European Commission, DG MARE

Studies for carrying out the Common Fisheries Policy:
Lot 3 Socio-economic dimensions in EU fisheries

Shetland: Walls case study report

West Pier on the west of Shetland, March 2013
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Abbreviations and acronyms

DCF: data collection framework
FTE: full-time equivalent
GBP: British pound (EUR 1 is equal to GBP 0.84 in April 2013)
ICES: International Council for the Exploration of the Sea
MSC: Marine Stewardship Council
NAFC: North Atlantic Fisheries College
SFA: Shetland Fishermen’s Association
SFF: Scottish Fishermen’s Federation
SFPO: Shetland Fish Producers’ Organisation
SFCT: Shetland Fisheries Training Centre Trust
SIC: Shetland Islands Council
SPFA: Scottish Pelagic Fishermen’s Association
SSMO: Shetland Shellfish Management Organisation
SSQC: Shetland Seafood Quality Control
1 Methods

1.1 Secondary data sources
A number of data sources have been used to prepare this report, including:

- data on fish landings from Marine Scotland Science Fisheries statistics;
- population statistics, taken from Scottish Government neighbourhood statistics and the Shetland Health Board;
- employment statistics, provided by the Shetland Islands Council (SIC) Economic Development Unit.

Some data is only available at the Shetland level as it is collected only at county (Shetland) scale.

1.2 Interviews with focus groups
Stakeholder group A comprised community council representatives and one SIC councillor. Two stakeholder sessions were held for fishers. All fishers in the community were invited, by letter/email, posters and radio advertisement. Four fishers were surveyed (approximately 18 % of all fishers). It should be noted that many fishers are part time and are also employed in other economic activities.

1.3 Questionnaires
All vessels are owned and crewed by the vessel owner. No crew were identified.
2. Settings

2.1 Description of the Walls case study site

Walls is a village on the west side of Shetland. From a fisheries management perspective, ‘Walls’ includes all small villages on the west side of Shetland, which are spread over a large geographical area. Each of these areas has pier facilities and marinas.

The west side of Shetland has a temperate maritime climate. Despite its latitude, 60 degrees north (comparable with St Petersburg in Russia and the southern tip of Greenland), the effects of the northerly latitude are mitigated by the North Atlantic Drift, a powerful ocean current that warms north-east Europe. Winter temperatures are comparatively warm, with monthly average temperature above 3 °C (compared with St Petersburg, −10.5 °C and southern Greenland, −5.5 °C). Mean summer temperatures peak at 12.1 °C in August. Rainfall is high, on average 1,179 mm a year, with the wettest months being November to March. Wind speeds are on average 9 m/s in the winter, dropping to 5.7 m/s in the summer. Wind speeds greater than 18 m/s normally occur every month. In winter months wind speeds greater than 20 m/s are frequent.

Figure 1 Location of Walls in the Shetland Islands
The west side of Shetland is home to approximately 15% of the Shetland shellfish fleet. However, many of these boats will only be used occasionally. There are no whitefish or pelagic boats based in the west side. Shellfish landings, which are spread across Shetland, were valued at GBP 5.8 million (EUR 6.9 million) in 2010, slightly less than 1% of all Scottish vessel landings. Landings into the west side of Shetland represent less than 1% by weight and volume of all Shetland landings.

2.2 Demographics

In 2011 the population estimate for the Walls and Sandness Community Council area (covering almost half the area of Shetland known as the ‘Wastside’) was 699 people, 2.9% of the Shetland population. The population estimate has varied by fewer than 30 over the last ten years.

In Shetland overall, the proportion of the population born outside the UK is very small. This is also true of Walls, where the proportion of residents originating outside the EU is estimated at less than 1% of the total population. Across Shetland 98.1% of community members originated in the UK. This is higher than the Scottish average of 91%. A breakdown of residents whose origins are non-UK is not available at a Shetland level.

The number of individuals entering and leaving Walls is not available but is likely to be similar to that of the whole of Shetland, see Figure 2 (see national level report). The number of people entering Shetland has been relatively stable from 2002-11, varying between 700 and 800 individuals a year or approximately 3% of the population. In contrast, the number of people leaving Shetland has shown a slow decline, resulting in net immigration, contributing to population growth. There has been a similar trend in immigration/emigration nationally.

