fishing interests were surrendered allegedly in return for improved terms of membership, it is clear that the wider fisheries related economy could be affected by factors unrelated to future fishing rights within the UK's EEZ. There are two areas of concern: trade relations and employment.

Today the EU figures significantly in the UK's seafood supply chain, accounting for around 66% of all UK fish exports. Not only is the EU the world's largest free trade area, but for the UK it is the closest, most accessible market with a population of 508 m relatively affluent people. It is unlikely that future trade deals brokered by the UK with both developed and developing countries could begin to rival the importance of the EU.

Future trade relations will now be resolved during the implementation period ending in December 2020 and could occur before the outcome of a dedicated fisheries negotiation is known. Following the Brexit referendum in 2016 there appeared to be three alternative scenarios: (i) retaining membership of the single market and/or customs union allowing trade relations to continue largely unaltered[3]; (ii) the negotiation of a preferential trade agreement; and (iii) the so-called 'cliff edge' scenario of no deal and future reliance on World Trade Organisation (WTO) rules involving a range of more stringent tariffs on fish and fish products varying from 2% - 20% for the top five fish exports from the UK to the EU (9)[4].

With an early decision by the UK government appearing to reject the single market and customs union option on grounds that the UK would be bound by EU regulations over which it had no influence and unable to negotiate its own trade agreements with non-EU countries, the choice was narrowed. The only realistic course of action now lay in negotiating a bespoke treaty governing future relations between the UK and EU that would inevitably involve compromises over particular issues. In terms of trade relations this could involve the imposition of preferential tariffs set below WTO rates and the introduction of non-tariff restrictions in the form of additional documentation and border checks, such that trade between the UK and EU would no longer be frictionless but the financial penalties would not act as a deterrent to future trade. It is even possible that zero tariffs could be levied on some fish and fish products but non-tariff restrictions still apply in order to ensure compliance with agreed food standards, *inter alia*.

However, any such agreement may be compromised by fallout from concurrent fisheries negotiations centred upon future access to the UK EEZ. These negotiations could have serious repercussions for the fishing industries (and seafood chains) of the UK's closest neighbours – Denmark, the Netherlands, Belgium, France and Ireland – and the possibility of retaliatory action in respect to UK access to EU markets (4). It is unclear how EU negotiators might respond to concerted pressure for higher levies on imports of fish and fish products from the UK from five Member States that make up a considerable share of the EU's post-

[3] As evidence from the House of Lords report (§153) highlights, non-EU members of the single market are still liable to tariffs levied on some fish exports to the EU (9).

[4] Gasiorek and Walmsley (2018) suggest that following a no deal Brexit, future trade with the EU will be conducted on the basis of 'most favoured nation' status that despite the terminology incurs the introduction of surprisingly high tariffs varied according to species. These range from a comparatively low level of 4.9% for salmon, through more elevated levels for haddock and saithe (7.5%), cod (11.8%), herring (14.3%) and mackerel (14.5%), reaching highs of 16% for both nephrops and scallop (10).

Brexit fishing capacity.

The second Brexit related issue for the UK seafood supply chain does not concern the negotiations *per se* but relates to future policy developments concerning immigration. It is widely believed that questions over the freedom of movement of people within the EU were instrumental in securing a leave vote in the 2016 referendum and that failure to reduce the flow of EU migrants into Britain post-Brexit will be seen as a betrayal of the referendum decision. While the UK is likely to remain open to highly qualified professionals and to some skilled workers, the squeeze will most likely fall on semi-skilled and unskilled labour from the EU, including health, construction, tourism, agriculture and fisheries. The implications for the UK seafood supply chain are outlined in the following section.

4. Implications for the UK seafood supply chain

There are no substantive grounds for supposing that the overall effectiveness of the existing supply chain will be seriously impaired by the outcome of Brexit negotiations, except in the event of 'no deal' and future reliance on WTO rules which could impact both imports and exports of fish and fish products, especially in relation to trade with the EU. However, such a challenge would stimulate greater activity in seeking enhanced trading opportunities with major suppliers and markets outside the EU through new or improved trade deals. The supply chain could be strengthened by improved opportunities for the domestic fishing industry operating within the EEZ. Napier (11) estimates the potential increased value to the UK fleet from increasing its share of the total catch from within the national EEZ from the current 36% to 75% at around £1,300 m (+60%) with the demersal and pelagic sectors having most to gain. Allowing for a loss of fishing rights in EU waters, the net gain in value is reduced to 47%. Realising the full benefits from this would necessitate expanding demand on both domestic and overseas markets. Otherwise, the supply chain could suffer oversupply, sluggish markets and weak prices. In theory the prospect of increased domestic landings should provide the harvesting sector with the opportunity to challenge the dominance of imported fish used within the UK processing sector and to match the processors' preference for frozen-at-sea fish and their requirements in terms of reliability of supply, quality and size of fish. In practice, however, the continuing instability of annual TACs for preferred species within the UK fishing zone could frustrate such a goal.

