## BIM <br> Ireland's <br> Seafood <br> Development Agency

## An Estimation of a Reference <br> Population for the Irish Seafood Sector



## Reference Population for Seafood Sector Comparisons

All data shown here sourced online from the Central Statistics Office (CSO): (https://www.cso.ie/en/index.html)

The population of the Republic of Ireland recorded in the Census for 2016 was 4.76 m .


Figure 1: numbers and proportions of Irish population by distance from coastline $40 \%$ of the Irish population live within 5 km of the coastline (1.91m).


Figure 2: population of Ireland residing within or over 5km of the coastline
The CSO definition of 'Town Area' and 'Rural Area' differentiates the two as 'those persons living in population clusters of 1,500 or more inhabitants' or not, respectively. Of the Irish population $37 \%$ reside in rural areas and $63 \%$ in urban areas. The population residing in rural areas in 2016 was 1.78m.


Figure 3: Urban and rural population of Ireland in numbers and proportions in 2016

## Methodology

To assess an appropriate target population for the seafood sector the data on the part of the population living along the coastline will be combined with the rural population, thereby removing the urban population from the coastline population. The result will give us close to what we seek which is the population of the rural coastline communities of Ireland. However, the definition of rural as excluding all towns above 1,500 population may be too strict therefore we need to add back in to the rural coastal population important coastal fishery towns and villages of a population over 1,500.

# Seafood Reference Population 



Figure 4: intersection of rural and coastal populations as reference seafood community population
The population of the 31 electoral areas of the Republic of Ireland (includes major cities and Dublin councils) are split into 10 coastline proximity categories (as can be seen in figure 1); Less than 100 metres, 100-250 metres, 250-500 metres, 500-1000 metres, 1-5 Km, 5-10 Km, 10-25 Km, 25-50 Km, $50-75 \mathrm{Km}$, Greater than 75 Km . The target coastal population is assumed here to reside within 5 km of the coastline.

The urban-rural population split is represented for the same 31 counties in another table. It is assumed that the urban-rural ratio is homogenous throughout each county for each of the 10 proximity categories (e.g. if county Meath has an urban rural ratio of 45:55 then the population of county Meath in each coastline proximity category has the same ratio). Two new tables are now created by multiplying the population proximity table by the urban share and the rural share. These tables now show the rural population proximity to the coastline and likewise the urban. The rural population within 5 km of the coastline must now have important fishing ports added back in.

There are now 200 settlements in the Republic of Ireland with a population over 1,500 according to the latest Census. Interestingly, three of the six Fishery Harbour Centres, Castletownbere, Killybegs and Rossaveal have populations below 1,500. The 16 towns with a population over 1,500 added are Skerries, Rush, Howth, Youghal, Lusk, Westport, Kinsale, Bantry, Kenmare, Clogherhead, An Daingean, Newport, Dunmore East, Strandhill, Rosslare and Clifden. The sum of the population of these 16 towns is 73,574 . To the rural table the total population of the 16 port-towns of interest are added and distributed across the five proximity categories within 5 km of the coastline as these are all small to medium sized coastal towns. The results are shown in the following section.

## Irelands Coastal Community Population (within 5km of the coastline)

The results of the combined tables on proximity to the coastline and the urban-rural divide are shown in the following figures. The results in figure 6 here are before the 16 selected towns over 1,500 are added back in.


Rural Population Coastal Proximity


Figure 5: coastal proximity ( 5 km ) of Ireland's rural population
Figure 6 shows that $29 \%$ of the rural population reside within 5 km of the coastline. As shown before, 1.78 m people reside in rural areas. Here it is estimated that the coastal rural population is therefore 511,000, with 1.27 m classified here as inland rural.

In the following figure 7 the results are shown for the adapted rural population including the 16 towns previously mentioned.


Figure 6: coastal proximity ( 5 km ) of Ireland's rural population adapted for reference seafood population
Here, it is estimated that the coastal rural population of Ireland that could be used as a reference for the seafood sector is $\mathbf{5 8 5 , 0 0 0}$.

## Conclusion

The Irish seafood sector is a driver of economic activity and employment in Ireland's coastal regions. These regions are often characterised by their remoteness from urban centres, their lack of infrastructure and industrial development and so depend highly on primary sectors such as the seafood and the agricultural sectors. The objective of this study has been to estimate an appropriate population for the seafood sector that captures the areas of the Republic of Ireland that are associated with the sector. The methodology used here merges the latest CSO Census data on the population of Ireland, at the electoral area level, that resides close to the coastline, with the rural population, so as to remove large cities and towns that do not depend on the seafood sector from the coastal population. The population within 5 km of the coastline (1.91m) was intersected with the rural population ( 1.78 m ) which resulted in an estimated rural coastline community of 511,000 . The inclusion of 16 important (urban) fishing ports around the Irish coast adds an extra 74,000 to the estimated population of the seafood sector. The labour force and total employed for the seafood sector have also been estimated using data at the electoral area level.

The results of the methodology described have therefore estimated the population of the Irish seafood community as 585,000 people, with a labour force of 275,000 with 239,000 total employees.

