

# Developing a Discard Index for the English and Welsh fishing fleet

- Presented are data from the Cefas Catch and Discard Observer Programme.
- Sampled trips are from English and Welsh >10m fishing vessels. The data include all fish species, commercial cephalopods and *Nephrops norvegicus*.

## 1. Randomly select vessel for sampling trip



## 2. Measure lengths of discard and retained samples



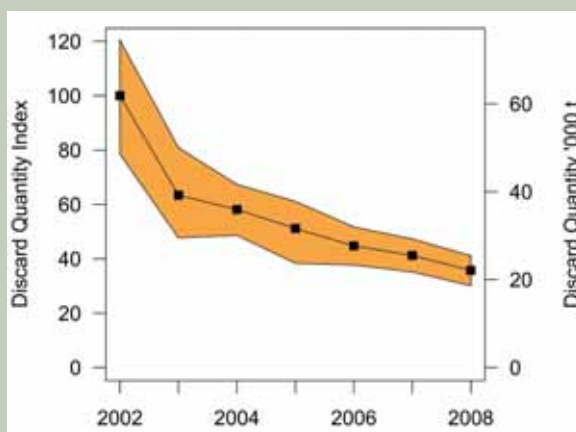
## 3. Raise to haul then to trip, and convert lengths to weights



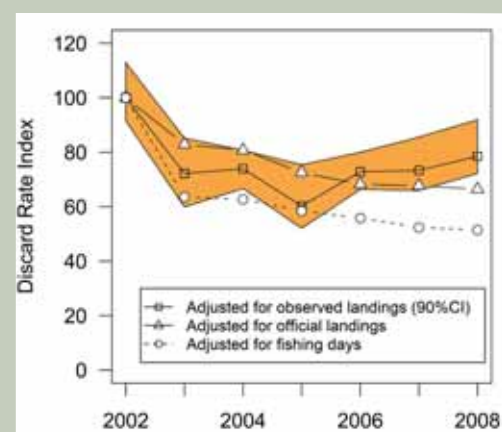
## 4. Raise trips by meter effort - fishing days (or trips or hours)



## 5. Sum meters to give Discard Quantity Index with 90%CI\*



## 6. Generate Discard Rate Indices by different metrics



\* Confidence intervals (90%) were generated by bootstrapping sampled trips.

- Discard Quantity Index shows a reduction in total discard weight of 60% between 2002 and 2008 (there was a 30% reduction in fishing effort during this period).
- The Discard Rate Indices shows a general reduction in discard rate during fishing operations (41-51% of catches discarded in 2002, 33-40% in 2008).
- The Discard Indices can be presented by weight or number, or by rate (using various metrics) for single or multiple species and metiers.