**Model parametrization for the Pulse project**

**1. Cost of effort/area:**

Different home ports, I have just picked two approximate port locations for estimate the effort cost.

Shing effort per week is estimated from the time spend at sea minus the travel between the harbour and the fishing ground assuming a steaming speed of 12Nm h-1 and 6 days per trip.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Port/area | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | **13** | **14** | **16** |
| **Harlingen (** lon 5.4; lat 53.05**)** | 15 | 14 | 14 | 16 | 14 | 13 | 15 | 16 | 17 | 14 | 15 | 17 | 15 | 15 | 18 |
| **Port A (south,** lon 4.2; lat 52.05**)** | 14 | 12 | 13 | 16 | 14 | 15 | 17 | 18 | 19 | 16 | 17 | 19 | 16 | 17 | 18 |
| **Port B (north,** lon 6.5; lat 53.4**)** | 17 | 15 | 15 | 17 | 14 | 12 | 14 | 15 | 17 | 13 | 15 | 17 | 16 | 16 | 18 |

Which are the exact port locations that we would like to model?

|  |  |  |
| --- | --- | --- |
|  | **Lon** | **Lat** |
| **Port A (south, name?)** |  |  |
| **Port B (north, name?)** |  |  |

Steaming speed:

|  |  |  |
| --- | --- | --- |
| Nm h-1 | **Beam trawlers** | **Pulse trawlers** |
| **Long distance** | 12 |  |
| **Euro cutters** |  |  |

**2. Catch efficiency parameters:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Long distance**  **Beam trawlers** | **Long distance**  **Pulse trawlers** | **Euro cutters**  **Beam trawlers** | **Euro cutters**  **Pulse trawlers** |
| **Sole** | 1 | 0.86 |  |  |
| **Marketable plaice** | 1 | 0.71 |  |  |
| **Undersized plaice** | 1 | 0.52 |  |  |
| **Cod** | 1 | 0.31 |  |  |
| **Shrimp** | 1 |  |  |  |

**3. Quotas:**

The model could only be constrained by two quota species, in principle, we just assume that sole is the only limiting specie. Therefore we can decide if we want to also constraint the fishery with plaice at any moment. I think shrimp has no quota.

|  |  |  |  |
| --- | --- | --- | --- |
| tonnes | **Low quota scenario** | **Mid quota scenario** | **High quota scenario** |
| **Sole** | 100 | 500 | 800 |
| **Plaice** |  |  |  |
| **Shrimp** |  |  |  |

**4. Fuel costs:**

|  |  |  |
| --- | --- | --- |
| d-1 | **Beam trawlers** | **Pulse trawlers** |
| **Long distance** | 6400 | 2400 |
| **Euro cutters** |  |  |