In table 1 the estimated population, labour force and total employees in the Irish seafood community is shown. Like the population estimate the figures for labour force and total employees is estimated using the CSO data for these descriptors by Electoral Area. The estimated labour force for the seafood community is 275,000 while the total number employed is estimated at 239,000.

In the BIM report 'A Top-Down Estimation of the Downstream Employment Generated by the Irish Seafood Sector' indirect employment in the seafood sector was estimated based on recent publications at the Irish and EU levels. An estimate for induced employment was also shown. The report estimated employment in ancillary activities that supply and support the direct sectors of fisheries, aquauculture and processing at 5,400. This leads to $\sim 14,800$ total employed directly and indirectly in the seafood sector. Induced employment, the jobs created by serving the necessities and leisures of those directly and indirectly employed in the sector, was estimated at $\sim 11,000$.

In table 2 the dependence of the seafood communitys' population, labour force and total numbers employed is shown for direct seafood employment, direct and indirect seafood employment and finally direct, indirect and induced seafood employment.

Table 1: revised summary of results for definition of Ireland's rural coastal community population

| Area | Population 2016 | Labour Force | Total Employed |
| :--- | :---: | :---: | :---: |
| Seafood Community | 585,000 | 275,000 | 239,000 |

Table 2: proportion of the rural coastal population directly employed in the seafood sector

| Seafood Sectors | Total Seafood <br> Employees | \% Population | \% Labour Force | \% Total Employed |
| :--- | :---: | :---: | :---: | :---: |
| Direct | 9,257 | $2 \%$ | $3 \%$ | $4 \%$ |
| Direct \& Indirect | 14,800 | $3 \%$ | $5 \%$ | $6 \%$ |
| Direct, Indirect \& Induced | 26,000 | $4 \%$ | $9 \%$ | $11 \%$ |

In tables 3, 4 and 5 these three categories of seafood employment are shown by FLAG region.

Table 3: direct employment in the seafood sector and proportion of the rural coastal population, labour force and employment by FLAG

| FLAG | Direct | \% Seafood <br> Population | \% Seafood <br> Labour Force | \% Seafood <br> Total Employed |
| :--- | :---: | :---: | :---: | :---: |
| North | 2,133 | $3 \%$ | $6 \%$ | $8 \%$ |
| North West | 650 | $1 \%$ | $2 \%$ | $3 \%$ |
| West | 1,093 | $2 \%$ | $4 \%$ | $4 \%$ |
| South West | 956 | $1 \%$ | $2 \%$ | $3 \%$ |
| South | 1,824 | $2 \%$ | $3 \%$ | $4 \%$ |
| South East | 1,299 | $1 \%$ | $3 \%$ | $4 \%$ |
| North East | 1,302 | 2,257 | $2 \%$ | $3 \%$ |
| Total |  |  | $3 \%$ | $4 \%$ |

Table 4: direct and indirect employment in the seafood sector and proportion of the rural coastal population, labour force and employment by FLAG

| FLAG | Direct and <br> Indirect | \% Seafood <br> Population | \% Seafood <br> Labour Force | \% Seafood <br> Total Employed |
| :--- | :---: | :---: | :---: | :---: |
| North | 3,347 | $4 \%$ | $10 \%$ | $12 \%$ |
| North West | 1,013 | $2 \%$ | $3 \%$ | $4 \%$ |
| West | 1,844 | $3 \%$ | $6 \%$ | $7 \%$ |
| South West | 1,650 | $2 \%$ | $4 \%$ | $4 \%$ |
| South | 2,888 | $2 \%$ | $5 \%$ | $6 \%$ |
| South East | 2,005 | $2 \%$ | $5 \%$ | $5 \%$ |
| North East | 2,031 | $2 \%$ | $5 \%$ | $6 \%$ |
| Total | 14,779 | $3 \%$ | $5 \%$ | $6 \%$ |

Table 5: direct, indirect and induced employment in the seafood sector and its proportion of the rural coastal population, labour force and employment by FLAG

| FLAG |  <br> Induced | \% Seafood <br> Population | \% Seafood <br> Labour Force | \% Seafood <br> Total Employed |
| :--- | :---: | :---: | :---: | :---: |
| North | 5,908 | $8 \%$ | $18 \%$ | $21 \%$ |
| North West | 1,801 | $3 \%$ | $6 \%$ | $7 \%$ |
| West | 3,028 | $5 \%$ | $10 \%$ | $11 \%$ |
| South West | 2,648 | $3 \%$ | $6 \%$ | $7 \%$ |
| South | 5,172 | $4 \%$ | $9 \%$ | $10 \%$ |
| South East | 3,717 | $4 \%$ | $9 \%$ | $10 \%$ |
| North East | 3,726 | $4 \%$ | $9 \%$ | $10 \%$ |
| Total | 25,999 | $4 \%$ | $9 \%$ | $11 \%$ |