Figure 2 Immigration and emigration in Shetland over time (2002-11)

The average life expectancy at birth is not available for Walls. Because population size is small, it has not been possible to estimate this accurately.
2.3 Employment opportunities/Sector overview
Walls, along with the whole of the west side, offers a relatively limited number of employment opportunities. Key employment opportunities include aquaculture, social care, crofting, knitwear and wool manufacture, the leisure centre and the school. Many residents commute to either Sullom Voe or Lerwick for work. There is no breakdown of economic output available for Walls.

In 2009 the average yearly wage in Walls was GBP 31,651 (EUR 36,715), slightly higher than the Shetland average GBP 30,180 (EUR 35,008). The median weekly wage in Shetland in 2012 was GBP 546.1 (EUR 655), higher than the Scottish and UK median weekly wage of GBP 498.3 (EUR 598) and GBP 508.0 (EUR 610) respectively. Shetland has experienced a more rapid increase in weekly median wage since 2007 than both Scotland and the UK. This may, in part, reflect the recent increase in employment opportunities in large-scale projects, for example the construction of the Total gas plant at Sullom Voe.

Unemployment statistics are not available below the Shetland level. Unemployment in Shetland is below the national average, varying between 1.7 % and 2.2 % since 2005. This is below the Scottish and UK average, currently 7.6 % and 7.8 % respectively.

Direct employment in fish catching still contributes 2 % of all full-time equivalent (FTE) employment opportunities across Shetland, higher than the Scottish average of 0.2 %. Fisheries (fish catching, aquaculture and fish processing) directly employs 8.6 % of the workforce across Shetland. The fishing industry still provides direct employment within Walls but fishing is predominantly part time. Historically, there were a number of white-fishing crews based on the west side but decommissioning resulted in the loss of this employment. Across Shetland the number in FTE employment in fish catching and fish processing decreased in the period 1997-2011, falling by 25 % and 27 % respectively. Since 2003 the decline in these sectors has been less rapid, declining by 10 % and 3 %. This trend is likely to be similar in Walls, as decommissioning of whitefish boats occurred between 2002 and 2004.

The Shetland economy has become increasingly dependent on public sector employment. The number of FTE employees in public administration across Shetland showed the largest growth from 1997-2011, increasing by 188 %. This rapid growth in public sector jobs has stabilised in recent years, and is likely to decrease over the next few years when the local authority, Shetland Island Council, implements significant budgetary cuts. Within Walls the care centre is large local employer.

2.4 Fisheries
While there are positive trends in terms of the value of the landings, the fishing sector faces significant challenges. Walls community representatives and fisheries owners said that decommissioning has reduced fish-related employment on the west side of Shetland. Also, the rising cost of fuel has reduced the profitability of the shellfish sector. This makes it more difficult to attract investment to upgrade vessels and makes the industry less attractive to young people.

Stock
Since 2002 the Shetland Shellfish Management Organisation (SSMO) has managed shellfish stocks within the Shetland Islands. The Scottish government grants management rights via a regulatory order
that restricts gear type, number of gears and number of vessels. There are no current concerns on shellfish stocks and the shellfish fleet has recently gained Marine Stewardship Council (MSC) certification.

**Infrastructure**
The west side of Shetland benefits from investment by Shetland Island Council in pier infrastructure, including the current upgrade of the Walls pier. Basic facilities, including water and fuel, are available on the west side. There are no marine engineering firms in the area but engineers will travel from Lerwick or Scalloway to repair boats.

**Seasonality**
Employment in Shetland is dominated by full-time work, with only the tourism sector showing seasonality. Business tourism is significant in this sector, and this does not have a seasonal pattern. Shellfish fishing takes place all year round. However, creel fishing levels can be higher in the summer when the weather is better, as there is less risk of losing gear.

**Fleet**
In Wall there is only an inshore shellfish fleet, see Table 1. This differs to the rest of Shetland, where the fishery sector comprises shellfish (82 %), whitefish (13 %) and pelagic (5 %). While there have been no whitefish boats based on the west side for a number of years, a number of whitefish crews were based on the west side. Decommissioning reduced the number of these boats in Shetland, reducing this employment opportunity.

In Walls the shellfish fleet comprises creel and scallop dredgers. In Shetland the shellfish fleet comprises mostly vessels 0-24 m in length, with just one shellfish vessel of more than 24 m. The Walls shellfish fleet comprises creel (82 %) and scallop dredge (18 %). In comparison, the Scottish fleet comprises 76 % creel, 10 % scallop dredge and 13 % nephrops trawl.

