# Annex J3d Qualitative impacts on fisheries arising from more than one site (Net Gain)

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J3d.1 The following presents the anticipated impacts on UK and non-UK fleets of all recommended Marine Conservation Zones (rMCZs) in the Net Gain Project Area.

## 1 Impacts on domestic fleets

J3d.2 Eleven interviews were conducted with representatives of the North Sea bottom trawling fleets, to assess any qualitative impacts of the rMCZs and to gauge the likely response of the fleet to a restriction on bottom trawling in rMCZs with this management scenario attached to them. Following a request from the Joint Nature Conservation Committee (JNCC) to investigate scenarios which include restrictions on static gears in four rMCZs, a further three interviews were conducted with static gear fishers. Interviews with non-UK fleets were carried out by JNCC on behalf of the regional MCZ projects. JNCC provided updates on the MCZ Project including MCZ IAs and asked if non-UK fleets would be happy to complete the MCZ IA questionnaires. Some questionnaires were completed with the support of JNCC other representatives preferred to complete the questionnaires at a later date. For further information on interview methods refer to Annex H7.

# 2 Impact options for vessels using bottom gears

# 2.1 Displacement

J3d.3 For all MCZs with management scenarios that restrict fisheries, all interviewees were unanimous that the likely impact on the North Sea fleet would be displacement. It is therefore likely that the direct economic cost of the suggested restrictions will be smaller than estimated. This may, however, in part be offset by other direct economic costs, such as increased fuel costs, and offset by social costs, such as a loss of social cohesion among fleets.

J3d.4 Any displacement would be into areas already fished by other fleets. The likely impact of this was thought to be increased tensions among fleets from competing ports which, through displacement, would need to share fishing grounds. It was felt that this would negatively impact on social cohesion, the bonds that bring individual fleets together.

J3d.5 Current data may not indicate the true importance of certain fishing grounds. Five interviewees thought that there was a potential increase in risk should any restrictions on fisheries be placed on any rMCZs within 6nm, as this would force the fleets further out to sea, which could compromise safety. Fleet representatives from many ports indicated their concern that rMCZs within 6nm provide important grounds for fishing in the winter and in bad weather conditions, when for safety reasons the fleets are unable to travel further to sea. There was concern that the value of these grounds may seem small when looking at annual figures, but these areas make a substantial contribution to year-round employment for port fleets, providing work over the winter months and in adverse weather conditions.

J3d.6 Currently, however, only rMCZ reference areas within 6nm have proposed restrictions on fisheries. These inshore reference areas tend to be relatively small and many are coastal and

estuarine sites where fishing intensity is relatively low or does not occur by vessels using bottom gears.

J3d.7 Interviewees who represented fleets that fish close to proposed Rounds 2 and 3 wind farms highlighted that future wind farm developments, with buffer zones, could limit the scope for potential areas of displacement. This is particularly the case between Flamborough and the North Norfolk coast, where fisheries representatives believed that approximately 50% of the area is likely to become unfishable within ten years due to wind farm developments and designation of rMCZs (Wells and surrounding fleets, pers. comm., 2011). Sourcing comparable areas for displacement was therefore seen by the interviewees as a difficult task.

## 2.2 Adaptation

J3d.8 All interviewees felt that adaptation was not possible, particularly among smaller vessels, due to current EU licensing laws, the current quota system (which relies on the existing pedigree of licences, where quota is allocated to vessels by the quantity of previous landings) and the high costs and unsuitability of vessels for adaptation. It was felt that any change of activity was not a feasible option for the English fleet.

J3d.9 Most representatives did not envisage any potential to adapt to the recreation and tourism sector, as this market was seen as being saturated. This is compounded by the costs of complying with current health and safety regulations requirements for recreational work (National Federation of Fishermen's Organisations (NFFO), pers. comm., 2011).

J3d.10 Despite a growing market, supply work for oil and gas and renewables was unlikely to be an option, as this was already being capitalised on by a significant number of new vessels which are being constructed to cater for this market. For example, P&O is constructing 90 catamaran support vessels to capture the offshore wind market in the North Sea. There could, however, potentially be some opportunity for guard work during the construction of wind farms (Whitby fleet representative, pers. comm., 2011).