## Appendix A

Table 6: CSO statistics by Electoral Areas with BIM estimates for Reference Coastal population, labour force and employment

|  |  |  |  | $\begin{aligned} & \dot{\ddagger} \dot{L}_{0}^{n} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Carlow | 56,932 | 28,928 | 0 | 0 | 0 | 0 | 0 | 8\% |
| Dublin City | 554,554 | 0 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Dún Laoghaire-Rathdown | 218,018 | 2,565 | 2,215 | 0 | 2,215 | 1,053 | 974 | 4\% |
| Fingal | 296,020 | 21,597 | 12,127 | 36,066 | 48,193 | 24,320 | 21,811 | 5\% |
| South Dublin | 278,767 | 5,552 | 8 | 0 | 8 | 4 | 3 | 7\% |
| Kildare | 222,504 | 72,166 | 0 | 0 | 0 | 0 | 0 | 6\% |
| Kilkenny | 99,232 | 60,794 | 0 | 0 | 0 | 0 | 0 | 6\% |
| Laois | 84,697 | 43,718 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Longford | 40,873 | 26,916 | 0 | 0 | 0 | 0 | 0 | 9\% |
| Louth | 128,884 | 43,660 | 22,252 | 2,145 | 24,397 | 11,429 | 9,525 | 8\% |
| Meath | 195,044 | 80,664 | 8,963 | 0 | 8,963 | 4,310 | 3,826 | 5\% |
| Offaly | 77,961 | 44,540 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Westmeath | 88,770 | 45,335 | 0 | 0 | 0 | 0 | 0 | 8\% |
| Wexford | 149,722 | 91,969 | 39,392 | 1,620 | 41,012 | 18,966 | 15,821 | 8\% |
| Wicklow | 142,425 | 49,832 | 33,428 | 0 | 33,428 | 15,898 | 13,879 | 6\% |
| Clare | 118,817 | 72,163 | 29,323 | 0 | 29,323 | 13,951 | 12,219 | 6\% |
| Cork City | 125,657 | 0 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Cork County | 417,211 | 202,216 | 99,567 | 15,966 | 115,533 | 54,879 | 49,815 | 4\% |
| Kerry | 147,707 | 95,581 | 46,953 | 4,426 | 51,379 | 24,323 | 21,296 | 6\% |
| Limerick City and County | 194,899 | 89,852 | 38,943 | 0 | 38,943 | 18,007 | 15,422 | 7\% |
| Tipperary | 159,553 | 93,309 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Waterford City and County | 116,176 | 44,630 | 15,432 | 1,808 | 17,240 | 8,001 | 6,766 | 7\% |
| Galway City | 78,668 | 0 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Galway County | 179,390 | 139,477 | 33,784 | 1,597 | 35,381 | 16,775 | 14,815 | 6\% |
| Leitrim | 32,044 | 28,622 | 1,950 | 0 | 1,950 | 906 | 774 | 7\% |
| Mayo | 130,507 | 93,231 | 25,805 | 8,193 | 33,998 | 15,638 | 13,400 | 7\% |
| Roscommon | 64,544 | 47,244 | 0 | 0 | 0 | 0 | 0 | 6\% |
| Sligo | 65,535 | 39,438 | 26,358 | 1,753 | 28,111 | 12,977 | 11,154 | 6\% |
| Cavan | 76,176 | 52,918 | 0 | 0 | 0 | 0 | 0 | 7\% |
| Donegal | 159,192 | 115,778 | 74,989 | 0 | 74,989 | 33,531 | 27,488 | 8\% |
| Monaghan | 61,386 | 43,389 | 0 | 0 | 0 | 0 | 0 | 6\% |
| Republic of Ireland | 4,761,865 | 1,776,084 | 511,490 | 73,574 | 585,064 | 274,967 | 238,989 | 6\% |
| ROI (millions) | 4.76 | 1.77 | 0.51 | 0.07 | 0.59 | 0.27 | 0.24 | 6\% |

## Appendix B

Table 7: CSO statistics and BIM estimates for reference Coastal population, labour force and employment by FLAG region

| Fisheries <br> Local <br> Action <br> Group |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| North | 159,192 | 115,778 | 74,989 | 0 | 74,989 | 33,531 | 27,488 | 8\% |
| Northwest | 292,630 | 208,535 | 54,113 | 9,946 | 64,059 | 29,521 | 25,328 | 7\% |
| West | 376,875 | 211,640 | 63,107 | 1,597 | 64,704 | 30,726 | 27,034 | 6\% |
| Southwest | 342,606 | 185,433 | 85,897 | 4,426 | 90,323 | 42,330 | 36,718 | 6\% |
| South | 542,868 | 202,216 | 99,567 | 15,966 | 115,533 | 54,879 | 49,815 | 4\% |
| Southeast | 808,737 | 413,180 | 88,253 | 3,428 | 91,681 | 42,865 | 36,467 | 7\% |
| Northeast | 2,238,957 | 439,302 | 45,564 | 38,211 | 83,775 | 41,115 | 36,139 | 6\% |
| Republic of Ireland | 4,761,865 | 1,776,084 | 511,490 | 73,574 | 585,064 | 274,967 | 238,989 | 6\% |
| ROI (millions) | 4.76 | 1.78 | 0.51 | 0.07 | 0.59 | 0.27 | 0.24 | 6\% |