Despite the generally positive, if muted, response there are certain elements within the supply chain that are more apprehensive about the outcomes of Brexit. These include two important contributors to the supply chain – the shellfish sector and the small scale inshore fishery – and one key link within the chain. The shellfish sector, including both wild caught lobsters, crabs, Nephrops and scallops, and mariculture production (oysters, mussels, cockles *inter alia*), is very heavily dependent on high end export markets which account for around 80% of total production. In preparation for Brexit, a number of enterprises are stepping up their interest in product development and securing alternative outlets focusing on the potential to expand domestic sales. One such example relates to the east coast lobster fishery centred on Bridlington, the UK's largest shellfish port, where presently 80% of the catch with a first hand sales value of £7 m is exported live to customers on the near continent. The North Eastern Inshore Fisheries Conservation Authority (IFCA) has recently commissioned an independent EU funded study into opportunities for diversifying into UK markets that presently rely on frozen imports of lobster (12).

While most medium sized and larger enterprises may be able to withstand the costs imposed by low tariff regimes and cope with the inconvenience of non-tariff restrictions, smaller scale operators in both harvesting and merchanting are less well placed. The inshore fleet, already limited to local fishing grounds and at the mercy of weather conditions, and making small volume landings of a potentially wide variety of high value species, are inevitably disadvantaged by the operation of a rather centralised supply system. They face the uncertainty caused by the insistence on minimum catch size and below market value prices offered by buyers offering to place their catches on the market.

For those small scale enterprises situated on England's south coast wishing to exploit their locational advantage in terms of access to the near continent, the greater risks would appear to come from non-tariff impediments in the form of added documentation and border checks that could cause delays and disrupt delivery schedules for fresh fish to clients in Europe. Delays of two or three hours may prove critical both to timely delivery and quality of fish that could undermine customer confidence.

At Brixham, for example, England's second largest fishing port, situated on the south coast, a considerable share of the catch is destined for export. It is also one of the very few major UK quayside markets that caters for dayboats with a number of merchants specialising in the handling of small unit landings of a wide range of species varied according to season intended for same day delivery to high end restaurants and fishmongers in London and the south east or for next day delivery to customers on the near continent.

As with some shellfish businesses, there is concern among small scale fishing enterprises over the ease of access to overseas markets after Brexit. For the latter, domestic supermarket sales are a less likely target for innovatory action. The more likely options lie in individual or more probably collective value adding activity and/or the development of short supply chains reconnecting the fishers and their end clients through regular, year round 'catch of the day' deliveries to local resident populations or, in season, supplying the expanding but limited local gastro-tourism market.

Finally, one of the strongest links in the seafood supply chain – the processing industry – could prove to be the most vulnerable. While some processing firms may benefit from greater access to supplies of cheaper materials from non-European sources as a result of new third country trade agreements, within the processing sector a handful of firms could face a 'triple whammy' arising from the combination of import duty on raw material inputs from Iceland and Norway which enjoy favourable trade relations with the EU, export duties on their end products and, most importantly, problems of labour recruitment arising from future immigration policy. The level of foreign workers in the UK seafood processing sector is significant. A survey of 18 Scottish processing firms, accounting for 37% of the sector's workforce in 2015, found that 58% of workers were sourced from non-UK European Economic Area countries, notably the Baltic states of Poland, Lithuania and Latvia (13). This is a very much higher figure than that for Scotland's offshore fishing sector (14) and well above previous estimates of around 42% for the UK processing sector.

Whereas the affected firms may be in a position to absorb the cost implications arising from negotiated tariffs on future UK-EU trade, the issues relating to uncertainty over recruitment of suitable workers and any additional production costs involved could prove more difficult to resolve. With relatively little to tie the firms to the UK, one option might be to relocate processing activity to mainland Europe – a decision with far-reaching consequences for the UK seafood supply chain.

In general the extent to which UK businesses will be able to pass on added costs to their EU customers is governed by economic factors such as exchange rates and the degree to which EU markets depend on UK imports together with the availability of alternative supplies or substitute products. In the case of the demersal and pelagic sectors UK suppliers are unlikely to occupy a dominant position except perhaps for some processed products. For the shellfish sector a recent study suggests that while the UK is a dominant supplier for some species, notably European lobster, there are no species where product substitution can be ruled out (15).