#### 2.3 Continued operations

J3d.11 All interviewees said that UK vessels would comply with any regulations for rMCZs. Concerns were raised by four interviewees over the logistics of policing and enforcing restrictions for sites beyond 12nm. This was seen as an impossible task and would rely on buy-in to the rMCZs by the UK and foreign fleets alike.

# 2.4 Ceasing operations

J3d.12 In light of cumulative pressures imposed by rMCZs, combined with other external pressures, including EU regulation, the current quota system, Natura 2000 sites (European Union (EU) Marine Protected Areas) and proposed wind farms, it was envisaged that a number of vessels would be forced to leave the North Sea fleet, at a greater pace than those already ceasing operations. It was noted that, should fishers choose to cease operations, they would be selling

their vessels into an already deflated market (National Federation of Fishermen's Organisations (NFFO), pers. comm., 2011).

J3d.13 The Grimsby fleet representative highlighted that there is already a long-term trend of decline in the fishing industry, with substantial employment loss over the past 30 years. It was noted that the rMCZs would have some impact, but that the vast majority of the UK fleet had already been lost (Jubilee Fishing, pers. comm., 2011).

# 2.5 Supply chains – employment

J3d.14 Two supply chains are relevant to commercial fishing vessels, one that supplies the vessels and one that the vessels supply. The supporting industries that service the vessels include diesel suppliers, ice box producers, boat manufacturers and repairers, transport providers and administration staff. These support industries ensure the continued operation of the vessels. The second relevant supply chain is in the supply of fish to processing facilities and to the wholesale and retail trades.

J3d.15 Interviewees thought that rMCZ management scenarios with restrictions on fisheries would have little impact on fish-processing facilities, which are already heavily dependent on imported fish from Icelandic waters (Jubilee Fishing, pers. comm., 2011) This was not thought to be true of fish processors, which are reliant on processing catch from UK waters and, it was felt, would be impacted by any reduction in locally caught fish (Wells fleet, pers. comm., 2011).

J3d.16 The Grimsby fleet representative highlighted that the majority of auxiliary support industries had already gone and that only a small proportion of jobs remained in the town in servicing the vessels (Jubilee Fishing, pers. comm., 2011).

J3d.17 Given the size of local labour markets among smaller port towns, the fisheries sector still provides a sizeable contribution to total employment. For example, the North Norfolk Coast Fishermen's Association representative (pers. comm., 2011) estimated that about 150 people are currently employed full time as fishers along the North Norfolk coast, with an additional 150 people employed in processing and a further 100 working in auxiliary jobs. This equates to around 400 people employed along the North Norfolk coast involved, directly or indirectly, in commercial fishing. It is therefore likely that any losses to local supply chains as the result of rMCZs will disproportionately impact on the labour markets of smaller coastal communities.

J3d.18 While the following figures are unsubstantiated, in relation to medium-sized towns, the Whitby fleet representative estimated that the fishing sector provided 400 ancillary jobs in Whitby, down from 700 jobs 15 years ago. Six vessels currently fish from Whitby, down from 14 vessels 15 years ago. It was estimated that each vessel supports between seven and ten ancillary jobs in King's Lynn and contributes between £4.5m/yr and £7.5m/yr to the UK economy. It was felt that the industry was a significant contributor to jobs around the Wash. The opening of Boston Cockle Factory was seen as a testament to this.

# 2.6 Regional variation in impacts

J3d.19 Only areas which are in close proximity to rMCZs with fisheries management scenarios were assessed. In the Net Gain Project Area, areas in close proximity to rMCZs which have fisheries management scenarios involving restrictions on bottom trawls include Suffolk, North East Lincolnshire, East and North Yorkshire and Northumberland. In the remaining areas of coastline, it was assumed that fleets will not be significantly impacted by restrictions on commercial fisheries in rMCZs. A representative from the Blyth fleet (pers. comm., 2011) felt that the impact of the rMCZs would be uneven and that location was an important factor in determining the likely effects. For example, vessels operating from the Tyne would have to travel 80nm before they entered an rMCZ, whereas vessels travelling from Amble would pass through four rMCZs if they were to travel 80nm.

J3d.20 The representative from the King's Lynn fleet felt that any static target species locating in an rMCZ or rMCZ reference area with restricted use (in any year) could have a lasting impact on local fleets. This is because static species, although nomadic, remain in specific locations for longer periods of time than mobile species, resulting in a greater impact should species locate within restricted sites. It was unclear whether and when this might occur, due to the unpredictability of stock habitats. The nomadic nature of mussel and oyster beds, potentially within rMCZ reference areas, was highlighted as a particular concern by the King's Lynn fleet (King's Lynn and Boston fleets, pers. comm., 2011).