A restriction on the number of scallop dredges means that it is not economical to operate large shellfish dredging boats. This has meant that the Shetland shellfish fleet is dominated by smaller boats.
Table 1  Fleet segments in Walls fleet

<table>
<thead>
<tr>
<th>Segment (length class)</th>
<th>Whalsay vessels</th>
<th>Shetland total fleet</th>
<th>Main gears used</th>
<th>Number of crew (average)</th>
<th>Main species fished</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>17</td>
<td>109 (16 %)</td>
<td>Creel</td>
<td>1</td>
<td>Lobster, brown crab, green crab, velvet crab</td>
</tr>
<tr>
<td>0-10</td>
<td>3</td>
<td>20 (15 %)</td>
<td>Scallop dredge</td>
<td>1</td>
<td>King and queen scallop</td>
</tr>
<tr>
<td>10-15</td>
<td>1</td>
<td>1 (100 %)</td>
<td>Creel</td>
<td>1</td>
<td>Lobster, brown crab, green crab, velvet crab</td>
</tr>
<tr>
<td>10-15</td>
<td>1</td>
<td>6 (17 %)</td>
<td>Scallop dredge</td>
<td>1</td>
<td>Lobster, brown crab, green crab, velvet crab</td>
</tr>
<tr>
<td>Total</td>
<td>22</td>
<td>172 (13 %)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Scottish government.

2.4.1 Shellfish fleet

**Fleet segment as a whole**

Because the vessels in the shellfish fleet are small (less than 15 m), they are normally operated single-handedly by their owners. Fishers require a local SSMO licence to operate a shellfish boat.

Of those surveyed, some fishers worked full time and others part time. However, within the Walls fleet most fishers are part time. Shellfish fishing is weather dependent because the boats are small and there is a risk of losing static gear. However, fishing takes place throughout the year.

All fishers interviewed lived in Walls or the surrounding area and all had been employed previously in one of the other fish-catching sectors. All fishers surveyed were between 41 and 65 years old.

Whilst it is likely that all of the vessels under 10m will be operated on a part-time basis larger vessels may be operated on a full or part-time basis, with greater size not pre-determining the vessel to be a full or part time venture.

![Figure 3 Age, gender and place of origin for owner-operator skippers in Walls](image-url)
**Economics**

All the shellfishers surveyed paid themselves on the operating surplus. Of those who reported an operating profit, all part-time skippers reported an income of less than GBP 15,000 (EUR 18,300) and full-time skippers reported an operating profit of GBP 30,000-50,000 (EUR 34,800-58,000). Several fishers reported that their largest cost was paying off the loan for the vessel.

Landings into Walls in 2011 were 1.5 tonnes, which represents less than 0.1% of the total Shetland landings. The shellfish landed volume in Shetland in 2011 was 1,565 tonnes, accounting for 1% of landings by UK vessels into the UK and 3% of all Scottish shellfish landed into the UK.

In Walls landings peaked in 2010. In Shetland landed volumes peaked in 2006 and have since declined. Brown crabs have represented the largest landed volume, see Figure 3.

![Figure 4 Shellfish landed volume Walls (west mainland) from 2003-11](image)

Shellfish landed value in Walls in 2011 was GBP 1,263 (EUR 1,465), accounting for less than 0.1% of the value of landings in Shetland. Landed values have decreased since a peak in 2006. Brown crabs represent the highest landed value, see Figure 5.

Landing opportunities exist throughout Shetland and it is likely that boats will land to the nearest locality to their fishing grounds, which maybe outwith the Walls areas, including Scalloway and Toft.
The price at first sale of velvet crabs and lobsters increased in 2011. The price at first sale of edible crabs has remained relatively constant. The price at first sale of scallops has been decreasing since 2006, see Figure 5.

There are currently 22 shellfish fishing boats in the west-side fishing fleet. The number of licensed shellfish vessels has declined since 2003, see Figure 6. The cause of this decline is unclear, but may in
part reflect the initial granting of licences by the SSMO to all part-time and full-time fishers, regardless of their fishing track record. As a small fee is levied to obtain an SSMO licence, inactive fishers may now have left the fleet.

![Graph showing trends in fleet segment numbers in Walls from 2003-11](image)

**Figure 7** Trends in fleet segment numbers in Walls from 2003-11

As for all fleet segments, increasing fuel costs have reduced profitability. Fishers reported that the cost of entering the fleet (boat cost) and the difficulty of obtaining a local licence restricted new entrants into the fleet.

