**Quality checks at data capture of data collected from fisheries or surveys, electronically recorded in the field with the application E-reg.**

Data collection made by Institute of Marine Research, Department of Aquatic resources (SLU Aqua), Swedish University of Agricultural Sciences.

Example: Pot fishery for Norwegian lobster. (Length, weight, sex, maturity in females and diseases.)

Data is captured in an **electronic protocol/application** on a tough book in the field. The application is developed by the institute and is designed for different sampling types of on-board sampling and a separate scheme for surveys. The user chooses a sampling type of the current trip and is then steered through a defined workflow, with flexibility due to differences in work schedule on different fishing vessels.

All data from the trip is transferred to the main database when coming back to the institute. For safety, a **backup copy** of the data is made on an USB-stick regularly during the trip.

When entering data into the application, length and weight are checked towards historical/**recent measured length-weight relationships** +/- 30% for the measured species. When **outliers** are detected observers get a question so they check if they are correct. If correct, the outlier value can still be stored.

Measurements as length can be made with an electronic calliper, connected by Bluetooth or USB-wire to the tough book.

**Sample weights** are checked by comparing the length frequency of the sample and sample weight cannot be larger than the total weight.

The person performing data capture choose e.g. latin names and gear types in **predefined lists** in the application. Only comments can be made in free text.

At sea, the application controls that **all values needed** for a sample type is there, a) per individual when measuring individuals, b) per haul, when verifying the haul when ending the haul registration and c) per trip when verifying the trip, before entering the harbour.

The **position** is not yet checked in the electronic protocol, but as long as you have wifi/satellite contact the position can be captured automatically at the sight by pushing a button. If not, it needs to be entered manually. You can also choose an ICES rectangle.

The rectangle or position defines which **sampling target** you have (you define this beforehand) and the number of sampled specimens per species is restricted due to this. (When collection a number of otoliths per length class in fish, the protocol jumps to the individual sampling page automatically as long as you still have individuals to sample. When a length class is full/ready the protocol stops jumping to the sampling page and stays on the length measurement page. To facilitate the correct number of sampled otoliths.)

**Duplications** are checked for at several occasions, when importing data from the field, ad hoc in the database (for things that cannot be checked when registration or import of electronic data occurs) and when delivering data to ICES. Things that are compared are eg. but not only:

* The combination any vessel and fromdatetime must be unique.
* The combination fish number and catch id must be unique.
* The combination length group and catch id must be unique.
* The combination species, processing, preservation, size must be unique.
* The combination station, species and sub sample must be unique.

When the data is entered into the main database FD2, additional checks are made. These checks are made for all data inserted in the database and are described in a separate document (“Quality checks database FD2”).