J3d.21 It was felt that Grimsby's branding as 'Europe's food town' would not be negatively impacted by the loss of the fishing fleet. The town would continue to play an important role in food manufacturing and processing and fisheries were just a small part of this. The majority of fish processed in the town is currently imported from Icelandic waters (Jubilee Fishing, pers. comm., 2011).

# 3 Impact options for vessels using static gears

# 3.1 Displacement

J3d.22 As with the mobile fleet, all interviewees stated that the likely response of the static fleet would be displacement. Perhaps the biggest difference compared with the mobile gear fleet is the limited availability of grounds for displacement due to the limited mobility of species. Alternative fishing grounds were seen as less suitable or not at all suitable. This is due to lobsters and crabs living on hard ground and many potential areas for displacement being reserved for existing or future wind farm sites (NFFO, pers. comm., 2012).

J3d.23 All interviewees emphasised the importance of the current fishing grounds to the static fleets. The NFFO representative explained that fishers are prepared to travel long distances to fish in rMCZs with management scenarios that restrict fisheries, steaming through other fishing grounds en route, because of the productivity of the fishing within those rMCZs and the potential value that can be accrued from within the sites. Vessels fish within the rMCZs because these are seen as the best places to get the highest catches (NFFO, pers. comm., 2012).

J3d.24 It was noted by the NFFO representative that vessels using pots and traps cannot risk deploying gear in areas which are regularly or sporadically trawled by mobile gear vessels from UK and non-UK fleets. Static vessels might lose a fleet of pots worth around £6,000 if caught up in a trawl (the price of pots was estimated at £75 per pot, with a further £15 of rope needed per pot). The risk is therefore seen as too great for the potting fleet. However, restrictions on bottom gear in rMCZs might open up these fishing grounds for use by the static fleet (NFFO, pers. comm., 2012).

J3d.25 Static gear fisheries representatives thought that displacement to fishing grounds further afield would compromise the safety of crew and vessels. This applies particularly to smaller vessels, which might be displaced from the southern North Sea to fishing grounds in the northern North Sea (NFFO, pers. comm., 2012). Soak times (the length of time for which gear is deployed) for vessels using pots were thought to be longer in the northern North Sea than in the southern North Sea. In the southern North Sea, it was felt that vessels could return to clear their pots every few days, while it would take 3 or 4 days to get the same catch in the northern North Sea. This would lead to a lower number of annual catches amongst vessels operating in the southern North Sea, should they be displaced to fishing grounds in the northern North Sea (NFFO, pers. comm., 2012).

# 3.2 Adaptation

J3d.26 Current licensing was not seen as conducive to adaptation for the static fleet. The market for guard work or the transportation of passengers for wind farms was seen as already saturated and capitalised upon by specially designed craft and therefore not offering opportunities for vessels to adapt (NFFO, pers. comm., 2012).

# 3.3 Continued operations

J3d.27 All interviewees felt that the vast majority of static gear vessels would adhere to any restricted activities in rMCZs. The Southwold fleet representative highlighted the difficulty in monitoring enforcement among smaller vessels, as a large proportion of these do not have Satellite Navigation technology.

J3d.28 The Southwold fleet representative also noted that vessels would be likely to fish as close to the boundary of rMCZ NG 1b as possible due to the competitive fishing grounds around the site. Those vessels fishing up to the boundary of the site using hooks and lines might unintentionally fish within the site, as lines can stray anywhere between 0.5 and 1nm depending on the current. He explained that the position of lines within the water was impossible to control and so lines would inevitably stray into the site (Southwold representative, pers. comm., 2012).

# 3.4 Ceasing operations

J3d.29 Interviewees were unable to provide an estimate of the number of vessels that might leave the fleet as a result of the management scenarios for rMCZs. All interviewees highlighted the decline in vessel numbers and employment in commercial fishing, which they attributed to a number of reasons including increased regulation and lost fishing grounds.