The fleet has recently gained MSC certification for king and queen scallops, and brown and velvet crabs. The dredge fishery gained accreditation after the fleet agreed voluntary closed areas, developed in consultation with the fishers.

**Employees within segment**

None of the fishers interviewed in Walls had accident or life insurance associated with their vessel, insurance cover was through other boats. A number of the fishers interviewed also held other employment, and for them fishing for shellfish was secondary employment.

The fleet is represented through the Shetland Fishermen’s Association (SFA). As the fleet is not quota led, representation at an EU level is less relevant to the fleet. The fishers reported that they felt they had been poorly represented in recent UK media reports.

**Summary**

The shellfishing fleet comprises small vessels, which are predominantly part time. Shellfish fishing is managed by the SSMO. The fleet has recently gained MSC certification, which may increase the prices the fleet can command.

**2.5 Summary of settings**

Shellfish fishing is the only fleet segment present on the west side of Shetland. The fishing fleet is dominated by part-time fishers.
Table 2  Summary of fishing fleets in Walls

<table>
<thead>
<tr>
<th></th>
<th>Shellfish fleet</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Target species status</strong></td>
<td>Stocks stable</td>
</tr>
<tr>
<td><strong>Business type</strong></td>
<td>Owner crewed</td>
</tr>
<tr>
<td><strong>Average annual income</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Less than GBP 15,000 part time</td>
</tr>
<tr>
<td></td>
<td>GBP 30,000-50,000 full time</td>
</tr>
<tr>
<td><strong>Main education level</strong></td>
<td>School education until 16. Fishing qualifications up to class 2</td>
</tr>
<tr>
<td><strong>Highlights</strong></td>
<td>Locally managed. Recently gained MSC certification for key species</td>
</tr>
<tr>
<td><strong>Key points</strong></td>
<td>Difficult to gain new licence. Vessels normally operated single-handedly</td>
</tr>
</tbody>
</table>

3. Linkages

3.1 Inter-sectoral linkages

*Geographical*
Fishing has the potential to overlap spatially with other industries. For example, cables, pipelines and aquaculture installations can have impacts on the inshore fishing fleet and there are many aquaculture sites on the west side of Shetland.

Natural heritage designations might reduce fishing opportunity in the future, through management measures such as restrictions imposed on gear types.

*Labour*
None of the fishers had boat crew, so there is no conflict for labour.

*Economic*
The Shetland fishing fleet uses more than 300 local and national suppliers. Within the west side there is little onshore dependency on the fishing fleet but the fishing fleet does help support local shops.

The Walls fishing vessels will directly support onshore jobs across Shetland in transport, processing, sales, engineering and supply. A survey of companies conducted as part of this study indicated that at least 225 onshore jobs in sectors such fish processing, transport and engineering are directly dependent on fishing across Shetland. Some of these business are solely dependent on fishing (such as fish-processing companies), while for others it represents a proportion of their income. Many of these businesses have already had to adapt to the reduction in the number of fishing vessels in Shetland and have increased reliance on other marine industries such as aquaculture and oil. While many of these companies would be able to continue to trade if the fishing industry were to close, it would be likely that staff whose jobs are directly dependent on fishing would be made redundant. In
addition, the income to the fishermen and onshore workers will indirectly help to support jobs across Shetland.

Wild and farmed fish and shellfish are Shetland’s largest export and these industries help support Shetland’s ferry link to the mainland and also the inter-island ferry services.

3.2 Intra-sectoral linkages

Institutions
The SFA represents all fleet segments within Shetland. The SFA organises meetings for each fleet segment to ensure they are all represented. The Shetland Fishermen’s Association (SFA), as a member of the Scottish Fishermen’s Federation (SFF), represent the interests of fishers nationally and internationally. All fishers reported that the SFA was representing their fleet. The SFA does not provide assistance in times of hardship and the fishers reported that none was required.

Within Shetland the SSMO manages the inshore shellfish fishery. The SSMO has representatives from the SFA, SIC, Association of Community Councils and the fish-processing industry. Fishers reported that they were not reliant upon state or voluntary aid and this was not rated as important to them. As fishers work all year round there is not a need for organisations to provide financial aid for times of hardship. However, The Fishermen's Mission is a local charity that can provide support to fishermen and their families in emergency, including loss of life and boat.