5. Responding to change

Given a favourable outcome to negotiations over future trading relations with the EU and assuming that no government would deliberately risk disabling two key elements of the UK's food security – agriculture and fisheries – by denying access to essential sources of labour, it would seem reasonable to infer that the Brexit negotiations will not cause immediate disruption to the seafood supply chain. The potential benefits and disbenefits from Brexit will be unevenly distributed across the UK fisheries sector and there will be winners and losers within the supply chain. Adjustments will be needed: certain sources of supply may become marginally more expensive and EU markets less secure and more difficult to access. And for some elements of the supply chain, notably shellfish and small scale fisheries, it may be necessary to review and modify their market options. However, for a distribution system highly reliant on imported supplies, uncertainties surrounding the wider economic impacts of Brexit, including the stability of the £ sterling and possible restructuring of trade flows within the North Atlantic region, could have longer term implications for future access to existing supply sources. Opportunities to generate new supply sources and develop new markets could arise from securing new trade deals both within the North Atlantic basin and further afield.

Whatever the outcome of the negotiations, the seafood supply chain will need to be strengthened in order to cope effectively with short and medium term challenges arising from Brexit and the changing nature of relationships with neighbouring coastal states, as well as shifting patterns of labour mobility and consumer demand. More importantly in the longer term it will need to respond to transformational changes to global seafood supply systems generated by climate change and predicted shifts in the global pattern of fish distribution (16).

The strengthening of the UK seafood supply chain will require a strategic approach to securing closer integration of the major actors ranging from harvesting to consumer (17), together with institutional and policy reform to help underpin the closer working relationships. Expansion of output from the supply chain will call for not only an increase in domestic sources through a combination of effective management of a sustainable resource and increased quota allocations within the EEZ but also actions to improve the modest levels of consumer demand.

Although the UK supply chain will continue to be shaped by regional and global influences, the changing fortunes of the domestic fisheries sector and the further evolution of fisheries governance are likely to exert the greatest influence. One major trend may have particular repercussions. It is not directly related to the Brexit negotiations *per se* though it has come into sharper focus during discussions over future restructuring of governance and management of fisheries post-Brexit. It concerns the growing separation between the Scottish and English fishing industries, as evidenced by strong support within Scotland for greater devolution of responsibility, making it more likely that a separate Scottish fisheries regulatory system will emerge. This development is in no way surprising considering the much larger share of UK capture fisheries held by the Scottish fleet, the greater prospects of a Brexit dividend arising from reallocation of quota entitlements, the increasing branding of 'Scottish seafood' in relation to marketing and the rising tide of nationalism within the Scottish political scene. The Scottish administration's vigorous promotion of its national fishing industry stands in stark contrast to the necessarily delicate position of the Westminster government charged with both oversight of the UK industry as a whole and responsibility for English fishing interests in particular. As the White Paper (2) makes clear, further development of devolved governance will inevitably strengthen Defra’s identification with English fishing interests.

Differences in the approach to fisheries governance are already evident with the Scottish administration tending to favour centralised decision making and the industry supporting an industry led approach to management, in contrast to a more laissez faire, decentralised approach south of the border as evidenced by their approaches to inshore fisheries management (18).

In terms of the seafood chain it is likely that the two very different 'streams' will continue to diverge with a Scottish supply stream centred upon a fleet of larger middle distance trawlers making year round, high volume landings of demersal species (cod, haddock, saithe) into NE Scotland, feeding into the main supply chain, together with an important seasonal pelagic fishery (mackerel, herring) whose harvest is largely destined for export. South of the border, the fleet of smaller vessels exploits a wider range of species expected to grow even greater under the ongoing 'tropicalisation' of the species mix off the UK's southern coast (19). Closer proximity to the metropolitan centres of London and Birmingham and to the near continent has tended to realign the supply chain towards sales of high quality fresh fish and shellfish on domestic and continental markets largely bypassing key stages in the traditional supply chain.

Whether or not the increasing divergence of Scottish and English fishing interests and market orientation will eventually culminate in two quite separate seafood supply chains and how this might affect the overall efficacy of the supply system is as yet unclear. In one sense the recent publication of *Seafood 2040: a strategic framework for England* (17) might appear to anticipate such a future. Prepared by an independent panel of representatives from key links within the supply chain, the report envisages a doubling of consumption and improvements in the levels of domestic production and imports to match the demand. Increasing domestic consumption presents a particular problem. The UK lags behind its continental neighbours in per capita consumption and, while household consumption has stagnated, the share of household expenditure spent on fish has risen from 4.6% in 2006 to 5.6% in 2016. It will require a concerted and imaginative approach from key supply chain actors – fishers, processors and retailers – to overcome deeply embedded conservatism in consumer behaviour especially in the context of increasing price disadvantage. Given the diversity of catch and the fragmentation and dispersion of the seafood industry, especially in England and Wales, and the resulting complexity of the supply chain, this will prove very challenging.

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