## 3.5 Impacts on supply chains and supporting services

J3d.30 The Southwold fleet representative thought that the vessel servicing industry has remained relatively robust around Suffolk, despite a loss of commercial fishing vessels. Businesses have been able to diversify into servicing pleasurecraft and wind farm support vessels to replace the loss of work associated with commercial vessels. It was felt that businesses that provide supporting services would not be impacted greatly if there was a loss of some commercial fishing vessels as a result of the management scenarios for rMCZs (Southwold fleet representative, pers. comm., 2012). The representative thought that the situation was the same for local fish-processing businesses. An estimated 60% of the fish that is processed is currently imported. It was felt that a reduction in locally caught fish would result in greater levels of imported fish being processed in the area. The ratio of locally caught to imported fish which is processed in the area depends on the time of year, due to local weather conditions and peak seasons for fish shoals. Currently, each vessel that fishes locally can normally catch between 2kg and 3kg of fish per day, or 10kg from the whole fleet on a particularly good day. Included in this catch, it was estimated that between 16 and 20 boxes of cod weighing 50kg each could be landed daily. The price of cod is currently £3.50 per kg. Vessels using hooks and lines only have an estimated 10 days of good fishing from within rMCZ NG1b a year (Southwold fleet representative, pers. comm., 2012).

J3d.31 The recent opening of the £0.5m shellfish facility in Wells has helped to secure the continued fishing tradition in the North Norfolk area, but this may now be threatened, should the fleet move due to the loss of current fishing grounds to wind farms and MCZs (Wells inshore fleet, pers. comm., 2011).

J3d.32 Should the Bridlington commercial fleet be significantly impacted, with the loss of a large number of vessels, the NFFO representatives that Bridlington harbour itself could not continue to provide moorings. Commercial vessels currently pay 4.3% of the total value of their landings to the Bridlington Harbour Commission and this is a high proportion of its income (NFFO, pers. comm., 2012). The representative throught that the harbour cannot accrue the same levels of revenue from recreational pleasurecraft. The worst case scenario, would be that without upkeep, the harbour itself could fall into disrepair and become unusable should the Commission not be able to afford to dredge it. This would significantly impact both the pleasurecraft industry and one of the town's key tourism assets (NFFO, pers. comm., 2012).

J3d.33 Fisheries representatives thought that the loss of one fish-processing company in Bridlington might result in the loss of between 40 and 50 jobs across the UK. This company employs six people directly in the town, but supports the jobs of an estimated ten people distributing the shellfish it has processed, and an estimated additional 30 jobs are supported across the UK in the wholesale and retail sale of its shellfish (NFFO, pers. comm., 2012).

J3d.34 The NFFO representative also highlighted that shellfish from Bridlington are transported to processors in other port towns and small coastal settlements around the UK (NFFO, pers. comm.,

2012). Many of these might be impacted indirectly by the loss of supply chains for shellfish and might also be impacted directly by any restrictions on activity in rMCZs in closer proximity.

#### 3.6 Social impacts of static fleet restrictions

J3d.35 All interviewees felt that any restrictions placed on static gears within the rMCZs would lead to increased overfishing of remaining fishing grounds. They thought that this would increase tensions between local static gear fleets, between mobile and static fleets and between UK and non-UK fleets. This applies particularly to the static fleets operating from the Yorkshire coastline. The NFFO representative highlighted that mobile gear fleets would not readily give up their fishing grounds to accommodate static gear vessels, as fishing grounds traditionally reserved for mobile gears have already been lost in recent years and more are likely to be lost as a result of rMCZs (NFFO, pers. comm., 2012).

J3d.36 The NFFO representative was clear that a restriction on static gears in rMCZ NG 9 would result in the loss of the UK's largest shellfishery (for crabs and lobsters) and Europe's largest lobster fishery, in Bridlington. It would lead to the loss of the entire Bridlington fleet, together with its four landing companies, which are international exporters (NFFO, pers. comm., 2012).

J3d.37 The skippers of the Bridlington fleet are the youngest in England. It is thought that this is because there are current opportunities for the potting fleet there and hauling pots is a job involving heavy labour which is better suited to younger people. There are currently eight skippers under 30 years old, each of whom has invested £100,000 in vessels in recent years (NFFO, pers. comm., 2012).

J3d.38 The Southwold fleet representative stated that the boundaries of rMCZ NG 1b were selected by the East of England Regional Hub in consultation with local fleets on the understanding that there would be restrictions placed only on bottom trawls. Consensus was reached through discussions and the local fishing fleets were content with placing a restriction on bottom trawling within the site, on the understanding that other gears used within the site could continue. The fleets were keen that the area should not become a No Take Zone. Should the site be designated with restrictions on the use of other gears, a key impact would be the loss of trust of local fleets (Southwold fleet representative, pers. comm., 2012).