3.2.1 Between fleet segments

Geographical
Fishers reported that there was no major conflict for space within the Shetland fishing sectors. However, community representatives reported that some conflict existed between full-time and part-time fishers, with the former believing the latter reduced fishing opportunity.

Labour
Labour mobility is not applicable to the west-side fleet, as boats are operated single-handedly.

Economic
The shellfish segment is not managed by a quota system and is not economically dependent on other fishers.

3.2.2 Between subsectors

Geographical
There is limited spatial overlap between fisheries subsectors. While there are no whitefish boats based on the west side, they will fish on the west of Shetland. Shellfish dredging grounds and whitefish trawling grounds may overlap but fishers reported that this did not cause any conflicts between the fleets. Fishers suggested that this was because the fishing grounds were quite large and fishing intensity relatively low.
The location of ancillary industries such as fish processing has contracted in recent years. Fish processing now takes place primarily in Lerwick and Scalloway. Historically, there were a number of fish processing factories spread across Shetland. Brown crab processing takes place in Yell. The centralisation of services has meant that many jobs created by ancillary industries are less geographically spread and are often located within different communities to those of the fishermen and boats.

**Labour**

None of the fishers reported that their spouses or partners were involved in the fishing industry. It is likely that the 225 onshore jobs are held predominantly by separate households: little evidence was found of more than one household member working in a fishing-dependent industry.

**Economic**

Seafood from Shetland is primarily sold unprocessed to Scottish mainland distributors. Shellfish is sold largely straight to mainland buyers. However, brown crab is processed in Yell and some fishers sell a proportion of their catch to the factory.

The price fishers receive is dependent on the national availability of fish, with over supply lowering prices and under supply raising prices.

The different fleet segments are not competing in the same markets, so the landed volume of one sector does not affect the landed price in other sectors. In Shetland the aquaculture industry produces significant volumes of salmon and mussels, but these are not fish caught by the wild fishery in Shetland, so there is little market competition. Aquaculture has become the west side’s largest employment sector.

![Figure 8 Value of finfish and shellfish produced in Shetland from 2003-11](image)

Figure 8 Value of finfish and shellfish produced in Shetland from 2003-11
3.3 Summary of linkages
The Shetland fishing fleets support onshore jobs, although these are situated elsewhere in Shetland. These jobs are in marine engineering, transport, processing and boat supply. There is no evidence that these are in the same households as fishers. As Shetland’s largest exporter, the fishing fleet also helps to support key infrastructure, including the ferry service.

No negative interactions were reported between the Shetland fleet segments due to differences in markets and fishing grounds.

4 Role of fishing

4.1 Fisheries as an economic activity

4.1.1 Diversification
Full-time fishers reported that fishing represented more than 50 % of household income and part-time fishers surveyed reported that shellfish fishing represented less than 30 % of household income. No change in dependency was reported.

Community representatives from Walls reported that, historically, there were larger numbers of fishers on the west side of Shetland. They reported that decommissioning of the whitefish fleet has reduced fisher numbers. Community representatives believed that the development of the aquaculture industry has provided alternative employment for fishers. In the future, community representatives would like to see the expansion of the fishing fleet, to increase fisheries employment across the Walls and west side. Community representatives also reported that while other industries had been trialled on the west side, only fishing and aquaculture had provided long-term employment opportunities.

Direct employment in fish catching, fish processing and aquaculture accounts for 9 % of the workforce. While at the Shetland level, 3 % of the workforce is dependent on fish catching, this does not take into account additional jobs created in ancillary industries.
All fishers participating in the survey reported a high level of job satisfaction. All fishers reported that they wished to stay working in the sector and did not intend to leave within the next 12 months. No fishers reported that they were, or had previously been, looking for alternative employment. Within Walls the only other large economic sector for the fishers to work within is aquaculture.

Vessels in the shellfish fleet are operated single-handedly, so no crew is required. All fishers had been fishing for more than ten years.

4.2 Adaptation

4.2.1 Analysis of adaptive response

Shellfish

The shellfish industry is not controlled by quota, so can adapt more easily to increases in stock abundance. Regular local monitoring of stock abundance means there is greater confidence in stock assessment.

Fishers report that because the SSMO is not issuing new licences to fishers currently, it is very difficult for the sector to grow. This makes it harder for new entrants to join the fleet. As most vessels are operated by only one crew member, unless a family member already owns a shellfish boat it may be difficult for a young person to gain shellfish fishing experience.
Wider declines in the economy have made it more difficult to access loans from banks and there has been a reduction in the level of financial support that can be offered at a national level.