# 3.7 Regional variation in impacts

J3d.39 Impacts were assessed only in areas that are in close proximity to rMCZs with fisheries management scenarios that involve restrictions on static gears, specifically Suffolk, Lincolnshire and East and North Yorkshire.

J3d.40 Fisheries representatives thought that the rMCZs would have a significant cumulative impact on Yorkshire static gear fleets. Should restrictions be placed on static gear within rMCZ NG 6, the only viable option for displacement would be for vessels to move into fishing grounds within rMCZ NG 9, a site that also has a management scenario involving static gear restrictions. Should restrictions be placed on static gear in rMCZ NG 9, alternative options are limited. Recommended MCZ NG 6 has management scenarios that also involve restrictions. Furthermore, static gear

fishing is already restricted around much of rMCZ NG 9, in areas reserved for aggregate extraction activity in the east, west and south and because non-UK beam trawlers fish east of the site. Fishing in rMCZ NG 8 is not seen as an option, as this site is already fished, particularly by the Withernsea and Hornsea fleets, and tensions between ports are already evident. Displacement to the north is therefore considered to be the only viable option for fishers using rMCZ NG 9. Some bigger vessels are, however, thought to have potential to move further east (NFFO, pers. comm., 2012).

J3d.41 The shellfishery in Bridlington has peaked at close to full exploitation. Policy is being explored that would place a cap on fishing catches in the area to prevent overexploitation of fish stocks. It was felt by the NFFO representatives that this might be a viable option for the Bridlington fleet.

## 4 Impacts on international fleets

J3d.42 Feedback forms and interviews were sent by JNCC to representatives of non-UK fleets on behalf of the four regional MCZ projects. The responses covered anticipated impacts of the management scenarios for rMCZs in all English waters. Summaries of impacts on non-UK fleets that are relevant to the Net Gain Project Area are provided below.

## 4.1 Summary of Belgian interests within Net Gain

J3d.43 The Belgian fleet is thought to fish in rMCZ NG 1b. Of the 80 vessels working in UK waters, all but two (using nets) are over-15-metre vessels. There are 62 beam trawlers (including Danish Seiners), 9 otter trawlers, 5 vessels using static gear, 2 twin rigs and 2 otter trawlers working in UK waters. The fleet has decreased from 130 vessels to 80 vessels over the past ten years. Remaining vessels use more sustainable gear types. The Belgian quota has remained relatively static for the past five years. The fleet tends to land its catch in UK ports and send it back to Belgian fish markets by truck. This has some implications for supply chains. Although some fish is imported to fish auctions and processors, the fish market in Belgium relies heavily on Belgian landed fish. Some 75% of current landings by the Belgian fleet are exported to the Netherlands. It is estimated that each job at sea supports between seven and eight jobs on land, either in the maintenance of vessels, or in the processing and sale of the vessels' catch. Small changes in employment in the fishing industry are thought to have a large social impact, as there is a strong fishing heritage in Belgium. The fleet has relied on fishing in foreign waters, as the country has a small coastline.

J3d.44 The Belgian fleet would not continue to fish the sites which have restrictions on bottom gear, as vessels are unsuited to adaptation. It is impossible for mobile vessels from the fleet to switch to using static gear. Should displacement occur into ever-decreasing areas, then vessels from the Belgian fleet might be forced into fishing the Dogger Bank, which has not been fished in recent years. This is because the quota for the Belgian fleet is based on spreading out the fishery. Each fishing ground is assigned a total quota, but if the area into which the fleet is displaced is too small, then it would be forced to seek new fishing grounds.

J3d.45 The cumulative impacts of other policies and developments continue to affect the fleet. The impact of the Hornsea wind farm and licensed dredging areas around Lowestoft is of particular concern to the fleet. Displacement from these sites does not necessarily mitigate all costs, as current fishing grounds are targeted for their high yields,, and the areas to which vessels are displaced do not necessarily produce these same high yields. Increased fuel costs as a result of travelling longer distances to these fishing grounds are also a key concern.