Economic challenges such as increased fuel prices affect the profitability of the sector. Most fishers are not solely reliant upon an income from shellfish fishing. Full-time fishers reported that they felt that part-time fishers who were not dependent on fishing had the potential to affect profitability of dependent fishers. Reduction in profitability has the potential to affect new fishers more because skippers will be less willing to take on new crew members. MSC certification may help fishers achieve a higher price and help maintain profitability.

4.3 Future development of the community
Across Shetland there has been a general trend of employment becoming centralised to Lerwick. Community representatives and fishers in Walls are concerned that any further reduction in local employment will result in depopulation of the west side.

Fishers placed a high value on education for young people to enable them to adapt to future changes in the economy. Community representatives hoped that the Shetland whitefish fleet would grow, creating employment opportunities for those living on the west side of Shetland. Community representatives felt that fishing and aquaculture were key potential employers on the west side of Shetland, where transportation distances to Lerwick could make it difficult for other businesses to become established.

A new funding scheme has been made available since 2012 for coastal communities through the European Fisheries fund, Axis 4. There have been no grants awarded for the Walls area.

5 Summary and conclusions
Walls is a small village on the west side of mainland Shetland. This case study covers Walls, Sandness and a number of other small fishing villages on the west side, each with its own pier facilities and marinas. The total population of the area has been more or less constant at 699 over the past ten years and comprises more than 99 % EU residents of EU origin, with the overwhelming majority of Scottish or UK origin.

Walls and the other west-side communities have a relatively limited number of employment opportunities. These include aquaculture, social care, crofting, knitwear and wool manufacture, the leisure centre and the school. Many residents commute to either Sullom Voe or Lerwick for work. The fishing industry still provides direct employment within Walls, but fishing is predominantly part time. There are no marine engineering firms based on the west side, although engineers will travel from Lerwick or Scalloway to repair boats. The aquaculture industry has become a large local employer. Community representatives would like to see the fishing industry in Shetland grow. Across Shetland there has been a general trend of employment becoming centralised to Lerwick. Community representatives and fishers are concerned that any further reduction in local employment will result in depopulation of the west side.
Within Walls and the west side of Shetland the fishing industry has declined and now consists of only 22 shellfish boats (mainly less than 10 m). All fishers interviewed lived in Walls or the surrounding area and all had been previously employed in one of the other fish-catching sectors. All fishers surveyed were males in the 41-65 age group. Part-time operators made less than GBP 15,000 (EUR 18,300) per annum and full-time skippers reported an operating profit of GBP 30,000-50,000 (EUR 34,800-58,000). Full-time fishers reported that fishing represented more than 50 % of household income and part-time fishers surveyed reported that shellfish fishing represented less than 30 % of household income.

Vessels in the shellfish fleet are operated single-handedly, mostly on a part-time basis. Shellfish fishing is weather dependent because the boats are small and there is a risk of losing static gear. However, however fishing takes place throughout the year. The number of licensed shellfish vessels has fallen since 2003 and may reflect the initial granting of licences by the SSMO to all part-time and full-time fishers, regardless of their fishing track record. As a small fee is levied to obtain an SSMO licence, inactive fishers may now have left the fleet. Like all fleet segments in the rest of Shetland, increasing fuel costs have reduced profitability. Fishers reported that the cost of entering the fleet (boat cost) and the difficulty of obtaining a local licence restricted new entrants into the fleet.

Data collection for remote communities like those on the west side are challenging, mainly due to the small population and resulting small sample size. In addition, because most of the population and economic units are clustered around the population centres of Lerwick and Scalloway, most demographic and economic information is collected only at Shetland level.

At present there are no data collection framework (DCF) variable types associated with social dimensions, apart from some information on employment (FTE employment and the number of engaged crew). It is apparent that there is a high dependency on fishing-derived employment and thus the community is highly vulnerable to external factors like changes in quota allocation, fuel costs and market prices. Many of these are captured in the current DCF regime (for example, under expenditure) but the vulnerability element is not currently captured nor fully understood by many. Therefore, it is suggested that key indicators be identified and included where possible in a new socio-economic dimension of the DCF. These could include:

- entrance and departure rates of persons involved in fishing;
- ratios of fisheries dependence in the local economy, in terms of both employment and economic contribution;
- relative contribution of Member State / other EU and non-EU employment within the local fisheries sector.