(Source: Questionnaires with international fleets – Belgium, 2011)

# 4.2 Summary of French interests within Net Gain

J3d.46 Some 15 to 20 vessels from Boulogne and 3 from Haute Normandie operate within the Net Gain Project Area. The French fleet fishes in rMCZ NG 12, NG 9, NG 6, NG 7 and NG 1b. All French vessels operating in the Net Gain Project Area are over 15 metres. These same vessels fish the Balanced Seas Project Area, and so are impacted by other rMCZs outside the Net Gain Project Area. The only vessels in the French fleet that are thought to be impacted on by the management scenarios for rMCZs are bottom trawlers. Any reductions in the value or quota of targeted species in the English Channel will force vessels to move to fishing grounds within the Net Gain Project Area. If quota rules change to include targeting of currently non-quota species (red mullet and squid), the French fleet would fish close to Grimsby, within NG 6, targeting whiting. Similarly, if there are low levels of these species in the English Channel, then the French fleet would again target whiting in NG 6.

J3d.47 The main impact on French vessels as a result of rMCZs would be that the fleet would no longer fish within the Net Gain Project Area. The rMCZs with management scenarios that involve restrictions on bottom trawling are in areas where French vessels target whiting. Existing 'gentlemen's agreements' to avoid fishing in areas fished with static gear around the sites currently concentrate trawling activity within rMCZs. As all French vessels fishing within Net Gain use bottom trawls and target whiting, it is felt that no French vessels would be able to continue using fishing grounds within Net Gain.

J3d.48 Adaptation is improbable for French vessels due to quota and cod recovery plan concerns. Mid-water target species do not have enough quota to make them a viable option for the fleet (particularly sole and cod). Changing to lighter gears (as a means of saving on fuel costs) is a potential option, but this might take some years to implement and is not a short-term fix.

J3d.49 The effect on suppliers is unclear. Currently, suppliers are adapting to changes in fleet activity. If trawlers land in Grimsby, per se, then suppliers from the Nord-Pas de Calais region will travel by land or air with supplies and return by vessel to land the fish back into Boulogne, although the diesel and ice required for transportation will be sourced in Grimsby. The French fleet have adapted to restricted fishing grounds, which have resulted in higher fuel and catch costs, by landing its catch in English ports, including landing whiting into the port of Grimsby. The French fleet attribute restricted fishing grounds to Natura 2000, wind farms and marine aggregate sites.

J3d.50 A reduction in catch would have an obvious effect on market sales. French fisheries representatives explained that it is impossible to move to replicate fishing grounds, so a loss of a fishing ground through rMCZ designations could mean that a particular species is no longer landed.

J3d.51 There is concern that vessels displaced as a result of rMCZ restrictions could create conflict among international fleets, particular placing pressure on existing gentlemen's agreements over static and mobile fishing grounds. There is concern that trawlers could be displaced to grounds where static gear is deployed, along the edges of rMCZs.

(Source: Questionnaires with international fleets - France, 2011)

# 4.3 Summary of Danish interests within Net Gain

J3d.52 Recommended MCZs would impact on the Danish fleet only if Dogger Bank was closed to fishing. All Danish vessels active within the Net Gain Project Area are over 15 metres. The value of the Net Gain Project Area to the Danish fleet is estimated to be not more than £0.1m a year. This is because there are fishing grounds closer to Denmark than UK waters. The size of the Danish fleet has decreased more than any other European fleet, because a decommissioning exercise was carried out earlier than for other international fleets. Fleet reduction has meant that the remaining fleet generally has more days at sea than previously. While this is the case for most port fleets in Denmark, some fleets that still have too much capacity have reduced their number of days at sea. The current quota on days at sea has resulted in the Danish fleet fishing closer to the Danish shore, within 12nm. This increases the length of time spent fishing by reducing the amount of time steaming.

J3d.53 Fisheries representatives thought that that all Danish otter trawler vessels would be affected by fisheries restrictions for rMCZs, and would not be able to continue operations in rMCZs that are subject to fisheries restrictions. No Danish vessels using mid-water trawls are expected to be impacted as a result of rMCZs.

J3d.54 The summer sandeel fishery is the most important fishery for the fleet. Those vessels undertaking bottom gear sandeel trawls could potentially switch to mid-water gear and still target sandeels. Recent examples of this practice in Scottish waters resulted in a higher yield. However, using mid-water nets to catch sandeels is not always possible within the Net Gain Project Area. It is unclear why this is the case.

J3d.55 Smaller areas of restriction would not impact on the fleet as much as larger restricted areas. In particular, closure of the Dogger Bank to bottom gear would have the largest impact. Danish vessels fish on the Dogger Bank as catch rates are usually twice as high as for other good fishing grounds in the North Sea. Restricting Danish vessels from fishing on areas of the Dogger Bank would be likely to result in the fleet fishing less productive grounds, which might not handle the fishing pressures that the Dogger Bank can. Closure of the Dogger Bank to Danish vessels might result in the closure of the Danish industrial fishery, as the majority of sandeel populations

are located on Dogger Bank. The sandeel fishery on Dogger Bank is worth €40m a year in sales and considerably more when account is taken of the impacts on processing factories. Export of fishmeal and fish oil from the Dogger Bank is worth £4m a year. The plaice fishery is worth £1m a year to the Danish fleet and the turbot fishery boats are currently working 75km of nets.

J3d.56 Overall, fisheries representatives felt that the impact of management scenarios for rMCZs would not have a great effect on those businesses servicing and supplying the fleet. However, in certain years when fish yields closer to Denmark are lower, it could have a large impact on the fleet and the associated processing industry. Each job at sea is supported by four to five jobs on land, servicing gear and processing fish. Fishmeal companies rely heavily on Danish-caught sandeel. Only those vessels using mid-water trawls are able to fill their quota by fishing elsewhere. Should the commercial fishing fleet be lost, then small fishing communities would see the greatest impact (Skagen and some others). The local economy of smaller fishing communities relies on commercial fishing. More diverse economies, such as Esjberg, are less dependent on commercial fishing. The Danish economy as a whole is not dependent on its commercial fishery.

(Source: Questionnaires with international fleets – Denmark, 2011)

# 4.4 Summary of Dutch interests within Net Gain

J3d.57 The average value of Dutch landings from the Net Gain Project Area is €36m a year (2007–9). The southern fleet (from Goedereede, Stellendam and Breskens) fishes more in the southern North Sea (below 54 °N), and the fleets from IJmuiden, Urk, Den Helder and Texel fish more within the northern North Sea. It is expected that the rMCZ management scenarios will mostly impact on those vessels fishing in the southern North Sea. The Net Gain Project Area is an important fishery for the Dutch cutter fleet. The estimated value of the Net Gain Project Area to the Dutch cutter fleet was €40.5m in 2009 (€30.3m in 2008 and €36.3m in 2007). All vessels are over 15 metres in length and the majority of active vessels are beam trawlers, otter trawlers (including twin riggers and outriggers) and flyshooters. Fishing intensity is thought to have remained static, with a trend towards using lighter gear types with less impact on the seabed.

J3d.58 The Dogger Bank is an important fishing area for the beam trawl fleets of Texel, Den Helder, Urk and Katwijk (approximately 16 vessels). Some 33 UK beamers (Dutch flag vessels) were active on the Dogger Bank from 2001 to 2006. After decommissioning and a scrapping scheme, an estimated 40 vessels (Dutch or UK) are active on the Dogger Bank. The southern part of the English section of the Dogger Bank is of particular importance to the Dutch fleet. Target species are plaice, sole, turbot and brill. Changes in Total Allowable Catch and quota distribution have shifted the target species from plaice to sole.

J3d.59 No vessels are expected to leave the fleet as a result of the management scenarios for rMCZs. Displacement, the only viable option for the fleet, is expected to increase fuel and labour costs. Some businesses will be able to adapt to new fishing areas, but for the majority of the Dutch fleet, it is anticipated that it will take around two years to source new fishing grounds and to familiarise vessels with the implications of closed areas.

J3d.60 The cumulative effect of designations and developments (the Natura 2000 sites on the North Norfolk sandbanks, the English Banks and the Dogger Bank, proposed offshore wind farms and an increase in closed areas for fisheries means that the Dutch fishing industry faces an increasing loss of its fishing grounds. No vessels currently fishing sites within Net Gain would be able to continue fishing within areas subject to additional fisheries management, as all vessels are bottom trawlers and unable to adapt to lighter gear types.

J3d.61 As a result of displacement, fishers may choose different ports to get supplies and repairs. This is dependent on the distance they have to travel to avoid the rMCZs. Certain ports may benefit from this, while others may lose valuable income and jobs. This will impact both on vessel support industries and on those processing the landed fish.

(Source: Questionnaires with international fleets – The Netherlands, 2011)